

**EMB120 Brasilia**



**EMPRESA BRASILEIRA DE AERONÁUTICA S.A.**

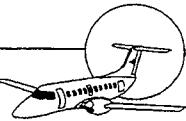
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TELEX (391) 1233589 EBAE BR - CEP 12227-901 - SÃO JOSÉ DOS CAMPOS - SÃO PAULO - BRASIL

## **SUPPLEMENTARY PERFORMANCE MANUAL**

**PW118A/B ENGINES  
WEIGHT UNITS IN KILOGRAMS**

**SPM – 120/1090  
20 NOVEMBER 1992  
REVISION 3 – 05 AUGUST 1999**





EMBRAER  
EMB120 Brasilia

APPLICABILITY

## SUPPLEMENTARY PERFORMANCE MANUAL

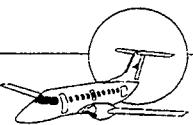
### APPLICABILITY

This publication is applicable to the EMB-120 Brasilia ER and RT airplanes equipped with Pratt & Whitney PW118A/B engines with the fuel indication provided in kilograms.

Only those ER airplanes are authorized to operate on the 11990 kg maximum takeoff weight limit.

Models RT must operate on the original 11500 kg limit.



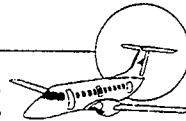
SUPPLEMENTARY PERFORMANCE  
MANUAL

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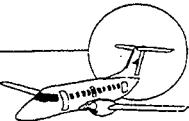


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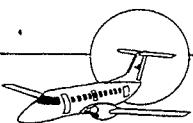
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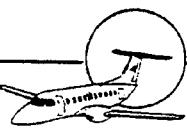
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TITLES IN CAPITAL LETTERS ARE TABLES  
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EMBRAER  
EMB120 Brasilia

INTRODUCTION

## SUPPLEMENTARY PERFORMANCE MANUAL

### INTRODUCTION

This publication presents the supplementary performance data applicable to the EMB-120 Brasilia. The supplementary performance provides flight planning data in tabulated format, ranging from long range cruise to maximum speed cruise. The data is presented by phase of flight, and enables the determination of fuel and time, as well as torque and airspeed for the prevailing ambient conditions.

For determination of takeoff and landing gross weight, refer to the Airplane Flight Manual.

**SUPPLEMENTARY PERFORMANCE  
MANUAL****OPERATING DATA**

This publication contains conversion tables and graphs with general information for dispatch and inflight use.

**- Standard Atmosphere Table**

It provides the properties of ICAO standard atmosphere tabulated in 1000 ft increments, from zero to 35000 ft.

References on temperature, pressure, air density and speed of sound ratio are given.

**- ISA Conversion**

It may be used to find the temperature deviation from standard temperature by entering the chart with known ambient temperature and pressure altitude.

**- Units Conversion Table**

It provides the means for the direct temperature conversion from degrees Centigrade to Fahrenheit; distance and speed conversion from feet, nautical miles, and feet per second and feet per minute to their metrical system equivalents, that is, meters, kilometers, meters per second and meters per minute, respectively.

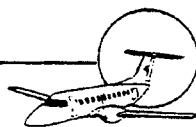
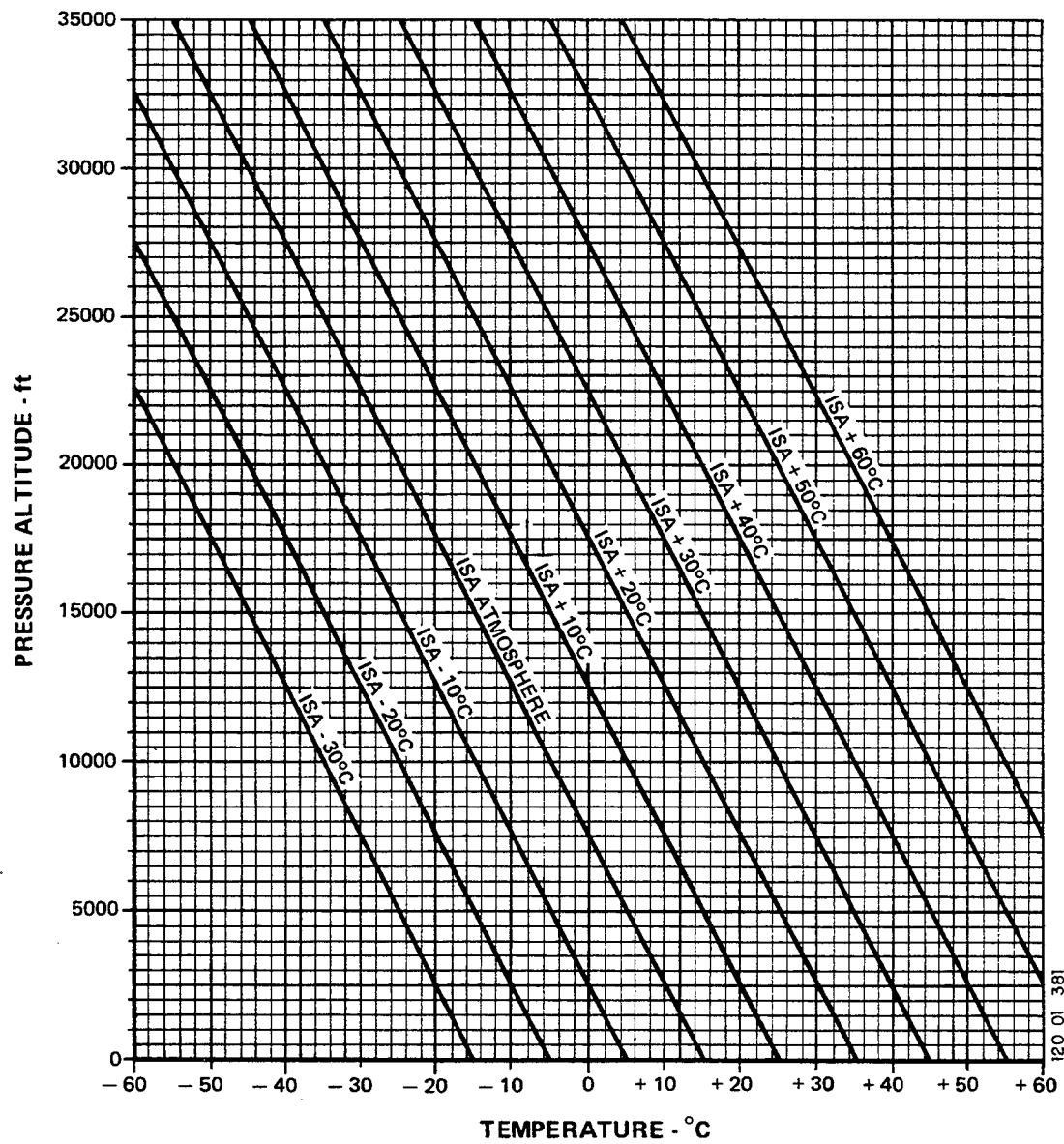
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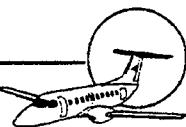
## STANDARD ATMOSPHERE TABLE

This table is based on NACA Technical Report No. 3182

| Standard Sea Level Atm |                           |  | $P = 29.92 \text{ in of Hg}$                   |       | $\rho_0 = .002378 \text{ slugs/cu.ft}$            |                           |                                    |
|------------------------|---------------------------|--|--|-------|---|---------------------------|------------------------------------|
|                        |                           |  | $t_0 = 15^\circ\text{C}$<br>$59^\circ\text{F}$ |       | $c_0 = 661 \text{ knots}$                         |                           |                                    |
| Altitude<br>Feet       | P<br>Pressure<br>in of Hg | $\delta$<br>( $p/p_0$ )<br>Pressure<br>Ratio | t<br>Temperature                               |       | $\sigma$<br>( $\rho/\rho_0$ )<br>Density<br>Ratio | $\frac{1}{\sqrt{\sigma}}$ | $c/c_0$<br>Speed of<br>Sound Ratio |
|                        |                           |  | Deg C  | Deg F |   |                           |                                    |
| 0                      | 29.92                     | 1.0000                                       | 15.0   | 59.0  | 1.0000  | 1.0000                    | 1.0000                             |
| 1000                   | 28.86                     | .9644  | 13.0   | 55.4  | .9711   | 1.0148                    | .9966                              |
| 2000                   | 27.82                     | .9298  | 11.0   | 51.9  | .9428   | 1.0299                    | .9931                              |
| 3000                   | 26.82                     | .8962  | 9.1  | 48.3  | .9151   | 1.0454                    | .9896                              |
| 4000                   | 25.84                     | .8637  | 7.1  | 44.7  | .8881   | 1.0611                    | .9862                              |
| 5000                   | 24.90                     | .8320  | 5.1  | 41.2  | .8617   | 1.0773                    | .9827                              |
| 6000                   | 23.98                     | .8014  | 3.1  | 37.6  | .8359   | 1.0938                    | .9792                              |
| 7000                   | 23.09                     | .7716  | 1.1  | 34.0  | .8106   | 1.1107                    | .9756                              |
| 8000                   | 22.22                     | .7428  | -.8  | 30.5  | .7860   | 1.1279                    | .9721                              |
| 9000                   | 21.39                     | .7148  | -2.8   | 26.9  | .7620   | 1.1456                    | .9686                              |
| 10000                  | 20.58                     | .6877  | -4.8   | 23.3  | .7385   | 1.1637                    | .9650                              |
| 11000                  | 19.79                     | .6614  | -6.8   | 19.8  | .7156   | 1.1822                    | .9614                              |
| 12000                  | 19.03                     | .6360  | -8.8   | 16.2  | .6932   | 1.2011                    | .9579                              |
| 13000                  | 18.29                     | .6113  | -10.8  | 12.6  | .6713   | 1.2205                    | .9543                              |
| 14000                  | 17.58                     | .5874  | -12.7  | 9.1   | .6500   | 1.2403                    | .9506                              |
| 15000                  | 16.89                     | .5643  | -14.7  | 5.5   | .6292   | 1.2606                    | .9470                              |
| 16000                  | 16.22                     | .5420  | -16.7  | 1.9   | .6090   | 1.2815                    | .9434                              |
| 17000                  | 15.57                     | .5203  | -18.7  | -1.6  | .5892   | 1.3028                    | .9397                              |
| 18000                  | 14.94                     | .4994  | -20.7  | -5.2  | .5699   | 1.3246                    | .9361                              |
| 19000                  | 14.34                     | .4791  | -22.6  | -8.8  | .5511   | 1.3470                    | .9324                              |
| 20000                  | 13.75                     | .4595  | -24.6  | -12.3 | .5328   | 1.3700                    | .9287                              |
| 21000                  | 13.18                     | .4406  | -26.6  | -15.9 | .5150   | 1.3935                    | .9250                              |
| 22000                  | 12.64                     | .4223  | -28.6  | -19.5 | .4976   | 1.4176                    | .9213                              |
| 23000                  | 12.11                     | .4046  | -30.6  | -23.0 | .4806   | 1.4424                    | .9175                              |
| 24000                  | 11.60                     | .3876  | -32.5  | -26.6 | .4642   | 1.4678                    | .9138                              |
| 25000                  | 11.10                     | .3711  | -34.5  | -30.2 | .4481   | 1.4938                    | .9100                              |
| 26000                  | 10.63                     | .3552  | -36.5  | -33.7 | .4325   | 1.5206                    | .9062                              |
| 27000                  | 10.17                     | .3398  | -38.5  | -37.3 | .4173   | 1.5480                    | .9024                              |
| 28000                  | 9.725                     | .3250  | -40.5  | -40.9 | .4025   | 1.5762                    | .8986                              |
| 29000                  | 9.297                     | .3107  | -42.5  | -44.4 | .3881   | 1.6052                    | .8948                              |
| 30000                  | 8.885                     | .2970  | -44.4  | -48.0 | .3741   | 1.6349                    | .8909                              |
| 31000                  | 8.488                     | .2837  | -46.4  | -51.6 | .3605   | 1.6654                    | .8870                              |
| 32000                  | 8.106                     | .2709  | -48.4  | -55.1 | .3473   | 1.6968                    | .8832                              |
| 33000                  | 7.737                     | .2586  | -50.4  | -58.7 | .3345   | 1.7291                    | .8793                              |
| 34000                  | 7.382                     | .2467  | -52.4  | -62.2 | .3220   | 1.7623                    | .8754                              |
| 35000                  | 7.041                     | .2353  | -54.3  | -65.8 | .3099   | 1.7964                    | .8714                              |

**ISA CONVERSION**

20 NOVEMBER 1992

SUPPLEMENTARY PERFORMANCE  
MANUAL  
UNITS CONVERSION TABLE

| TEMPERATURE |     | DISTANCE |        |            | SPEED |       |              |              |                |                |       |
|-------------|-----|----------|--------|------------|-------|-------|--------------|--------------|----------------|----------------|-------|
| °C          | °F  | FEET     | METERS | NAUT MILES | km    | KNOTS | FEET PER SEC | FEET PER MIN | METERS PER SEC | METERS PER MIN | KNOTS |
| 100         | 200 | 15,000   | 4500   | 3000       | 5500  | 700   | 70,000       | 360          | 20,000         | 700            |       |
| 90          | 190 | 14,000   | 4000   |            | 5000  |       | 1100         |              | 320            |                |       |
| 80          | 170 | 13,000   | 2500   |            | 4500  |       | 600          | 60,000       | 280            |                |       |
| 70          | 160 | 12,000   | 3500   |            | 4000  |       | 500          | 50,000       | 240            |                |       |
| 60          | 140 | 10,000   | 3000   | 2000       | 3500  |       | 400          | 40,000       | 200            |                |       |
| 50          | 120 | 9,000    |        |            | 3000  |       | 300          | 30,000       | 160            |                |       |
| 40          | 100 | 8,000    | 2500   |            | 2500  |       | 200          | 20,000       | 120            |                |       |
| 30          | 80  | 7,000    | 2000   |            | 2000  |       | 100          | 10,000       | 80             |                |       |
| 20          | 60  | 6,000    |        |            | 1500  |       |              |              | 40,000         | 200            |       |
| 10          | 40  | 5,000    | 1500   |            | 1500  |       |              |              | 30,000         | 160            |       |
| 0           | 0   | 4,000    |        |            | 1000  |       |              |              | 20,000         | 120            |       |
| -10         |     | 3,000    |        |            | 1000  |       |              |              | 10,000         | 80             |       |
| -20         |     | 2,000    | 500    |            | 500   |       |              |              |                | 40,000         | 200   |
| -30         |     | 1,000    |        |            | 500   |       |              |              |                | 30,000         | 160   |
| -40         |     |          |        |            |       |       |              |              |                | 20,000         | 120   |
| -50         |     |          |        |            |       |       |              |              |                | 10,000         | 80    |
| -60         |     |          |        |            |       |       |              |              |                | 0              | 0     |

NOTE: TO CONVERT LITERS TO U.S. GAL, MULTIPLY BY 0.264  
TO CONVERT LITERS TO IMP. GAL, MULTIPLY BY 0.220  
TO CONVERT MILLIBARS TO INCHES OF MERCURY, MULTIPLY BY 0.0295  
TO CONVERT KILOGRAMS TO POUNDS, MULTIPLY BY 2.205  
TO CONVERT POUNDS TO KILOGRAMS, MULTIPLY BY 0.454  
TO CONVERT KILOMETERS TO STATUTE MILES, MULTIPLY BY 0.621  
TO CONVERT KILOMETERS TO NAUTICAL MILES, MULTIPLY BY 0.540



## SUPPLEMENTARY PERFORMANCE MANUAL

### FLIGHT PLANNING TABLES DESCRIPTION

The following tables provide information for flight planning and cruise control at various parameters of weight, power, altitude, and temperature. The tables included are Climb Torque Setting, Climb Planning, Long Range, Maximum Speed and Intermediate Cruise Flight Planning, Long Range, Maximum Speed and Intermediate Cruise Control, Descent and Holding.

#### CLIMB TORQUE SETTING

The Climb Torque Setting tables are presented for various altitudes and indicated outside air temperature.

They are divided into two specific tables concerning the applicable N<sub>p</sub> settings:

- Climb Torque Setting table for N<sub>p</sub> = 100%.
- Climb Torque Setting table for N<sub>p</sub> = 100% up to 12000 ft and 90% above 12000 ft.

Associated Conditions:

- Airspeed: 155 KIAS from SL to 20000 ft, decreasing linearly to 135 KIAS at 32000 ft (auto-pilot climb mode) or 170 KIAS at SL, decreasing linearly to 155 KIAS at 20000 ft, 155 KIAS above 20000 ft.
- Bleed Switch: AUTO
- Pack Control Selector: LOW

#### CLIMB PLANNING

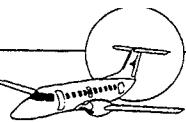
The Climb Planning tables show the fuel consumption, distance, and time elapsed from the brake release to the top of climb, for various weights, ISA deviations and cruise altitudes.

The tables are presented separately for two distinct airspeed schedules:

- Airspeed: 155 KIAS from SL to 20000 ft, decreasing linearly to 135 KIAS at 32000 ft (auto-pilot climb mode).
- Airspeed: 170 KIAS at SL, decreasing linearly to 155 KIAS at 20000 ft, 155 KIAS above 20000 ft.

Associated Conditions:

- Two engines operating
- N<sub>p</sub>: 100% or
  - 100% up to 12000 ft and
  - 90% above 12000 ft.
- Bleed Switch: AUTO
- Pack Control Selector: LOW



## SUPPLEMENTARY PERFORMANCE MANUAL

### FLIGHT PLANNING TABLES DESCRIPTION (Continued)

#### FLIGHT PLANNING

Flight Planning tables present the true airspeed and the total fuel consumption, for various weights, pressure altitude and ISA deviations. The One Engine Inoperative tables are presented in the long range cruise schedule. The All Engines Operating tables are presented in the long range cruise, maximum speed cruise and intermediate cruise schedules.

Associated Conditions:

- Np: 85% (all engines operating), 100% (one engine inoperative)
- Bleed Switch: AUTO
- Pack Control Selector: LOW

#### CRUISE CONTROL

Cruise Control tables present the indicated airspeed, the required torque, and the fuel flow per engine per hour, for various weights, pressure altitude and indicated outside air temperature (IOAT). The One Engine Inoperative tables are presented in the long range cruise schedule. The All Engines Operating tables are presented in the long range cruise, maximum speed cruise and intermediate cruise schedules.

Associated Conditions:

- Np: 85% (all engines operating), 100% (one engine inoperative)
- Bleed Switch: AUTO
- Pack Control Selector: LOW

The All Engines Operating tables in the long range cruise schedule are also presented for the landing gear down and flaps up configuration.

Associated Conditions:

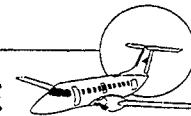
- Np: 85% (all engines operating)
- Bleed Switch: AUTO
- Pack Control Selector: LOW

#### DESCENT

Descent tables show the total fuel consumption, distance, and time elapsed from the top of descent to sea level for various cruise altitudes. Two tables are presented: one considering a rate of descent of 3000 ft/min and the other considering a rate of descent of 2000 ft/min (autopilot descent mode).

Associated Conditions:

- Airspeed: V<sub>MO</sub> or 250 KIAS, whichever is lower
- Np: 85%
- Bleed Switch: AUTO
- Pack Control Selector: LOW



## SUPPLEMENTARY PERFORMANCE MANUAL

### FLIGHT PLANNING TABLES DESCRIPTION (Continued)

#### HOLDING

Holding tables present the torque settings, fuel flow per engine, fuel consumption, and air-speeds, in two engines and one engine operating configurations, for various pressure altitudes and weights at standard atmosphere.

Associated Conditions:

- Airspeed: 1.3 V<sub>S</sub>
- Np: 85% (all engines operating), 100% (one engine inoperative)
- Bleed Switch: AUTO
- Pack Control Selector: LOW

#### ADOPTED SCHEDULES

##### Long Range Cruise:

In this schedule the airplane is flown in a speed corresponding to a specific range equal to 99% of maximum specific range. It is used when range is the overall factor.

##### Maximum Speed Cruise:

In this schedule the airplane is flown in a speed resulting from maximum cruise power setting. It is used when minimum flight time is desired.

##### Intermediate Cruise:

In the intermediate cruise the airplane is flown according to the following torque schedule:

- From SL to 10000 ft, the torque is constant and equal to 65%.
- Above 10000 ft, the torque setting is calculated based on the following formula: long range cruise torque + 2/3 (maximum speed cruise torque – long range cruise torque).

#### EXAMPLE

The tables are used as follows:

- Flight Planning for Maximum Speed
- All Engines
- Cruise Altitude: 10000 ft
- Cruise Weight: 10000 kg
- Cruise Temperature: ISA – 20°C
- Results: True Airspeed = 276 kt  
Total Fuel Consumption: 601 kg/h



EMBRAER  
EMB120 Brasilia

FLIGHT PLANNING

SUPPLEMENTARY PERFORMANCE  
MANUAL

FLIGHT PLANNING

ALL ENGINES OPERATING

PW118A ENGINES

MAXIMUM SPEED CRUISE

CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 10000 FT

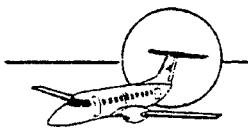
WEIGHT  
KG

ISA + °C

|       |       |    |      | -50 | -40 | -30 | -20 | -10 | 0   | 10  | 20  | 30  | 40  |
|-------|-------|----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 12000 | TAS   | KT | KG/H | 265 | 268 | 271 | 275 | 278 | 281 | 284 | 286 | 278 | 265 |
|       | TOTAL | FC |      | 592 | 595 | 598 | 601 | 604 | 607 | 609 | 613 | 571 | 522 |
| 11500 | TAS   | KT | KG/H | 265 | 268 | 272 | 275 | 278 | 281 | 284 | 287 | 280 | 266 |
|       | TOTAL | FC |      | 592 | 595 | 598 | 601 | 604 | 607 | 609 | 613 | 572 | 522 |
| 11000 | TAS   | KT | KG/H | 265 | 268 | 272 | 275 | 279 | 282 | 285 | 287 | 280 | 268 |
|       | TOTAL | FC |      | 592 | 595 | 598 | 601 | 604 | 607 | 609 | 613 | 572 | 523 |
| 10500 | TAS   | KT | KG/H | 266 | 269 | 272 | 276 | 279 | 282 | 285 | 289 | 281 | 270 |
|       | TOTAL | FC |      | 592 | 595 | 598 | 601 | 604 | 607 | 609 | 613 | 572 | 523 |
| 10000 | TAS   | KT | KG/H | 266 | 269 | 272 | 276 | 279 | 282 | 285 | 289 | 282 | 271 |
|       | TOTAL | FC |      | 592 | 595 | 598 | 601 | 604 | 607 | 609 | 613 | 573 | 523 |
| 9500  | TAS   | KT | KG/H | 265 | 269 | 273 | 276 | 279 | 282 | 285 | 289 | 282 | 271 |
|       | TOTAL | FC |      | 592 | 595 | 598 | 601 | 604 | 607 | 609 | 613 | 573 | 523 |
| 9000  | TAS   | KT | KG/H | 266 | 269 | 273 | 276 | 279 | 282 | 286 | 289 | 282 | 272 |
|       | TOTAL | FC |      | 592 | 595 | 598 | 601 | 604 | 607 | 609 | 613 | 573 | 524 |
| 8500  | TAS   | KT | KG/H | 266 | 270 | 273 | 277 | 280 | 283 | 286 | 289 | 283 | 272 |
|       | TOTAL | FC |      | 592 | 595 | 598 | 601 | 604 | 607 | 609 | 613 | 573 | 524 |
| 8000  | TAS   | KT | KG/H | 266 | 269 | 273 | 277 | 280 | 283 | 286 | 290 | 283 | 273 |
|       | TOTAL | FC |      | 592 | 595 | 598 | 601 | 604 | 607 | 609 | 613 | 573 | 524 |

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SUPPLEMENTARY PERFORMANCE  
MANUAL

## CLIMB TORQUE SETTING

ALL ENGINES OPERATING

PW118A ENGINES

## CRUISE CONFIGURATION

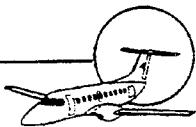
NP: 100%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

| PRESSURE<br>ALTITUDE<br>FT | CLIMB TORQUE SETTING - %<br>IOAT ( °C ) |     |     |     |     |     |     |     |     |    |    |  |
|----------------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|----|----|--|
|                            | -50                                     | -45 | -40 | -35 | -30 | -25 | -20 | -15 | -10 | -5 | 0  |  |
| 0                          | 84                                      | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 84 | 84 |  |
| 2000                       | 84                                      | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 84 | 84 |  |
| 4000                       | 84                                      | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 84 | 84 |  |
| 6000                       | 84                                      | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 84 | 84 |  |
| 8000                       | 84                                      | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 84 | 84 |  |
| 10000                      | 84                                      | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 84 | 84 |  |
| 12000                      | 84                                      | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 84 | 84 |  |
| 14000                      | 84                                      | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 81 | 77 |  |
| 16000                      | 84                                      | 84  | 84  | 84  | 84  | 84  | 84  | 81  | 78  | 74 | 71 |  |
| 18000                      | 84                                      | 84  | 84  | 84  | 84  | 81  | 78  | 75  | 72  | 69 | 66 |  |
| 20000                      | 84                                      | 84  | 83  | 80  | 78  | 75  | 72  | 69  | 66  | 63 | 60 |  |
| 22000                      | 82                                      | 79  | 77  | 74  | 72  | 69  | 67  | 64  | 61  | 58 | 56 |  |
| 24000                      | 76                                      | 73  | 71  | 69  | 66  | 64  | 61  | 59  | 56  | 54 | 51 |  |
| 26000                      | 70                                      | 68  | 65  | 63  | 61  | 59  | 56  | 54  | 52  | 49 | 47 |  |
| 28000                      | 64                                      | 62  | 60  | 58  | 56  | 54  | 52  | 50  | 47  | 45 | 42 |  |
| 30000                      | 59                                      | 57  | 55  | 53  | 51  | 49  | 47  | 45  | 43  | 41 | 39 |  |
| 32000                      | 54                                      | 52  | 50  | 49  | 47  | 45  | 43  | 41  | 39  | 37 | 36 |  |

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**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CLIMB TORQUE SETTING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**

## CRUISE CONFIGURATION

NP: 100%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

| PRESSURE<br>ALTITUDE<br>FT | CLIMB TORQUE SETTING - %<br>IOAT ( °C ) |    |    |    |    |    |    |    |    |    |    |
|----------------------------|---|----|----|----|----|----|----|----|----|----|----|
|                            | 5                                       | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 |
| 0                          | 84                                      | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 80 | 75 | 69 |
| 2000                       | 84                                      | 84 | 84 | 84 | 84 | 84 | 84 | 80 | 74 | 69 | 64 |
| 4000                       | 84                                      | 84 | 84 | 84 | 84 | 83 | 78 | 74 | 69 | 64 | 59 |
| 6000                       | 84                                      | 84 | 84 | 84 | 82 | 77 | 72 | 68 | 63 | 59 | -  |
| 8000                       | 84                                      | 84 | 84 | 80 | 75 | 71 | 67 | 63 | 58 | -  | -  |
| 10000                      | 84                                      | 82 | 78 | 74 | 70 | 66 | 62 | 58 | -  | -  | -  |
| 12000                      | 80                                      | 76 | 72 | 68 | 64 | 60 | 57 | 53 | -  | -  | -  |
| 14000                      | 74                                      | 70 | 66 | 63 | 59 | 56 | 52 | -  | -  | -  | -  |
| 16000                      | 68                                      | 64 | 61 | 57 | 54 | 51 | -  | -  | -  | -  | -  |
| 18000                      | 63                                      | 59 | 56 | 53 | 50 | -  | -  | -  | -  | -  | -  |
| 20000                      | 57                                      | 54 | 51 | 48 | 45 | -  | -  | -  | -  | -  | -  |
| 22000                      | 53                                      | 50 | 47 | 44 | -  | -  | -  | -  | -  | -  | -  |
| 24000                      | 48                                      | 45 | 43 | -  | -  | -  | -  | -  | -  | -  | -  |
| 26000                      | 44                                      | 42 | -  | -  | -  | -  | -  | -  | -  | -  | -  |
| 28000                      | 40                                      | 38 | -  | -  | -  | -  | -  | -  | -  | -  | -  |
| 30000                      | 37                                      | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  |
| 32000                      | -                                       | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  |

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CLIMB TORQUE SETTING

SUPPLEMENTARY PERFORMANCE  
MANUAL

CLIMB TORQUE SETTING

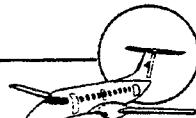
ALL ENGINES OPERATING

PW118A ENGINES

CRUISE CONFIGURATION  
NP: 100% UP TO 12000 FT  
90% ABOVE 12000 FT  
BLEED SWITCH: AUTO  
PACK CONTROL SELECTOR: LOW

| PRESSURE<br>ALTITUDE<br>FT | CLIMB TORQUE SETTING - %<br>IOAT ( °C ) |     |     |     |     |     |     |     |     |    |    |  |
|----------------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|----|----|--|
|                            | -50                                     | -45 | -40 | -35 | -30 | -25 | -20 | -15 | -10 | -5 | 0  |  |
| 0                          | 84                                      | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 84 | 84 |  |
| 2000                       | 84                                      | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 84 | 84 |  |
| 4000                       | 84                                      | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 84 | 84 |  |
| 6000                       | 84                                      | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 84 | 84 |  |
| 8000                       | 84                                      | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 84 | 84 |  |
| 10000                      | 84                                      | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 84 | 84 |  |
| 12000                      | 84                                      | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 84 | 84 |  |
| 14000                      | 84                                      | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 84 | 84 |  |
| 16000                      | 84                                      | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 83 | 80 |  |
| 18000                      | 84                                      | 84  | 84  | 84  | 84  | 84  | 84  | 83  | 80  | 77 | 74 |  |
| 20000                      | 84                                      | 84  | 84  | 84  | 84  | 83  | 80  | 77  | 74  | 71 | 68 |  |
| 22000                      | 84                                      | 84  | 84  | 82  | 79  | 77  | 74  | 71  | 68  | 65 | 62 |  |
| 24000                      | 83                                      | 81  | 78  | 76  | 73  | 71  | 68  | 65  | 63  | 60 | 57 |  |
| 26000                      | 77                                      | 74  | 72  | 70  | 68  | 65  | 62  | 60  | 58  | 55 | 52 |  |
| 28000                      | 71                                      | 68  | 66  | 64  | 62  | 60  | 57  | 55  | 53  | 50 | 48 |  |
| 30000                      | 65                                      | 63  | 61  | 59  | 57  | 55  | 52  | 50  | 48  | 46 | 44 |  |
| 32000                      | 59                                      | 57  | 56  | 54  | 52  | 50  | 48  | 46  | 44  | 42 | 40 |  |

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**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CLIMB TORQUE SETTING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**

## CRUISE CONFIGURATION

NP: 100% UP TO 12000 FT

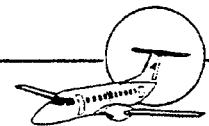
90% ABOVE 12000 FT

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

| PRESSURE<br>ALTITUDE<br>FT | CLIMB TORQUE SETTING - %<br>IOAT ( °C ) |    |    |    |    |    |    |    |    |    |    |
|----------------------------|---|----|----|----|----|----|----|----|----|----|----|
|                            | 5                                       | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 |
| 0                          | 84                                      | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 80 | 75 | 69 |
| 2000                       | 84                                      | 84 | 84 | 84 | 84 | 84 | 84 | 80 | 74 | 69 | 64 |
| 4000                       | 84                                      | 84 | 84 | 84 | 84 | 83 | 78 | 74 | 69 | 64 | 59 |
| 6000                       | 84                                      | 84 | 84 | 84 | 82 | 77 | 72 | 68 | 63 | 59 | -  |
| 8000                       | 84                                      | 84 | 84 | 80 | 75 | 71 | 67 | 63 | 58 | -  | -  |
| 10000                      | 84                                      | 82 | 78 | 74 | 70 | 66 | 62 | 58 | -  | -  | -  |
| 12000                      | 80                                      | 76 | 72 | 68 | 64 | 60 | 57 | 53 | -  | -  | -  |
| 14000                      | 83                                      | 79 | 75 | 71 | 67 | 63 | 60 | -  | -  | -  | -  |
| 16000                      | 76                                      | 73 | 69 | 65 | 62 | 58 | -  | -  | -  | -  | -  |
| 18000                      | 70                                      | 67 | 63 | 60 | 57 | -  | -  | -  | -  | -  | -  |
| 20000                      | 64                                      | 61 | 58 | 55 | 52 | -  | -  | -  | -  | -  | -  |
| 22000                      | 59                                      | 56 | 53 | 50 | -  | -  | -  | -  | -  | -  | -  |
| 24000                      | 54                                      | 51 | 49 | -  | -  | -  | -  | -  | -  | -  | -  |
| 26000                      | 50                                      | 47 | -  | -  | -  | -  | -  | -  | -  | -  | -  |
| 28000                      | 45                                      | 43 | -  | -  | -  | -  | -  | -  | -  | -  | -  |
| 30000                      | 41                                      | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  |
| 32000                      | -                                       | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  |

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**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CLIMB PLANNING**

**ALL ENGINES OPERATING**

**PW118A ENGINES**

**ALTITUDE: SEA LEVEL TO 5000 FT**

CRUISE CONFIGURATION

NP: 100% OR

100% UP TO 12000 FT AND

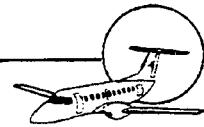
90% ABOVE 12000 FT

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

SPEED SCHEDULE: 155 KIAS FROM SL TO 20000 FT,  
DECREASING TO 135 KIAS AT  
32000 FT

| WEIGHT<br>KG | ISA + °C       |     |     |     |     |    |    |    |    |    |    |  |
|--------------|----------------|-----|-----|-----|-----|----|----|----|----|----|----|--|
|              | -60            | -40 | -30 | -20 | -10 | 0  | 10 | 20 | 30 | 40 |    |  |
| 12000        | FUEL<br>KG     | 23  | 26  | 28  | 30  | 31 | 33 | 35 | 37 | 44 | 56 |  |
|              | DISTANCE<br>NM | 5   | 5   | 6   | 6   | 7  | 7  | 8  | 8  | 11 | 15 |  |
|              | TIME<br>MIN    | 2   | 2   | 2   | 2   | 3  | 3  | 3  | 3  | 4  | 5  |  |
| 11500        | FUEL<br>KG     | 22  | 25  | 26  | 28  | 29 | 31 | 32 | 34 | 40 | 51 |  |
|              | DISTANCE<br>NM | 4   | 5   | 5   | 6   | 6  | 7  | 7  | 8  | 10 | 14 |  |
|              | TIME<br>MIN    | 2   | 2   | 2   | 2   | 2  | 2  | 3  | 3  | 3  | 5  |  |
| 11000        | FUEL<br>KG     | 21  | 23  | 24  | 26  | 27 | 29 | 30 | 32 | 37 | 46 |  |
|              | DISTANCE<br>NM | 4   | 5   | 5   | 5   | 6  | 6  | 7  | 7  | 9  | 12 |  |
|              | TIME<br>MIN    | 2   | 2   | 2   | 2   | 2  | 2  | 2  | 3  | 3  | 4  |  |
| 10500        | FUEL<br>KG     | 19  | 22  | 23  | 24  | 25 | 27 | 28 | 30 | 34 | 42 |  |
|              | DISTANCE<br>NM | 4   | 4   | 5   | 5   | 5  | 6  | 6  | 7  | 8  | 11 |  |
|              | TIME<br>MIN    | 2   | 2   | 2   | 2   | 2  | 2  | 2  | 2  | 3  | 4  |  |
| 10000        | FUEL<br>KG     | 18  | 20  | 21  | 22  | 24 | 25 | 26 | 28 | 32 | 39 |  |
|              | DISTANCE<br>NM | 3   | 4   | 4   | 5   | 5  | 6  | 6  | 6  | 8  | 10 |  |
|              | TIME<br>MIN    | 1   | 2   | 2   | 2   | 2  | 2  | 2  | 2  | 3  | 4  |  |
| 9500         | FUEL<br>KG     | 17  | 19  | 20  | 21  | 22 | 23 | 24 | 26 | 29 | 36 |  |
|              | DISTANCE<br>NM | 3   | 4   | 4   | 5   | 5  | 6  | 6  | 7  | 7  | 10 |  |
|              | TIME<br>MIN    | 1   | 2   | 2   | 2   | 2  | 2  | 2  | 3  | 3  | 3  |  |
| 9000         | FUEL<br>KG     | 16  | 18  | 18  | 19  | 20 | 21 | 23 | 24 | 27 | 33 |  |
|              | DISTANCE<br>NM | 3   | 3   | 4   | 4   | 5  | 5  | 5  | 7  | 7  | 9  |  |
|              | TIME<br>MIN    | 1   | 1   | 2   | 2   | 2  | 2  | 2  | 2  | 2  | 3  |  |
| 8500         | FUEL<br>KG     | 15  | 16  | 17  | 18  | 19 | 20 | 21 | 22 | 25 | 30 |  |
|              | DISTANCE<br>NM | 3   | 3   | 3   | 4   | 4  | 5  | 5  | 6  | 6  | 8  |  |
|              | TIME<br>MIN    | 1   | 1   | 1   | 1   | 2  | 2  | 2  | 2  | 2  | 3  |  |
| 8000         | FUEL<br>KG     | 14  | 15  | 16  | 17  | 18 | 19 | 19 | 20 | 23 | 28 |  |
|              | DISTANCE<br>NM | 3   | 3   | 3   | 3   | 4  | 4  | 4  | 5  | 6  | 7  |  |
|              | TIME<br>MIN    | 1   | 1   | 1   | 1   | 1  | 1  | 2  | 2  | 2  | 3  |  |

**CLIMB PLANNING****ALL ENGINES OPERATING****PW118A ENGINES****ALTITUDE: SEA LEVEL TO 6000 FT**

## CRUISE CONFIGURATION

NP: 100% OR  
 100% UP TO 12000 FT AND  
 90% ABOVE 12000 FT

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

SPEED SCHEDULE: 155 KIAS FROM SL TO 20000 FT,  
 DECREASING TO 135 KIAS AT  
 32000 FT

|       |          |     | ISA + °C |     |     |     |     |    |    |    |    |    |
|-------|----------|-----|----------|-----|-----|-----|-----|----|----|----|----|----|
|       |          |     | -60      | -40 | -30 | -20 | -10 | 0  | 10 | 20 | 30 | 40 |
|       | FUEL     | KG  | 28       | 32  | 33  | 35  | 37  | 39 | 41 | 44 | 53 | 67 |
|       | DISTANCE | NM  | 6        | 6   | 7   | 7   | 8   | 9  | 9  | 10 | 13 | 19 |
|       | TIME     | MIN | 2        | 3   | 3   | 3   | 3   | 3  | 3  | 4  | 5  | 6  |
| 12000 | FUEL     | KG  | 26       | 29  | 31  | 33  | 35  | 37 | 39 | 41 | 49 | 61 |
| 12000 | DISTANCE | NM  | 5        | 6   | 6   | 7   | 7   | 8  | 8  | 9  | 12 | 17 |
| 12000 | TIME     | MIN | 2        | 2   | 3   | 3   | 3   | 3  | 3  | 4  | 4  | 6  |
| 11000 | FUEL     | KG  | 25       | 28  | 29  | 31  | 32  | 34 | 36 | 38 | 45 | 56 |
| 11000 | DISTANCE | NM  | 5        | 6   | 6   | 7   | 7   | 8  | 9  | 11 | 15 | 15 |
| 11000 | TIME     | MIN | 2        | 2   | 2   | 3   | 3   | 3  | 3  | 4  | 4  | 5  |
| 10500 | FUEL     | KG  | 23       | 26  | 27  | 29  | 30  | 32 | 33 | 36 | 41 | 51 |
| 10500 | DISTANCE | NM  | 5        | 5   | 6   | 6   | 7   | 7  | 8  | 10 | 14 | 14 |
| 10500 | TIME     | MIN | 2        | 2   | 2   | 2   | 3   | 3  | 3  | 4  | 4  | 5  |
| 10000 | FUEL     | KG  | 21       | 24  | 25  | 27  | 28  | 30 | 31 | 33 | 38 | 47 |
| 10000 | DISTANCE | NM  | 4        | 5   | 5   | 6   | 6   | 7  | 7  | 10 | 13 | 13 |
| 10000 | TIME     | MIN | 2        | 2   | 2   | 2   | 2   | 3  | 3  | 3  | 3  | 4  |
| 9500  | FUEL     | KG  | 20       | 22  | 24  | 25  | 26  | 28 | 29 | 31 | 35 | 43 |
| 9500  | DISTANCE | NM  | 4        | 5   | 5   | 6   | 6   | 7  | 7  | 9  | 12 | 12 |
| 9500  | TIME     | MIN | 2        | 2   | 2   | 2   | 2   | 3  | 3  | 3  | 3  | 4  |
| 9000  | FUEL     | KG  | 19       | 21  | 22  | 23  | 24  | 26 | 27 | 29 | 33 | 39 |
| 9000  | DISTANCE | NM  | 4        | 4   | 5   | 5   | 6   | 6  | 6  | 8  | 11 | 14 |
| 9000  | TIME     | MIN | 2        | 2   | 2   | 2   | 2   | 2  | 2  | 3  | 3  | 4  |
| 8500  | FUEL     | KG  | 17       | 19  | 21  | 22  | 23  | 24 | 25 | 27 | 30 | 36 |
| 8500  | DISTANCE | NM  | 3        | 4   | 4   | 5   | 5   | 5  | 6  | 7  | 10 | 10 |
| 8500  | TIME     | MIN | 1        | 2   | 2   | 2   | 2   | 2  | 2  | 3  | 3  | 3  |
| 8000  | FUEL     | KG  | 16       | 18  | 19  | 20  | 21  | 22 | 23 | 25 | 28 | 33 |
| 8000  | DISTANCE | NM  | 3        | 4   | 4   | 4   | 5   | 5  | 6  | 7  | 9  | 9  |
| 8000  | TIME     | MIN | 1        | 1   | 2   | 2   | 2   | 2  | 2  | 2  | 2  | 3  |

20 NOVEMBER 1992



**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CLIMB PLANNING**

**ALL ENGINES OPERATING**

**PW118A ENGINES**

**ALTITUDE: SEA LEVEL TO 7000 FT**

**CRUISE CONFIGURATION**

NP: 100% OR  
 100% UP TO 12000 FT AND  
 90% ABOVE 12000 FT

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**SPEED SCHEDULE: 155 KIAS FROM SL TO 20000 FT,  
DECREASING TO 135 KIAS AT  
32000 FT**

| WEIGHT<br>KG | ISA + °C |    |    |     |    |    |     |    |    |     |                |   |     |   |   |   |    |    |    |    |    |             |   |   |    |   |   |    |   |   |   |   |
|--------------|----------|----|----|-----|----|----|-----|----|----|-----|----------------|---|-----|---|---|---|----|----|----|----|----|-------------|---|---|----|---|---|----|---|---|---|---|
|              | -60      |    |    | -40 |    |    | -30 |    |    | -20 |                |   | -10 |   |   | 0 |    |    | 10 |    |    | 20          |   |   | 30 |   |   | 40 |   |   |   |   |
| FUEL<br>KG   | 33       | 37 | 39 | 41  | 43 | 46 | 48  | 52 | 62 | 79  | DISTANCE<br>NM | 7 | 8   | 8 | 9 | 9 | 10 | 11 | 12 | 16 | 22 | TIME<br>MIN | 3 | 3 | 3  | 3 | 4 | 4  | 4 | 4 | 5 | 8 |
| 12000        | 30       | 34 | 36 | 38  | 40 | 43 | 45  | 48 | 57 | 72  | 79             | 6 | 7   | 8 | 8 | 9 | 10 | 11 | 14 | 20 | 22 | 3           | 3 | 3 | 3  | 4 | 4 | 5  | 7 |   |   |   |
| 11500        | 28       | 32 | 34 | 36  | 38 | 40 | 42  | 45 | 53 | 66  | 79             | 6 | 7   | 7 | 8 | 8 | 9  | 9  | 10 | 13 | 18 | 22          | 2 | 2 | 3  | 3 | 3 | 3  | 4 | 5 |   |   |
| 11000        | 27       | 30 | 32 | 34  | 36 | 38 | 40  | 42 | 50 | 63  | 79             | 5 | 6   | 7 | 8 | 8 | 9  | 9  | 10 | 13 | 18 | 22          | 1 | 2 | 3  | 3 | 3 | 3  | 4 | 5 |   |   |
| 10500        | 25       | 28 | 30 | 32  | 35 | 37 | 39  | 42 | 49 | 60  | 79             | 5 | 6   | 7 | 8 | 8 | 9  | 9  | 10 | 12 | 17 | 22          | 1 | 2 | 3  | 3 | 3 | 3  | 4 | 6 |   |   |
| 10000        | 25       | 28 | 30 | 31  | 33 | 34 | 36  | 39 | 45 | 55  | 79             | 5 | 6   | 7 | 8 | 8 | 9  | 9  | 10 | 11 | 15 | 22          | 1 | 2 | 3  | 3 | 3 | 3  | 4 | 5 |   |   |
| 9500         | 23       | 26 | 28 | 29  | 31 | 32 | 34  | 36 | 41 | 50  | 79             | 5 | 6   | 7 | 8 | 8 | 9  | 9  | 10 | 11 | 14 | 22          | 2 | 2 | 3  | 3 | 3 | 3  | 4 | 5 |   |   |
| 9000         | 22       | 24 | 26 | 27  | 28 | 30 | 31  | 33 | 38 | 46  | 79             | 4 | 5   | 6 | 7 | 7 | 8  | 8  | 9  | 10 | 13 | 22          | 2 | 2 | 3  | 3 | 3 | 3  | 4 | 4 |   |   |
| 8500         | 20       | 23 | 24 | 25  | 26 | 28 | 29  | 31 | 35 | 42  | 79             | 4 | 5   | 6 | 7 | 7 | 8  | 8  | 9  | 10 | 12 | 22          | 2 | 2 | 3  | 3 | 3 | 3  | 4 | 4 |   |   |
| 8000         | 19       | 21 | 22 | 23  | 24 | 26 | 27  | 28 | 33 | 39  | 79             | 4 | 4   | 5 | 5 | 5 | 6  | 6  | 6  | 7  | 11 | 22          | 2 | 2 | 3  | 3 | 3 | 3  | 4 | 4 |   |   |



# SUPPLEMENTARY PERFORMANCE MANUAL

## CLIMB PLANNING

ALL ENGINES OPERATING

PW118A ENGINES

ALTITUDE: SEA LEVEL TO 8000 FT

CRUISE CONFIGURATION

NP: 100% OR  
100% UP TO 12000 FT AND  
90% ABOVE 12000 FT

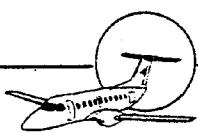
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

SPEED SCHEDULE: 155 KIAS FROM SL TO 20000 FT,  
DECREASING TO 135 KIAS AT  
32000 FT

| WEIGHT<br>KG |                          |                 | ISA + °C     |              |              |               |               |               |               |               |               |               |
|--------------|--------------------------|-----------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
|              |                          |                 | -60          | -40          | -30          | -20           | -10           | 0             | 10            | 20            | 30            | 40            |
| 12000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 37<br>8<br>3 | 42<br>9<br>4 | 44<br>9<br>4 | 47<br>10<br>4 | 50<br>11<br>4 | 52<br>12<br>4 | 55<br>12<br>4 | 60<br>14<br>5 | 71<br>19<br>6 | 92<br>26<br>9 |
| 11500        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 35<br>7<br>3 | 39<br>8<br>3 | 41<br>9<br>4 | 44<br>9<br>4  | 46<br>10<br>4 | 49<br>11<br>4 | 51<br>12<br>4 | 55<br>13<br>5 | 66<br>17<br>6 | 83<br>24<br>8 |
| 11000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 32<br>7<br>3 | 37<br>8<br>3 | 39<br>8<br>3 | 41<br>9<br>4  | 43<br>9<br>4  | 45<br>10<br>4 | 48<br>11<br>4 | 51<br>12<br>4 | 60<br>16<br>5 | 76<br>22<br>7 |
| 10500        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 30<br>6<br>3 | 34<br>7<br>3 | 36<br>8<br>3 | 38<br>8<br>3  | 40<br>9<br>3  | 42<br>9<br>3  | 44<br>10<br>4 | 48<br>11<br>4 | 56<br>14<br>5 | 69<br>20<br>7 |
| 10000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 28<br>6<br>2 | 32<br>7<br>3 | 34<br>7<br>3 | 35<br>8<br>3  | 37<br>8<br>3  | 39<br>9<br>3  | 41<br>9<br>3  | 44<br>10<br>4 | 51<br>13<br>5 | 63<br>18<br>6 |
| 9500         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 26<br>5<br>2 | 30<br>6<br>2 | 31<br>7<br>3 | 33<br>7<br>3  | 35<br>8<br>3  | 37<br>8<br>3  | 38<br>9<br>3  | 41<br>10<br>3 | 48<br>12<br>4 | 58<br>17<br>6 |
| 9000         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 25<br>5<br>2 | 28<br>6<br>2 | 29<br>6<br>2 | 31<br>7<br>3  | 32<br>7<br>3  | 34<br>8<br>3  | 36<br>8<br>3  | 38<br>9<br>3  | 44<br>11<br>4 | 53<br>15<br>5 |
| 8500         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 23<br>5<br>2 | 26<br>5<br>2 | 27<br>6<br>2 | 29<br>6<br>2  | 30<br>7<br>2  | 32<br>7<br>3  | 33<br>7<br>3  | 35<br>8<br>3  | 41<br>10<br>4 | 49<br>14<br>5 |
| 8000         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 21<br>4<br>2 | 24<br>5<br>2 | 25<br>5<br>2 | 27<br>6<br>2  | 28<br>6<br>2  | 29<br>6<br>2  | 31<br>7<br>3  | 33<br>8<br>3  | 37<br>10<br>3 | 45<br>13<br>4 |

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**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CLIMB PLANNING**

**ALL ENGINES OPERATING**

**PW118A ENGINES**

**ALTITUDE: SEA LEVEL TO 9000 FT**

CRUISE CONFIGURATION

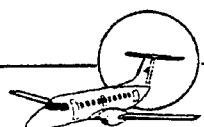
NP: 100% OR  
100% UP TO 12000 FT AND  
90% ABOVE 12000 FT

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

SPEED SCHEDULE: 155 KIAS FROM SL TO 20000 FT,  
DECREASING TO 135 KIAS AT  
32000 FT

| WEIGHT<br>KG | ISA + °C       |     |     |     |     |    |    |    |    |    |     |  |
|--------------|----------------|-----|-----|-----|-----|----|----|----|----|----|-----|--|
|              | -60            | -40 | -30 | -20 | -10 | 0  | 10 | 20 | 30 | 40 |     |  |
| 12000        | FUEL<br>KG     | 42  | 47  | 50  | 53  | 56 | 59 | 62 | 68 | 81 | 104 |  |
|              | DISTANCE<br>NM | 9   | 10  | 11  | 12  | 12 | 13 | 14 | 16 | 21 | 31  |  |
|              | TIME<br>MIN    | 4   | 4   | 4   | 4   | 5  | 5  | 5  | 6  | 7  | 10  |  |
| 11500        | FUEL<br>KG     | 39  | 44  | 46  | 49  | 52 | 55 | 58 | 63 | 74 | 94  |  |
|              | DISTANCE<br>NM | 8   | 9   | 10  | 11  | 12 | 12 | 13 | 15 | 20 | 28  |  |
|              | TIME<br>MIN    | 3   | 4   | 4   | 4   | 4  | 5  | 5  | 5  | 7  | 9   |  |
| 11000        | FUEL<br>KG     | 36  | 41  | 43  | 46  | 48 | 51 | 54 | 58 | 68 | 86  |  |
|              | DISTANCE<br>NM | 7   | 9   | 9   | 10  | 11 | 11 | 12 | 14 | 18 | 25  |  |
|              | TIME<br>MIN    | 3   | 3   | 4   | 4   | 4  | 4  | 4  | 5  | 6  | 9   |  |
| 10500        | FUEL<br>KG     | 34  | 38  | 40  | 43  | 45 | 47 | 50 | 54 | 63 | 78  |  |
|              | DISTANCE<br>NM | 7   | 8   | 9   | 9   | 10 | 11 | 11 | 13 | 17 | 23  |  |
|              | TIME<br>MIN    | 3   | 3   | 3   | 4   | 4  | 4  | 4  | 5  | 6  | 8   |  |
| 10000        | FUEL<br>KG     | 32  | 36  | 38  | 40  | 42 | 44 | 46 | 50 | 58 | 71  |  |
|              | DISTANCE<br>NM | 6   | 8   | 8   | 9   | 9  | 10 | 11 | 12 | 15 | 21  |  |
|              | TIME<br>MIN    | 3   | 3   | 3   | 3   | 4  | 4  | 4  | 4  | 5  | 7   |  |
| 9500         | FUEL<br>KG     | 30  | 33  | 35  | 37  | 39 | 41 | 43 | 47 | 54 | 65  |  |
|              | DISTANCE<br>NM | 6   | 7   | 8   | 8   | 9  | 10 | 11 | 14 | 19 | 26  |  |
|              | TIME<br>MIN    | 3   | 3   | 3   | 3   | 3  | 4  | 4  | 4  | 5  | 6   |  |
| 9000         | FUEL<br>KG     | 28  | 31  | 33  | 35  | 36 | 38 | 40 | 43 | 50 | 60  |  |
|              | DISTANCE<br>NM | 6   | 7   | 7   | 8   | 9  | 9  | 10 | 13 | 18 | 26  |  |
|              | TIME<br>MIN    | 2   | 3   | 3   | 3   | 3  | 3  | 4  | 4  | 5  | 6   |  |
| 8500         | FUEL<br>KG     | 26  | 29  | 30  | 32  | 34 | 35 | 37 | 40 | 46 | 55  |  |
|              | DISTANCE<br>NM | 5   | 6   | 6   | 7   | 8  | 8  | 10 | 12 | 16 | 18  |  |
|              | TIME<br>MIN    | 2   | 2   | 3   | 3   | 3  | 3  | 3  | 4  | 4  | 5   |  |
| 8000         | FUEL<br>KG     | 24  | 27  | 28  | 30  | 31 | 33 | 34 | 37 | 42 | 50  |  |
|              | DISTANCE<br>NM | 5   | 6   | 6   | 6   | 7  | 8  | 9  | 11 | 15 | 18  |  |
|              | TIME<br>MIN    | 2   | 2   | 2   | 2   | 3  | 3  | 3  | 4  | 4  | 5   |  |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CLIMB PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**ALTITUDE: SEA LEVEL TO 10000 FT**
**CRUISE CONFIGURATION**

 NP: 100% OR  
 100% UP TO 12000 FT AND  
 90% ABOVE 12000 FT

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

 SPEED SCHEDULE: 155 KIAS FROM SL TO 20000 FT,  
 DECREASING TO 135 KIAS AT  
 32000 FT

**WEIGHT  
KG**
**ISA + °C**

|       |          |     | -50 | -40 | -30 | -20 | -10 | 0  | 10 | 20 | 30 | 40  |
|-------|----------|-----|-----|-----|-----|-----|-----|----|----|----|----|-----|
| 12000 | FUEL     | KG  | 49  | 52  | 55  | 58  | 62  | 65 | 69 | 76 | 91 | 117 |
|       | DISTANCE | NM  | 10  | 11  | 12  | 13  | 14  | 15 | 16 | 19 | 25 | 35  |
|       | TIME     | MIN | 4   | 4   | 5   | 5   | 5   | 5  | 6  | 6  | 8  | 12  |
| 11500 | FUEL     | KG  | 46  | 49  | 51  | 54  | 57  | 61 | 64 | 70 | 83 | 106 |
|       | DISTANCE | NM  | 10  | 10  | 11  | 12  | 13  | 14 | 15 | 17 | 23 | 32  |
|       | TIME     | MIN | 4   | 4   | 4   | 5   | 5   | 5  | 5  | 6  | 8  | 11  |
| 11000 | FUEL     | KG  | 43  | 45  | 48  | 51  | 54  | 56 | 59 | 65 | 77 | 96  |
|       | DISTANCE | NM  | 9   | 10  | 10  | 11  | 12  | 13 | 14 | 16 | 21 | 29  |
|       | TIME     | MIN | 4   | 4   | 4   | 4   | 4   | 5  | 5  | 6  | 7  | 10  |
| 10500 | FUEL     | KG  | 40  | 42  | 45  | 47  | 50  | 53 | 55 | 60 | 71 | 88  |
|       | DISTANCE | NM  | 8   | 9   | 10  | 10  | 11  | 12 | 13 | 15 | 19 | 26  |
|       | TIME     | MIN | 3   | 4   | 4   | 4   | 4   | 5  | 5  | 5  | 7  | 9   |
| 10000 | FUEL     | KG  | 37  | 40  | 42  | 44  | 46  | 49 | 51 | 56 | 65 | 80  |
|       | DISTANCE | NM  | 8   | 8   | 9   | 10  | 10  | 11 | 12 | 14 | 18 | 24  |
|       | TIME     | MIN | 3   | 3   | 4   | 4   | 4   | 4  | 5  | 6  | 6  | 8   |
| 9500  | FUEL     | KG  | 35  | 37  | 39  | 41  | 43  | 45 | 48 | 52 | 60 | 73  |
|       | DISTANCE | NM  | 7   | 8   | 8   | 9   | 10  | 10 | 11 | 13 | 16 | 22  |
|       | TIME     | MIN | 3   | 3   | 3   | 4   | 4   | 4  | 4  | 6  | 6  | 7   |
| 9000  | FUEL     | KG  | 32  | 34  | 36  | 38  | 40  | 42 | 44 | 48 | 55 | 67  |
|       | DISTANCE | NM  | 7   | 7   | 8   | 8   | 9   | 10 | 10 | 12 | 15 | 20  |
|       | TIME     | MIN | 3   | 3   | 3   | 3   | 4   | 4  | 4  | 5  | 5  | 7   |
| 8500  | FUEL     | KG  | 30  | 32  | 34  | 36  | 37  | 39 | 41 | 45 | 51 | 61  |
|       | DISTANCE | NM  | 6   | 7   | 7   | 8   | 8   | 9  | 10 | 11 | 14 | 18  |
|       | TIME     | MIN | 3   | 3   | 3   | 3   | 3   | 3  | 3  | 4  | 5  | 6   |
| 8000  | FUEL     | KG  | 28  | 30  | 31  | 33  | 35  | 36 | 38 | 41 | 47 | 56  |
|       | DISTANCE | NM  | 6   | 6   | 7   | 7   | 8   | 8  | 9  | 10 | 13 | 17  |
|       | TIME     | MIN | 2   | 3   | 3   | 3   | 3   | 3  | 3  | 4  | 4  | 6   |

**20 NOVEMBER 1992**



SUPPLEMENTARY PERFORMANCE  
MANUAL

CLIMB PLANNING

ALL ENGINES OPERATING

PW118A ENGINES

ALTITUDE: SEA LEVEL TO 11000 FT

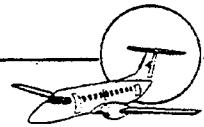
CRUISE CONFIGURATION

NP: 100% OR  
100% UP TO 12000 FT AND  
90% ABOVE 12000 FT

BLEED SWITCH: AUTO  
PACK CONTROL SELECTOR: LOW

SPEED SCHEDULE: 155 KIAS FROM SL TO 20000 FT,  
DECREASING TO 135 KIAS AT  
32000 FT

| WEIGHT<br>KG |                          |                 | ISA + °C      |               |               |               |               |               |               |               |                |                 |  |
|--------------|--------------------------|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|-----------------|--|
|              |                          |                 | -50           | -40           | -30           | -20           | -10           | 0             | 10            | 20            | 30             | 40              |  |
| 12000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 54<br>12<br>5 | 57<br>12<br>5 | 61<br>13<br>5 | 64<br>14<br>5 | 68<br>16<br>6 | 71<br>17<br>6 | 76<br>18<br>6 | 84<br>21<br>7 | 101<br>28<br>9 | 131<br>40<br>13 |  |
| 11500        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 50<br>11<br>4 | 53<br>12<br>5 | 56<br>13<br>5 | 60<br>13<br>5 | 63<br>14<br>5 | 67<br>15<br>6 | 70<br>17<br>6 | 78<br>20<br>7 | 93<br>26<br>9  | 118<br>36<br>12 |  |
| 11000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 47<br>10<br>4 | 50<br>11<br>4 | 53<br>12<br>4 | 56<br>13<br>5 | 59<br>13<br>5 | 62<br>14<br>5 | 65<br>15<br>5 | 72<br>18<br>6 | 85<br>24<br>8  | 107<br>33<br>11 |  |
| 10500        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 44<br>9<br>4  | 46<br>10<br>4 | 49<br>11<br>4 | 52<br>12<br>4 | 55<br>13<br>5 | 58<br>13<br>5 | 61<br>14<br>5 | 67<br>17<br>6 | 78<br>22<br>7  | 97<br>30<br>10  |  |
| 10000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 41<br>9<br>3  | 43<br>9<br>4  | 46<br>10<br>4 | 48<br>11<br>4 | 51<br>12<br>4 | 54<br>12<br>4 | 57<br>13<br>5 | 62<br>15<br>5 | 72<br>20<br>7  | 89<br>27<br>9   |  |
| 9500         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 38<br>8<br>3  | 40<br>9<br>3  | 43<br>9<br>4  | 45<br>10<br>4 | 47<br>11<br>4 | 50<br>12<br>4 | 53<br>12<br>4 | 57<br>14<br>5 | 66<br>18<br>6  | 81<br>25<br>8   |  |
| 9000         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 36<br>7<br>3  | 38<br>8<br>3  | 40<br>9<br>3  | 42<br>9<br>4  | 44<br>10<br>4 | 46<br>11<br>4 | 49<br>11<br>4 | 53<br>13<br>5 | 61<br>17<br>6  | 74<br>23<br>8   |  |
| 8500         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 33<br>7<br>3  | 35<br>7<br>3  | 37<br>8<br>3  | 39<br>9<br>3  | 41<br>9<br>3  | 43<br>10<br>4 | 45<br>11<br>4 | 49<br>12<br>4 | 56<br>16<br>5  | 68<br>21<br>7   |  |
| 8000         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 31<br>6<br>3  | 32<br>7<br>3  | 34<br>7<br>3  | 36<br>8<br>3  | 38<br>9<br>3  | 40<br>9<br>3  | 42<br>10<br>3 | 45<br>11<br>4 | 52<br>14<br>5  | 62<br>19<br>6   |  |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CLIMB PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**ALTITUDE: SEA LEVEL TO 12000 FT**
**CRUISE CONFIGURATION**

 NP: 100% OR  
 100% UP TO 12000 FT AND  
 90% ABOVE 12000 FT

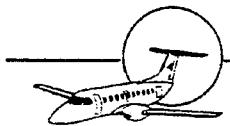
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

 SPEED SCHEDULE: 155 KIAS FROM SL TO 20000 FT,  
 DECREASING TO 135 KIAS AT  
 32000 FT

|       |          |     |    | ISA + °C |     |     |     |     |    |    |     |     |    |
|-------|----------|-----|----|----------|-----|-----|-----|-----|----|----|-----|-----|----|
|       |          |     |    | -50      | -40 | -30 | -20 | -10 | 0  | 10 | 20  | 30  | 40 |
|       | FUEL     | KG  | 59 | 62       | 66  | 70  | 74  | 78  | 83 | 92 | 112 | 146 |    |
|       | DISTANCE | NM  | 13 | 14       | 15  | 16  | 17  | 18  | 20 | 24 | 32  | 46  |    |
|       | TIME     | MIN | 5  | 5        | 6   | 6   | 6   | 7   | 7  | 8  | 11  | 15  |    |
| 12000 | FUEL     | KG  | 55 | 58       | 61  | 65  | 69  | 72  | 77 | 85 | 102 | 131 |    |
| 12000 | DISTANCE | NM  | 12 | 13       | 14  | 15  | 16  | 17  | 18 | 22 | 29  | 41  |    |
| 12000 | TIME     | MIN | 5  | 5        | 5   | 5   | 6   | 6   | 6  | 7  | 10  | 14  |    |
| 11000 | FUEL     | KG  | 51 | 54       | 57  | 61  | 64  | 67  | 71 | 79 | 94  | 118 |    |
| 11000 | DISTANCE | NM  | 11 | 12       | 13  | 14  | 15  | 16  | 17 | 20 | 27  | 37  |    |
| 11000 | TIME     | MIN | 4  | 5        | 5   | 5   | 5   | 6   | 6  | 7  | 9   | 12  |    |
| 10500 | FUEL     | KG  | 48 | 51       | 53  | 57  | 60  | 63  | 66 | 73 | 86  | 107 |    |
| 10500 | DISTANCE | NM  | 10 | 11       | 12  | 13  | 14  | 15  | 16 | 19 | 24  | 34  |    |
| 10500 | TIME     | MIN | 4  | 4        | 5   | 5   | 5   | 6   | 6  | 8  | 11  |     |    |
| 10000 | FUEL     | KG  | 45 | 47       | 50  | 53  | 56  | 58  | 62 | 68 | 79  | 98  |    |
| 10000 | DISTANCE | NM  | 10 | 10       | 11  | 12  | 13  | 14  | 15 | 17 | 22  | 31  |    |
| 10000 | TIME     | MIN | 4  | 4        | 4   | 5   | 5   | 5   | 6  | 8  | 10  |     |    |
| 9500  | FUEL     | KG  | 42 | 44       | 46  | 49  | 52  | 54  | 57 | 63 | 73  | 89  |    |
| 9500  | DISTANCE | NM  | 9  | 10       | 10  | 11  | 12  | 13  | 14 | 16 | 21  | 28  |    |
| 9500  | TIME     | MIN | 4  | 4        | 4   | 4   | 5   | 5   | 5  | 7  | 9   |     |    |
| 9000  | FUEL     | KG  | 39 | 41       | 43  | 46  | 48  | 50  | 53 | 58 | 67  | 81  |    |
| 9000  | DISTANCE | NM  | 8  | 9        | 10  | 10  | 11  | 12  | 13 | 15 | 19  | 25  |    |
| 9000  | TIME     | MIN | 3  | 3        | 4   | 4   | 4   | 4   | 5  | 6  | 8   |     |    |
| 8500  | FUEL     | KG  | 36 | 38       | 40  | 42  | 45  | 47  | 49 | 54 | 62  | 74  |    |
| 8500  | DISTANCE | NM  | 8  | 8        | 9   | 10  | 10  | 11  | 12 | 14 | 17  | 23  |    |
| 8500  | TIME     | MIN | 3  | 3        | 3   | 4   | 4   | 4   | 5  | 6  | 8   |     |    |
| 8000  | FUEL     | KG  | 33 | 35       | 37  | 39  | 41  | 43  | 46 | 50 | 57  | 68  |    |
| 8000  | DISTANCE | NM  | 7  | 8        | 8   | 9   | 9   | 10  | 11 | 13 | 16  | 21  |    |
| 8000  | TIME     | MIN | 3  | 3        | 3   | 3   | 3   | 4   | 4  | 5  | 5   | 7   |    |

**20 NOVEMBER 1992**



**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CLIMB PLANNING**

**ALL ENGINES OPERATING**

**PW118A ENGINES**

**ALTITUDE: SEA LEVEL TO 13000 FT**

**CRUISE CONFIGURATION**

NP: 100% OR  
100% UP TO 12000 FT AND  
90% ABOVE 12000 FT

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**SPEED SCHEDULE:** 155 KIAS FROM SL TO 20000 FT,  
DECREASING TO 135 KIAS AT  
32000 FT

| WEIGHT<br>KG |                          |                 | ISA + °C      |               |               |               |               |               |               |                |                 |                 |  |
|--------------|--------------------------|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|-----------------|-----------------|--|
|              |                          |                 | -50           | -40           | -30           | -20           | -10           | 0             | 10            | 20             | 30              | 40              |  |
| 12000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 63<br>14<br>5 | 67<br>15<br>6 | 72<br>16<br>6 | 76<br>18<br>6 | 80<br>19<br>7 | 85<br>20<br>7 | 90<br>22<br>8 | 101<br>27<br>9 | 123<br>35<br>12 | 161<br>52<br>17 |  |
| 11500        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 59<br>13<br>5 | 63<br>14<br>5 | 67<br>15<br>6 | 71<br>16<br>6 | 75<br>18<br>6 | 79<br>19<br>7 | 84<br>21<br>7 | 93<br>25<br>8  | 112<br>33<br>11 | 144<br>46<br>15 |  |
| 11000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 55<br>12<br>5 | 59<br>13<br>5 | 62<br>14<br>5 | 66<br>15<br>6 | 70<br>16<br>6 | 73<br>18<br>6 | 78<br>19<br>7 | 86<br>23<br>8  | 103<br>30<br>10 | 130<br>42<br>14 |  |
| 10500        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 52<br>11<br>4 | 55<br>12<br>5 | 58<br>13<br>5 | 61<br>14<br>5 | 65<br>15<br>5 | 68<br>16<br>6 | 72<br>18<br>6 | 80<br>21<br>7  | 94<br>27<br>9   | 118<br>38<br>12 |  |
| 10000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 48<br>11<br>4 | 51<br>11<br>4 | 54<br>12<br>5 | 57<br>13<br>5 | 60<br>14<br>5 | 63<br>15<br>5 | 67<br>16<br>6 | 74<br>19<br>7  | 87<br>25<br>8   | 107<br>34<br>11 |  |
| 9500         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 45<br>10<br>4 | 48<br>11<br>4 | 50<br>11<br>4 | 53<br>12<br>5 | 56<br>13<br>5 | 59<br>14<br>5 | 62<br>15<br>5 | 68<br>18<br>6  | 80<br>23<br>8   | 97<br>31<br>10  |  |
| 9000         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 42<br>9<br>4  | 44<br>10<br>4 | 47<br>11<br>4 | 49<br>11<br>4 | 52<br>12<br>4 | 55<br>13<br>5 | 58<br>14<br>5 | 63<br>17<br>6  | 73<br>21<br>7   | 89<br>28<br>9   |  |
| 8500         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 39<br>8<br>3  | 41<br>9<br>4  | 44<br>10<br>4 | 46<br>11<br>4 | 48<br>11<br>4 | 51<br>12<br>4 | 54<br>13<br>5 | 59<br>15<br>5  | 67<br>19<br>6   | 81<br>26<br>8   |  |
| 8000         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 36<br>8<br>3  | 38<br>8<br>3  | 40<br>9<br>3  | 43<br>10<br>4 | 45<br>10<br>4 | 47<br>11<br>4 | 50<br>12<br>4 | 54<br>14<br>5  | 62<br>18<br>6   | 74<br>24<br>8   |  |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CLIMB PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**ALTITUDE: SEA LEVEL TO 14000 FT**
**CRUISE CONFIGURATION**

 NP: 100% OR  
 100% UP TO 12000 FT AND  
 90% ABOVE 12000 FT

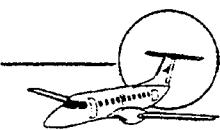
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

 SPEED SCHEDULE: 155 KIAS FROM SL TO 20000 FT,  
 DECREASING TO 135 KIAS AT  
 32000 FT

|       |          |     | ISA + °C |     |     |     |     |    |    |     |     |     |  |
|-------|----------|-----|----------|-----|-----|-----|-----|----|----|-----|-----|-----|--|
|       |          |     | -50      | -40 | -30 | -20 | -10 | 0  | 10 | 20  | 30  | 40  |  |
|       | FUEL     | KG  | 69       | 73  | 78  | 83  | 87  | 92 | 98 | 111 | 134 | 177 |  |
|       | DISTANCE | NM  | 15       | 17  | 18  | 20  | 21  | 23 | 25 | 30  | 40  | 59  |  |
|       | TIME     | MIN | 6        | 6   | 7   | 7   | 8   | 8  | 8  | 10  | 13  | 19  |  |
| 12000 | FUEL     | KG  | 64       | 68  | 72  | 77  | 81  | 86 | 91 | 102 | 123 | 158 |  |
|       | DISTANCE | NM  | 14       | 16  | 17  | 18  | 20  | 21 | 23 | 27  | 37  | 52  |  |
|       | TIME     | MIN | 6        | 6   | 6   | 7   | 7   | 8  | 9  | 12  | 17  |     |  |
| 11500 | FUEL     | KG  | 60       | 64  | 67  | 71  | 76  | 80 | 85 | 94  | 112 | 142 |  |
|       | DISTANCE | NM  | 13       | 15  | 16  | 17  | 18  | 20 | 21 | 25  | 33  | 47  |  |
|       | TIME     | MIN | 5        | 6   | 6   | 6   | 6   | 7  | 8  | 11  | 15  |     |  |
| 11000 | FUEL     | KG  | 56       | 59  | 63  | 66  | 70  | 74 | 79 | 87  | 103 | 128 |  |
|       | DISTANCE | NM  | 12       | 14  | 15  | 16  | 17  | 18 | 20 | 23  | 30  | 42  |  |
|       | TIME     | MIN | 5        | 5   | 5   | 6   | 6   | 7  | 8  | 10  | 14  |     |  |
| 10500 | FUEL     | KG  | 52       | 55  | 59  | 62  | 65  | 69 | 73 | 80  | 94  | 116 |  |
|       | DISTANCE | NM  | 12       | 13  | 14  | 15  | 16  | 17 | 18 | 22  | 28  | 38  |  |
|       | TIME     | MIN | 5        | 5   | 5   | 6   | 6   | 6  | 7  | 9   | 12  |     |  |
| 10000 | FUEL     | KG  | 49       | 51  | 54  | 58  | 61  | 64 | 68 | 74  | 87  | 106 |  |
|       | DISTANCE | NM  | 11       | 12  | 13  | 14  | 15  | 16 | 17 | 20  | 26  | 35  |  |
|       | TIME     | MIN | 4        | 4   | 5   | 5   | 5   | 6  | 7  | 8   | 11  |     |  |
| 9500  | FUEL     | KG  | 45       | 48  | 51  | 54  | 56  | 59 | 63 | 69  | 80  | 97  |  |
|       | DISTANCE | NM  | 10       | 11  | 12  | 13  | 14  | 14 | 16 | 18  | 24  | 32  |  |
|       | TIME     | MIN | 4        | 4   | 4   | 5   | 5   | 5  | 6  | 8   | 10  |     |  |
| 9000  | FUEL     | KG  | 42       | 44  | 47  | 50  | 52  | 55 | 58 | 64  | 73  | 88  |  |
|       | DISTANCE | NM  | 9        | 10  | 11  | 12  | 12  | 13 | 14 | 17  | 22  | 29  |  |
|       | TIME     | MIN | 4        | 4   | 4   | 4   | 4   | 5  | 6  | 7   | 9   | 9   |  |
| 8500  | FUEL     | KG  | 39       | 41  | 44  | 46  | 48  | 51 | 54 | 59  | 67  | 80  |  |
|       | DISTANCE | NM  | 9        | 9   | 10  | 11  | 12  | 12 | 13 | 16  | 20  | 26  |  |
|       | TIME     | MIN | 3        | 4   | 4   | 4   | 4   | 5  | 5  | 7   | 8   |     |  |
| 8000  | FUEL     | KG  | 39       | 41  | 44  | 46  | 48  | 51 | 54 | 59  | 67  | 80  |  |
|       | DISTANCE | NM  | 9        | 9   | 10  | 11  | 12  | 12 | 13 | 16  | 20  | 26  |  |
|       | TIME     | MIN | 3        | 4   | 4   | 4   | 4   | 5  | 5  | 7   | 8   |     |  |

20 NOVEMBER 1992



**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CLIMB PLANNING**

**ALL ENGINES OPERATING**

**PW118A ENGINES**

**ALTITUDE: SEA LEVEL TO 15000 FT**

**CRUISE CONFIGURATION**

NP: 100% OR  
100% UP TO 12000 FT AND  
90% ABOVE 12000 FT  
BLEED SWITCH: AUTO  
PACK CONTROL SELECTOR: LOW

**SPEED SCHEDULE: 155 KIAS FROM SL TO 20000 FT,  
DECREASING TO 135 KIAS AT  
32000 FT**

| WEIGHT<br>KG |                          |                 | ISA + °C      |               |               |               |                |                |                 |                 |                 |                 |  |
|--------------|--------------------------|-----------------|---------------|---------------|---------------|---------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|--|
|              |                          |                 | -40           | -30           | -20           | -10           | 0              | 10             | 20              | 30              | 35              | 40              |  |
|              | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 79<br>18<br>7 | 84<br>20<br>7 | 89<br>22<br>8 | 95<br>23<br>8 | 100<br>25<br>9 | 107<br>27<br>9 | 120<br>33<br>11 | 147<br>45<br>15 | 167<br>45<br>17 | 194<br>54<br>21 |  |
| 12000        |                          |                 |               |               |               |               |                |                |                 |                 |                 |                 |  |
| 11500        |                          |                 |               |               |               |               |                |                |                 |                 |                 |                 |  |
| 11000        |                          |                 |               |               |               |               |                |                |                 |                 |                 |                 |  |
| 10500        |                          |                 |               |               |               |               |                |                |                 |                 |                 |                 |  |
| 10000        |                          |                 |               |               |               |               |                |                |                 |                 |                 |                 |  |
| 9500         |                          |                 |               |               |               |               |                |                |                 |                 |                 |                 |  |
| 9000         |                          |                 |               |               |               |               |                |                |                 |                 |                 |                 |  |
| 8500         |                          |                 |               |               |               |               |                |                |                 |                 |                 |                 |  |
| 8000         |                          |                 |               |               |               |               |                |                |                 |                 |                 |                 |  |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CLIMB PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**ALTITUDE: SEA LEVEL TO 16000 FT**

## CRUISE CONFIGURATION

 NP: 100% OR  
 100% UP TO 12000 FT AND  
 90% ABOVE 12000 FT

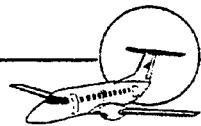
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

 SPEED SCHEDULE: 155 KIAS FROM SL TO 20000 FT,  
 DECREASING TO 135 KIAS AT  
 32000 FT

| WEIGHT<br>KG |                          |                 | ISA + °C      |               |               |                |                |                 |                 |                 |                 |                 |
|--------------|--------------------------|-----------------|---------------|---------------|---------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|              |                          |                 | -40           | -30           | -20           | -10            | 0              | 10              | 20              | 30              | 35              | 40              |
| 12000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 85<br>20<br>8 | 90<br>22<br>8 | 96<br>24<br>8 | 102<br>26<br>9 | 108<br>28<br>9 | 115<br>30<br>10 | 131<br>37<br>12 | 160<br>50<br>16 | 183<br>60<br>19 | 214<br>75<br>23 |
| 11500        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 79<br>19<br>7 | 84<br>20<br>7 | 89<br>22<br>8 | 95<br>24<br>8  | 100<br>26<br>9 | 107<br>28<br>9  | 120<br>34<br>11 | 145<br>46<br>15 | 164<br>54<br>17 | 189<br>66<br>21 |
| 11000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 73<br>17<br>7 | 78<br>19<br>7 | 83<br>20<br>8 | 88<br>22<br>8  | 93<br>24<br>8  | 99<br>26<br>9   | 110<br>31<br>10 | 132<br>41<br>13 | 148<br>49<br>15 | 169<br>58<br>18 |
| 10500        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 68<br>16<br>6 | 73<br>18<br>6 | 77<br>19<br>7 | 81<br>20<br>8  | 86<br>22<br>8  | 91<br>24<br>8   | 102<br>29<br>9  | 121<br>38<br>12 | 134<br>44<br>14 | 152<br>52<br>17 |
| 10000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 64<br>15<br>6 | 67<br>16<br>6 | 72<br>18<br>7 | 76<br>19<br>7  | 80<br>20<br>7  | 85<br>22<br>7   | 94<br>26<br>9   | 110<br>34<br>11 | 122<br>40<br>13 | 137<br>47<br>15 |
| 9500         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 59<br>14<br>5 | 63<br>15<br>6 | 66<br>16<br>6 | 70<br>18<br>6  | 74<br>19<br>6  | 79<br>20<br>7   | 87<br>24<br>8   | 101<br>31<br>10 | 111<br>36<br>12 | 124<br>43<br>13 |
| 9000         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 55<br>13<br>5 | 58<br>14<br>5 | 62<br>15<br>5 | 65<br>16<br>6  | 69<br>17<br>6  | 73<br>19<br>6   | 80<br>22<br>7   | 93<br>29<br>9   | 102<br>33<br>11 | 113<br>39<br>12 |
| 8500         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 51<br>12<br>5 | 54<br>13<br>5 | 57<br>14<br>5 | 60<br>15<br>5  | 64<br>16<br>6  | 67<br>17<br>6   | 74<br>21<br>7   | 85<br>26<br>9   | 93<br>30<br>10  | 103<br>35<br>11 |
| 8000         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 47<br>11<br>4 | 50<br>12<br>4 | 53<br>13<br>5 | 56<br>14<br>5  | 59<br>15<br>5  | 62<br>16<br>5   | 68<br>19<br>6   | 78<br>24<br>8   | 85<br>28<br>9   | 94<br>32<br>10  |

20 NOVEMBER 1992



SUPPLEMENTARY PERFORMANCE  
MANUAL

**CLIMB PLANNING**

ALL ENGINES OPERATING

PW118A ENGINES

ALTITUDE: SEA LEVEL TO 17000 FT

CRUISE CONFIGURATION  
NP: 100% OR  
100% UP TO 12000 FT AND  
90% ABOVE 12000 FT  
BLEED SWITCH: AUTO  
PACK CONTROL SELECTOR: LOW

SPEED SCHEDULE: 155 KIAS FROM SL TO 20000 FT,  
DECREASING TO 135 KIAS AT  
32000 FT

| WEIGHT<br>KG             | ISA + °C        |    |    |     |     |     |     |     |     |     |     |  |
|--------------------------|-----------------|----|----|-----|-----|-----|-----|-----|-----|-----|-----|--|
|                          | -40             |    |    | -30 |     |     | -20 |     |     | -10 |     |  |
| FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 91 | 97 | 103 | 109 | 116 | 124 | 142 | 175 | 200 | 236 |  |
| 12000                    |                 | 22 | 24 | 26  | 28  | 30  | 34  | 41  | 57  | 68  | 85  |  |
|                          |                 | 8  | 9  | 9   | 10  | 10  | 11  | 13  | 18  | 21  | 26  |  |
| 11500                    |                 | 84 | 90 | 95  | 101 | 107 | 115 | 130 | 158 | 179 | 207 |  |
|                          |                 | 20 | 22 | 24  | 26  | 28  | 31  | 38  | 51  | 61  | 74  |  |
|                          |                 | 8  | 8  | 8   | 9   | 9   | 10  | 12  | 16  | 19  | 23  |  |
| 11000                    |                 | 78 | 83 | 89  | 94  | 99  | 106 | 119 | 143 | 161 | 184 |  |
|                          |                 | 19 | 21 | 22  | 24  | 26  | 28  | 35  | 46  | 54  | 66  |  |
|                          |                 | 7  | 7  | 8   | 8   | 9   | 9   | 11  | 15  | 17  | 20  |  |
| 10500                    |                 | 73 | 77 | 82  | 87  | 92  | 98  | 110 | 130 | 145 | 165 |  |
|                          |                 | 18 | 19 | 21  | 22  | 24  | 26  | 32  | 42  | 49  | 58  |  |
|                          |                 | 7  | 7  | 7   | 8   | 8   | 9   | 10  | 13  | 15  | 18  |  |
| 10000                    |                 | 68 | 72 | 76  | 81  | 86  | 91  | 101 | 119 | 132 | 148 |  |
|                          |                 | 16 | 18 | 19  | 21  | 22  | 24  | 29  | 38  | 44  | 52  |  |
|                          |                 | 6  | 6  | 7   | 7   | 8   | 8   | 9   | 12  | 14  | 16  |  |
| 9500                     |                 | 63 | 67 | 71  | 75  | 79  | 84  | 93  | 109 | 120 | 134 |  |
|                          |                 | 15 | 16 | 18  | 19  | 21  | 22  | 27  | 35  | 40  | 47  |  |
|                          |                 | 6  | 6  | 7   | 7   | 7   | 9   | 11  | 13  | 13  | 15  |  |
| 9000                     |                 | 59 | 62 | 66  | 70  | 73  | 78  | 86  | 100 | 109 | 122 |  |
|                          |                 | 14 | 15 | 16  | 18  | 19  | 21  | 25  | 32  | 37  | 43  |  |
|                          |                 | 5  | 6  | 6   | 6   | 6   | 7   | 8   | 10  | 12  | 13  |  |
| 8500                     |                 | 54 | 58 | 61  | 64  | 68  | 72  | 79  | 92  | 100 | 111 |  |
|                          |                 | 13 | 14 | 15  | 16  | 18  | 19  | 23  | 29  | 33  | 39  |  |
|                          |                 | 5  | 5  | 5   | 6   | 6   | 7   | 9   | 11  | 11  | 12  |  |
| 8000                     |                 | 50 | 53 | 56  | 60  | 63  | 67  | 73  | 84  | 91  | 101 |  |
|                          |                 | 12 | 13 | 14  | 15  | 16  | 18  | 21  | 27  | 30  | 35  |  |
|                          |                 | 5  | 5  | 5   | 5   | 6   | 6   | 7   | 8   | 10  | 11  |  |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CLIMB PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**ALTITUDE: SEA LEVEL TO 18000 FT**
**CRUISE CONFIGURATION**

 NP: 100% OR  
 100% UP TO 12000 FT AND  
 90% ABOVE 12000 FT

BLEED SWITCH: AUTO

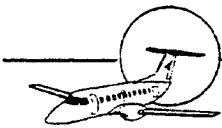
PACK CONTROL SELECTOR: LOW

 SPEED SCHEDULE: 155 KIAS FROM SL TO 20000 FT,  
 DECREASING TO 135 KIAS AT  
 32000 FT

**WEIGHT  
KG**
**ISA + °C**

|       |                          |                 | -40           | -30            | -20             | -10             | 0               | 10              | 20              | 30              | 35              | 40              |
|-------|--------------------------|-----------------|---------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| 12000 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 96<br>24<br>9 | 103<br>26<br>9 | 110<br>28<br>10 | 117<br>31<br>10 | 124<br>33<br>11 | 134<br>37<br>12 | 153<br>46<br>15 | 190<br>63<br>20 | 219<br>77<br>24 | 261<br>97<br>30 |
| 11500 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 90<br>22<br>8 | 96<br>24<br>9  | 102<br>26<br>9  | 108<br>28<br>10 | 115<br>31<br>10 | 123<br>34<br>11 | 140<br>42<br>13 | 171<br>57<br>18 | 195<br>68<br>21 | 228<br>84<br>26 |
| 11000 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 83<br>21<br>8 | 89<br>22<br>8  | 94<br>24<br>8   | 100<br>26<br>9  | 106<br>28<br>9  | 114<br>31<br>10 | 128<br>38<br>12 | 155<br>51<br>16 | 174<br>61<br>19 | 201<br>74<br>23 |
| 10500 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 78<br>19<br>7 | 82<br>21<br>7  | 88<br>22<br>8   | 93<br>24<br>8   | 98<br>26<br>9   | 105<br>29<br>9  | 118<br>35<br>11 | 141<br>46<br>15 | 157<br>54<br>17 | 179<br>65<br>20 |
| 10000 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 72<br>18<br>7 | 77<br>19<br>7  | 81<br>21<br>7   | 86<br>22<br>8   | 91<br>24<br>8   | 97<br>27<br>9   | 108<br>32<br>10 | 128<br>42<br>13 | 142<br>49<br>15 | 161<br>58<br>18 |
| 9500  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 67<br>16<br>6 | 71<br>18<br>6  | 76<br>19<br>7   | 80<br>21<br>7   | 85<br>22<br>8   | 90<br>25<br>8   | 100<br>30<br>9  | 117<br>38<br>12 | 129<br>44<br>14 | 145<br>52<br>16 |
| 9000  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 62<br>15<br>6 | 66<br>16<br>6  | 70<br>18<br>6   | 74<br>19<br>7   | 78<br>21<br>7   | 83<br>23<br>7   | 92<br>27<br>9   | 107<br>35<br>11 | 118<br>40<br>13 | 131<br>47<br>15 |
| 8500  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 58<br>14<br>5 | 61<br>15<br>5  | 65<br>16<br>6   | 69<br>18<br>6   | 72<br>19<br>6   | 77<br>21<br>7   | 85<br>25<br>8   | 98<br>32<br>10  | 107<br>37<br>11 | 119<br>43<br>13 |
| 8000  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 54<br>13<br>5 | 57<br>14<br>5  | 60<br>15<br>5   | 63<br>16<br>6   | 67<br>18<br>6   | 71<br>19<br>6   | 78<br>23<br>7   | 90<br>29<br>9   | 98<br>33<br>10  | 108<br>39<br>12 |

**20 NOVEMBER 1992**



SUPPLEMENTARY PERFORMANCE  
MANUAL

**CLIMB PLANNING**

ALL ENGINES OPERATING

PW118A ENGINES

ALTITUDE: SEA LEVEL TO 19000 FT

CRUISE CONFIGURATION

NP: 100% OR  
100% UP TO 12000 FT AND  
90% ABOVE 12000 FT

BLEED SWITCH: AUTO  
PACK CONTROL SELECTOR: LOW

SPEED SCHEDULE: 155 KIAS FROM SL TO 20000 FT,  
DECREASING TO 135 KIAS AT  
32000 FT

| WEIGHT<br>KG |                          |                 | ISA + °C       |                 |                 |                 |                 |                 |                 |                 |                 |                  |  |
|--------------|--------------------------|-----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|--|
|              |                          |                 | -40            | -30             | -20             | -10             | 0               | 10              | 20              | 30              | 35              | 40               |  |
| 12000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 102<br>26<br>9 | 110<br>28<br>10 | 117<br>31<br>11 | 125<br>33<br>11 | 133<br>36<br>12 | 144<br>41<br>13 | 166<br>51<br>16 | 208<br>72<br>22 | 242<br>88<br>27 | 292<br>113<br>34 |  |
| 11500        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 95<br>24<br>9  | 102<br>26<br>9  | 108<br>28<br>10 | 115<br>31<br>10 | 123<br>33<br>11 | 132<br>37<br>12 | 151<br>46<br>15 | 186<br>64<br>20 | 213<br>77<br>24 | 252<br>96<br>29  |  |
| 11000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 88<br>22<br>8  | 94<br>24<br>9   | 100<br>26<br>9  | 107<br>28<br>10 | 113<br>31<br>10 | 122<br>34<br>11 | 138<br>42<br>13 | 167<br>57<br>18 | 190<br>68<br>21 | 220<br>84<br>25  |  |
| 10500        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 82<br>21<br>7  | 88<br>22<br>8   | 93<br>24<br>8   | 99<br>26<br>9   | 105<br>28<br>9  | 113<br>32<br>10 | 126<br>39<br>12 | 152<br>51<br>16 | 170<br>61<br>19 | 195<br>73<br>22  |  |
| 10000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 76<br>19<br>7  | 81<br>21<br>7   | 86<br>22<br>8   | 92<br>24<br>8   | 97<br>26<br>9   | 104<br>29<br>9  | 116<br>35<br>11 | 138<br>47<br>14 | 153<br>55<br>17 | 174<br>65<br>20  |  |
| 9500         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 71<br>18<br>6  | 75<br>19<br>7   | 80<br>21<br>7   | 85<br>22<br>8   | 90<br>24<br>8   | 96<br>27<br>9   | 107<br>32<br>10 | 126<br>42<br>13 | 139<br>49<br>15 | 156<br>58<br>18  |  |
| 9000         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 66<br>16<br>6  | 70<br>18<br>6   | 74<br>19<br>7   | 79<br>21<br>7   | 83<br>22<br>7   | 89<br>25<br>8   | 98<br>30<br>9   | 115<br>38<br>12 | 126<br>45<br>14 | 141<br>52<br>16  |  |
| 8500         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 61<br>15<br>6  | 65<br>16<br>6   | 69<br>18<br>6   | 73<br>19<br>7   | 77<br>21<br>7   | 82<br>23<br>7   | 90<br>27<br>9   | 105<br>35<br>11 | 115<br>40<br>12 | 128<br>47<br>14  |  |
| 8000         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 57<br>14<br>5  | 60<br>15<br>5   | 64<br>16<br>6   | 67<br>18<br>6   | 71<br>19<br>6   | 76<br>21<br>7   | 83<br>25<br>8   | 96<br>32<br>10  | 105<br>37<br>11 | 116<br>43<br>13  |  |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CLIMB PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**ALTITUDE: SEA LEVEL TO 20000 FT**
**CRUISE CONFIGURATION**

NP: 100% OR  
100% UP TO 12000 FT AND  
90% ABOVE 12000 FT

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

SPEED SCHEDULE: 155 KIAS FROM SL TO 20000 FT,  
DECREASING TO 135 KIAS AT  
32000 FT

**WEIGHT  
KG**
**ISA + °C**

|       |          |     | -30 | -20 | -10 | -5  | 0   | 10  | 20  | 30  | 35  | 40  |
|-------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 12000 | FUEL     | KG  | 116 | 124 | 133 | 137 | 142 | 155 | 179 | 227 | 268 | 333 |
|       | DISTANCE | NM  | 30  | 33  | 36  | 38  | 39  | 45  | 57  | 81  | 102 | 135 |
|       | TIME     | MIN | 11  | 11  | 12  | 12  | 13  | 14  | 18  | 25  | 30  | 40  |
| 11500 | FUEL     | KG  | 108 | 115 | 123 | 126 | 131 | 142 | 163 | 202 | 234 | 280 |
|       | DISTANCE | NM  | 28  | 31  | 33  | 35  | 36  | 41  | 52  | 71  | 88  | 112 |
|       | TIME     | MIN | 10  | 10  | 11  | 11  | 12  | 13  | 16  | 22  | 26  | 33  |
| 11000 | FUEL     | KG  | 100 | 106 | 113 | 117 | 121 | 130 | 148 | 181 | 207 | 242 |
|       | DISTANCE | NM  | 26  | 28  | 31  | 32  | 33  | 38  | 47  | 64  | 77  | 95  |
|       | TIME     | MIN | 9   | 10  | 10  | 11  | 11  | 12  | 15  | 19  | 23  | 28  |
| 10500 | FUEL     | KG  | 93  | 99  | 105 | 108 | 112 | 120 | 136 | 163 | 184 | 213 |
|       | DISTANCE | NM  | 24  | 26  | 28  | 29  | 31  | 35  | 43  | 57  | 68  | 83  |
|       | TIME     | MIN | 8   | 9   | 10  | 10  | 10  | 11  | 13  | 17  | 21  | 25  |
| 10000 | FUEL     | KG  | 86  | 92  | 97  | 100 | 103 | 111 | 124 | 148 | 166 | 189 |
|       | DISTANCE | NM  | 22  | 24  | 26  | 27  | 28  | 32  | 39  | 51  | 61  | 73  |
|       | TIME     | MIN | 8   | 8   | 9   | 9   | 9   | 10  | 12  | 16  | 18  | 22  |
| 9500  | FUEL     | KG  | 80  | 85  | 90  | 93  | 95  | 102 | 114 | 135 | 150 | 169 |
|       | DISTANCE | NM  | 21  | 22  | 24  | 25  | 26  | 29  | 36  | 47  | 55  | 65  |
|       | TIME     | MIN | 7   | 8   | 8   | 8   | 9   | 9   | 11  | 14  | 17  | 20  |
| 9000  | FUEL     | KG  | 74  | 79  | 83  | 86  | 88  | 94  | 105 | 123 | 135 | 152 |
|       | DISTANCE | NM  | 19  | 21  | 22  | 23  | 24  | 27  | 33  | 42  | 49  | 58  |
|       | TIME     | MIN | 7   | 7   | 8   | 8   | 8   | 9   | 10  | 13  | 15  | 18  |
| 8500  | FUEL     | KG  | 69  | 73  | 77  | 79  | 82  | 87  | 96  | 112 | 123 | 137 |
|       | DISTANCE | NM  | 18  | 19  | 21  | 21  | 22  | 25  | 30  | 39  | 45  | 52  |
|       | TIME     | MIN | 6   | 7   | 7   | 7   | 7   | 8   | 9   | 12  | 14  | 16  |
| 8000  | FUEL     | KG  | 63  | 67  | 71  | 73  | 75  | 80  | 88  | 102 | 112 | 124 |
|       | DISTANCE | NM  | 16  | 18  | 19  | 20  | 21  | 23  | 27  | 35  | 40  | 47  |
|       | TIME     | MIN | 6   | 6   | 6   | 7   | 7   | 7   | 9   | 11  | 12  | 14  |

**20 NOVEMBER 1992**



**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CLIMB PLANNING**

**ALL ENGINES OPERATING**

**PW118A ENGINES**

**ALTITUDE: SEA LEVEL TO 21000 FT**

**CRUISE CONFIGURATION**

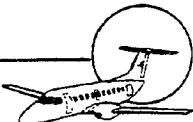
NP: 100% OR  
 100% UP TO 12000 FT AND  
 90% ABOVE 12000 FT

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**SPEED SCHEDULE:** 155 KIAS FROM SL TO 20000 FT,  
 DECREASING TO 135 KIAS AT  
 32000 FT

| WEIGHT<br>KG   | ISA + °C |     |     |     |     |     |     |     |     |     |    |    |
|----------------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|
|                |          |     | -30 | -20 | -10 | -5  | 0   | 10  | 20  | 30  | 35 | 40 |
| FUEL<br>KG     | 123      | 132 | 141 | 146 | 151 | 166 | 194 | 250 | 301 | 388 |    |    |
| DISTANCE<br>NM | 33       | 36  | 39  | 41  | 43  | 50  | 64  | 92  | 119 | 165 |    |    |
| TIME<br>MIN    | 11       | 12  | 13  | 13  | 14  | 16  | 20  | 28  | 35  | 48  |    |    |
| FUEL<br>KG     | 114      | 122 | 130 | 134 | 139 | 152 | 175 | 220 | 258 | 316 |    |    |
| DISTANCE<br>NM | 30       | 33  | 36  | 37  | 39  | 45  | 57  | 81  | 100 | 132 |    |    |
| TIME<br>MIN    | 10       | 11  | 12  | 12  | 13  | 14  | 18  | 24  | 30  | 38  |    |    |
| FUEL<br>KG     | 106      | 113 | 120 | 124 | 128 | 139 | 159 | 196 | 226 | 269 |    |    |
| DISTANCE<br>NM | 28       | 30  | 33  | 35  | 36  | 41  | 52  | 71  | 87  | 110 |    |    |
| TIME<br>MIN    | 10       | 10  | 11  | 11  | 12  | 13  | 16  | 21  | 26  | 32  |    |    |
| FUEL<br>KG     | 98       | 104 | 111 | 115 | 118 | 128 | 145 | 176 | 200 | 233 |    |    |
| DISTANCE<br>NM | 26       | 28  | 30  | 32  | 33  | 38  | 47  | 64  | 76  | 94  |    |    |
| TIME<br>MIN    | 9        | 10  | 10  | 10  | 11  | 12  | 15  | 19  | 23  | 28  |    |    |
| FUEL<br>KG     | 91       | 97  | 103 | 106 | 109 | 118 | 133 | 159 | 179 | 205 |    |    |
| DISTANCE<br>NM | 24       | 26  | 28  | 29  | 31  | 35  | 43  | 57  | 68  | 82  |    |    |
| TIME<br>MIN    | 8        | 9   | 9   | 10  | 10  | 11  | 13  | 17  | 20  | 24  |    |    |
| FUEL<br>KG     | 84       | 90  | 95  | 98  | 101 | 109 | 122 | 144 | 161 | 183 |    |    |
| DISTANCE<br>NM | 22       | 24  | 26  | 27  | 28  | 32  | 39  | 51  | 61  | 73  |    |    |
| TIME<br>MIN    | 8        | 8   | 9   | 9   | 9   | 10  | 12  | 16  | 18  | 22  |    |    |
| FUEL<br>KG     | 78       | 83  | 88  | 91  | 93  | 100 | 112 | 131 | 145 | 163 |    |    |
| DISTANCE<br>NM | 20       | 22  | 24  | 25  | 26  | 29  | 36  | 47  | 54  | 65  |    |    |
| TIME<br>MIN    | 7        | 8   | 8   | 8   | 9   | 9   | 11  | 14  | 16  | 19  |    |    |
| FUEL<br>KG     | 72       | 77  | 81  | 84  | 86  | 92  | 102 | 120 | 132 | 147 |    |    |
| DISTANCE<br>NM | 19       | 20  | 22  | 23  | 24  | 27  | 33  | 42  | 49  | 58  |    |    |
| TIME<br>MIN    | 7        | 7   | 7   | 8   | 8   | 9   | 10  | 13  | 15  | 17  |    |    |
| FUEL<br>KG     | 67       | 71  | 75  | 77  | 80  | 85  | 94  | 109 | 119 | 133 |    |    |
| DISTANCE<br>NM | 17       | 19  | 20  | 21  | 22  | 25  | 30  | 38  | 44  | 52  |    |    |
| TIME<br>MIN    | 6        | 6   | 7   | 7   | 7   | 8   | 9   | 12  | 13  | 16  |    |    |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CLIMB PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**ALTITUDE: SEA LEVEL TO 22000 FT**
**CRUISE CONFIGURATION**

NP: 100% OR  
100% UP TO 12000 FT AND  
90% ABOVE 12000 FT

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

SPEED SCHEDULE: 155 KIAS FROM SL TO 20000 FT,  
DECREASING TO 135 KIAS AT  
32000 FT

|       |          |     | ISA + °C |     |     |     |     |     |     |     |     |     |
|-------|----------|-----|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|       |          |     | -30      | -20 | -10 | -5  | 0   | 10  | 20  | 30  | 35  | 40  |
|       | FUEL     | KG  | 130      | 139 | 149 | 155 | 161 | 178 | 210 | 276 | 341 | 472 |
|       | DISTANCE | NM  | 35       | 38  | 42  | 44  | 47  | 55  | 72  | 106 | 141 | 214 |
|       | TIME     | MIN | 12       | 13  | 14  | 14  | 15  | 17  | 22  | 31  | 41  | 61  |
| 12000 | FUEL     | KG  | 120      | 129 | 138 | 143 | 148 | 162 | 189 | 241 | 287 | 363 |
| 11500 | DISTANCE | NM  | 32       | 35  | 39  | 41  | 43  | 50  | 64  | 91  | 116 | 158 |
| 11500 | TIME     | MIN | 11       | 12  | 13  | 13  | 14  | 16  | 19  | 27  | 34  | 45  |
| 11000 | FUEL     | KG  | 111      | 119 | 127 | 131 | 136 | 149 | 171 | 213 | 247 | 300 |
| 11000 | DISTANCE | NM  | 30       | 33  | 36  | 37  | 39  | 45  | 57  | 80  | 99  | 128 |
| 11000 | TIME     | MIN | 10       | 11  | 12  | 12  | 13  | 14  | 18  | 24  | 29  | 37  |
| 10500 | FUEL     | KG  | 103      | 110 | 117 | 121 | 126 | 136 | 155 | 190 | 217 | 256 |
| 10500 | DISTANCE | NM  | 28       | 30  | 33  | 34  | 36  | 42  | 52  | 71  | 86  | 108 |
| 10500 | TIME     | MIN | 10       | 10  | 11  | 11  | 12  | 13  | 16  | 21  | 25  | 31  |
| 10000 | FUEL     | KG  | 96       | 102 | 109 | 112 | 116 | 125 | 142 | 171 | 193 | 223 |
| 10000 | DISTANCE | NM  | 26       | 28  | 30  | 32  | 33  | 38  | 47  | 63  | 76  | 93  |
| 10000 | TIME     | MIN | 9        | 9   | 10  | 10  | 11  | 12  | 14  | 19  | 22  | 27  |
| 9500  | FUEL     | KG  | 89       | 94  | 100 | 104 | 107 | 115 | 130 | 154 | 173 | 197 |
| 9500  | DISTANCE | NM  | 24       | 26  | 28  | 29  | 31  | 35  | 43  | 57  | 67  | 81  |
| 9500  | TIME     | MIN | 8        | 9   | 9   | 10  | 10  | 11  | 13  | 17  | 20  | 24  |
| 9000  | FUEL     | KG  | 82       | 87  | 93  | 96  | 99  | 106 | 119 | 140 | 156 | 176 |
| 9000  | DISTANCE | NM  | 22       | 24  | 26  | 27  | 28  | 32  | 39  | 51  | 60  | 72  |
| 9000  | TIME     | MIN | 8        | 8   | 9   | 9   | 10  | 12  | 15  | 18  | 21  | 21  |
| 8500  | FUEL     | KG  | 76       | 81  | 86  | 88  | 91  | 98  | 109 | 127 | 140 | 158 |
| 8500  | DISTANCE | NM  | 20       | 22  | 24  | 25  | 26  | 29  | 36  | 46  | 54  | 64  |
| 8500  | TIME     | MIN | 7        | 7   | 8   | 8   | 9   | 11  | 14  | 16  | 19  | 19  |
| 8000  | FUEL     | KG  | 70       | 75  | 79  | 81  | 84  | 90  | 100 | 116 | 127 | 142 |
| 8000  | DISTANCE | NM  | 19       | 20  | 22  | 23  | 24  | 27  | 33  | 42  | 49  | 57  |
| 8000  | TIME     | MIN | 6        | 7   | 7   | 8   | 9   | 10  | 13  | 15  | 17  | 17  |

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SUPPLEMENTARY PERFORMANCE  
MANUAL

CLIMB PLANNING

ALL ENGINES OPERATING

PW118A ENGINES

ALTITUDE: SEA LEVEL TO 23000 FT

CRUISE CONFIGURATION

NP: 100% OR  
100% UP TO 12000 FT AND  
90% ABOVE 12000 FT

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

SPEED SCHEDULE: 155 KIAS FROM SL TO 20000 FT,  
DECREASING TO 135 KIAS AT  
32000 FT

| WEIGHT<br>KG | ISA + °C       |             |            |                |             |            |                |             |            |                |             |            |
|--------------|----------------|-------------|------------|----------------|-------------|------------|----------------|-------------|------------|----------------|-------------|------------|
|              | -30            |             |            | -20            |             |            | -10            |             |            | -5             |             |            |
| FUEL<br>KG   | DISTANCE<br>NM | TIME<br>MIN | FUEL<br>KG | DISTANCE<br>NM | TIME<br>MIN | FUEL<br>KG | DISTANCE<br>NM | TIME<br>MIN | FUEL<br>KG | DISTANCE<br>NM | TIME<br>MIN | FUEL<br>KG |
| 12000        |                |             | 137        | 147            | 158         | 165        | 172            | 191         | 229        | 309            | 396         | 649        |
|              | NM             | MIN         | 37         | 41             | 45          | 48         | 51             | 51          | 81         | 123            | 172         | 320        |
|              |                |             | 13         | 14             | 15          | 15         | 16             | 19          | 24         | 36             | 49          | 88         |
| 11500        |                |             | 127        | 136            | 146         | 151        | 157            | 174         | 204        | 264            | 321         | 429        |
|              | NM             | MIN         | 35         | 38             | 42          | 44         | 47             | 55          | 71         | 104            | 136         | 198        |
|              |                |             | 12         | 13             | 14          | 14         | 15             | 17          | 21         | 30             | 39          | 56         |
| 11000        |                |             | 117        | 126            | 134         | 139        | 144            | 159         | 184        | 231            | 272         | 339        |
|              | NM             | MIN         | 32         | 35             | 38          | 40         | 43             | 50          | 64         | 90             | 113         | 151        |
|              |                |             | 11         | 12             | 12          | 13         | 14             | 15          | 19         | 26             | 33          | 43         |
| 10500        |                |             | 109        | 116            | 124         | 128        | 133            | 145         | 166        | 205            | 237         | 283        |
|              | NM             | MIN         | 29         | 32             | 35          | 37         | 39             | 45          | 57         | 79             | 97          | 124        |
|              |                |             | 10         | 11             | 12          | 12         | 13             | 14          | 17         | 23             | 28          | 36         |
| 10000        |                |             | 101        | 107            | 114         | 118        | 122            | 133         | 151        | 183            | 209         | 244        |
|              | NM             | MIN         | 27         | 30             | 32          | 34         | 36             | 41          | 52         | 70             | 84          | 105        |
|              |                |             | 9          | 10             | 11          | 11         | 12             | 13          | 16         | 21             | 25          | 30         |
| 9500         |                |             | 93         | 99             | 106         | 109        | 113            | 122         | 138        | 165            | 186         | 214        |
|              | NM             | MIN         | 25         | 27             | 30          | 31         | 33             | 38          | 47         | 62             | 74          | 91         |
|              |                |             | 9          | 9              | 10          | 10         | 11             | 12          | 14         | 19             | 22          | 26         |
| 9000         |                |             | 86         | 92             | 98          | 101        | 104            | 112         | 126        | 149            | 166         | 189        |
|              | NM             | MIN         | 23         | 25             | 28          | 29         | 30             | 35          | 43         | 56             | 66          | 80         |
|              |                |             | 8          | 8              | 9           | 9          | 10             | 11          | 13         | 17             | 19          | 23         |
| 8500         |                |             | 80         | 85             | 90          | 93         | 96             | 103         | 115        | 135            | 150         | 169        |
|              | NM             | MIN         | 21         | 23             | 25          | 27         | 28             | 32          | 39         | 51             | 59          | 71         |
|              |                |             | 7          | 8              | 8           | 9          | 9              | 10          | 12         | 15             | 17          | 21         |
| 8000         |                |             | 74         | 78             | 83          | 86         | 88             | 95          | 105        | 123            | 135         | 151        |
|              | NM             | MIN         | 20         | 21             | 23          | 24         | 26             | 29          | 35         | 46             | 53          | 63         |
|              |                |             | 7          | 7              | 8           | 8          | 8              | 9           | 11         | 14             | 16          | 18         |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CLIMB PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**ALTITUDE: SEA LEVEL TO 24000 FT**

## CRUISE CONFIGURATION

 NP: 100% OR  
 100% UP TO 12000 FT AND  
 90% ABOVE 12000 FT

BLEED SWITCH: AUTO

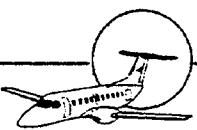
PACK CONTROL SELECTOR: LOW

 SPEED SCHEDULE: 155 KIAS FROM SL TO 20000 FT,  
 DECREASING TO 135 KIAS AT  
 32000 FT

**WEIGHT  
KG**
**ISA + °C**

|       |          |     | -30 | -20 | -10 | -5  | 0   | 10  | 20  | 30  | 35  | 40  |
|-------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 12000 | FUEL     | KG  | 145 | 156 | 168 | 175 | 183 | 206 | 250 | 351 | 486 | -   |
|       | DISTANCE | NM  | 40  | 44  | 49  | 52  | 56  | 68  | 91  | 147 | 225 | -   |
|       | TIME     | MIN | 14  | 15  | 16  | 17  | 18  | 21  | 27  | 42  | 63  | -   |
| 11500 | FUEL     | KG  | 133 | 143 | 154 | 160 | 167 | 186 | 221 | 293 | 367 | 548 |
|       | DISTANCE | NM  | 37  | 40  | 45  | 48  | 51  | 61  | 80  | 120 | 163 | 272 |
|       | TIME     | MIN | 12  | 13  | 14  | 15  | 16  | 19  | 24  | 35  | 46  | 75  |
| 11000 | FUEL     | KG  | 123 | 132 | 142 | 147 | 153 | 169 | 198 | 253 | 303 | 392 |
|       | DISTANCE | NM  | 34  | 37  | 41  | 44  | 46  | 55  | 71  | 102 | 131 | 184 |
|       | TIME     | MIN | 12  | 12  | 13  | 14  | 15  | 17  | 21  | 30  | 37  | 52  |
| 10500 | FUEL     | KG  | 114 | 122 | 131 | 135 | 141 | 154 | 178 | 222 | 259 | 316 |
|       | DISTANCE | NM  | 31  | 34  | 38  | 40  | 43  | 50  | 63  | 88  | 110 | 144 |
|       | TIME     | MIN | 11  | 11  | 12  | 13  | 13  | 15  | 19  | 26  | 32  | 41  |
| 10000 | FUEL     | KG  | 106 | 113 | 121 | 125 | 129 | 141 | 161 | 197 | 226 | 267 |
|       | DISTANCE | NM  | 29  | 32  | 35  | 37  | 39  | 45  | 57  | 78  | 94  | 120 |
|       | TIME     | MIN | 10  | 11  | 11  | 12  | 12  | 14  | 17  | 23  | 27  | 34  |
| 9500  | FUEL     | KG  | 98  | 104 | 111 | 115 | 119 | 129 | 147 | 177 | 200 | 232 |
|       | DISTANCE | NM  | 27  | 29  | 32  | 34  | 36  | 41  | 51  | 69  | 83  | 102 |
|       | TIME     | MIN | 9   | 10  | 10  | 11  | 11  | 13  | 15  | 20  | 24  | 29  |
| 9000  | FUEL     | KG  | 91  | 96  | 103 | 106 | 110 | 119 | 134 | 159 | 178 | 203 |
|       | DISTANCE | NM  | 25  | 27  | 29  | 31  | 33  | 38  | 47  | 62  | 73  | 89  |
|       | TIME     | MIN | 8   | 9   | 10  | 10  | 10  | 12  | 14  | 18  | 21  | 26  |
| 8500  | FUEL     | KG  | 84  | 89  | 95  | 98  | 101 | 109 | 122 | 144 | 160 | 181 |
|       | DISTANCE | NM  | 23  | 25  | 27  | 29  | 30  | 35  | 42  | 55  | 65  | 78  |
|       | TIME     | MIN | 8   | 8   | 9   | 9   | 10  | 11  | 13  | 16  | 19  | 22  |
| 8000  | FUEL     | KG  | 77  | 82  | 87  | 90  | 93  | 100 | 111 | 130 | 144 | 161 |
|       | DISTANCE | NM  | 21  | 23  | 25  | 26  | 28  | 32  | 38  | 50  | 58  | 69  |
|       | TIME     | MIN | 7   | 8   | 8   | 8   | 9   | 10  | 12  | 15  | 17  | 20  |

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**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CLIMB PLANNING**

**ALL ENGINES OPERATING**

**PW118A ENGINES**

**ALTITUDE: SEA LEVEL TO 25000 FT**

**CRUISE CONFIGURATION**

NP: 100% OR  
100% UP TO 12000 FT AND  
90% ABOVE 12000 FT

BLEED SWITCH: AUTO  
PACK CONTROL SELECTOR: LOW

**SPEED SCHEDULE:** 155 KIAS FROM SL TO 20000 FT,  
DECREASING TO 135 KIAS AT  
32000 FT

| WEIGHT<br>KG | ISA + °C |     |     |     |     |     |     |     |     |     |   |   |
|--------------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|---|---|
|              | -20      |     |     | -10 |     |     | -5  |     |     | 0   |   |   |
| FUEL         | KG       | 164 | 178 | 186 | 196 | 207 | 223 | 275 | 414 | 723 | - | - |
| DISTANCE     | NM       | 47  | 53  | 57  | 62  | 68  | 76  | 105 | 184 | 370 | - | - |
| TIME         | MIN      | 16  | 17  | 18  | 19  | 21  | 23  | 31  | 52  | 100 | - | - |
| 12000        |          |     |     |     |     |     |     |     |     |     |   |   |
| 11500        |          |     |     |     |     |     |     |     |     |     |   |   |
| 11000        |          |     |     |     |     |     |     |     |     |     |   |   |
| 10500        |          |     |     |     |     |     |     |     |     |     |   |   |
| 10000        |          |     |     |     |     |     |     |     |     |     |   |   |
| 9500         |          |     |     |     |     |     |     |     |     |     |   |   |
| 9000         |          |     |     |     |     |     |     |     |     |     |   |   |
| 8500         |          |     |     |     |     |     |     |     |     |     |   |   |
| 8000         |          |     |     |     |     |     |     |     |     |     |   |   |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CLIMB PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**ALTITUDE: SEA LEVEL TO 26000 FT**

## CRUISE CONFIGURATION

 NP: 100% OR  
 100% UP TO 12000 FT AND  
 90% ABOVE 12000 FT

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

 SPEED SCHEDULE: 155 KIAS FROM SL TO 20000 FT,  
 DECREASING TO 135 KIAS AT  
 32000 FT

| WEIGHT<br>KG |          |     | ISA + °C |     |     |     |     |     |     |     |     |     |
|--------------|----------|-----|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |          |     | -20      | -10 | -5  | 0   | 5   | 10  | 20  | 30  | 35  | 40  |
| 12000        | FUEL     | KG  | 174      | 189 | 199 | 209 | 223 | 242 | 307 | 543 | -   | -   |
|              | DISTANCE | NM  | 51       | 58  | 62  | 68  | 75  | 85  | 122 | 262 | -   | -   |
|              | TIME     | MIN | 17       | 18  | 19  | 21  | 23  | 25  | 35  | 72  | -   | -   |
| 11500        | FUEL     | KG  | 159      | 173 | 180 | 190 | 201 | 215 | 263 | 382 | 585 | -   |
|              | DISTANCE | NM  | 47       | 53  | 56  | 61  | 67  | 75  | 103 | 173 | 300 | -   |
|              | TIME     | MIN | 15       | 17  | 18  | 19  | 20  | 22  | 30  | 48  | 81  | -   |
| 11000        | FUEL     | KG  | 146      | 158 | 165 | 172 | 182 | 193 | 230 | 310 | 397 | 685 |
|              | DISTANCE | NM  | 43       | 48  | 51  | 55  | 60  | 67  | 88  | 136 | 190 | 379 |
|              | TIME     | MIN | 14       | 15  | 16  | 17  | 18  | 20  | 26  | 38  | 53  | 101 |
| 10500        | FUEL     | KG  | 135      | 145 | 151 | 157 | 165 | 175 | 205 | 263 | 317 | 423 |
|              | DISTANCE | NM  | 39       | 44  | 47  | 50  | 54  | 60  | 78  | 113 | 147 | 215 |
|              | TIME     | MIN | 13       | 14  | 15  | 16  | 17  | 18  | 23  | 32  | 41  | 59  |
| 10000        | FUEL     | KG  | 124      | 133 | 139 | 144 | 151 | 159 | 184 | 229 | 268 | 331 |
|              | DISTANCE | NM  | 36       | 40  | 43  | 46  | 49  | 54  | 69  | 97  | 121 | 161 |
|              | TIME     | MIN | 12       | 13  | 13  | 14  | 15  | 16  | 20  | 28  | 34  | 45  |
| 9500         | FUEL     | KG  | 115      | 123 | 127 | 132 | 138 | 145 | 166 | 203 | 232 | 276 |
|              | DISTANCE | NM  | 33       | 37  | 39  | 42  | 45  | 49  | 62  | 84  | 103 | 131 |
|              | TIME     | MIN | 11       | 12  | 12  | 13  | 14  | 15  | 18  | 24  | 29  | 37  |
| 9000         | FUEL     | KG  | 106      | 113 | 117 | 121 | 126 | 132 | 150 | 181 | 204 | 237 |
|              | DISTANCE | NM  | 30       | 34  | 36  | 38  | 41  | 44  | 55  | 74  | 89  | 111 |
|              | TIME     | MIN | 10       | 11  | 11  | 12  | 13  | 13  | 16  | 22  | 25  | 31  |
| 8500         | FUEL     | KG  | 98       | 104 | 108 | 112 | 116 | 121 | 136 | 162 | 181 | 207 |
|              | DISTANCE | NM  | 28       | 31  | 33  | 35  | 37  | 40  | 50  | 66  | 79  | 96  |
|              | TIME     | MIN | 9        | 10  | 10  | 11  | 12  | 12  | 15  | 19  | 22  | 27  |
| 8000         | FUEL     | KG  | 90       | 96  | 99  | 102 | 106 | 111 | 124 | 146 | 162 | 183 |
|              | DISTANCE | NM  | 26       | 28  | 30  | 32  | 34  | 37  | 45  | 59  | 70  | 84  |
|              | TIME     | MIN | 8        | 9   | 10  | 10  | 11  | 11  | 13  | 17  | 20  | 24  |

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SUPPLEMENTARY PERFORMANCE  
MANUAL

CLIMB PLANNING

ALL ENGINES OPERATING

PW118A ENGINES

ALTITUDE: SEA LEVEL TO 27000 FT

CRUISE CONFIGURATION

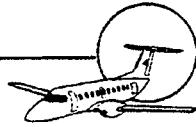
NP: 100% OR  
100% UP TO 12000 FT AND  
90% ABOVE 12000 FT

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

SPEED SCHEDULE: 155 KIAS FROM SL TO 20000 FT,  
DECREASING TO 135 KIAS AT  
32000 FT

| WEIGHT<br>KG | ISA + °C       |     |     |     |     |     |     |     |     |     |     |   |
|--------------|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---|
|              | -20            | -10 | -5  | 0   | 5   | 10  | 20  | 30  | 35  | 40  |     |   |
| 12000        | FUEL<br>KG     | 184 | 202 | 212 | 225 | 242 | 265 | 352 | -   | -   | -   | - |
|              | DISTANCE<br>NM | 55  | 63  | 69  | 75  | 84  | 97  | 148 | -   | -   | -   | - |
|              | TIME<br>MIN    | 18  | 20  | 21  | 23  | 25  | 29  | 42  | -   | -   | -   | - |
| 11500        | FUEL<br>KG     | 168 | 183 | 192 | 202 | 215 | 232 | 292 | 476 | -   | -   | - |
|              | DISTANCE<br>NM | 50  | 57  | 62  | 67  | 74  | 84  | 119 | 232 | -   | -   | - |
|              | TIME<br>MIN    | 16  | 18  | 19  | 20  | 22  | 25  | 34  | 64  | -   | -   | - |
| 11000        | FUEL<br>KG     | 154 | 167 | 175 | 183 | 194 | 207 | 251 | 353 | 500 | -   | - |
|              | DISTANCE<br>NM | 46  | 52  | 56  | 60  | 66  | 74  | 100 | 163 | 258 | -   | - |
|              | TIME<br>MIN    | 15  | 16  | 17  | 18  | 20  | 22  | 29  | 45  | 70  | -   | - |
| 10500        | FUEL<br>KG     | 142 | 153 | 159 | 167 | 175 | 186 | 221 | 291 | 363 | 545 |   |
|              | DISTANCE<br>NM | 42  | 47  | 50  | 54  | 59  | 66  | 87  | 130 | 176 | 300 |   |
|              | TIME<br>MIN    | 14  | 15  | 16  | 17  | 18  | 20  | 25  | 37  | 49  | 80  |   |
| 10000        | FUEL<br>KG     | 130 | 140 | 146 | 152 | 160 | 169 | 196 | 249 | 296 | 380 |   |
|              | DISTANCE<br>NM | 38  | 43  | 46  | 49  | 54  | 59  | 76  | 109 | 139 | 195 |   |
|              | TIME<br>MIN    | 12  | 14  | 14  | 15  | 16  | 18  | 22  | 31  | 39  | 53  |   |
| 9500         | FUEL<br>KG     | 120 | 129 | 134 | 139 | 146 | 153 | 176 | 218 | 252 | 305 |   |
|              | DISTANCE<br>NM | 35  | 39  | 42  | 45  | 49  | 53  | 68  | 94  | 116 | 152 |   |
|              | TIME<br>MIN    | 11  | 13  | 13  | 14  | 15  | 16  | 20  | 27  | 33  | 42  |   |
| 9000         | FUEL<br>KG     | 111 | 119 | 123 | 128 | 133 | 140 | 159 | 193 | 219 | 258 |   |
|              | DISTANCE<br>NM | 32  | 36  | 38  | 41  | 44  | 48  | 60  | 82  | 99  | 125 |   |
|              | TIME<br>MIN    | 11  | 11  | 12  | 13  | 13  | 15  | 18  | 23  | 28  | 35  |   |
| 8500         | FUEL<br>KG     | 102 | 109 | 113 | 117 | 122 | 128 | 144 | 172 | 193 | 223 |   |
|              | DISTANCE<br>NM | 30  | 33  | 35  | 37  | 40  | 44  | 54  | 73  | 87  | 106 |   |
|              | TIME<br>MIN    | 10  | 11  | 11  | 12  | 12  | 13  | 16  | 21  | 25  | 30  |   |
| 8000         | FUEL<br>KG     | 94  | 100 | 104 | 107 | 112 | 116 | 131 | 155 | 172 | 196 |   |
|              | DISTANCE<br>NM | 27  | 30  | 32  | 34  | 37  | 40  | 49  | 65  | 76  | 92  |   |
|              | TIME<br>MIN    | 9   | 10  | 10  | 11  | 11  | 12  | 14  | 19  | 22  | 26  |   |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CLIMB PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**ALTITUDE: SEA LEVEL TO 28000 FT**
**CRUISE CONFIGURATION**

NP: 100% OR  
100% UP TO 12000 FT AND  
90% ABOVE 12000 FT

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

SPEED SCHEDULE: 155 KIAS FROM SL TO 20000 FT,  
DECREASING TO 135 KIAS AT  
32000 FT

|       | WEIGHT<br>KG | ISA + °C |     |     |     |     |     |     |     |     |     |  |  |
|-------|--------------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
|       |              | -20      | -10 | -5  | 0   | 5   | 10  | 20  | 30  | 35  | 40  |  |  |
| 12000 | FUEL KG      | 195      | 215 | 228 | 243 | 264 | 294 | 429 | -   | -   | -   |  |  |
|       | DISTANCE NM  | 60       | 69  | 76  | 84  | 96  | 113 | 193 | -   | -   | -   |  |  |
|       | TIME MIN     | 19       | 22  | 23  | 25  | 28  | 33  | 54  | -   | -   | -   |  |  |
| 11500 | FUEL KG      | 177      | 194 | 204 | 217 | 232 | 253 | 330 | -   | -   | -   |  |  |
|       | DISTANCE NM  | 54       | 62  | 68  | 74  | 83  | 95  | 141 | -   | -   | -   |  |  |
|       | TIME MIN     | 17       | 19  | 21  | 22  | 25  | 28  | 40  | -   | -   | -   |  |  |
| 11000 | FUEL KG      | 162      | 177 | 185 | 195 | 207 | 223 | 276 | 425 | -   | -   |  |  |
|       | DISTANCE NM  | 49       | 56  | 61  | 66  | 73  | 82  | 115 | 210 | -   | -   |  |  |
|       | TIME MIN     | 16       | 18  | 19  | 20  | 22  | 24  | 33  | 57  | -   | -   |  |  |
| 10500 | FUEL KG      | 149      | 161 | 168 | 177 | 186 | 199 | 239 | 327 | 438 | -   |  |  |
|       | DISTANCE NM  | 45       | 51  | 55  | 59  | 65  | 73  | 97  | 154 | 228 | -   |  |  |
|       | TIME MIN     | 14       | 16  | 17  | 18  | 20  | 21  | 28  | 43  | 62  | -   |  |  |
| 10000 | FUEL KG      | 137      | 148 | 154 | 161 | 169 | 179 | 211 | 273 | 333 | 461 |  |  |
|       | DISTANCE NM  | 41       | 46  | 50  | 54  | 58  | 65  | 85  | 125 | 165 | 254 |  |  |
|       | TIME MIN     | 13       | 15  | 15  | 16  | 18  | 19  | 24  | 35  | 45  | 68  |  |  |
| 9500  | FUEL KG      | 126      | 135 | 141 | 147 | 154 | 162 | 188 | 235 | 276 | 344 |  |  |
|       | DISTANCE NM  | 38       | 42  | 45  | 49  | 53  | 58  | 74  | 105 | 133 | 180 |  |  |
|       | TIME MIN     | 12       | 13  | 14  | 15  | 16  | 17  | 22  | 30  | 37  | 49  |  |  |
| 9000  | FUEL KG      | 116      | 124 | 129 | 134 | 140 | 147 | 169 | 206 | 237 | 282 |  |  |
|       | DISTANCE NM  | 35       | 39  | 41  | 44  | 48  | 52  | 66  | 91  | 111 | 143 |  |  |
|       | TIME MIN     | 11       | 12  | 13  | 14  | 14  | 16  | 19  | 26  | 31  | 39  |  |  |
| 8500  | FUEL KG      | 107      | 114 | 118 | 123 | 128 | 134 | 152 | 183 | 207 | 240 |  |  |
|       | DISTANCE NM  | 32       | 35  | 38  | 40  | 43  | 47  | 59  | 80  | 96  | 119 |  |  |
|       | TIME MIN     | 10       | 11  | 12  | 12  | 13  | 14  | 17  | 23  | 27  | 33  |  |  |
| 8000  | FUEL KG      | 98       | 105 | 108 | 112 | 117 | 122 | 138 | 164 | 183 | 209 |  |  |
|       | DISTANCE NM  | 29       | 32  | 34  | 37  | 39  | 43  | 53  | 71  | 84  | 102 |  |  |
|       | TIME MIN     | 9        | 10  | 11  | 11  | 12  | 13  | 16  | 20  | 24  | 28  |  |  |

20 NOVEMBER 1992



**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CLIMB PLANNING**

**ALL ENGINES OPERATING**

**PW118A ENGINES**

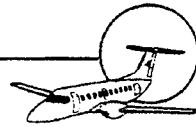
**ALTITUDE: SEA LEVEL TO 29000 FT**

**CRUISE CONFIGURATION**

NP: 100% OR  
100% UP TO 12000 FT AND  
90% ABOVE 12000 FT  
BLEED SWITCH: AUTO  
PACK CONTROL SELECTOR: LOW

**SPEED SCHEDULE:** 155 KIAS FROM SL TO 20000 FT,  
DECREASING TO 135 KIAS AT  
32000 FT

| WEIGHT<br>KG | ISA + °C       |             |            |                |             |            |                |             |            |                |             |            |
|--------------|----------------|-------------|------------|----------------|-------------|------------|----------------|-------------|------------|----------------|-------------|------------|
|              | -20            |             |            | -10            |             |            | -5             |             |            | 0              |             |            |
| FUEL<br>KG   | DISTANCE<br>NM | TIME<br>MIN | FUEL<br>KG | DISTANCE<br>NM | TIME<br>MIN | FUEL<br>KG | DISTANCE<br>NM | TIME<br>MIN | FUEL<br>KG | DISTANCE<br>NM | TIME<br>MIN | FUEL<br>KG |
| 12000        |                |             | 207        | 231            | 246         | 265        | 292            | 334         | -          | -              | -           | -          |
|              | 65             | 77          | 85         | 96             | 111         | 136        |                |             | -          | -              | -           | -          |
|              |                | 20          | 24         | 26             | 28          | 32         | 39             |             | -          | -              | -           | -          |
| 11500        |                |             | 188        | 207            | 219         | 233        | 252            | 279         | 392        | -              | -           | -          |
|              | 58             | 68          | 75         | 83             | 94          | 110        | 136            | 180         |            | -              | -           | -          |
|              |                | 18          | 21         | 23             | 25          | 28         | 32             | 50          |            | -              | -           | -          |
| 11000        |                |             | 171        | 187            | 197         | 208        | 222            | 242         | 309        | 631            | -           | -          |
|              | 53             | 61          | 66         | 73             | 81          | 93         | 135            | 135         | 350        | -              | -           | -          |
|              |                | 17          | 19         | 20             | 22          | 24         | 27             | 38          | 93         | -              | -           | -          |
| 10500        |                |             | 156        | 170            | 178         | 187        | 199            | 213         | 261        | 383            | -           | -          |
|              | 48             | 55          | 60         | 65             | 72          | 81         | 93             | 111         | 192        | -              | -           | -          |
|              |                | 15          | 17         | 18             | 20          | 21         | 24             | 31          | 52         | -              | -           | -          |
| 10000        |                |             | 143        | 155            | 162         | 170        | 179            | 191         | 227        | 303            | 390         | 704        |
|              | 44             | 50          | 54         | 58             | 64          | 71         | 71             | 95          | 145        | 206            | 437         |            |
|              |                | 14          | 16         | 16             | 18          | 19         | 21             | 27          | 40         | 56             | 114         |            |
| 9500         |                |             | 132        | 142            | 148         | 154        | 162            | 172         | 201        | 256            | 307         | 402        |
|              | 40             | 46          | 49         | 53             | 57          | 63         | 63             | 82          | 119        | 155            | 223         |            |
|              |                | 13          | 14         | 15             | 16          | 17         | 19             | 24          | 33         | 42             | 60          |            |
| 9000         |                |             | 121        | 130            | 135         | 141        | 147            | 156         | 179        | 222            | 257         | 313        |
|              | 37             | 42          | 44         | 48             | 52          | 57         | 57             | 73          | 101        | 126            | 166         |            |
|              |                | 12          | 13         | 14             | 15          | 16         | 17             | 21          | 28         | 35             | 45          |            |
| 8500         |                |             | 111        | 119            | 124         | 129        | 134            | 141         | 161        | 195            | 222         | 261        |
|              | 34             | 38          | 40         | 43             | 47          | 51         | 51             | 65          | 88         | 107            | 135         |            |
|              |                | 11          | 12         | 12             | 13          | 14         | 15             | 19          | 25         | 30             | 37          |            |
| 8000         |                |             | 102        | 109            | 113         | 118        | 123            | 128         | 145        | 173            | 195         | 224        |
|              | 31             | 35          | 37         | 39             | 42          | 46         | 46             | 58          | 77         | 92             | 113         |            |
|              |                | 10          | 11         | 11             | 12          | 13         | 14             | 17          | 22         | 26             | 31          |            |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CLIMB PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**ALTITUDE: SEA LEVEL TO 30000 FT**

## CRUISE CONFIGURATION

NP: 100% OR

100% UP TO 12000 FT AND  
90% ABOVE 12000 FT

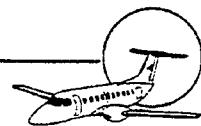
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

 SPEED SCHEDULE: 155 KIAS FROM SL TO 20000 FT,  
 DECREASING TO 135 KIAS AT  
 32000 FT

| WEIGHT<br>KG |                          |                 | ISA + °C        |                 |                  |                  |                  |                  |                  |                  |                  |                  |
|--------------|--------------------------|-----------------|-----------------|-----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|              |                          |                 | -10             | -5              | 0                | 5                | 10               | 15               | 20               | 25               | 30               | 35               |
| 12000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 249<br>86<br>26 | 268<br>96<br>29 | 294<br>111<br>33 | 332<br>134<br>38 | 406<br>178<br>50 | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      |
| 11500        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 221<br>75<br>23 | 235<br>83<br>25 | 253<br>93<br>28  | 278<br>108<br>31 | 314<br>131<br>37 | 380<br>172<br>48 | 566<br>291<br>79 | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      |
| 11000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 199<br>67<br>20 | 210<br>73<br>22 | 223<br>81<br>24  | 241<br>91<br>27  | 265<br>106<br>31 | 300<br>129<br>36 | 360<br>168<br>47 | 516<br>273<br>73 | -<br>-<br>-      | -<br>-<br>-      |
| 10500        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 180<br>60<br>18 | 189<br>65<br>20 | 200<br>71<br>21  | 213<br>80<br>23  | 230<br>91<br>26  | 254<br>106<br>30 | 290<br>130<br>36 | 350<br>170<br>47 | 504<br>278<br>74 | -<br>-<br>-      |
| 10000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 163<br>54<br>17 | 171<br>58<br>18 | 180<br>64<br>19  | 190<br>70<br>21  | 204<br>79<br>23  | 222<br>91<br>26  | 247<br>107<br>30 | 284<br>132<br>37 | 347<br>177<br>48 | 517<br>300<br>79 |
| 9500         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 149<br>49<br>15 | 156<br>53<br>16 | 163<br>57<br>17  | 172<br>63<br>19  | 182<br>70<br>20  | 197<br>79<br>23  | 215<br>92<br>26  | 242<br>110<br>31 | 282<br>138<br>38 | 351<br>188<br>51 |
| 9000         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 136<br>45<br>14 | 142<br>48<br>15 | 148<br>52<br>16  | 155<br>56<br>17  | 164<br>62<br>18  | 176<br>70<br>20  | 191<br>80<br>23  | 211<br>94<br>26  | 240<br>114<br>32 | 283<br>145<br>40 |
| 8500         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 125<br>41<br>13 | 130<br>43<br>13 | 135<br>47<br>14  | 141<br>51<br>15  | 149<br>55<br>16  | 158<br>62<br>18  | 170<br>71<br>20  | 187<br>82<br>23  | 209<br>98<br>27  | 240<br>120<br>33 |
| 8000         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 114<br>37<br>12 | 118<br>39<br>12 | 123<br>42<br>13  | 128<br>46<br>14  | 135<br>50<br>15  | 143<br>56<br>16  | 153<br>63<br>18  | 166<br>72<br>20  | 184<br>85<br>24  | 208<br>102<br>28 |

20 NOVEMBER 1992



**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CLIMB PLANNING**

**ALL ENGINES OPERATING**

**PW118A ENGINES**

**ALTITUDE: SEA LEVEL TO 31000 FT**

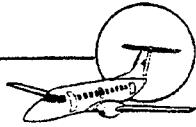
**CRUISE CONFIGURATION**

NP: 100% OR  
100% UP TO 12000 FT AND  
90% ABOVE 12000 FT

BLEED SWITCH: AUTO  
PACK CONTROL SELECTOR: LOW

**SPEED SCHEDULE:** 155 KIAS FROM SL TO 20000 FT,  
DECREASING TO 135 KIAS AT  
32000 FT

| WEIGHT<br>KG | ISA + °C                 |                 |                 |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|--------------|--------------------------|-----------------|-----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|              |                          |                 |                 | -10              | -5               | 0                | 5                | 10               | 15               | 20               | 25               | 30               |
| 12000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 272<br>97<br>29 | 298<br>112<br>33 | 336<br>135<br>39 | 407<br>177<br>50 | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      |
| 11500        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 238<br>84<br>25 | 256<br>94<br>28  | 279<br>108<br>31 | 313<br>129<br>37 | 372<br>166<br>46 | 552<br>282<br>76 | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      |
| 11000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 212<br>74<br>22 | 225<br>81<br>24  | 241<br>91<br>27  | 263<br>105<br>30 | 295<br>125<br>35 | 349<br>161<br>45 | 477<br>246<br>67 | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      |
| 10500        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 190<br>65<br>20 | 201<br>71<br>21  | 213<br>79<br>23  | 229<br>89<br>26  | 251<br>103<br>29 | 282<br>124<br>35 | 332<br>158<br>43 | 439<br>233<br>63 | -<br>-<br>-      | -<br>-<br>-      |
| 10000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 172<br>59<br>18 | 181<br>64<br>19  | 191<br>70<br>21  | 203<br>78<br>23  | 219<br>88<br>25  | 241<br>103<br>29 | 271<br>124<br>35 | 321<br>159<br>43 | 428<br>236<br>63 | -<br>-<br>-      |
| 9500         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 157<br>53<br>16 | 164<br>57<br>17  | 172<br>62<br>19  | 182<br>69<br>20  | 194<br>77<br>22  | 210<br>88<br>25  | 233<br>103<br>29 | 265<br>126<br>35 | 317<br>164<br>44 | 432<br>250<br>66 |
| 9000         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 143<br>48<br>15 | 149<br>51<br>16  | 156<br>56<br>17  | 164<br>61<br>18  | 174<br>68<br>20  | 187<br>77<br>22  | 204<br>89<br>25  | 227<br>105<br>29 | 261<br>130<br>36 | 318<br>173<br>46 |
| 8500         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 130<br>43<br>13 | 136<br>47<br>14  | 142<br>50<br>15  | 148<br>55<br>16  | 157<br>61<br>18  | 167<br>68<br>20  | 181<br>78<br>22  | 199<br>91<br>25  | 224<br>109<br>30 | 261<br>137<br>37 |
| 8000         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 119<br>39<br>12 | 124<br>42<br>13  | 129<br>45<br>14  | 135<br>49<br>15  | 142<br>54<br>16  | 150<br>60<br>17  | 162<br>68<br>19  | 176<br>79<br>22  | 196<br>94<br>26  | 223<br>114<br>31 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CLIMB PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**ALTITUDE: SEA LEVEL TO 32000 FT**
**CRUISE CONFIGURATION**

 NP: 100% OR  
 100% UP TO 12000 FT AND  
 90% ABOVE 12000 FT

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

 SPEED SCHEDULE: 155 KIAS FROM SL TO 20000 FT,  
 DECREASING TO 135 KIAS AT  
 32000 FT

| WEIGHT<br>KG | ISA + °C       |     |     |     |     |     |     |     |     |     |  |
|--------------|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
|              | -10            | -5  | 0   | 5   | 10  | 15  | 20  | 25  | 30  | 35  |  |
| 12000        | FUEL<br>KG     | 303 | 343 | 421 | -   | -   | -   | -   | -   | -   |  |
|              | DISTANCE<br>NM | 114 | 137 | 184 | -   | -   | -   | -   | -   | -   |  |
|              | TIME<br>MIN    | 34  | 40  | 52  | -   | -   | -   | -   | -   | -   |  |
| 11500        | FUEL<br>KG     | 259 | 282 | 315 | 374 | -   | -   | -   | -   | -   |  |
|              | DISTANCE<br>NM | 95  | 109 | 129 | 166 | -   | -   | -   | -   | -   |  |
|              | TIME<br>MIN    | 28  | 32  | 37  | 47  | -   | -   | -   | -   | -   |  |
| 11000        | FUEL<br>KG     | 227 | 243 | 264 | 294 | 343 | 463 | -   | -   | -   |  |
|              | DISTANCE<br>NM | 82  | 91  | 104 | 123 | 155 | 236 | -   | -   | -   |  |
|              | TIME<br>MIN    | 25  | 27  | 30  | 35  | 43  | 64  | -   | -   | -   |  |
| 10500        | FUEL<br>KG     | 202 | 214 | 230 | 249 | 277 | 322 | 414 | -   | -   |  |
|              | DISTANCE<br>NM | 72  | 79  | 89  | 101 | 120 | 151 | 215 | -   | -   |  |
|              | TIME<br>MIN    | 22  | 23  | 26  | 29  | 34  | 42  | 58  | -   | -   |  |
| 10000        | FUEL<br>KG     | 182 | 192 | 203 | 218 | 237 | 264 | 306 | 385 | -   |  |
|              | DISTANCE<br>NM | 64  | 70  | 77  | 87  | 100 | 119 | 148 | 205 | -   |  |
|              | TIME<br>MIN    | 19  | 21  | 23  | 25  | 28  | 33  | 41  | 55  | -   |  |
| 9500         | FUEL<br>KG     | 165 | 173 | 182 | 193 | 208 | 227 | 254 | 295 | 374 |  |
|              | DISTANCE<br>NM | 57  | 62  | 68  | 76  | 85  | 99  | 118 | 148 | 208 |  |
|              | TIME<br>MIN    | 17  | 19  | 20  | 22  | 24  | 28  | 33  | 40  | 55  |  |
| 9000         | FUEL<br>KG     | 150 | 156 | 164 | 173 | 184 | 199 | 219 | 247 | 290 |  |
|              | DISTANCE<br>NM | 52  | 56  | 61  | 67  | 75  | 85  | 99  | 120 | 152 |  |
|              | TIME<br>MIN    | 16  | 17  | 18  | 19  | 21  | 24  | 28  | 33  | 41  |  |
| 8500         | FUEL<br>KG     | 136 | 142 | 149 | 156 | 165 | 177 | 192 | 213 | 243 |  |
|              | DISTANCE<br>NM | 47  | 50  | 54  | 60  | 66  | 75  | 86  | 101 | 123 |  |
|              | TIME<br>MIN    | 14  | 15  | 16  | 17  | 19  | 21  | 24  | 28  | 34  |  |
| 8000         | FUEL<br>KG     | 124 | 129 | 135 | 141 | 149 | 158 | 171 | 187 | 209 |  |
|              | DISTANCE<br>NM | 42  | 45  | 49  | 53  | 59  | 66  | 75  | 87  | 104 |  |
|              | TIME<br>MIN    | 13  | 14  | 15  | 16  | 17  | 19  | 21  | 24  | 29  |  |
|              |                |     |     |     |     |     |     |     |     | 242 |  |
|              |                |     |     |     |     |     |     |     |     | 129 |  |
|              |                |     |     |     |     |     |     |     |     | 35  |  |

**20 NOVEMBER 1992**



**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CLIMB PLANNING**

**ALL ENGINES OPERATING**

**PW118A ENGINES**

**ALTITUDE: SEA LEVEL TO 5000 FT**

**CRUISE CONFIGURATION**

NP: 100% OR  
100% UP TO 12000 FT AND  
90% ABOVE 12000 FT

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**SPEED SCHEDULE:** 170 KIAS AT SL, DECREASING  
TO 155 KIAS AT 20000 FT,  
155 KIAS ABOVE 20000 FT

| WEIGHT<br>KG |                          |                 | ISA + °C     |              |              |              |              |              |              |              |               |               |  |
|--------------|--------------------------|-----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|--|
|              |                          |                 | -60          | -40          | -30          | -20          | -10          | 0            | 10           | 20           | 30            | 40            |  |
| 12000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 24<br>5<br>2 | 27<br>6<br>2 | 29<br>6<br>2 | 30<br>7<br>2 | 32<br>7<br>3 | 34<br>8<br>3 | 36<br>8<br>3 | 38<br>9<br>3 | 46<br>12<br>3 | 60<br>18<br>6 |  |
| 11500        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 22<br>5<br>2 | 25<br>6<br>2 | 27<br>6<br>2 | 28<br>6<br>2 | 30<br>7<br>2 | 32<br>7<br>3 | 33<br>8<br>3 | 35<br>9<br>3 | 42<br>11<br>4 | 55<br>16<br>5 |  |
| 11000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 21<br>4<br>2 | 24<br>5<br>2 | 25<br>6<br>2 | 27<br>6<br>2 | 28<br>6<br>2 | 30<br>7<br>2 | 31<br>7<br>2 | 33<br>8<br>3 | 39<br>10<br>3 | 50<br>15<br>5 |  |
| 10500        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 20<br>4<br>2 | 22<br>5<br>2 | 24<br>5<br>2 | 25<br>6<br>2 | 26<br>6<br>2 | 28<br>6<br>2 | 29<br>7<br>2 | 31<br>7<br>2 | 36<br>10<br>3 | 46<br>13<br>4 |  |
| 10000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 19<br>4<br>2 | 21<br>5<br>2 | 22<br>5<br>2 | 23<br>5<br>2 | 25<br>6<br>2 | 26<br>6<br>2 | 27<br>6<br>2 | 29<br>7<br>2 | 34<br>9<br>3  | 43<br>12<br>4 |  |
| 9500         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 17<br>4<br>1 | 19<br>4<br>2 | 21<br>5<br>2 | 22<br>5<br>2 | 23<br>5<br>2 | 24<br>6<br>2 | 25<br>6<br>2 | 27<br>6<br>2 | 31<br>8<br>3  | 39<br>11<br>4 |  |
| 9000         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 16<br>3<br>1 | 18<br>4<br>1 | 19<br>4<br>2 | 20<br>5<br>2 | 21<br>5<br>2 | 22<br>5<br>2 | 24<br>6<br>2 | 25<br>6<br>2 | 29<br>8<br>3  | 36<br>10<br>3 |  |
| 8500         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 15<br>3<br>1 | 17<br>4<br>1 | 18<br>4<br>1 | 19<br>4<br>2 | 20<br>5<br>2 | 21<br>5<br>2 | 22<br>5<br>2 | 23<br>6<br>2 | 27<br>7<br>2  | 33<br>10<br>3 |  |
| 8000         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 14<br>3<br>1 | 16<br>3<br>1 | 17<br>4<br>1 | 18<br>4<br>1 | 18<br>4<br>1 | 19<br>4<br>1 | 20<br>5<br>2 | 22<br>5<br>2 | 25<br>7<br>2  | 31<br>9<br>3  |  |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CLIMB PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**ALTITUDE: SEA LEVEL TO 6000 FT**

## CRUISE CONFIGURATION

 NP: 100% OR  
 100% UP TO 12000 FT AND  
 90% ABOVE 12000 FT

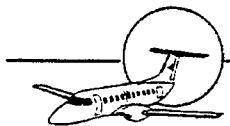
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

 SPEED SCHEDULE: 170 KIAS AT SL, DECREASING  
 TO 155 KIAS AT 20000 FT,  
 155 KIAS ABOVE 20000 FT

| WEIGHT<br>KG |                          |                 | ISA + °C     |              |              |              |              |               |               |               |               |               |
|--------------|--------------------------|-----------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|
|              |                          |                 | -60          | -40          | -30          | -20          | -10          | 0             | 10            | 20            | 30            | 40            |
| 12000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 29<br>6<br>2 | 32<br>7<br>3 | 34<br>8<br>3 | 36<br>8<br>3 | 38<br>9<br>3 | 41<br>10<br>3 | 43<br>10<br>3 | 46<br>11<br>4 | 55<br>15<br>5 | 73<br>22<br>7 |
| 11500        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 27<br>6<br>2 | 30<br>7<br>3 | 32<br>7<br>3 | 34<br>8<br>3 | 36<br>8<br>3 | 38<br>9<br>3  | 40<br>10<br>3 | 43<br>10<br>3 | 51<br>14<br>4 | 66<br>20<br>6 |
| 11000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 25<br>5<br>2 | 28<br>6<br>2 | 30<br>7<br>2 | 32<br>7<br>3 | 34<br>8<br>3 | 35<br>8<br>3  | 37<br>9<br>3  | 40<br>10<br>3 | 47<br>13<br>4 | 61<br>18<br>6 |
| 10500        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 24<br>5<br>2 | 27<br>6<br>2 | 28<br>6<br>2 | 30<br>7<br>2 | 31<br>7<br>3 | 33<br>8<br>3  | 35<br>8<br>3  | 37<br>9<br>3  | 44<br>12<br>4 | 56<br>17<br>5 |
| 10000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 22<br>5<br>2 | 25<br>5<br>2 | 26<br>6<br>2 | 28<br>6<br>2 | 29<br>7<br>2 | 31<br>7<br>3  | 32<br>8<br>3  | 35<br>8<br>3  | 41<br>11<br>4 | 51<br>15<br>5 |
| 9500         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 21<br>4<br>2 | 23<br>5<br>2 | 25<br>6<br>2 | 26<br>6<br>2 | 27<br>6<br>2 | 29<br>7<br>2  | 30<br>7<br>2  | 32<br>8<br>3  | 38<br>10<br>3 | 47<br>14<br>4 |
| 9000         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 19<br>4<br>2 | 22<br>5<br>2 | 23<br>5<br>2 | 24<br>6<br>2 | 26<br>6<br>2 | 27<br>6<br>2  | 28<br>7<br>2  | 30<br>7<br>2  | 35<br>9<br>3  | 43<br>13<br>4 |
| 8500         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 18<br>4<br>2 | 20<br>4<br>2 | 21<br>5<br>2 | 23<br>5<br>2 | 24<br>5<br>2 | 25<br>6<br>2  | 26<br>6<br>2  | 28<br>7<br>2  | 32<br>9<br>3  | 40<br>12<br>4 |
| 8000         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 17<br>4<br>1 | 19<br>4<br>2 | 20<br>4<br>2 | 21<br>5<br>2 | 22<br>5<br>2 | 23<br>5<br>2  | 24<br>6<br>2  | 26<br>6<br>2  | 30<br>8<br>3  | 37<br>11<br>3 |

20 NOVEMBER 1992



**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CLIMB PLANNING**

**ALL ENGINES OPERATING**

**PW118A ENGINES**

**ALTITUDE: SEA LEVEL TO 7000 FT**

**CRUISE CONFIGURATION**

NP: 100% OR  
100% UP TO 12000 FT AND  
90% ABOVE 12000 FT

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**SPEED SCHEDULE:** 170 KIAS AT SL, DECREASING  
TO 155 KIAS AT 20000 FT,  
155 KIAS ABOVE 20000 FT

|       |          |     | ISA + °C |     |     |     |     |    |    |    |    |    |  |
|-------|----------|-----|----------|-----|-----|-----|-----|----|----|----|----|----|--|
|       |          |     | -60      | -40 | -30 | -20 | -10 | 0  | 10 | 20 | 30 | 40 |  |
|       | FUEL     | KG  | 33       | 38  | 40  | 42  | 45  | 47 | 50 | 54 | 65 | 86 |  |
|       | DISTANCE | NM  | 7        | 8   | 9   | 10  | 11  | 11 | 12 | 13 | 18 | 26 |  |
|       | TIME     | MIN | 3        | 3   | 3   | 3   | 4   | 4  | 4  | 4  | 6  | 8  |  |
| 12000 | FUEL     | KG  | 31       | 35  | 37  | 40  | 42  | 44 | 46 | 50 | 60 | 78 |  |
| 12000 | DISTANCE | NM  | 7        | 8   | 9   | 9   | 10  | 10 | 11 | 12 | 16 | 24 |  |
| 12000 | TIME     | MIN | 3        | 3   | 3   | 3   | 3   | 4  | 4  | 4  | 5  | 8  |  |
| 11500 | FUEL     | KG  | 29       | 33  | 35  | 37  | 39  | 41 | 43 | 46 | 55 | 71 |  |
| 11500 | DISTANCE | NM  | 6        | 7   | 8   | 9   | 9   | 10 | 10 | 12 | 15 | 22 |  |
| 11500 | TIME     | MIN | 2        | 3   | 3   | 3   | 3   | 3  | 4  | 4  | 5  | 7  |  |
| 11000 | FUEL     | KG  | 27       | 31  | 33  | 35  | 36  | 38 | 40 | 43 | 51 | 65 |  |
| 11000 | DISTANCE | NM  | 6        | 7   | 7   | 8   | 9   | 9  | 10 | 11 | 14 | 20 |  |
| 11000 | TIME     | MIN | 2        | 3   | 3   | 3   | 3   | 3  | 3  | 4  | 5  | 6  |  |
| 10500 | FUEL     | KG  | 26       | 29  | 31  | 32  | 34  | 36 | 38 | 40 | 47 | 60 |  |
| 10500 | DISTANCE | NM  | 6        | 6   | 7   | 7   | 8   | 9  | 9  | 10 | 13 | 18 |  |
| 10500 | TIME     | MIN | 2        | 2   | 3   | 3   | 3   | 3  | 3  | 3  | 4  | 6  |  |
| 10000 | FUEL     | KG  | 24       | 27  | 29  | 30  | 32  | 33 | 35 | 38 | 44 | 55 |  |
| 10000 | DISTANCE | NM  | 5        | 6   | 6   | 7   | 7   | 8  | 9  | 9  | 12 | 17 |  |
| 10000 | TIME     | MIN | 2        | 2   | 2   | 2   | 3   | 3  | 3  | 3  | 4  | 5  |  |
| 9500  | FUEL     | KG  | 22       | 25  | 27  | 28  | 30  | 31 | 33 | 35 | 41 | 51 |  |
| 9500  | DISTANCE | NM  | 5        | 6   | 6   | 6   | 7   | 8  | 9  | 9  | 11 | 15 |  |
| 9500  | TIME     | MIN | 2        | 2   | 2   | 2   | 2   | 3  | 3  | 3  | 4  | 5  |  |
| 9000  | FUEL     | KG  | 21       | 23  | 25  | 26  | 28  | 29 | 30 | 32 | 38 | 47 |  |
| 9000  | DISTANCE | NM  | 4        | 5   | 6   | 6   | 7   | 7  | 8  | 8  | 10 | 14 |  |
| 9000  | TIME     | MIN | 2        | 2   | 2   | 2   | 2   | 2  | 2  | 3  | 3  | 4  |  |
| 8500  | FUEL     | KG  | 19       | 22  | 23  | 24  | 26  | 27 | 28 | 30 | 35 | 43 |  |
| 8500  | DISTANCE | NM  | 4        | 5   | 5   | 6   | 6   | 6  | 7  | 7  | 9  | 13 |  |
| 8500  | TIME     | MIN | 2        | 2   | 2   | 2   | 2   | 2  | 2  | 2  | 3  | 4  |  |
| 8000  | FUEL     | KG  | 19       | 22  | 23  | 24  | 26  | 27 | 28 | 30 | 35 | 43 |  |
| 8000  | DISTANCE | NM  | 4        | 5   | 5   | 6   | 6   | 6  | 7  | 7  | 9  | 13 |  |
| 8000  | TIME     | MIN | 2        | 2   | 2   | 2   | 2   | 2  | 2  | 2  | 3  | 4  |  |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CLIMB PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**ALTITUDE: SEA LEVEL TO 8000 FT**

CRUISE CONFIGURATION

 NP: 100% OR  
 100% UP TO 12000 FT AND  
 90% ABOVE 12000 FT

BLEED SWITCH: AUTO

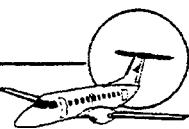
PACK CONTROL SELECTOR: LOW

 SPEED SCHEDULE: 170 KIAS AT SL, DECREASING  
 TO 155 KIAS AT 20000 FT,  
 155 KIAS ABOVE 20000 FT

**WEIGHT  
KG**
**ISA + °C**

|       |                          |                 | -60          | -40           | -30           | -20           | -10           | 0             | 10            | 20            | 30            | 40             |
|-------|--------------------------|-----------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
| 12000 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 38<br>8<br>3 | 43<br>10<br>4 | 45<br>10<br>4 | 48<br>11<br>4 | 51<br>12<br>4 | 54<br>13<br>4 | 57<br>14<br>5 | 62<br>16<br>5 | 75<br>21<br>7 | 99<br>31<br>10 |
| 11500 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 36<br>8<br>3 | 40<br>9<br>3  | 43<br>10<br>4 | 45<br>11<br>4 | 48<br>11<br>4 | 50<br>12<br>4 | 53<br>13<br>4 | 57<br>14<br>5 | 69<br>19<br>6 | 90<br>28<br>9  |
| 11000 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 33<br>7<br>3 | 38<br>8<br>3  | 40<br>9<br>3  | 42<br>10<br>3 | 44<br>11<br>4 | 47<br>11<br>4 | 49<br>12<br>4 | 53<br>13<br>4 | 64<br>18<br>6 | 82<br>25<br>8  |
| 10500 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 31<br>7<br>3 | 35<br>8<br>3  | 37<br>9<br>3  | 39<br>9<br>3  | 42<br>10<br>3 | 44<br>11<br>4 | 46<br>11<br>4 | 50<br>13<br>4 | 59<br>16<br>5 | 75<br>23<br>7  |
| 10000 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 29<br>6<br>2 | 33<br>7<br>3  | 35<br>8<br>3  | 37<br>9<br>3  | 39<br>9<br>3  | 41<br>10<br>3 | 43<br>10<br>4 | 46<br>12<br>4 | 54<br>15<br>5 | 69<br>21<br>7  |
| 9500  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 27<br>6<br>2 | 31<br>7<br>3  | 32<br>7<br>3  | 34<br>8<br>3  | 36<br>9<br>3  | 38<br>9<br>3  | 40<br>10<br>3 | 43<br>11<br>4 | 50<br>14<br>5 | 63<br>19<br>6  |
| 9000  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 26<br>6<br>2 | 29<br>6<br>2  | 30<br>7<br>3  | 32<br>7<br>3  | 34<br>8<br>3  | 35<br>8<br>3  | 37<br>9<br>3  | 40<br>10<br>3 | 47<br>13<br>4 | 58<br>18<br>6  |
| 8500  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 24<br>5<br>2 | 27<br>6<br>2  | 28<br>6<br>2  | 30<br>7<br>2  | 31<br>7<br>3  | 33<br>8<br>3  | 35<br>8<br>3  | 37<br>9<br>3  | 43<br>12<br>4 | 53<br>16<br>5  |
| 8000  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 22<br>5<br>2 | 25<br>6<br>2  | 26<br>6<br>2  | 28<br>6<br>2  | 29<br>7<br>2  | 31<br>7<br>3  | 32<br>8<br>3  | 34<br>9<br>3  | 40<br>11<br>4 | 49<br>15<br>5  |

20 NOVEMBER 1992



**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CLIMB PLANNING**

**ALL ENGINES OPERATING**

**PW118A ENGINES**

**ALTITUDE: SEA LEVEL TO 9000 FT**

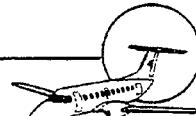
**CRUISE CONFIGURATION**

NP: 100% OR  
 100% UP TO 12000 FT AND  
 90% ABOVE 12000 FT

BLEED SWITCH: AUTO  
 PACK CONTROL SELECTOR: LOW

SPEED SCHEDULE: 170 KIAS AT SL, DECREASING  
 TO 155 KIAS AT 20000 FT,  
 155 KIAS ABOVE 20000 FT

| WEIGHT<br>KG | ISA + °C       |     |     |     |     |    |    |    |    |    |     |  |
|--------------|----------------|-----|-----|-----|-----|----|----|----|----|----|-----|--|
|              | -60            | -40 | -30 | -20 | -10 | 0  | 10 | 20 | 30 | 40 |     |  |
| 12000        | FUEL<br>KG     | 42  | 48  | 51  | 54  | 57 | 60 | 64 | 70 | 85 | 113 |  |
|              | DISTANCE<br>NM | 9   | 11  | 12  | 13  | 14 | 15 | 16 | 18 | 24 | 35  |  |
|              | TIME<br>MIN    | 4   | 4   | 4   | 4   | 5  | 5  | 5  | 6  | 8  | 11  |  |
| 11500        | FUEL<br>KG     | 40  | 45  | 48  | 50  | 53 | 56 | 59 | 65 | 78 | 102 |  |
|              | DISTANCE<br>NM | 9   | 10  | 11  | 12  | 13 | 14 | 15 | 17 | 22 | 32  |  |
|              | TIME<br>MIN    | 3   | 4   | 4   | 4   | 4  | 5  | 5  | 5  | 7  | 10  |  |
| 11000        | FUEL<br>KG     | 37  | 42  | 45  | 47  | 50 | 53 | 55 | 60 | 72 | 93  |  |
|              | DISTANCE<br>NM | 8   | 10  | 10  | 11  | 12 | 13 | 14 | 16 | 20 | 29  |  |
|              | TIME<br>MIN    | 3   | 4   | 4   | 4   | 4  | 5  | 5  | 7  |    | 9   |  |
| 10500        | FUEL<br>KG     | 35  | 39  | 42  | 44  | 47 | 49 | 52 | 56 | 67 | 85  |  |
|              | DISTANCE<br>NM | 8   | 9   | 10  | 10  | 11 | 12 | 13 | 14 | 19 | 27  |  |
|              | TIME<br>MIN    | 3   | 3   | 3   | 4   | 4  | 4  | 5  | 6  |    | 8   |  |
| 10000        | FUEL<br>KG     | 33  | 37  | 39  | 41  | 43 | 46 | 48 | 52 | 62 | 78  |  |
|              | DISTANCE<br>NM | 7   | 8   | 9   | 10  | 10 | 11 | 12 | 13 | 17 | 24  |  |
|              | TIME<br>MIN    | 3   | 3   | 3   | 4   | 4  | 4  | 4  | 6  |    | 8   |  |
| 9500         | FUEL<br>KG     | 31  | 34  | 36  | 38  | 41 | 43 | 45 | 49 | 57 | 71  |  |
|              | DISTANCE<br>NM | 7   | 8   | 9   | 10  | 10 | 11 | 12 | 13 | 16 | 22  |  |
|              | TIME<br>MIN    | 3   | 3   | 3   | 3   | 4  | 4  | 4  | 5  |    | 7   |  |
| 9000         | FUEL<br>KG     | 29  | 32  | 34  | 36  | 38 | 40 | 42 | 45 | 53 | 65  |  |
|              | DISTANCE<br>NM | 6   | 7   | 8   | 9   | 10 | 10 | 12 | 15 | 20 | 26  |  |
|              | TIME<br>MIN    | 2   | 3   | 3   | 3   | 3  | 3  | 4  | 5  |    | 6   |  |
| 8500         | FUEL<br>KG     | 27  | 30  | 32  | 33  | 35 | 37 | 39 | 42 | 49 | 60  |  |
|              | DISTANCE<br>NM | 6   | 7   | 7   | 8   | 8  | 9  | 10 | 11 | 14 | 19  |  |
|              | TIME<br>MIN    | 2   | 3   | 3   | 3   | 3  | 3  | 4  | 4  |    | 6   |  |
| 8000         | FUEL<br>KG     | 25  | 28  | 29  | 31  | 33 | 34 | 36 | 39 | 45 | 55  |  |
|              | DISTANCE<br>NM | 5   | 6   | 7   | 7   | 8  | 8  | 9  | 10 | 13 | 17  |  |
|              | TIME<br>MIN    | 2   | 2   | 2   | 3   | 3  | 3  | 3  | 4  |    | 5   |  |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CLIMB PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**ALTITUDE: SEA LEVEL TO 10000 FT**
**CRUISE CONFIGURATION**

 NP: 100% OR  
 100% UP TO 12000 FT AND  
 90% ABOVE 12000 FT

BLEED SWITCH: AUTO

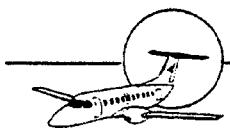
PACK CONTROL SELECTOR: LOW

 SPEED SCHEDULE: 170 KIAS AT SL, DECREASING  
 TO 155 KIAS AT 20000 FT,  
 155 KIAS ABOVE 20000 FT

**WEIGHT  
KG**
**ISA + °C**

|       |                          |                 | -50           | -40           | -30           | -20           | -10           | 0             | 10            | 20            | 30            | 40              |
|-------|--------------------------|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-----------------|
| 12000 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 50<br>11<br>4 | 53<br>12<br>4 | 56<br>13<br>5 | 60<br>14<br>5 | 63<br>15<br>5 | 67<br>16<br>6 | 71<br>18<br>6 | 78<br>20<br>7 | 95<br>27<br>9 | 127<br>41<br>13 |
| 11500 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 47<br>11<br>4 | 50<br>12<br>4 | 53<br>12<br>4 | 56<br>13<br>5 | 59<br>14<br>5 | 62<br>15<br>5 | 66<br>16<br>5 | 72<br>19<br>6 | 87<br>25<br>8 | 115<br>37<br>11 |
| 11000 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 44<br>10<br>4 | 47<br>11<br>4 | 49<br>12<br>4 | 52<br>12<br>4 | 55<br>13<br>5 | 58<br>14<br>5 | 61<br>15<br>5 | 67<br>18<br>6 | 81<br>23<br>7 | 104<br>33<br>10 |
| 10500 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 41<br>9<br>3  | 44<br>10<br>4 | 46<br>11<br>4 | 49<br>12<br>4 | 52<br>12<br>4 | 54<br>13<br>5 | 57<br>14<br>5 | 63<br>16<br>5 | 74<br>21<br>7 | 95<br>30<br>10  |
| 10000 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 38<br>9<br>3  | 41<br>9<br>3  | 43<br>10<br>4 | 46<br>11<br>4 | 48<br>12<br>4 | 51<br>12<br>4 | 53<br>13<br>4 | 58<br>15<br>4 | 69<br>20<br>5 | 87<br>28<br>6   |
| 9500  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 36<br>8<br>3  | 38<br>9<br>3  | 40<br>9<br>3  | 43<br>10<br>4 | 45<br>11<br>4 | 47<br>12<br>4 | 50<br>12<br>4 | 54<br>14<br>5 | 64<br>18<br>6 | 80<br>25<br>8   |
| 9000  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 34<br>8<br>3  | 35<br>8<br>3  | 38<br>9<br>3  | 40<br>9<br>3  | 42<br>10<br>3 | 44<br>11<br>4 | 46<br>11<br>4 | 50<br>13<br>4 | 59<br>17<br>5 | 73<br>23<br>7   |
| 8500  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 31<br>7<br>3  | 33<br>8<br>3  | 35<br>8<br>3  | 37<br>9<br>3  | 39<br>9<br>3  | 41<br>10<br>3 | 43<br>11<br>4 | 47<br>12<br>4 | 54<br>16<br>5 | 67<br>21<br>7   |
| 8000  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 29<br>6<br>2  | 31<br>7<br>3  | 32<br>8<br>3  | 34<br>8<br>3  | 36<br>9<br>3  | 38<br>9<br>3  | 40<br>10<br>3 | 43<br>11<br>4 | 50<br>14<br>5 | 61<br>20<br>6   |

**20 NOVEMBER 1992**



SUPPLEMENTARY PERFORMANCE  
MANUAL

**CLIMB PLANNING**

ALL ENGINES OPERATING

PW118A ENGINES

ALTITUDE: SEA LEVEL TO 11000 FT

CRUISE CONFIGURATION

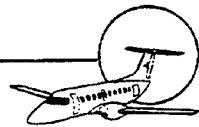
NP: 100% OR  
100% UP TO 12000 FT AND  
90% ABOVE 12000 FT

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

SPEED SCHEDULE: 170 KIAS AT SL, DECREASING  
TO 155 KIAS AT 20000 FT,  
155 KIAS ABOVE 20000 FT

| WEIGHT<br>KG | ISA + °C       |     |     |     |     |    |    |    |    |     |     |  |
|--------------|----------------|-----|-----|-----|-----|----|----|----|----|-----|-----|--|
|              | -50            | -40 | -30 | -20 | -10 | 0  | 10 | 20 | 30 | 40  |     |  |
| 12000        | FUEL<br>KG     | 55  | 58  | 62  | 66  | 69 | 73 | 78 | 86 | 106 | 142 |  |
|              | DISTANCE<br>NM | 13  | 14  | 15  | 16  | 17 | 18 | 20 | 23 | 31  | 46  |  |
|              | TIME<br>MIN    | 5   | 5   | 5   | 6   | 6  | 6  | 6  | 7  | 10  | 14  |  |
| 11500        | FUEL<br>KG     | 51  | 55  | 58  | 61  | 65 | 68 | 72 | 80 | 97  | 128 |  |
|              | DISTANCE<br>NM | 12  | 13  | 14  | 15  | 16 | 17 | 18 | 21 | 29  | 42  |  |
|              | TIME<br>MIN    | 4   | 5   | 5   | 5   | 5  | 6  | 6  | 7  | 9   | 13  |  |
| 11000        | FUEL<br>KG     | 48  | 51  | 54  | 57  | 61 | 64 | 67 | 74 | 89  | 116 |  |
|              | DISTANCE<br>NM | 11  | 12  | 13  | 14  | 15 | 16 | 17 | 20 | 26  | 38  |  |
|              | TIME<br>MIN    | 4   | 4   | 5   | 5   | 5  | 5  | 6  | 6  | 8   | 12  |  |
| 10500        | FUEL<br>KG     | 45  | 48  | 51  | 54  | 57 | 60 | 63 | 69 | 82  | 106 |  |
|              | DISTANCE<br>NM | 10  | 11  | 12  | 13  | 14 | 15 | 16 | 18 | 24  | 34  |  |
|              | TIME<br>MIN    | 4   | 4   | 4   | 5   | 5  | 5  | 5  | 6  | 8   | 11  |  |
| 10000        | FUEL<br>KG     | 42  | 45  | 47  | 50  | 53 | 56 | 59 | 64 | 76  | 96  |  |
|              | DISTANCE<br>NM | 10  | 10  | 11  | 12  | 13 | 14 | 15 | 17 | 22  | 31  |  |
|              | TIME<br>MIN    | 4   | 4   | 4   | 4   | 5  | 5  | 5  | 6  | 7   | 10  |  |
| 9500         | FUEL<br>KG     | 39  | 42  | 44  | 47  | 49 | 52 | 55 | 60 | 70  | 88  |  |
|              | DISTANCE<br>NM | 9   | 10  | 10  | 11  | 12 | 13 | 14 | 16 | 21  | 29  |  |
|              | TIME<br>MIN    | 3   | 4   | 4   | 4   | 4  | 5  | 5  | 7  | 9   | 9   |  |
| 9000         | FUEL<br>KG     | 37  | 39  | 41  | 43  | 46 | 48 | 51 | 55 | 65  | 81  |  |
|              | DISTANCE<br>NM | 8   | 9   | 10  | 10  | 11 | 12 | 13 | 15 | 19  | 26  |  |
|              | TIME<br>MIN    | 3   | 3   | 3   | 4   | 4  | 4  | 5  | 6  | 6   | 8   |  |
| 8500         | FUEL<br>KG     | 34  | 36  | 38  | 40  | 43 | 45 | 47 | 51 | 60  | 74  |  |
|              | DISTANCE<br>NM | 8   | 8   | 9   | 10  | 10 | 11 | 12 | 14 | 18  | 24  |  |
|              | TIME<br>MIN    | 3   | 3   | 3   | 3   | 4  | 4  | 4  | 6  | 6   | 7   |  |
| 8000         | FUEL<br>KG     | 32  | 34  | 36  | 38  | 40 | 42 | 44 | 48 | 55  | 68  |  |
|              | DISTANCE<br>NM | 7   | 8   | 6   | 9   | 10 | 10 | 11 | 13 | 16  | 22  |  |
|              | TIME<br>MIN    | 3   | 3   | 3   | 3   | 3  | 3  | 4  | 4  | 5   | 7   |  |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CLIMB PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**ALTITUDE: SEA LEVEL TO 12000 FT**
**CRUISE CONFIGURATION**

 NP: 100% OR  
 100% UP TO 12000 FT AND  
 90% ABOVE 12000 FT

BLEED SWITCH: AUTO

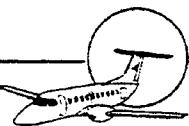
PACK CONTROL SELECTOR: LOW

 SPEED SCHEDULE: 170 KIAS AT SL, DECREASING  
 TO 155 KIAS AT 20000 FT,  
 155 KIAS ABOVE 20000 FT

**WEIGHT  
KG**
**ISA + °C**

|       |                          |                 | -50           | -40           | -30           | -20           | -10           | 0             | 10            | 20            | 30              | 40              |
|-------|--------------------------|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-----------------|-----------------|
| 12000 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 60<br>14<br>5 | 63<br>15<br>5 | 67<br>16<br>6 | 71<br>17<br>6 | 76<br>19<br>6 | 80<br>20<br>7 | 85<br>22<br>7 | 95<br>26<br>8 | 117<br>35<br>11 | 157<br>52<br>16 |
| 11500 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 56<br>13<br>5 | 59<br>14<br>5 | 63<br>15<br>5 | 67<br>16<br>6 | 71<br>17<br>6 | 75<br>19<br>6 | 79<br>20<br>7 | 88<br>24<br>8 | 107<br>32<br>10 | 141<br>47<br>15 |
| 11000 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 52<br>12<br>4 | 55<br>13<br>5 | 59<br>14<br>5 | 62<br>15<br>5 | 66<br>16<br>6 | 69<br>17<br>6 | 74<br>19<br>6 | 82<br>22<br>7 | 98<br>30<br>9   | 128<br>43<br>13 |
| 10500 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 49<br>11<br>4 | 52<br>12<br>4 | 55<br>13<br>5 | 58<br>14<br>5 | 61<br>15<br>5 | 65<br>16<br>5 | 69<br>18<br>6 | 76<br>21<br>7 | 91<br>27<br>9   | 116<br>39<br>12 |
| 10000 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 46<br>11<br>4 | 48<br>11<br>4 | 51<br>12<br>4 | 54<br>13<br>5 | 57<br>14<br>5 | 60<br>15<br>5 | 64<br>16<br>5 | 70<br>19<br>6 | 84<br>25<br>8   | 106<br>35<br>11 |
| 9500  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 43<br>10<br>4 | 45<br>11<br>4 | 48<br>11<br>4 | 51<br>12<br>4 | 53<br>13<br>4 | 56<br>14<br>5 | 59<br>15<br>5 | 65<br>18<br>6 | 77<br>23<br>7   | 97<br>32<br>10  |
| 9000  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 40<br>9<br>3  | 42<br>10<br>4 | 45<br>11<br>4 | 47<br>11<br>4 | 50<br>12<br>4 | 52<br>13<br>4 | 55<br>14<br>5 | 61<br>16<br>5 | 71<br>21<br>7   | 89<br>29<br>9   |
| 8500  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 37<br>8<br>3  | 39<br>9<br>3  | 42<br>10<br>4 | 44<br>11<br>4 | 46<br>11<br>4 | 49<br>12<br>4 | 51<br>13<br>4 | 56<br>15<br>5 | 66<br>20<br>6   | 81<br>27<br>8   |
| 8000  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 35<br>8<br>3  | 37<br>8<br>3  | 39<br>9<br>3  | 41<br>10<br>3 | 43<br>11<br>4 | 45<br>11<br>4 | 48<br>12<br>4 | 52<br>14<br>5 | 60<br>18<br>6   | 74<br>25<br>8   |

**20 NOVEMBER 1992**



**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CLIMB PLANNING**

**ALL ENGINES OPERATING**

**PW118A ENGINES**

**ALTITUDE: SEA LEVEL TO 13000 FT**

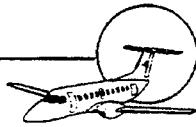
**CRUISE CONFIGURATION**

NP: 100% OR  
100% UP TO 12000 FT AND  
90% ABOVE 12000 FT

BLEED SWITCH: AUTO  
PACK CONTROL SELECTOR: LOW

**SPEED SCHEDULE:** 170 KIAS AT SL, DECREASING  
TO 155 KIAS AT 20000 FT,  
155 KIAS ABOVE 20000 FT

| WEIGHT<br>KG             | ISA + °C        |    |    |     |    |    |     |    |     |     |     |  |     |  |  |   |    |    |    |    |
|--------------------------|-----------------|----|----|-----|----|----|-----|----|-----|-----|-----|--|-----|--|--|---|----|----|----|----|
|                          | -50             |    |    | -40 |    |    | -30 |    |     | -20 |     |  | -10 |  |  | 0 | 10 | 20 | 30 | 40 |
| FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 65 | 69 | 73  | 78 | 82 | 87  | 93 | 104 | 128 | 173 |  |     |  |  |   |    |    |    |    |
| 12000                    |                 | 15 | 16 | 18  | 19 | 21 | 22  | 24 | 29  | 39  | 59  |  |     |  |  |   |    |    |    |    |
|                          |                 | 6  | 6  | 6   | 7  | 7  | 7   | 8  | 9   | 12  | 18  |  |     |  |  |   |    |    |    |    |
| 11500                    |                 | 14 | 15 | 17  | 18 | 19 | 21  | 22 | 27  | 36  | 53  |  |     |  |  |   |    |    |    |    |
|                          |                 | 5  | 6  | 6   | 6  | 7  | 7   | 7  | 9   | 11  | 16  |  |     |  |  |   |    |    |    |    |
| 11000                    |                 | 13 | 14 | 15  | 17 | 18 | 19  | 21 | 25  | 33  | 48  |  |     |  |  |   |    |    |    |    |
|                          |                 | 5  | 5  | 5   | 6  | 6  | 6   | 7  | 8   | 10  | 15  |  |     |  |  |   |    |    |    |    |
| 10500                    |                 | 12 | 13 | 14  | 16 | 17 | 18  | 19 | 23  | 30  | 43  |  |     |  |  |   |    |    |    |    |
|                          |                 | 5  | 5  | 5   | 6  | 6  | 6   | 6  | 7   | 9   | 13  |  |     |  |  |   |    |    |    |    |
| 10000                    |                 | 12 | 12 | 13  | 15 | 16 | 17  | 18 | 21  | 28  | 39  |  |     |  |  |   |    |    |    |    |
|                          |                 | 4  | 5  | 5   | 5  | 5  | 6   | 6  | 7   | 9   | 12  |  |     |  |  |   |    |    |    |    |
| 9500                     |                 | 11 | 12 | 13  | 14 | 15 | 16  | 17 | 20  | 26  | 36  |  |     |  |  |   |    |    |    |    |
|                          |                 | 4  | 4  | 4   | 5  | 5  | 5   | 5  | 6   | 8   | 11  |  |     |  |  |   |    |    |    |    |
| 9000                     |                 | 10 | 11 | 12  | 13 | 14 | 15  | 16 | 18  | 24  | 33  |  |     |  |  |   |    |    |    |    |
|                          |                 | 4  | 4  | 4   | 4  | 5  | 5   | 5  | 6   | 7   | 10  |  |     |  |  |   |    |    |    |    |
| 8500                     |                 | 9  | 10 | 11  | 12 | 13 | 14  | 15 | 17  | 22  | 30  |  |     |  |  |   |    |    |    |    |
|                          |                 | 3  | 4  | 4   | 4  | 4  | 4   | 4  | 5   | 7   | 9   |  |     |  |  |   |    |    |    |    |
| 8000                     |                 | 9  | 9  | 10  | 11 | 12 | 13  | 14 | 16  | 20  | 27  |  |     |  |  |   |    |    |    |    |
|                          |                 | 3  | 3  | 4   | 4  | 4  | 4   | 4  | 5   | 6   | 8   |  |     |  |  |   |    |    |    |    |

SUPPLEMENTARY PERFORMANCE  
MANUAL

## CLIMB PLANNING

ALL ENGINES OPERATING

PW118A ENGINES

ALTITUDE: SEA LEVEL TO 14000 FT

## CRUISE CONFIGURATION

NP: 100% OR  
100% UP TO 12000 FT AND  
90% ABOVE 12000 FT

BLEED SWITCH: AUTO

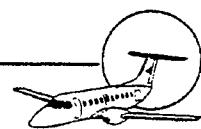
PACK CONTROL SELECTOR: LOW

SPEED SCHEDULE: 170 KIAS AT SL, DECREASING  
TO 155 KIAS AT 20000 FT,  
155 KIAS ABOVE 20000 FTWEIGHT  
KG

ISA + °C

|       |          |     | -50 | -40 | -30 | -20 | -10 | 0  | 10  | 20  | 30  | 40  |
|-------|----------|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|
|       | FUEL     | KG  | 70  | 75  | 79  | 84  | 89  | 95 | 101 | 114 | 140 | 190 |
|       | DISTANCE | NM  | 17  | 18  | 20  | 21  | 23  | 25 | 27  | 32  | 44  | 66  |
|       | TIME     | MIN | 6   | 6   | 7   | 7   | 8   | 8  | 9   | 10  | 14  | 20  |
| 12000 | FUEL     | KG  | 65  | 70  | 74  | 79  | 83  | 88 | 94  | 105 | 128 | 170 |
| 12000 | DISTANCE | NM  | 16  | 17  | 18  | 20  | 21  | 23 | 25  | 30  | 40  | 59  |
| 12000 | TIME     | MIN | 6   | 6   | 6   | 7   | 7   | 8  | 8   | 9   | 12  | 18  |
| 11500 | FUEL     | KG  | 61  | 65  | 69  | 73  | 78  | 82 | 87  | 97  | 117 | 153 |
| 11500 | DISTANCE | NM  | 15  | 16  | 17  | 18  | 20  | 21 | 23  | 28  | 37  | 53  |
| 11500 | TIME     | MIN | 5   | 6   | 6   | 6   | 7   | 7  | 7   | 9   | 11  | 16  |
| 11000 | FUEL     | KG  | 57  | 61  | 65  | 68  | 72  | 76 | 81  | 90  | 108 | 139 |
| 11000 | DISTANCE | NM  | 14  | 15  | 16  | 17  | 18  | 20 | 21  | 26  | 34  | 48  |
| 11000 | TIME     | MIN | 5   | 5   | 6   | 6   | 7   | 7  | 7   | 8   | 10  | 15  |
| 10500 | FUEL     | KG  | 53  | 57  | 60  | 64  | 67  | 71 | 75  | 83  | 99  | 126 |
| 10500 | DISTANCE | NM  | 13  | 14  | 15  | 16  | 17  | 18 | 20  | 24  | 31  | 43  |
| 10500 | TIME     | MIN | 5   | 5   | 5   | 6   | 6   | 6  | 6   | 7   | 10  | 13  |
| 10000 | FUEL     | KG  | 50  | 53  | 56  | 59  | 63  | 66 | 70  | 77  | 91  | 115 |
| 10000 | DISTANCE | NM  | 12  | 13  | 14  | 15  | 16  | 17 | 19  | 22  | 28  | 39  |
| 10000 | TIME     | MIN | 4   | 5   | 5   | 5   | 5   | 6  | 6   | 7   | 9   | 12  |
| 9500  | FUEL     | KG  | 47  | 49  | 52  | 55  | 58  | 62 | 65  | 72  | 84  | 105 |
| 9500  | DISTANCE | NM  | 11  | 12  | 13  | 14  | 15  | 16 | 17  | 20  | 26  | 36  |
| 9500  | TIME     | MIN | 4   | 4   | 5   | 5   | 5   | 6  | 6   | 6   | 8   | 11  |
| 9000  | FUEL     | KG  | 43  | 46  | 49  | 51  | 54  | 57 | 60  | 66  | 77  | 96  |
| 9000  | DISTANCE | NM  | 10  | 11  | 12  | 13  | 14  | 15 | 16  | 19  | 24  | 33  |
| 9000  | TIME     | MIN | 4   | 4   | 4   | 4   | 5   | 5  | 5   | 6   | 7   | 10  |
| 8500  | FUEL     | KG  | 40  | 43  | 45  | 48  | 50  | 53 | 56  | 61  | 71  | 87  |
| 8500  | DISTANCE | NM  | 9   | 10  | 11  | 12  | 13  | 14 | 15  | 17  | 22  | 30  |
| 8500  | TIME     | MIN | 4   | 4   | 4   | 4   | 4   | 5  | 5   | 5   | 7   | 9   |
| 8000  | FUEL     | KG  | 40  | 43  | 45  | 48  | 50  | 53 | 56  | 61  | 71  | 87  |
| 8000  | DISTANCE | NM  | 9   | 10  | 11  | 12  | 13  | 14 | 15  | 17  | 22  | 30  |
| 8000  | TIME     | MIN | 4   | 4   | 4   | 4   | 4   | 5  | 5   | 5   | 7   | 9   |

20 NOVEMBER 1992



**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CLIMB PLANNING**

**ALL ENGINES OPERATING**

**PW118A ENGINES**

**ALTITUDE: SEA LEVEL TO 15000 FT**

**CRUISE CONFIGURATION**

NP: 100% OR

100% UP TO 12000 FT AND

90% ABOVE 12000 FT

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**SPEED SCHEDULE:** 170 KIAS AT SL, DECREASING  
TO 155 KIAS AT 20000 FT,  
155 KIAS ABOVE 20000 FT

| WEIGHT<br>KG | FUEL<br>KG | DISTANCE<br>NM | TIME<br>MIN | ISA + °C |     |     |     |     |     |     |    |    |    |
|--------------|------------|----------------|-------------|----------|-----|-----|-----|-----|-----|-----|----|----|----|
|              |            |                |             | -40      | -30 | -20 | -10 | 0   | 10  | 20  | 30 | 35 | 40 |
| 12000        | 80         | 86             | 91          | 97       | 103 | 109 | 124 | 153 | 176 | 208 |    |    |    |
|              | 20         | 22             | 23          | 25       | 27  | 30  | 36  | 49  | 59  | 74  |    |    |    |
|              | 7          | 7              | 8           | 8        | 9   | 9   | 11  | 15  | 18  | 22  |    |    |    |
| 11500        | 75         | 80             | 85          | 90       | 95  | 101 | 114 | 140 | 159 | 186 |    |    |    |
|              | 19         | 20             | 22          | 23       | 25  | 27  | 33  | 45  | 54  | 66  |    |    |    |
|              | 7          | 7              | 7           | 8        | 8   | 9   | 10  | 14  | 16  | 20  |    |    |    |
| 11000        | 70         | 74             | 79          | 84       | 89  | 94  | 105 | 128 | 144 | 167 |    |    |    |
|              | 17         | 19             | 20          | 22       | 23  | 25  | 31  | 41  | 48  | 59  |    |    |    |
|              | 6          | 7              | 7           | 7        | 8   | 8   | 10  | 13  | 15  | 18  |    |    |    |
| 10500        | 65         | 69             | 74          | 78       | 82  | 88  | 97  | 117 | 131 | 151 |    |    |    |
|              | 16         | 17             | 19          | 20       | 22  | 24  | 28  | 37  | 44  | 53  |    |    |    |
|              | 6          | 6              | 6           | 7        | 7   | 8   | 9   | 11  | 13  | 16  |    |    |    |
| 10000        | 61         | 65             | 69          | 73       | 77  | 81  | 90  | 107 | 120 | 136 |    |    |    |
|              | 15         | 16             | 18          | 19       | 20  | 22  | 26  | 34  | 40  | 48  |    |    |    |
|              | 5          | 6              | 6           | 6        | 7   | 7   | 8   | 11  | 12  | 15  |    |    |    |
| 9500         | 57         | 60             | 64          | 68       | 71  | 76  | 84  | 99  | 110 | 124 |    |    |    |
|              | 14         | 15             | 16          | 18       | 19  | 20  | 24  | 31  | 37  | 44  |    |    |    |
|              | 5          | 5              | 6           | 6        | 6   | 7   | 8   | 10  | 11  | 13  |    |    |    |
| 9000         | 53         | 56             | 59          | 63       | 66  | 70  | 77  | 91  | 100 | 113 |    |    |    |
|              | 13         | 14             | 15          | 16       | 17  | 19  | 22  | 29  | 34  | 40  |    |    |    |
|              | 5          | 5              | 5           | 5        | 6   | 6   | 7   | 9   | 10  | 12  |    |    |    |
| 8500         | 49         | 52             | 55          | 58       | 61  | 65  | 71  | 84  | 92  | 103 |    |    |    |
|              | 12         | 13             | 14          | 15       | 16  | 17  | 21  | 27  | 31  | 36  |    |    |    |
|              | 4          | 5              | 5           | 5        | 5   | 6   | 6   | 8   | 9   | 11  |    |    |    |
| 8000         | 46         | 48             | 51          | 54       | 57  | 60  | 66  | 77  | 84  | 94  |    |    |    |
|              | 11         | 12             | 13          | 14       | 15  | 16  | 19  | 24  | 28  | 33  |    |    |    |
|              | 4          | 4              | 4           | 5        | 5   | 5   | 6   | 8   | 9   | 10  |    |    |    |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CLIMB PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**ALTITUDE: SEA LEVEL TO 16000 FT**

## CRUISE CONFIGURATION

 NP: 100% OR  
 100% UP TO 12000 FT AND  
 90% ABOVE 12000 FT

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

 SPEED SCHEDULE: 170 KIAS AT SL, DECREASING  
 TO 155 KIAS AT 20000 FT,  
 155 KIAS ABOVE 20000 FT

| WEIGHT<br>KG |                          |                 | ISA + °C      |               |               |                |                 |                 |                 |                 |                 |                 |
|--------------|--------------------------|-----------------|---------------|---------------|---------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|              |                          |                 | -40           | -30           | -20           | -10            | 0               | 10              | 20              | 30              | 35              | 40              |
|              | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 86<br>22<br>8 | 92<br>24<br>8 | 98<br>26<br>9 | 104<br>28<br>9 | 111<br>30<br>10 | 118<br>33<br>10 | 134<br>40<br>12 | 167<br>55<br>17 | 192<br>67<br>20 | 229<br>83<br>25 |
| 12000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 80<br>20<br>7 | 86<br>22<br>8 | 91<br>24<br>8 | 97<br>26<br>8  | 103<br>28<br>9  | 109<br>30<br>10 | 123<br>37<br>11 | 152<br>50<br>15 | 173<br>60<br>18 | 203<br>74<br>22 |
| 11500        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 75<br>19<br>7 | 80<br>20<br>7 | 85<br>22<br>7 | 90<br>24<br>8  | 95<br>26<br>8   | 101<br>28<br>9  | 114<br>34<br>10 | 138<br>45<br>14 | 156<br>54<br>16 | 181<br>66<br>20 |
| 11000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 70<br>18<br>6 | 74<br>19<br>7 | 79<br>21<br>7 | 84<br>22<br>7  | 89<br>24<br>8   | 94<br>26<br>8   | 105<br>31<br>10 | 127<br>41<br>13 | 142<br>49<br>15 | 163<br>59<br>18 |
| 10500        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 65<br>16<br>6 | 69<br>18<br>6 | 74<br>19<br>6 | 78<br>21<br>7  | 82<br>22<br>7   | 87<br>24<br>8   | 97<br>29<br>9   | 116<br>38<br>12 | 130<br>44<br>13 | 148<br>53<br>16 |
| 10000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 61<br>15<br>5 | 65<br>16<br>6 | 68<br>18<br>6 | 72<br>19<br>6  | 77<br>20<br>7   | 81<br>22<br>7   | 90<br>26<br>8   | 106<br>35<br>11 | 118<br>40<br>12 | 134<br>48<br>14 |
| 9500         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 57<br>14<br>5 | 60<br>15<br>5 | 64<br>16<br>6 | 67<br>18<br>6  | 71<br>19<br>6   | 75<br>21<br>7   | 83<br>24<br>8   | 98<br>32<br>10  | 108<br>37<br>11 | 122<br>44<br>13 |
| 9000         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 53<br>13<br>5 | 56<br>14<br>5 | 59<br>15<br>5 | 62<br>16<br>5  | 66<br>18<br>6   | 70<br>19<br>6   | 77<br>23<br>7   | 90<br>29<br>9   | 99<br>34<br>10  | 111<br>40<br>12 |
| 8500         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 49<br>12<br>4 | 52<br>13<br>5 | 55<br>14<br>5 | 58<br>15<br>5  | 61<br>16<br>5   | 65<br>18<br>6   | 71<br>21<br>7   | 83<br>27<br>8   | 91<br>31<br>9   | 101<br>36<br>11 |
| 8000         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 49<br>12<br>4 | 52<br>13<br>5 | 55<br>14<br>5 | 58<br>15<br>5  | 61<br>16<br>5   | 65<br>18<br>6   | 71<br>21<br>7   | 83<br>27<br>8   | 91<br>31<br>9   | 101<br>36<br>11 |

20 NOVEMBER 1992



SUPPLEMENTARY PERFORMANCE  
MANUAL

CLIMB PLANNING

ALL ENGINES OPERATING

PW118A ENGINES

ALTITUDE: SEA LEVEL TO 17000 FT

CRUISE CONFIGURATION

NP: 100% OR  
100% UP TO 12000 FT AND  
90% ABOVE 12000 FT

BLEED SWITCH: AUTO  
PACK CONTROL SELECTOR: LOW

SPEED SCHEDULE: 170 KIAS AT SL, DECREASING  
TO 155 KIAS AT 20000 FT,  
155 KIAS ABOVE 20000 FT

| WEIGHT<br>KG             | ISA + °C        |               |               |                |                 |                 |                 |                 |                 |                 |                 |    |
|--------------------------|-----------------|---------------|---------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|----|
|                          |                 |               | -40           | -30            | -20             | -10             | 0               | 10              | 20              | 30              | 35              | 40 |
| FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 92<br>24<br>8 | 98<br>26<br>9 | 105<br>28<br>9 | 112<br>30<br>10 | 119<br>33<br>10 | 127<br>36<br>11 | 145<br>44<br>14 | 182<br>61<br>18 | 210<br>75<br>22 | 252<br>94<br>28 |    |
| 12000                    |                 |               |               |                |                 |                 |                 |                 |                 |                 |                 |    |
| 11500                    |                 |               |               |                |                 |                 |                 |                 |                 |                 |                 |    |
| 11000                    |                 |               |               |                |                 |                 |                 |                 |                 |                 |                 |    |
| 10500                    |                 |               |               |                |                 |                 |                 |                 |                 |                 |                 |    |
| 10000                    |                 |               |               |                |                 |                 |                 |                 |                 |                 |                 |    |
| 9500                     |                 |               |               |                |                 |                 |                 |                 |                 |                 |                 |    |
| 9000                     |                 |               |               |                |                 |                 |                 |                 |                 |                 |                 |    |
| 8500                     |                 |               |               |                |                 |                 |                 |                 |                 |                 |                 |    |
| 8000                     |                 |               |               |                |                 |                 |                 |                 |                 |                 |                 |    |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CLIMB PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**ALTITUDE: SEA LEVEL TO 18000 FT**
**CRUISE CONFIGURATION**

 NP: 100% OR  
 100% UP TO 12000 FT AND  
 90% ABOVE 12000 FT

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

 SPEED SCHEDULE: 170 KIAS AT SL, DECREASING  
 TO 155 KIAS AT 20000 FT,  
 155 KIAS ABOVE 20000 FT

**WEIGHT  
KG**
**ISA + °C**

|       |                          |                 | -40           | -30            | -20             | -10             | 0               | 10              | 20              | 30              | 35              | 40               |
|-------|--------------------------|-----------------|---------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|
| 12000 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 98<br>25<br>9 | 105<br>28<br>9 | 112<br>30<br>10 | 119<br>33<br>11 | 127<br>35<br>11 | 137<br>39<br>12 | 157<br>49<br>15 | 198<br>68<br>20 | 230<br>84<br>25 | 278<br>107<br>31 |
| 11500 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 91<br>24<br>8 | 97<br>26<br>9  | 104<br>28<br>9  | 111<br>30<br>10 | 118<br>33<br>10 | 126<br>36<br>11 | 144<br>45<br>14 | 178<br>61<br>18 | 205<br>74<br>22 | 243<br>93<br>27  |
| 11000 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 85<br>22<br>8 | 91<br>24<br>8  | 97<br>26<br>9   | 103<br>28<br>9  | 109<br>30<br>10 | 117<br>34<br>10 | 132<br>41<br>13 | 161<br>55<br>17 | 184<br>66<br>20 | 215<br>82<br>24  |
| 10500 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 79<br>20<br>7 | 84<br>22<br>8  | 90<br>24<br>8   | 95<br>26<br>9   | 101<br>28<br>9  | 108<br>31<br>10 | 122<br>38<br>12 | 147<br>50<br>15 | 166<br>60<br>18 | 192<br>73<br>21  |
| 10000 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 74<br>19<br>7 | 79<br>21<br>7  | 84<br>22<br>7   | 89<br>24<br>8   | 94<br>26<br>8   | 100<br>29<br>9  | 112<br>35<br>11 | 134<br>46<br>14 | 150<br>54<br>16 | 172<br>65<br>19  |
| 9500  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 69<br>18<br>6 | 73<br>19<br>7  | 78<br>21<br>7   | 82<br>22<br>7   | 87<br>24<br>8   | 93<br>26<br>8   | 103<br>32<br>10 | 123<br>42<br>13 | 137<br>49<br>15 | 155<br>58<br>17  |
| 9000  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 64<br>16<br>6 | 68<br>18<br>6  | 72<br>19<br>6   | 76<br>21<br>7   | 81<br>22<br>7   | 86<br>24<br>8   | 95<br>29<br>9   | 112<br>38<br>12 | 125<br>44<br>13 | 141<br>53<br>16  |
| 8500  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 59<br>15<br>5 | 63<br>16<br>6  | 67<br>18<br>6   | 71<br>19<br>6   | 75<br>21<br>7   | 79<br>23<br>7   | 88<br>27<br>8   | 103<br>35<br>11 | 114<br>40<br>12 | 128<br>48<br>14  |
| 8000  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 55<br>14<br>5 | 58<br>15<br>5  | 62<br>16<br>6   | 66<br>18<br>6   | 69<br>19<br>6   | 73<br>21<br>7   | 81<br>25<br>8   | 94<br>32<br>10  | 104<br>37<br>11 | 116<br>43<br>13  |

**20 NOVEMBER 1992**



**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CLIMB PLANNING**

**ALL ENGINES OPERATING**

**PW118A ENGINES**

**ALTITUDE: SEA LEVEL TO 19000 FT**

**CRUISE CONFIGURATION**

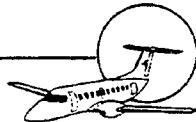
NP: 100% OR  
100% UP TO 12000 FT AND  
90% ABOVE 12000 FT

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**SPEED SCHEDULE: 170 KIAS AT SL, DECREASING  
TO 155 KIAS AT 20000 FT,  
155 KIAS ABOVE 20000 FT**

| WEIGHT<br>KG |                          |                 | ISA + °C       |                 |                 |                 |                 |                 |                 |                 |                 |                  |
|--------------|--------------------------|-----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|
|              |                          |                 | -40            | -30             | -20             | -10             | 0               | 10              | 20              | 30              | 35              | 40               |
| 12000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 104<br>27<br>9 | 111<br>30<br>10 | 119<br>33<br>11 | 127<br>35<br>11 | 135<br>38<br>12 | 147<br>43<br>13 | 170<br>54<br>16 | 215<br>77<br>23 | 253<br>95<br>28 | 310<br>124<br>36 |
| 11500        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 97<br>25<br>9  | 104<br>28<br>9  | 111<br>30<br>10 | 118<br>33<br>11 | 125<br>35<br>11 | 135<br>40<br>12 | 155<br>49<br>15 | 193<br>68<br>20 | 223<br>83<br>25 | 267<br>105<br>31 |
| 11000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 90<br>24<br>8  | 96<br>26<br>9   | 103<br>28<br>9  | 109<br>30<br>10 | 116<br>33<br>10 | 125<br>37<br>11 | 142<br>45<br>14 | 174<br>61<br>18 | 199<br>74<br>22 | 234<br>92<br>27  |
| 10500        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 84<br>22<br>8  | 90<br>24<br>8   | 95<br>26<br>9   | 101<br>28<br>9  | 108<br>30<br>10 | 115<br>34<br>11 | 130<br>41<br>13 | 158<br>55<br>17 | 179<br>66<br>20 | 208<br>81<br>24  |
| 10000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 78<br>20<br>7  | 83<br>22<br>8   | 89<br>24<br>8   | 94<br>26<br>8   | 100<br>28<br>9  | 107<br>31<br>10 | 120<br>38<br>12 | 144<br>50<br>15 | 162<br>59<br>18 | 186<br>72<br>21  |
| 9500         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 73<br>19<br>7  | 77<br>21<br>7   | 82<br>22<br>7   | 87<br>24<br>8   | 92<br>26<br>8   | 99<br>29<br>9   | 110<br>35<br>11 | 131<br>46<br>14 | 147<br>54<br>16 | 167<br>64<br>19  |
| 9000         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 68<br>18<br>6  | 72<br>19<br>6   | 76<br>21<br>7   | 81<br>22<br>7   | 86<br>24<br>8   | 91<br>27<br>8   | 102<br>32<br>10 | 120<br>42<br>12 | 133<br>49<br>14 | 151<br>58<br>17  |
| 8500         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 63<br>16<br>6  | 67<br>18<br>6   | 71<br>19<br>6   | 75<br>21<br>7   | 79<br>22<br>7   | 85<br>25<br>8   | 94<br>29<br>9   | 110<br>38<br>11 | 122<br>44<br>13 | 137<br>52<br>15  |
| 8000         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 58<br>15<br>5  | 62<br>16<br>6   | 66<br>18<br>6   | 69<br>19<br>6   | 73<br>20<br>7   | 78<br>23<br>7   | 86<br>27<br>8   | 101<br>35<br>10 | 111<br>40<br>12 | 124<br>47<br>14  |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CLIMB PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**ALTITUDE: SEA LEVEL TO 20000 FT**
**CRUISE CONFIGURATION**

NP: 100% OR  
100% UP TO 12000 FT AND  
90% ABOVE 12000 FT

BLEED SWITCH: AUTO

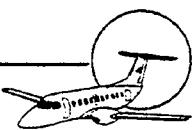
PACK CONTROL SELECTOR: LOW

SPEED SCHEDULE: 170 KIAS AT SL, DECREASING  
TO 155 KIAS AT 20000 FT,  
155 KIAS ABOVE 20000 FT

**WEIGHT  
KG**
**ISA + °C**

|       |                          |                 | -30             | -20             | -10             | -5              | 0               | 10              | 20              | 30              | 35               | 40               |
|-------|--------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|------------------|
| 12000 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 118<br>32<br>11 | 126<br>35<br>12 | 135<br>38<br>12 | 140<br>40<br>13 | 144<br>42<br>13 | 157<br>48<br>15 | 183<br>60<br>18 | 235<br>86<br>25 | 280<br>109<br>32 | 350<br>145<br>42 |
| 11500 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 110<br>30<br>10 | 117<br>32<br>11 | 125<br>35<br>11 | 129<br>37<br>12 | 133<br>38<br>12 | 145<br>44<br>13 | 167<br>55<br>16 | 209<br>76<br>22 | 244<br>94<br>27  | 296<br>121<br>35 |
| 11000 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 102<br>28<br>9  | 109<br>30<br>10 | 116<br>33<br>10 | 119<br>34<br>11 | 123<br>35<br>11 | 133<br>40<br>12 | 152<br>50<br>15 | 188<br>68<br>20 | 216<br>83<br>24  | 257<br>104<br>30 |
| 10500 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 95<br>26<br>9   | 101<br>28<br>9  | 107<br>30<br>10 | 111<br>31<br>10 | 114<br>33<br>10 | 123<br>37<br>11 | 139<br>45<br>14 | 170<br>61<br>18 | 193<br>73<br>21  | 226<br>90<br>26  |
| 10000 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 88<br>24<br>8   | 94<br>26<br>9   | 100<br>28<br>9  | 103<br>29<br>9  | 106<br>30<br>10 | 114<br>34<br>10 | 128<br>41<br>13 | 154<br>55<br>16 | 174<br>66<br>19  | 201<br>80<br>23  |
| 9500  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 82<br>22<br>7   | 87<br>24<br>8   | 92<br>26<br>8   | 95<br>27<br>9   | 98<br>28<br>9   | 105<br>31<br>10 | 118<br>38<br>11 | 141<br>50<br>15 | 157<br>59<br>17  | 180<br>71<br>21  |
| 9000  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 76<br>20<br>7   | 81<br>22<br>7   | 86<br>24<br>8   | 88<br>25<br>8   | 91<br>26<br>8   | 97<br>29<br>9   | 108<br>35<br>11 | 128<br>46<br>14 | 143<br>53<br>16  | 162<br>64<br>19  |
| 8500  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 70<br>19<br>6   | 75<br>20<br>7   | 79<br>22<br>7   | 82<br>23<br>7   | 84<br>24<br>8   | 90<br>27<br>8   | 100<br>32<br>10 | 117<br>42<br>12 | 130<br>48<br>14  | 146<br>57<br>17  |
| 8000  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 65<br>17<br>6   | 69<br>19<br>6   | 73<br>20<br>7   | 75<br>21<br>7   | 78<br>22<br>7   | 83<br>24<br>8   | 92<br>29<br>9   | 107<br>38<br>11 | 118<br>44<br>13  | 132<br>52<br>15  |

**20 NOVEMBER 1992**



**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CLIMB PLANNING**

**ALL ENGINES OPERATING**

**PW118A ENGINES**

**ALTITUDE: SEA LEVEL TO 21000 FT**

**CRUISE CONFIGURATION**

NP: 100% OR  
100% UP TO 12000 FT AND  
90% ABOVE 12000 FT

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**SPEED SCHEDULE:** 170 KIAS AT SL, DECREASING  
TO 155 KIAS AT 20000 FT,  
155 KIAS ABOVE 20000 FT

| WEIGHT<br>KG |                          |                 |                 | ISA + °C        |                 |                 |                 |                 |                 |                 |                  |                  |    |
|--------------|--------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|------------------|----|
|              |                          |                 |                 | -30             | -20             | -10             | -5              | 0               | 10              | 20              | 30               | 35               | 40 |
| 12000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 125<br>34<br>11 | 134<br>38<br>12 | 143<br>41<br>13 | 148<br>43<br>14 | 154<br>45<br>14 | 169<br>52<br>16 | 198<br>67<br>20 | 258<br>98<br>28 | 313<br>126<br>36 | 407<br>177<br>50 |    |
| 11500        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 116<br>32<br>11 | 124<br>35<br>11 | 132<br>38<br>12 | 137<br>40<br>13 | 142<br>42<br>13 | 155<br>48<br>15 | 179<br>60<br>18 | 228<br>86<br>25 | 269<br>107<br>31 | 333<br>141<br>40 |    |
| 11000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 108<br>30<br>10 | 115<br>32<br>11 | 123<br>35<br>11 | 127<br>37<br>12 | 131<br>38<br>12 | 142<br>44<br>13 | 163<br>55<br>16 | 203<br>76<br>22 | 236<br>93<br>27  | 283<br>119<br>34 |    |
| 10500        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 100<br>27<br>9  | 107<br>30<br>10 | 113<br>32<br>10 | 117<br>34<br>11 | 121<br>35<br>11 | 131<br>40<br>12 | 149<br>50<br>15 | 183<br>68<br>20 | 209<br>82<br>24  | 246<br>102<br>29 |    |
| 10000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 93<br>25<br>9   | 99<br>28<br>9   | 105<br>30<br>10 | 108<br>31<br>10 | 112<br>33<br>10 | 121<br>37<br>11 | 137<br>45<br>14 | 165<br>61<br>18 | 187<br>73<br>21  | 217<br>89<br>26  |    |
| 9500         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 86<br>23<br>8   | 92<br>26<br>8   | 97<br>28<br>9   | 100<br>29<br>9  | 104<br>30<br>9  | 112<br>34<br>10 | 125<br>41<br>12 | 150<br>55<br>16 | 169<br>65<br>19  | 194<br>79<br>23  |    |
| 9000         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 80<br>22<br>7   | 85<br>24<br>8   | 90<br>26<br>8   | 93<br>27<br>8   | 96<br>28<br>9   | 103<br>31<br>10 | 115<br>38<br>11 | 137<br>50<br>15 | 153<br>59<br>17  | 174<br>70<br>20  |    |
| 8500         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 74<br>20<br>7   | 79<br>22<br>7   | 84<br>24<br>8   | 86<br>25<br>8   | 89<br>26<br>8   | 95<br>29<br>9   | 106<br>35<br>10 | 125<br>45<br>13 | 138<br>53<br>15  | 156<br>63<br>18  |    |
| 8000         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 69<br>19<br>6   | 73<br>20<br>7   | 77<br>22<br>7   | 79<br>23<br>7   | 82<br>24<br>7   | 88<br>26<br>8   | 97<br>32<br>10  | 114<br>41<br>12 | 126<br>48<br>14  | 141<br>57<br>16  |    |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CLIMB PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**ALTITUDE: SEA LEVEL TO 22000 FT**
**CRUISE CONFIGURATION**

NP: 100% OR  
100% UP TO 12000 FT AND  
90% ABOVE 12000 FT

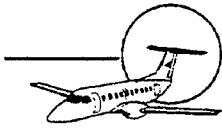
**BLEED SWITCH: AUTO**
**PACK CONTROL SELECTOR: LOW**

SPEED SCHEDULE: 170 KIAS AT SL, DECREASING  
TO 155 KIAS AT 20000 FT,  
155 KIAS ABOVE 20000 FT

**WEIGHT  
KG**
**ISA + °C**

|       |                          |                 | -30             | -20             | -10             | -5              | 0               | 10              | 20              | 30               | 35               | 40               |
|-------|--------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|------------------|------------------|
| 12000 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 132<br>37<br>12 | 142<br>40<br>13 | 152<br>44<br>14 | 158<br>47<br>15 | 164<br>49<br>15 | 181<br>58<br>17 | 215<br>75<br>22 | 286<br>112<br>32 | 357<br>151<br>43 | 510<br>237<br>65 |
| 11500 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 122<br>34<br>11 | 131<br>37<br>12 | 140<br>41<br>13 | 145<br>43<br>13 | 151<br>45<br>14 | 166<br>52<br>16 | 193<br>67<br>20 | 249<br>97<br>28  | 299<br>124<br>35 | 385<br>172<br>48 |
| 11000 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 113<br>32<br>10 | 121<br>34<br>11 | 130<br>38<br>12 | 134<br>39<br>12 | 139<br>42<br>13 | 152<br>48<br>14 | 175<br>60<br>18 | 221<br>85<br>25  | 259<br>106<br>30 | 318<br>139<br>39 |
| 10500 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 105<br>29<br>10 | 112<br>32<br>10 | 120<br>35<br>11 | 124<br>36<br>11 | 128<br>38<br>12 | 139<br>44<br>13 | 160<br>55<br>16 | 197<br>75<br>22  | 228<br>92<br>26  | 271<br>117<br>33 |
| 10000 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 98<br>27<br>9   | 104<br>29<br>10 | 111<br>32<br>10 | 115<br>34<br>11 | 119<br>35<br>11 | 128<br>40<br>12 | 146<br>50<br>15 | 178<br>67<br>20  | 202<br>81<br>23  | 237<br>101<br>29 |
| 9500  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 91<br>25<br>8   | 97<br>27<br>9   | 103<br>30<br>9  | 106<br>31<br>10 | 110<br>33<br>10 | 118<br>37<br>11 | 133<br>45<br>13 | 161<br>61<br>18  | 181<br>72<br>21  | 209<br>88<br>25  |
| 9000  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 84<br>23<br>8   | 90<br>25<br>8   | 95<br>27<br>9   | 98<br>29<br>9   | 101<br>30<br>9  | 109<br>34<br>10 | 122<br>41<br>12 | 146<br>55<br>16  | 163<br>65<br>19  | 187<br>78<br>22  |
| 8500  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 78<br>21<br>7   | 83<br>23<br>8   | 88<br>25<br>8   | 91<br>26<br>8   | 94<br>28<br>9   | 101<br>31<br>10 | 112<br>38<br>11 | 133<br>50<br>14  | 148<br>58<br>17  | 167<br>70<br>20  |
| 8000  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 72<br>20<br>7   | 77<br>21<br>7   | 81<br>23<br>7   | 84<br>24<br>8   | 86<br>25<br>8   | 93<br>29<br>9   | 103<br>35<br>10 | 121<br>45<br>13  | 134<br>53<br>15  | 151<br>62<br>18  |

**20 NOVEMBER 1992**



SUPPLEMENTARY PERFORMANCE  
MANUAL

CLIMB PLANNING

ALL ENGINES OPERATING

PW118A ENGINES

ALTITUDE: SEA LEVEL TO 23000 FT

CRUISE CONFIGURATION

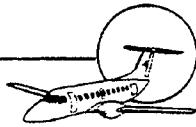
NP: 100% OR  
100% UP TO 12000 FT AND  
90% ABOVE 12000 FT

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

SPEED SCHEDULE: 170 KIAS AT SL, DECREASING  
TO 155 KIAS AT 20000 FT,  
155 KIAS ABOVE 20000 FT

| WEIGHT<br>KG | ISA + °C       |     |     |     |     |     |     |     |     |     |     |   |
|--------------|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---|
|              | -30            | -20 | -10 | -5  | 0   | 10  | 20  | 30  | 35  | 40  |     |   |
| 12000        | FUEL<br>KG     | 139 | 150 | 161 | 167 | 175 | 195 | 234 | 322 | 426 | -   | - |
|              | DISTANCE<br>NM | 39  | 43  | 48  | 50  | 54  | 64  | 85  | 132 | 191 | -   | - |
|              | TIME<br>MIN    | 13  | 14  | 15  | 16  | 16  | 19  | 25  | 37  | 53  | -   | - |
| 11500        | FUEL<br>KG     | 129 | 138 | 148 | 154 | 160 | 177 | 209 | 275 | 341 | 480 |   |
|              | DISTANCE<br>NM | 36  | 40  | 44  | 46  | 49  | 58  | 75  | 111 | 148 | 230 |   |
|              | TIME<br>MIN    | 12  | 13  | 14  | 14  | 15  | 17  | 22  | 32  | 41  | 63  |   |
| 11000        | FUEL<br>KG     | 119 | 128 | 137 | 142 | 147 | 162 | 189 | 241 | 287 | 367 |   |
|              | DISTANCE<br>NM | 34  | 37  | 40  | 43  | 45  | 53  | 67  | 96  | 122 | 169 |   |
|              | TIME<br>MIN    | 11  | 12  | 13  | 13  | 14  | 16  | 20  | 27  | 34  | 47  |   |
| 10500        | FUEL<br>KG     | 111 | 118 | 126 | 131 | 136 | 148 | 171 | 214 | 249 | 304 |   |
|              | DISTANCE<br>NM | 31  | 34  | 37  | 39  | 41  | 48  | 60  | 84  | 105 | 136 |   |
|              | TIME<br>MIN    | 10  | 11  | 12  | 12  | 13  | 14  | 18  | 24  | 30  | 38  |   |
| 10000        | FUEL<br>KG     | 103 | 110 | 117 | 121 | 125 | 136 | 156 | 191 | 220 | 261 |   |
|              | DISTANCE<br>NM | 29  | 31  | 34  | 36  | 38  | 44  | 55  | 75  | 91  | 115 |   |
|              | TIME<br>MIN    | 10  | 10  | 11  | 11  | 12  | 13  | 16  | 21  | 26  | 32  |   |
| 9500         | FUEL<br>KG     | 95  | 102 | 108 | 112 | 116 | 125 | 142 | 172 | 196 | 228 |   |
|              | DISTANCE<br>NM | 27  | 29  | 32  | 33  | 35  | 40  | 50  | 67  | 81  | 100 |   |
|              | TIME<br>MIN    | 9   | 9   | 10  | 11  | 12  | 15  | 19  | 23  | 28  |     |   |
| 9000         | FUEL<br>KG     | 88  | 94  | 100 | 103 | 107 | 115 | 130 | 156 | 175 | 202 |   |
|              | DISTANCE<br>NM | 25  | 27  | 29  | 31  | 32  | 37  | 45  | 60  | 72  | 87  |   |
|              | TIME<br>MIN    | 8   | 9   | 9   | 10  | 11  | 13  | 17  | 20  | 25  |     |   |
| 8500         | FUEL<br>KG     | 82  | 87  | 93  | 95  | 99  | 106 | 119 | 141 | 158 | 180 |   |
|              | DISTANCE<br>NM | 23  | 25  | 27  | 28  | 30  | 34  | 41  | 54  | 64  | 77  |   |
|              | TIME<br>MIN    | 8   | 8   | 9   | 9   | 10  | 12  | 16  | 18  | 22  |     |   |
| 8000         | FUEL<br>KG     | 76  | 80  | 85  | 88  | 91  | 98  | 109 | 129 | 143 | 161 |   |
|              | DISTANCE<br>NM | 21  | 23  | 25  | 26  | 27  | 31  | 38  | 49  | 58  | 69  |   |
|              | TIME<br>MIN    | 7   | 7   | 8   | 8   | 8   | 9   | 11  | 14  | 17  | 20  |   |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CLIMB PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**ALTITUDE: SEA LEVEL TO 24000 FT**
**CRUISE CONFIGURATION**

 NP: 100% OR  
 100% UP TO 12000 FT AND  
 90% ABOVE 12000 FT

BLEED SWITCH: AUTO

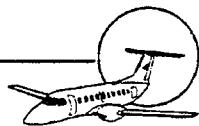
PACK CONTROL SELECTOR: LOW

 SPEED SCHEDULE: 170 KIAS AT SL, DECREASING  
 TO 155 KIAS AT 20000 FT,  
 155 KIAS ABOVE 20000 FT

**WEIGHT  
KG**
**ISA + °C**

|       |                          |                 | -30             | -20             | -10             | -5              | 0               | 10              | 20              | 30               | 35               | 40               |
|-------|--------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|------------------|------------------|
| 12000 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 147<br>42<br>14 | 158<br>46<br>15 | 171<br>52<br>16 | 178<br>55<br>17 | 186<br>59<br>18 | 210<br>71<br>21 | 257<br>97<br>28 | 375<br>163<br>45 | 596<br>295<br>79 | -<br>-<br>-      |
| 11500 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 136<br>39<br>13 | 146<br>43<br>14 | 157<br>47<br>15 | 163<br>50<br>15 | 170<br>54<br>16 | 190<br>64<br>19 | 228<br>85<br>24 | 309<br>131<br>37 | 405<br>188<br>51 | -<br>-<br>-      |
| 11000 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 125<br>36<br>12 | 135<br>39<br>13 | 145<br>43<br>14 | 150<br>46<br>14 | 156<br>49<br>15 | 173<br>58<br>17 | 204<br>75<br>22 | 266<br>110<br>31 | 326<br>146<br>40 | 455<br>226<br>61 |
| 10500 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 116<br>33<br>11 | 124<br>36<br>12 | 133<br>40<br>12 | 138<br>42<br>13 | 144<br>45<br>14 | 158<br>53<br>16 | 184<br>67<br>19 | 233<br>95<br>27  | 276<br>121<br>34 | 350<br>166<br>45 |
| 10000 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 108<br>31<br>10 | 115<br>33<br>11 | 123<br>37<br>12 | 128<br>39<br>12 | 132<br>41<br>13 | 145<br>48<br>14 | 167<br>60<br>18 | 207<br>84<br>24  | 240<br>104<br>29 | 291<br>135<br>37 |
| 9500  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 100<br>28<br>9  | 107<br>31<br>10 | 114<br>34<br>11 | 118<br>36<br>11 | 122<br>38<br>12 | 133<br>44<br>13 | 152<br>55<br>16 | 185<br>74<br>21  | 212<br>91<br>25  | 250<br>114<br>32 |
| 9000  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 93<br>26<br>9   | 99<br>28<br>9   | 105<br>31<br>10 | 109<br>33<br>10 | 113<br>35<br>11 | 122<br>40<br>12 | 138<br>50<br>14 | 167<br>67<br>19  | 189<br>80<br>23  | 219<br>99<br>27  |
| 8500  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 86<br>24<br>8   | 91<br>26<br>8   | 97<br>29<br>9   | 100<br>30<br>9  | 104<br>32<br>10 | 112<br>37<br>11 | 126<br>45<br>13 | 151<br>60<br>17  | 169<br>71<br>20  | 194<br>86<br>24  |
| 8000  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 79<br>22<br>7   | 84<br>24<br>8   | 90<br>27<br>8   | 93<br>28<br>9   | 96<br>29<br>9   | 103<br>34<br>10 | 116<br>41<br>12 | 137<br>54<br>15  | 152<br>64<br>18  | 173<br>76<br>21  |

**20 NOVEMBER 1992**



SUPPLEMENTARY PERFORMANCE  
MANUAL

CLIMB PLANNING

ALL ENGINES OPERATING

PW118A ENGINES

ALTITUDE: SEA LEVEL TO 25000 FT

CRUISE CONFIGURATION

NP: 100% OR  
100% UP TO 12000 FT AND  
90% ABOVE 12000 FT

BLEED SWITCH: AUTO  
PACK CONTROL SELECTOR: LOW

SPEED SCHEDULE: 170 KIAS AT SL, DECREASING  
TO 155 KIAS AT 20000 FT,  
155 KIAS ABOVE 20000 FT

| WEIGHT<br>KG             | ISA + °C        |                 |                 |                 |                 |                 |                 |                  |                  |        |        |        |
|--------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|------------------|--------|--------|--------|
|                          |                 |                 | -20             | -10             | -5              | 0               | 5               | 10               | 20               | 30     | 35     | 40     |
| FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 167<br>50<br>16 | 181<br>56<br>17 | 189<br>60<br>18 | 199<br>65<br>19 | 212<br>71<br>21 | 228<br>80<br>23 | 286<br>113<br>32 | 477<br>225<br>61 | -<br>- | -<br>- | -<br>- |
| 12000                    |                 |                 |                 |                 |                 |                 |                 |                  |                  |        |        |        |
| 11500                    |                 |                 |                 |                 |                 |                 |                 |                  |                  |        |        |        |
| 11000                    |                 |                 |                 |                 |                 |                 |                 |                  |                  |        |        |        |
| 10500                    |                 |                 |                 |                 |                 |                 |                 |                  |                  |        |        |        |
| 10000                    |                 |                 |                 |                 |                 |                 |                 |                  |                  |        |        |        |
| 9500                     |                 |                 |                 |                 |                 |                 |                 |                  |                  |        |        |        |
| 9000                     |                 |                 |                 |                 |                 |                 |                 |                  |                  |        |        |        |
| 8500                     |                 |                 |                 |                 |                 |                 |                 |                  |                  |        |        |        |
| 8000                     |                 |                 |                 |                 |                 |                 |                 |                  |                  |        |        |        |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CLIMB PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**ALTITUDE: SEA LEVEL TO 26000 FT**
**CRUISE CONFIGURATION**

 NP: 100% OR  
 100% UP TO 12000 FT AND  
 90% ABOVE 12000 FT

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

 SPEED SCHEDULE: 170 KIAS AT SL, DECREASING  
 TO 155 KIAS AT 20000 FT,  
 155 KIAS ABOVE 20000 FT

**WEIGHT  
KG**
**ISA + °C**

|       |                          |                 | -20             | -10             | -5              | 0               | 5               | 10              | 20               | 30               | 35               | 40               |
|-------|--------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|------------------|------------------|------------------|
| 12000 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 176<br>53<br>17 | 192<br>61<br>19 | 202<br>66<br>20 | 214<br>72<br>21 | 228<br>80<br>23 | 248<br>91<br>26 | 326<br>136<br>38 | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      |
| 11500 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 162<br>49<br>15 | 176<br>55<br>17 | 184<br>60<br>18 | 194<br>65<br>19 | 206<br>71<br>21 | 221<br>80<br>23 | 277<br>113<br>31 | 458<br>224<br>60 | -<br>-<br>-      | -<br>-<br>-      |
| 11000 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 149<br>45<br>14 | 161<br>51<br>15 | 168<br>54<br>16 | 177<br>59<br>17 | 186<br>64<br>19 | 199<br>71<br>21 | 242<br>97<br>27  | 346<br>161<br>43 | 540<br>287<br>75 | -<br>-<br>-      |
| 10500 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 137<br>41<br>13 | 148<br>46<br>14 | 154<br>50<br>15 | 161<br>53<br>16 | 170<br>58<br>17 | 180<br>64<br>19 | 214<br>84<br>24  | 287<br>129<br>35 | 372<br>184<br>49 | -<br>-<br>-      |
| 10000 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 127<br>38<br>12 | 137<br>43<br>13 | 142<br>45<br>14 | 148<br>49<br>15 | 155<br>53<br>16 | 164<br>58<br>17 | 192<br>75<br>21  | 248<br>109<br>30 | 301<br>144<br>39 | 420<br>224<br>59 |
| 9500  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 117<br>35<br>11 | 126<br>39<br>12 | 131<br>42<br>13 | 136<br>44<br>13 | 142<br>48<br>14 | 150<br>52<br>15 | 173<br>67<br>19  | 218<br>95<br>26  | 256<br>120<br>33 | 323<br>164<br>44 |
| 9000  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 108<br>32<br>10 | 116<br>36<br>11 | 120<br>38<br>12 | 125<br>41<br>12 | 131<br>44<br>13 | 137<br>48<br>14 | 157<br>60<br>17  | 193<br>83<br>23  | 223<br>102<br>28 | 270<br>133<br>36 |
| 8500  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 100<br>30<br>9  | 107<br>33<br>10 | 111<br>35<br>11 | 115<br>37<br>11 | 120<br>40<br>12 | 126<br>43<br>13 | 143<br>54<br>15  | 173<br>74<br>21  | 197<br>89<br>25  | 232<br>113<br>30 |
| 8000  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 92<br>27<br>9   | 99<br>30<br>9   | 102<br>32<br>10 | 106<br>34<br>10 | 110<br>37<br>11 | 115<br>40<br>12 | 130<br>49<br>14  | 156<br>66<br>18  | 176<br>79<br>22  | 203<br>97<br>26  |

**20 NOVEMBER 1992**



**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CLIMB PLANNING**

**ALL ENGINES OPERATING**

**PW118A ENGINES**

**ALTITUDE: SEA LEVEL TO 27000 FT**

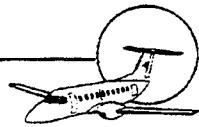
**CRUISE CONFIGURATION**

NP: 100% OR  
100% UP TO 12000 FT AND  
90% ABOVE 12000 FT

BLEED SWITCH: AUTO  
PACK CONTROL SELECTOR: LOW

**SPEED SCHEDULE:** 170 KIAS AT SL, DECREASING  
TO 155 KIAS AT 20000 FT,  
155 KIAS ABOVE 20000 FT

| WEIGHT |          |     | ISA + °C |     |     |     |     |     |     |     |     |     |  |
|--------|----------|-----|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| KG     |          |     | -20      | -10 | -5  | 0   | 5   | 10  | 20  | 30  | 35  | 40  |  |
|        | FUEL     | KG  | 186      | 205 | 216 | 230 | 248 | 274 | 392 | -   | -   | -   |  |
|        | DISTANCE | NM  | 58       | 67  | 73  | 80  | 90  | 105 | 176 | -   | -   | -   |  |
|        | TIME     | MIN | 18       | 20  | 21  | 23  | 26  | 30  | 47  | -   | -   | -   |  |
| 12000  | FUEL     | KG  | 171      | 186 | 196 | 207 | 222 | 241 | 315 | -   | -   | -   |  |
| 12000  | DISTANCE | NM  | 53       | 60  | 65  | 71  | 80  | 91  | 136 | -   | -   | -   |  |
| 12000  | TIME     | MIN | 16       | 18  | 19  | 21  | 23  | 26  | 37  | -   | -   | -   |  |
| 11500  | FUEL     | KG  | 157      | 171 | 179 | 188 | 200 | 215 | 268 | 443 | -   | -   |  |
| 11500  | DISTANCE | NM  | 48       | 55  | 59  | 64  | 71  | 80  | 112 | 226 | -   | -   |  |
| 11500  | TIME     | MIN | 15       | 17  | 18  | 19  | 21  | 23  | 31  | 59  | -   | -   |  |
| 11000  | FUEL     | KG  | 144      | 156 | 163 | 171 | 181 | 193 | 234 | 334 | 532 | -   |  |
| 11000  | DISTANCE | NM  | 44       | 50  | 54  | 58  | 64  | 71  | 96  | 161 | 297 | -   |  |
| 11000  | TIME     | MIN | 14       | 15  | 16  | 17  | 19  | 20  | 27  | 43  | 76  | -   |  |
| 10500  | FUEL     | KG  | 133      | 144 | 150 | 157 | 165 | 175 | 208 | 278 | 360 | -   |  |
| 10500  | DISTANCE | NM  | 41       | 46  | 49  | 53  | 58  | 64  | 84  | 129 | 185 | -   |  |
| 10500  | TIME     | MIN | 13       | 14  | 15  | 16  | 17  | 18  | 24  | 35  | 49  | -   |  |
| 10000  | FUEL     | KG  | 123      | 132 | 138 | 144 | 151 | 159 | 186 | 239 | 291 | 410 |  |
| 10000  | DISTANCE | NM  | 38       | 42  | 45  | 48  | 52  | 58  | 75  | 109 | 144 | 229 |  |
| 10000  | TIME     | MIN | 12       | 13  | 13  | 14  | 15  | 17  | 21  | 30  | 38  | 59  |  |
| 9500   | FUEL     | KG  | 114      | 122 | 127 | 132 | 138 | 145 | 168 | 210 | 247 | 313 |  |
| 9500   | DISTANCE | NM  | 35       | 39  | 41  | 44  | 48  | 52  | 67  | 94  | 119 | 165 |  |
| 9500   | TIME     | MIN | 11       | 12  | 12  | 13  | 14  | 15  | 19  | 26  | 32  | 43  |  |
| 9000   | FUEL     | KG  | 105      | 112 | 116 | 121 | 126 | 133 | 152 | 187 | 215 | 260 |  |
| 9000   | DISTANCE | NM  | 32       | 36  | 38  | 40  | 44  | 48  | 60  | 83  | 102 | 134 |  |
| 9000   | TIME     | MIN | 10       | 11  | 11  | 12  | 13  | 14  | 17  | 23  | 28  | 35  |  |
| 8500   | FUEL     | KG  | 97       | 103 | 107 | 111 | 116 | 121 | 138 | 167 | 190 | 224 |  |
| 8500   | DISTANCE | NM  | 29       | 33  | 35  | 37  | 40  | 43  | 54  | 73  | 89  | 113 |  |
| 8500   | TIME     | MIN | 9        | 10  | 10  | 11  | 12  | 13  | 15  | 20  | 24  | 30  |  |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CLIMB PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**ALTITUDE: SEA LEVEL TO 28000 FT**

## CRUISE CONFIGURATION

 NP: 100% OR  
 100% UP TO 12000 FT AND  
 90% ABOVE 12000 FT

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

 SPEED SCHEDULE: 170 KIAS AT SL, DECREASING  
 TO 155 KIAS AT 20000 FT,  
 155 KIAS ABOVE 20000 FT

**WEIGHT  
KG**
**ISA + °C**

|       |                          |                 | -20             | -10             | -5              | 0               | 5                | 10               | 20               | 30               | 35               | 40               |
|-------|--------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|------------------|------------------|------------------|------------------|------------------|
| 12000 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 197<br>63<br>19 | 218<br>73<br>22 | 232<br>81<br>24 | 249<br>90<br>26 | 273<br>104<br>29 | 310<br>126<br>35 | -<br>-           | -<br>-           | -<br>-           | -<br>-           |
| 11500 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 180<br>57<br>17 | 198<br>66<br>20 | 209<br>72<br>21 | 223<br>80<br>23 | 241<br>90<br>26  | 266<br>105<br>29 | 378<br>176<br>47 | -<br>-           | -<br>-           | -<br>-           |
| 11000 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 165<br>52<br>16 | 181<br>60<br>18 | 190<br>65<br>19 | 201<br>71<br>21 | 215<br>80<br>23  | 234<br>91<br>25  | 305<br>136<br>37 | -<br>-           | -<br>-           | -<br>-           |
| 10500 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 152<br>48<br>15 | 165<br>54<br>16 | 173<br>59<br>17 | 182<br>64<br>19 | 194<br>71<br>20  | 209<br>80<br>23  | 260<br>113<br>31 | 434<br>230<br>59 | -<br>-           | -<br>-           |
| 10000 | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 140<br>44<br>13 | 152<br>50<br>15 | 158<br>53<br>16 | 166<br>58<br>17 | 176<br>64<br>18  | 188<br>71<br>20  | 227<br>96<br>26  | 324<br>162<br>43 | -<br>-           | -<br>-           |
| 9500  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 129<br>40<br>12 | 139<br>45<br>14 | 145<br>49<br>14 | 152<br>53<br>15 | 160<br>58<br>17  | 170<br>64<br>18  | 201<br>84<br>23  | 269<br>130<br>35 | 351<br>188<br>49 | -<br>-           |
| 9000  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 119<br>37<br>11 | 128<br>42<br>13 | 133<br>45<br>13 | 139<br>48<br>14 | 146<br>52<br>15  | 154<br>58<br>16  | 180<br>75<br>21  | 232<br>109<br>29 | 282<br>145<br>38 | 409<br>239<br>61 |
| 8500  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 110<br>34<br>11 | 118<br>38<br>12 | 122<br>41<br>12 | 128<br>44<br>13 | 133<br>47<br>14  | 141<br>52<br>15  | 162<br>67<br>18  | 203<br>94<br>25  | 239<br>120<br>32 | 305<br>168<br>43 |
| 8000  | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 101<br>31<br>10 | 108<br>35<br>11 | 112<br>37<br>11 | 117<br>40<br>12 | 122<br>43<br>13  | 128<br>47<br>14  | 147<br>60<br>17  | 180<br>83<br>22  | 208<br>102<br>27 | 253<br>135<br>35 |

20 NOVEMBER 1992



SUPPLEMENTARY PERFORMANCE  
MANUAL

CLIMB PLANNING

ALL ENGINES OPERATING

PW118A ENGINES

ALTITUDE: SEA LEVEL TO 29000 FT

CRUISE CONFIGURATION

NP: 1.00% OR  
100% UP TO 12000 FT AND  
90% ABOVE 12000 FT

BLEED SWITCH: AUTO  
PACK CONTROL SELECTOR: LOW

SPEED SCHEDULE: 170 KIAS AT SL, DECREASING  
TO 155 KIAS AT 20000 FT,  
155 KIAS ABOVE 20000 FT

| WEIGHT<br>KG | ISA + °C       |             |            |                |             |            |                |             |            |                |             |            |
|--------------|----------------|-------------|------------|----------------|-------------|------------|----------------|-------------|------------|----------------|-------------|------------|
|              | -20            |             |            | -10            |             |            | -5             |             |            | 0              |             |            |
| FUEL<br>KG   | DISTANCE<br>NM | TIME<br>MIN | FUEL<br>KG | DISTANCE<br>NM | TIME<br>MIN | FUEL<br>KG | DISTANCE<br>NM | TIME<br>MIN | FUEL<br>KG | DISTANCE<br>NM | TIME<br>MIN | FUEL<br>KG |
| 12000        |                |             | 209        | 235            | 251         | 274        | 307            | 366         | -          | -              | -           | -          |
|              | 68             | 21          | 82         | 91             | 104         | 124        | 160            | -           | -          | -              | -           | -          |
|              |                |             | 24         | 26             | 29          | 34         | 43             | -           | -          | -              | -           | -          |
| 11500        |                |             | 190        | 211            | 225         | 242        | 265            | 300         | -          | -              | -           | -          |
|              | 62             | 19          | 73         | 80             | 90          | 104        | 126            | -           | -          | -              | -           | -          |
|              |                |             | 21         | 23             | 26          | 29         | 34             | -           | -          | -              | -           | -          |
| 11000        |                |             | 174        | 192            | 203         | 216        | 233            | 258         | 367        | -              | -           | -          |
|              | 56             | 17          | 66         | 72             | 80          | 90         | 106            | 177         | -          | -              | -           | -          |
|              |                |             | 19         | 21             | 23          | 25         | 29             | 46          | -          | -              | -           | -          |
| 10500        |                |             | 160        | 175            | 184         | 195        | 208            | 227         | 295        | -              | -           | -          |
|              | 51             | 16          | 59         | 65             | 71          | 79         | 91             | 136         | -          | -              | -           | -          |
|              |                |             | 18         | 19             | 20          | 22         | 25             | 36          | -          | -              | -           | -          |
| 10000        |                |             | 147        | 160            | 168         | 177        | 188            | 202         | 251        | 431            | -           | -          |
|              | 47             | 14          | 54         | 58             | 64          | 71         | 80             | 113         | 241        | -              | -           | -          |
|              |                |             | 16         | 16             | 17          | 18         | 20             | 22          | 30         | 61             | -           | -          |
| 9500         |                |             | 135        | 147            | 153         | 161        | 170            | 182         | 220        | 316            | -           | -          |
|              | 43             | 13          | 49         | 53             | 58          | 63         | 71             | 97          | 164        | -              | -           | -          |
|              |                |             | 15         | 16             | 17          | 18         | 20             | 26          | 43         | -              | -           | -          |
| 9000         |                |             | 125        | 135            | 140         | 147        | 155            | 165         | 195        | 261            | 347         | -          |
|              | 40             | 12          | 45         | 48             | 52          | 57         | 64             | 84          | 131        | 196            | -           | -          |
|              |                |             | 13         | 14             | 15          | 16         | 18             | 23          | 34         | 50             | -           | -          |
| 8500         |                |             | 115        | 124            | 129         | 134        | 141            | 149         | 174        | 224            | 275         | 421        |
|              | 36             | 11          | 41         | 44             | 48          | 52         | 57             | 75          | 110        | 148            | 262         | -          |
|              |                |             | 12         | 12             | 13          | 14         | 15             | 16          | 20         | 29             | 38          | 65         |
| 8000         |                |             | 106        | 114            | 118         | 123        | 129            | 136         | 157        | 197            | 233         | 301        |
|              | 33             | 10          | 38         | 40             | 43          | 47         | 52             | 66          | 95         | 121            | 174         | -          |
|              |                |             | 11         | 12             | 13          | 13         | 15             | 18          | 25         | 32             | 44          | -          |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CLIMB PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**ALTITUDE: SEA LEVEL TO 30000 FT**

## CRUISE CONFIGURATION

 NP: 100% OR  
 100% UP TO 12000 FT AND  
 90% ABOVE 12000 FT

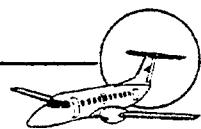
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

 SPEED SCHEDULE: 170 KIAS AT SL, DECREASING  
 TO 155 KIAS AT 20000 FT,  
 155 KIAS ABOVE 20000 FT

| WEIGHT<br>KG |                          |                 | ISA + °C        |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|--------------|--------------------------|-----------------|-----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|              |                          |                 | -10             | -5               | 0                | 5                | 10               | 15               | 20               | 25               | 30               | 35               |
| 12000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 254<br>92<br>26 | 276<br>105<br>29 | 308<br>124<br>34 | 362<br>157<br>42 | 524<br>261<br>67 | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      |
| 11500        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 227<br>81<br>23 | 243<br>91<br>26  | 265<br>104<br>29 | 298<br>124<br>34 | 356<br>162<br>43 | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      |
| 11000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 205<br>72<br>21 | 218<br>80<br>23  | 234<br>90<br>25  | 257<br>104<br>29 | 291<br>127<br>34 | 355<br>170<br>44 | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      |
| 10500        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 186<br>65<br>19 | 196<br>71<br>20  | 209<br>79<br>22  | 226<br>90<br>25  | 250<br>106<br>29 | 287<br>131<br>35 | 360<br>181<br>47 | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      |
| 10000        | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 169<br>59<br>17 | 178<br>64<br>18  | 189<br>71<br>20  | 202<br>79<br>22  | 220<br>91<br>25  | 246<br>109<br>29 | 287<br>138<br>36 | 383<br>207<br>53 | -<br>-<br>-      | -<br>-<br>-      |
| 9500         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 155<br>54<br>16 | 162<br>58<br>17  | 171<br>64<br>18  | 182<br>71<br>20  | 196<br>80<br>22  | 215<br>94<br>25  | 244<br>114<br>30 | 295<br>150<br>39 | 444<br>264<br>65 | -<br>-<br>-      |
| 9000         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 142<br>49<br>14 | 148<br>53<br>15  | 156<br>57<br>16  | 165<br>63<br>18  | 176<br>71<br>20  | 192<br>82<br>22  | 213<br>97<br>26  | 247<br>122<br>32 | 311<br>170<br>43 | -<br>-<br>-      |
| 8500         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 130<br>44<br>13 | 136<br>48<br>14  | 142<br>52<br>15  | 150<br>57<br>16  | 159<br>64<br>18  | 172<br>72<br>20  | 189<br>85<br>23  | 214<br>103<br>27 | 255<br>133<br>34 | 351<br>209<br>52 |
| 8000         | FUEL<br>DISTANCE<br>TIME | KG<br>NM<br>MIN | 119<br>41<br>12 | 124<br>44<br>13  | 130<br>47<br>14  | 136<br>52<br>15  | 144<br>57<br>16  | 155<br>65<br>18  | 169<br>75<br>20  | 188<br>89<br>24  | 218<br>111<br>29 | 271<br>153<br>39 |

20 NOVEMBER 1992



SUPPLEMENTARY PERFORMANCE  
MANUAL

**CLIMB PLANNING**

ALL ENGINES OPERATING

PW118A ENGINES

ALTITUDE: SEA LEVEL TO 31000 FT

CRUISE CONFIGURATION

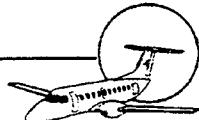
NP: 100% OR  
100% UP TO 12000 FT AND  
90% ABOVE 12000 FT

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

SPEED SCHEDULE: 170 KIAS AT SL, DECREASING  
TO 155 KIAS AT 20000 FT,  
155 KIAS ABOVE 20000 FT

| WEIGHT<br>KG | ISA + °C       |     |     |     |     |     |     |     |     |     |  |
|--------------|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
|              | -10            | -5  | 0   | 5   | 10  | 15  | 20  | 25  | 30  | 35  |  |
| 12000        | FUEL<br>KG     | 279 | 310 | 364 | 517 | -   | -   | -   | -   | -   |  |
|              | DISTANCE<br>NM | 106 | 125 | 158 | 257 | -   | -   | -   | -   | -   |  |
|              | TIME<br>MIN    | 30  | 34  | 42  | 66  | -   | -   | -   | -   | -   |  |
| 11500        | FUEL<br>KG     | 246 | 267 | 298 | 353 | -   | -   | -   | -   | -   |  |
|              | DISTANCE<br>NM | 92  | 105 | 124 | 159 | -   | -   | -   | -   | -   |  |
|              | TIME<br>MIN    | 26  | 29  | 34  | 42  | -   | -   | -   | -   | -   |  |
| 11000        | FUEL<br>KG     | 220 | 236 | 257 | 289 | 349 | -   | -   | -   | -   |  |
|              | DISTANCE<br>NM | 81  | 91  | 104 | 125 | 165 | -   | -   | -   | -   |  |
|              | TIME<br>MIN    | 23  | 25  | 29  | 34  | 43  | -   | -   | -   | -   |  |
| 10500        | FUEL<br>KG     | 198 | 211 | 227 | 249 | 283 | 350 | -   | -   | -   |  |
|              | DISTANCE<br>NM | 72  | 80  | 90  | 105 | 128 | 175 | -   | -   | -   |  |
|              | TIME<br>MIN    | 21  | 22  | 25  | 28  | 34  | 45  | -   | -   | -   |  |
| 10000        | FUEL<br>KG     | 180 | 190 | 203 | 219 | 243 | 280 | 357 | -   | -   |  |
|              | DISTANCE<br>NM | 65  | 71  | 79  | 90  | 107 | 133 | 189 | -   | -   |  |
|              | TIME<br>MIN    | 19  | 20  | 22  | 25  | 29  | 35  | 48  | -   | -   |  |
| 9500         | FUEL<br>KG     | 164 | 172 | 183 | 196 | 213 | 239 | 281 | 387 | -   |  |
|              | DISTANCE<br>NM | 58  | 64  | 71  | 79  | 92  | 110 | 141 | 221 | -   |  |
|              | TIME<br>MIN    | 17  | 18  | 20  | 22  | 25  | 29  | 36  | 55  | -   |  |
| 9000         | FUEL<br>KG     | 149 | 157 | 165 | 176 | 190 | 209 | 238 | 290 | -   |  |
|              | DISTANCE<br>NM | 53  | 58  | 63  | 71  | 80  | 94  | 115 | 154 | -   |  |
|              | TIME<br>MIN    | 15  | 16  | 18  | 19  | 22  | 25  | 30  | 39  | -   |  |
| 8500         | FUEL<br>KG     | 137 | 143 | 150 | 159 | 170 | 186 | 207 | 241 | 311 |  |
|              | DISTANCE<br>NM | 48  | 52  | 57  | 63  | 71  | 82  | 98  | 124 | 179 |  |
|              | TIME<br>MIN    | 14  | 15  | 16  | 17  | 19  | 22  | 26  | 32  | 45  |  |
| 8000         | FUEL<br>KG     | 125 | 130 | 137 | 144 | 154 | 166 | 183 | 208 | 250 |  |
|              | DISTANCE<br>NM | 44  | 47  | 52  | 57  | 63  | 72  | 85  | 104 | 137 |  |
|              | TIME<br>MIN    | 13  | 14  | 15  | 16  | 17  | 19  | 22  | 27  | 35  |  |
|              |                |     |     |     |     |     |     |     |     | 372 |  |
|              |                |     |     |     |     |     |     |     |     | 239 |  |
|              |                |     |     |     |     |     |     |     |     | 58  |  |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CLIMB PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**ALTITUDE: SEA LEVEL TO 32000 FT**
**CRUISE CONFIGURATION**

 NP: 100% OR  
 100% UP TO 12000 FT AND  
 90% ABOVE 12000 FT

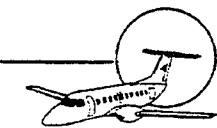
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

 SPEED SCHEDULE: 170 KIAS AT SL , DECREASING  
 TO 155 KIAS AT 20000 FT,  
 155 KIAS ABOVE 20000 FT

|       |          |     | ISA + °C |     |     |     |     |     |     |     |     |    |
|-------|----------|-----|----------|-----|-----|-----|-----|-----|-----|-----|-----|----|
|       |          |     | -10      | -5  | 0   | 5   | 10  | 15  | 20  | 25  | 30  | 35 |
|       | FUEL     | KG  | 314      | 369 | -   | -   | -   | -   | -   | -   | -   | -  |
|       | DISTANCE | NM  | 127      | 161 | -   | -   | -   | -   | -   | -   | -   | -  |
|       | TIME     | MIN | 35       | 43  | -   | -   | -   | -   | -   | -   | -   | -  |
| 12000 | FUEL     | KG  | 270      | 301 | 356 | -   | -   | -   | -   | -   | -   | -  |
| 12000 | DISTANCE | NM  | 106      | 125 | 161 | -   | -   | -   | -   | -   | -   | -  |
| 12000 | TIME     | MIN | 29       | 34  | 42  | -   | -   | -   | -   | -   | -   | -  |
| 11500 | FUEL     | KG  | 238      | 259 | 290 | 347 | -   | -   | -   | -   | -   | -  |
| 11500 | DISTANCE | NM  | 91       | 105 | 125 | 164 | -   | -   | -   | -   | -   | -  |
| 11500 | TIME     | MIN | 26       | 29  | 34  | 42  | -   | -   | -   | -   | -   | -  |
| 11000 | FUEL     | KG  | 212      | 228 | 250 | 282 | 344 | -   | -   | -   | -   | -  |
| 11000 | DISTANCE | NM  | 80       | 91  | 105 | 127 | 171 | -   | -   | -   | -   | -  |
| 11000 | TIME     | MIN | 23       | 25  | 28  | 33  | 44  | -   | -   | -   | -   | -  |
| 10500 | FUEL     | KG  | 191      | 204 | 220 | 242 | 277 | 349 | -   | -   | -   | -  |
| 10500 | DISTANCE | NM  | 72       | 80  | 90  | 106 | 130 | 184 | -   | -   | -   | -  |
| 10500 | TIME     | MIN | 20       | 22  | 25  | 28  | 34  | 46  | -   | -   | -   | -  |
| 10000 | FUEL     | KG  | 173      | 184 | 196 | 213 | 236 | 275 | 363 | -   | -   | -  |
| 10000 | DISTANCE | NM  | 64       | 71  | 79  | 91  | 108 | 137 | 204 | -   | -   | -  |
| 10000 | TIME     | MIN | 18       | 20  | 22  | 24  | 28  | 35  | 50  | -   | -   | -  |
| 9500  | FUEL     | KG  | 158      | 166 | 177 | 190 | 207 | 233 | 277 | 408 | -   | -  |
| 9500  | DISTANCE | NM  | 58       | 64  | 71  | 80  | 92  | 112 | 146 | 251 | -   | -  |
| 9500  | TIME     | MIN | 17       | 18  | 19  | 22  | 25  | 29  | 37  | 61  | -   | -  |
| 9000  | FUEL     | KG  | 144      | 151 | 160 | 170 | 184 | 203 | 232 | 288 | -   | -  |
| 9000  | DISTANCE | NM  | 53       | 57  | 63  | 71  | 81  | 95  | 118 | 162 | -   | -  |
| 9000  | TIME     | MIN | 15       | 16  | 17  | 19  | 22  | 25  | 30  | 40  | -   | -  |
| 8500  | FUEL     | KG  | 131      | 138 | 145 | 154 | 165 | 180 | 201 | 236 | 320 | -  |
| 8500  | DISTANCE | NM  | 48       | 52  | 57  | 63  | 71  | 83  | 99  | 127 | 197 | -  |
| 8500  | TIME     | MIN | 14       | 15  | 16  | 17  | 19  | 22  | 26  | 32  | 48  | -  |

**20 NOVEMBER 1992**

SUPPLEMENTARY PERFORMANCE  
MANUALFLIGHT PLANNING  
ALL ENGINES OPERATING

PW118A ENGINES

## LONG RANGE CRUISE

## CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 5000 FT

| WEIGHT<br>KG |              |    | ISA + °C   |            |            |            |            |            |            |            |            |            |            |
|--------------|--------------|----|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|              |              |    | -60        | -40        | -30        | -20        | -10        | 0          | 10         | 20         | 30         | 40         |            |
| 12000        | TAS<br>TOTAL | FC | KT<br>KG/H | 207<br>460 | 215<br>478 | 220<br>489 | 225<br>499 | 229<br>508 | 232<br>514 | 235<br>521 | 239<br>530 | 243<br>539 | 247<br>548 |
| 11500        | TAS<br>TOTAL | FC | KT<br>KG/H | 206<br>455 | 213<br>469 | 219<br>482 | 223<br>491 | 227<br>499 | 230<br>505 | 234<br>514 | 237<br>521 | 242<br>532 | 245<br>538 |
| 11000        | TAS<br>TOTAL | FC | KT<br>KG/H | 205<br>449 | 211<br>461 | 216<br>472 | 221<br>483 | 225<br>491 | 229<br>499 | 232<br>505 | 236<br>514 | 240<br>522 | 243<br>529 |
| 10500        | TAS<br>TOTAL | FC | KT<br>KG/H | 205<br>447 | 210<br>455 | 214<br>463 | 219<br>474 | 224<br>485 | 227<br>491 | 230<br>497 | 234<br>505 | 238<br>514 | 242<br>523 |
| 10000        | TAS<br>TOTAL | FC | KT<br>KG/H | 204<br>442 | 209<br>450 | 213<br>458 | 217<br>466 | 222<br>477 | 226<br>485 | 229<br>491 | 232<br>497 | 236<br>505 | 240<br>514 |
| 9500         | TAS<br>TOTAL | FC | KT<br>KG/H | 202<br>435 | 208<br>445 | 212<br>453 | 216<br>461 | 220<br>469 | 225<br>480 | 228<br>486 | 231<br>492 | 235<br>500 | 238<br>506 |
| 9000         | TAS<br>TOTAL | FC | KT<br>KG/H | 200<br>428 | 207<br>440 | 210<br>446 | 214<br>454 | 218<br>462 | 223<br>472 | 227<br>481 | 230<br>487 | 233<br>493 | 237<br>501 |
| 8500         | TAS<br>TOTAL | FC | KT<br>KG/H | 197<br>419 | 206<br>436 | 209<br>441 | 212<br>447 | 216<br>455 | 221<br>466 | 225<br>474 | 229<br>482 | 232<br>488 | 235<br>494 |
| 8000         | TAS<br>TOTAL | FC | KT<br>KG/H | 194<br>410 | 204<br>429 | 207<br>435 | 211<br>443 | 214<br>449 | 219<br>459 | 223<br>467 | 227<br>475 | 231<br>483 | 234<br>489 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING  
ALL ENGINES OPERATING**
**PW118A ENGINES****LONG RANGE CRUISE**

## CRUISE CONFIGURATION

NP : 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 6000 FT**

|              |       |    |            | ISA + °C |     |     |     |     |     |     |     |     |     |     |
|--------------|-------|----|------------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |       |    |            | -60      | -40 | -30 | -20 | -10 | 0   | 10  | 20  | 30  | 40  |     |
| WEIGHT<br>KG | TAS   | FC | KT<br>KG/H | 206      | 215 | 221 | 225 | 230 | 233 | 236 | 240 | 244 | 248 |     |
| 12000        | TOTAL | FC | KT<br>KG/H | 445      | 464 | 477 | 485 | 496 | 502 | 509 | 517 | 526 | 534 |     |
| 11500        | TAS   | FC | KT<br>KG/H | 206      | 213 | 219 | 223 | 227 | 231 | 235 | 238 | 243 | 246 | 525 |
| 11000        | TAS   | FC | KT<br>KG/H | 436      | 449 | 460 | 470 | 478 | 484 | 490 | 501 | 509 | 515 |     |
| 10500        | TAS   | FC | KT<br>KG/H | 204      | 211 | 215 | 220 | 225 | 228 | 231 | 234 | 238 | 243 | 509 |
| 10000        | TAS   | FC | KT<br>KG/H | 428      | 436 | 444 | 454 | 462 | 472 | 478 | 484 | 492 | 498 | 498 |
| 9500         | TAS   | FC | KT<br>KG/H | 203      | 208 | 211 | 216 | 221 | 225 | 229 | 232 | 235 | 239 | 492 |
| 9000         | TAS   | FC | KT<br>KG/H | 423      | 431 | 436 | 446 | 457 | 464 | 473 | 478 | 484 | 488 |     |
| 8500         | TAS   | FC | KT<br>KG/H | 201      | 207 | 210 | 214 | 219 | 223 | 227 | 230 | 233 | 237 | 485 |
| 8000         | TAS   | FC | KT<br>KG/H | 416      | 426 | 431 | 439 | 449 | 457 | 465 | 471 | 476 | 481 |     |
|              | TOTAL | FC | KT<br>KG/H | 198      | 206 | 209 | 212 | 216 | 221 | 225 | 229 | 232 | 235 | 477 |
|              |       |    |            | 407      | 421 | 427 | 432 | 440 | 450 | 458 | 466 | 471 |     |     |
|              |       |    |            | 195      | 204 | 208 | 211 | 215 | 219 | 223 | 228 | 231 | 234 |     |
|              |       |    |            | 398      | 415 | 422 | 428 | 436 | 443 | 451 | 461 | 467 | 472 |     |

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SUPPLEMENTARY PERFORMANCE  
MANUALFLIGHT PLANNING  
ALL ENGINES OPERATING

PW118A ENGINES

## LONG RANGE CRUISE

## CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 7000 FT

| WEIGHT<br>KG | TAS<br>TOTAL FC | KT<br>KG/H | ISA + °C   |            |            |            |            |            |            |            |            |            |
|--------------|-----------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|              |                 |            | -60        | -40        | -30        | -20        | -10        | 0          | 10         | 20         | 30         | 40         |
| 12000        | TAS<br>TOTAL FC | KT<br>KG/H | 207<br>434 | 216<br>453 | 222<br>465 | 226<br>473 | 230<br>482 | 234<br>490 | 238<br>499 | 241<br>505 | 245<br>513 | 248<br>519 |
| 11500        | TAS<br>TOTAL FC | KT<br>KG/H | 206<br>428 | 214<br>444 | 220<br>457 | 224<br>465 | 228<br>472 | 232<br>481 | 235<br>487 | 240<br>497 | 243<br>503 | 246<br>509 |
| 11000        | TAS<br>TOTAL FC | KT<br>KG/H | 205<br>423 | 212<br>436 | 218<br>448 | 222<br>456 | 227<br>466 | 230<br>472 | 233<br>478 | 237<br>486 | 241<br>494 | 245<br>502 |
| 10500        | TAS<br>TOTAL FC | KT<br>KG/H | 204<br>417 | 211<br>430 | 216<br>440 | 220<br>448 | 225<br>458 | 229<br>466 | 232<br>471 | 235<br>477 | 239<br>485 | 243<br>493 |
| 10000        | TAS<br>TOTAL FC | KT<br>KG/H | 204<br>414 | 209<br>422 | 213<br>430 | 219<br>442 | 223<br>450 | 227<br>457 | 230<br>463 | 233<br>469 | 237<br>477 | 241<br>485 |
| 9500         | TAS<br>TOTAL FC | KT<br>KG/H | 203<br>410 | 209<br>419 | 212<br>424 | 216<br>432 | 221<br>442 | 225<br>450 | 228<br>455 | 232<br>463 | 235<br>469 | 240<br>479 |
| 9000         | TAS<br>TOTAL FC | KT<br>KG/H | 201<br>403 | 208<br>414 | 210<br>417 | 214<br>425 | 219<br>435 | 224<br>444 | 227<br>450 | 230<br>456 | 234<br>463 | 237<br>469 |
| 8500         | TAS<br>TOTAL FC | KT<br>KG/H | 198<br>394 | 206<br>408 | 209<br>413 | 213<br>420 | 217<br>428 | 221<br>435 | 226<br>445 | 229<br>450 | 232<br>456 | 236<br>463 |
| 8000         | TAS<br>TOTAL FC | KT<br>KG/H | 196<br>387 | 205<br>403 | 208<br>408 | 211<br>414 | 215<br>421 | 219<br>428 | 224<br>438 | 228<br>446 | 231<br>451 | 234<br>457 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING  
ALL ENGINES OPERATING**
**PW118A ENGINES****LONG RANGE CRUISE**

## CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 8000 FT**

| WEIGHT<br>KG |              |    | ISA + °C   |            |            |            |            |            |            |            |            |            |            |
|--------------|--------------|----|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|              |              |    | -60        | -40        | -30        | -20        | -10        | 0          | 10         | 20         | 30         | 40         |            |
| 12000        | TAS<br>TOTAL | FC | KT<br>KG/H | 207<br>422 | 217<br>443 | 223<br>455 | 227<br>462 | 231<br>470 | 235<br>479 | 239<br>487 | 242<br>493 | 246<br>501 | 250<br>509 |
| 11500        | TAS<br>TOTAL | FC | KT<br>KG/H | 206<br>416 | 215<br>434 | 220<br>444 | 225<br>453 | 229<br>461 | 233<br>469 | 236<br>475 | 241<br>486 | 244<br>491 | 247<br>497 |
| 11000        | TAS<br>TOTAL | FC | KT<br>KG/H | 205<br>410 | 213<br>425 | 218<br>435 | 223<br>445 | 228<br>454 | 231<br>460 | 234<br>466 | 238<br>474 | 242<br>482 | 246<br>490 |
| 10500        | TAS<br>TOTAL | FC | KT<br>KG/H | 205<br>406 | 211<br>417 | 216<br>427 | 221<br>436 | 225<br>444 | 229<br>451 | 233<br>459 | 236<br>465 | 240<br>473 | 244<br>481 |
| 10000        | TAS<br>TOTAL | FC | KT<br>KG/H | 204<br>401 | 210<br>411 | 214<br>418 | 219<br>428 | 224<br>438 | 227<br>443 | 231<br>451 | 234<br>456 | 238<br>464 | 242<br>472 |
| 9500         | TAS<br>TOTAL | FC | KT<br>KG/H | 203<br>396 | 209<br>406 | 212<br>411 | 217<br>420 | 222<br>430 | 226<br>437 | 229<br>443 | 232<br>448 | 236<br>456 | 240<br>464 |
| 9000         | TAS<br>TOTAL | FC | KT<br>KG/H | 202<br>392 | 208<br>401 | 211<br>406 | 215<br>413 | 219<br>421 | 224<br>430 | 228<br>437 | 231<br>443 | 234<br>448 | 238<br>456 |
| 8500         | TAS<br>TOTAL | FC | KT<br>KG/H | 199<br>383 | 206<br>394 | 209<br>399 | 213<br>406 | 217<br>413 | 222<br>423 | 226<br>430 | 229<br>436 | 233<br>443 | 236<br>448 |
| 8000         | TAS<br>TOTAL | FC | KT<br>KG/H | 196<br>374 | 205<br>390 | 208<br>395 | 211<br>400 | 215<br>407 | 220<br>416 | 224<br>423 | 228<br>431 | 232<br>438 | 235<br>443 |

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SUPPLEMENTARY PERFORMANCE  
MANUALFLIGHT PLANNING  
ALL ENGINES OPERATING

PW118A ENGINES

## LONG RANGE CRUISE

## CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 9000 FT

| WEIGHT<br>KG |       |    | ISA + °C |     |     |     |     |     |     |     |     |     |     |
|--------------|-------|----|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |       |    | -60      | -40 | -30 | -20 | -10 | 0   | 10  | 20  | 30  | 40  |     |
| 12000        | TAS   | KT | 208      | 219 | 224 | 228 | 232 | 235 | 240 | 244 | 247 | 251 |     |
|              | TOTAL | FC | KG/H     | 413 | 435 | 444 | 452 | 459 | 465 | 476 | 484 | 490 | 498 |
| 11500        | TAS   | KT | 206      | 216 | 221 | 226 | 231 | 234 | 237 | 242 | 245 | 249 |     |
|              | TOTAL | FC | KG/H     | 404 | 424 | 433 | 442 | 452 | 458 | 464 | 474 | 480 | 487 |
| 11000        | TAS   | KT | 205      | 213 | 220 | 224 | 228 | 232 | 235 | 239 | 243 | 247 |     |
|              | TOTAL | FC | KG/H     | 398 | 413 | 426 | 434 | 441 | 449 | 455 | 463 | 470 | 478 |
| 10500        | TAS   | KT | 205      | 212 | 217 | 222 | 226 | 230 | 233 | 237 | 241 | 245 |     |
|              | TOTAL | FC | KG/H     | 394 | 406 | 416 | 425 | 432 | 440 | 446 | 453 | 461 | 469 |
| 10000        | TAS   | KT | 204      | 210 | 215 | 220 | 225 | 228 | 231 | 235 | 239 | 243 |     |
|              | TOTAL | FC | KG/H     | 389 | 399 | 408 | 417 | 426 | 432 | 437 | 445 | 452 | 459 |
| 9500         | TAS   | KT | 203      | 209 | 213 | 218 | 222 | 227 | 229 | 232 | 237 | 241 |     |
|              | TOTAL | FC | KG/H     | 384 | 393 | 400 | 409 | 417 | 426 | 429 | 434 | 444 | 451 |
| 9000         | TAS   | KT | 202      | 208 | 211 | 216 | 220 | 224 | 228 | 231 | 234 | 238 |     |
|              | TOTAL | FC | KG/H     | 379 | 388 | 393 | 402 | 409 | 416 | 423 | 429 | 434 | 441 |
| 8500         | TAS   | KT | 200      | 207 | 210 | 213 | 218 | 222 | 226 | 230 | 233 | 236 |     |
|              | TOTAL | FC | KG/H     | 372 | 383 | 388 | 393 | 402 | 409 | 416 | 423 | 428 | 433 |
| 8000         | TAS   | KT | 196      | 206 | 208 | 212 | 216 | 221 | 225 | 228 | 232 | 235 |     |
|              | TOTAL | FC | KG/H     | 362 | 379 | 381 | 388 | 395 | 404 | 411 | 416 | 423 | 428 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING  
ALL ENGINES OPERATING**
**PW118A ENGINES****LONG RANGE CRUISE**

## CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 10000 FT**

| WEIGHT<br>KG |              |    | ISA + °C   |            |            |            |            |            |            |            |            |            |            |
|--------------|--------------|----|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|              |              |    | -50        | -40        | -30        | -20        | -10        | 0          | 10         | 20         | 30         | 40         |            |
| 12000        | TAS<br>TOTAL | FC | KT<br>KG/H | 213<br>412 | 221<br>428 | 225<br>434 | 229<br>442 | 233<br>449 | 237<br>457 | 242<br>467 | 245<br>473 | 249<br>481 | 253<br>489 |
| 11500        | TAS<br>TOTAL | FC | KT<br>KG/H | 211<br>402 | 218<br>416 | 223<br>425 | 227<br>432 | 231<br>440 | 235<br>447 | 239<br>455 | 243<br>463 | 246<br>469 | 250<br>476 |
| 11000        | TAS<br>TOTAL | FC | KT<br>KG/H | 209<br>394 | 214<br>403 | 221<br>416 | 225<br>423 | 229<br>430 | 233<br>438 | 237<br>446 | 240<br>452 | 244<br>459 | 247<br>464 |
| 10500        | TAS<br>TOTAL | FC | KT<br>KG/H | 208<br>387 | 212<br>395 | 218<br>406 | 223<br>415 | 227<br>422 | 231<br>429 | 234<br>435 | 239<br>444 | 242<br>450 | 246<br>457 |
| 10000        | TAS<br>TOTAL | FC | KT<br>KG/H | 207<br>381 | 211<br>388 | 215<br>396 | 220<br>405 | 225<br>414 | 229<br>420 | 232<br>426 | 236<br>433 | 240<br>441 | 244<br>448 |
| 9500         | TAS<br>TOTAL | FC | KT<br>KG/H | 206<br>376 | 209<br>381 | 213<br>388 | 218<br>397 | 223<br>406 | 227<br>413 | 230<br>418 | 233<br>423 | 238<br>432 | 242<br>439 |
| 9000         | TAS<br>TOTAL | FC | KT<br>KG/H | 205<br>371 | 208<br>375 | 211<br>380 | 216<br>389 | 221<br>398 | 225<br>405 | 229<br>412 | 232<br>417 | 235<br>422 | 239<br>429 |
| 8500         | TAS<br>TOTAL | FC | KT<br>KG/H | 204<br>366 | 207<br>371 | 210<br>375 | 213<br>380 | 218<br>389 | 223<br>398 | 227<br>404 | 230<br>410 | 233<br>414 | 237<br>421 |
| 8000         | TAS<br>TOTAL | FC | KT<br>KG/H | 203<br>362 | 206<br>366 | 209<br>371 | 212<br>375 | 216<br>382 | 221<br>391 | 225<br>398 | 228<br>402 | 232<br>409 | 235<br>414 |

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SUPPLEMENTARY PERFORMANCE  
MANUALFLIGHT PLANNING  
ALL ENGINES OPERATING

PW118A ENGINES

## LONG RANGE CRUISE

## CRUISE CONFIGURATION

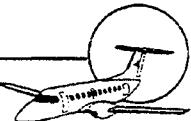
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 11000 FT

| WEIGHT<br>KG | TAS<br>TOTAL FC | KT<br>KG/H | ISA + °C   |            |            |            |            |            |            |            |            |            |
|--------------|-----------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|              |                 |            | -50        | -40        | -30        | -20        | -10        | 0          | 10         | 20         | 30         | 40         |
| 12000        | TAS<br>TOTAL FC | KT<br>KG/H | 217<br>409 | 222<br>418 | 225<br>423 | 230<br>432 | 234<br>439 | 239<br>449 | 243<br>457 | 246<br>463 | 250<br>471 | 255<br>480 |
| 11500        | TAS<br>TOTAL FC | KT<br>KG/H | 212<br>393 | 220<br>409 | 224<br>416 | 228<br>422 | 232<br>430 | 236<br>437 | 240<br>445 | 244<br>453 | 248<br>460 | 252<br>468 |
| 11000        | TAS<br>TOTAL FC | KT<br>KG/H | 210<br>384 | 215<br>394 | 222<br>407 | 226<br>413 | 230<br>420 | 234<br>428 | 238<br>435 | 242<br>443 | 245<br>448 | 249<br>455 |
| 10500        | TAS<br>TOTAL FC | KT<br>KG/H | 208<br>376 | 213<br>385 | 219<br>396 | 223<br>403 | 228<br>411 | 232<br>418 | 235<br>424 | 240<br>434 | 243<br>439 | 247<br>446 |
| 10000        | TAS<br>TOTAL FC | KT<br>KG/H | 207<br>369 | 211<br>377 | 216<br>386 | 221<br>394 | 226<br>403 | 230<br>410 | 233<br>415 | 237<br>422 | 241<br>430 | 244<br>435 |
| 9500         | TAS<br>TOTAL FC | KT<br>KG/H | 206<br>364 | 209<br>369 | 214<br>378 | 219<br>386 | 223<br>393 | 228<br>402 | 231<br>407 | 235<br>414 | 239<br>421 | 243<br>428 |
| 9000         | TAS<br>TOTAL FC | KT<br>KG/H | 205<br>359 | 208<br>363 | 212<br>370 | 217<br>379 | 222<br>387 | 226<br>394 | 229<br>399 | 232<br>404 | 236<br>411 | 240<br>418 |
| 8500         | TAS<br>TOTAL FC | KT<br>KG/H | 204<br>354 | 207<br>359 | 210<br>363 | 214<br>369 | 219<br>378 | 224<br>387 | 227<br>391 | 230<br>396 | 234<br>403 | 238<br>410 |
| 8000         | TAS<br>TOTAL FC | KT<br>KG/H | 203<br>350 | 206<br>354 | 209<br>358 | 212<br>363 | 216<br>369 | 221<br>378 | 226<br>386 | 229<br>391 | 232<br>396 | 235<br>400 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING  
ALL ENGINES OPERATING**
**PW118A ENGINES****LONG RANGE CRUISE**

## CRUISE CONFIGURATION

NP: 85%

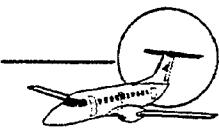
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 12000 FT**

|        |       |      |      | ISA + °C |     |     |     |     |     |     |     |     |     |
|--------|-------|------|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|        |       |      |      | -50      | -40 | -30 | -20 | -10 | 0   | 10  | 20  | 30  | 40  |
| WEIGHT | TAS   | FC   | KT   |          |     |     |     |     |     |     |     |     |     |
| KG     | TOTAL | KG/H | KG/H | 219      | 222 | 227 | 231 | 236 | 240 | 244 | 248 | 253 | 256 |
| 12000  | TAS   | FC   | KT   | 403      | 407 | 416 | 423 | 432 | 440 | 448 | 455 | 465 | 470 |
| 11500  | TAS   | FC   | KT   | 214      | 221 | 224 | 229 | 233 | 238 | 242 | 246 | 249 | 254 |
| 11000  | TAS   | FC   | KT   | 374      | 389 | 397 | 404 | 411 | 418 | 425 | 433 | 438 | 445 |
| 10500  | TAS   | FC   | KT   | 367      | 376 | 387 | 393 | 402 | 408 | 414 | 423 | 428 | 435 |
| 10000  | TAS   | FC   | KT   | 359      | 366 | 376 | 384 | 393 | 400 | 405 | 412 | 419 | 424 |
| 9500   | TAS   | FC   | KT   | 353      | 359 | 366 | 377 | 383 | 391 | 396 | 403 | 410 | 417 |
| 9000   | TAS   | FC   | KT   | 348      | 352 | 359 | 367 | 375 | 382 | 388 | 393 | 400 | 407 |
| 8500   | TAS   | FC   | KT   | 343      | 347 | 351 | 360 | 368 | 376 | 381 | 385 | 390 | 398 |
| 8000   | TAS   | FC   | KT   | 338      | 342 | 346 | 353 | 359 | 367 | 374 | 378 | 383 | 389 |

20 NOVEMBER 1992

SUPPLEMENTARY PERFORMANCE  
MANUALFLIGHT PLANNING  
ALL ENGINES OPERATING

PW118A ENGINES

## LONG RANGE CRUISE

## CRUISE CONFIGURATION

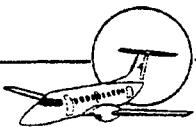
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 13000 FT

| WEIGHT<br>KG |              |    | ISA + °C   |            |            |            |            |            |            |            |            |            |            |
|--------------|--------------|----|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|              |              |    | -50        | -40        | -30        | -20        | -10        | 0          | 10         | 20         | 30         | 40         |            |
| 12000        | TAS<br>TOTAL | FC | KT<br>KG/H | 220<br>395 | 223<br>399 | 228<br>407 | 233<br>416 | 238<br>425 | 242<br>433 | 246<br>440 | 250<br>448 | 255<br>458 | 258<br>463 |
| 11500        | TAS<br>TOTAL | FC | KT<br>KG/H | 217<br>383 | 222<br>391 | 226<br>398 | 230<br>404 | 234<br>411 | 239<br>420 | 243<br>428 | 247<br>435 | 252<br>445 | 255<br>450 |
| 11000        | TAS<br>TOTAL | FC | KT<br>KG/H | 212<br>368 | 220<br>382 | 224<br>388 | 228<br>395 | 232<br>401 | 236<br>408 | 241<br>418 | 244<br>423 | 248<br>430 | 253<br>439 |
| 10500        | TAS<br>TOTAL | FC | KT<br>KG/H | 209<br>357 | 215<br>368 | 222<br>380 | 225<br>384 | 230<br>392 | 234<br>399 | 238<br>406 | 242<br>413 | 246<br>420 | 249<br>425 |
| 10000        | TAS<br>TOTAL | FC | KT<br>KG/H | 208<br>350 | 212<br>357 | 219<br>369 | 223<br>375 | 227<br>382 | 232<br>390 | 235<br>395 | 240<br>404 | 243<br>409 | 247<br>416 |
| 9500         | TAS<br>TOTAL | FC | KT<br>KG/H | 206<br>342 | 210<br>349 | 215<br>357 | 221<br>367 | 225<br>373 | 229<br>380 | 233<br>386 | 237<br>393 | 241<br>400 | 244<br>405 |
| 9000         | TAS<br>TOTAL | FC | KT<br>KG/H | 205<br>337 | 209<br>343 | 213<br>349 | 218<br>357 | 223<br>365 | 227<br>372 | 231<br>378 | 234<br>383 | 238<br>390 | 242<br>396 |
| 8500         | TAS<br>TOTAL | FC | KT<br>KG/H | 204<br>332 | 207<br>336 | 211<br>342 | 216<br>350 | 220<br>356 | 225<br>364 | 229<br>370 | 232<br>375 | 235<br>380 | 239<br>386 |
| 8000         | TAS<br>TOTAL | FC | KT<br>KG/H | 204<br>329 | 206<br>331 | 209<br>335 | 213<br>341 | 218<br>349 | 223<br>357 | 227<br>363 | 230<br>367 | 233<br>372 | 237<br>378 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**LONG RANGE CRUISE**
**CRUISE CONFIGURATION**

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 14000 FT**

|        |       |    |      | ISA + °C |     |     |     |     |     |     |     |     |     |
|--------|-------|----|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|        |       |    |      | -50      | -40 | -30 | -20 | -10 | 0   | 10  | 20  | 30  | 40  |
| WEIGHT |       | KG |      |          |     |     |     |     |     |     |     |     |     |
| 12000  | TAS   | KT | 220  | 225      | 230 | 235 | 240 | 243 | 247 | 253 | 256 | 259 | 259 |
|        | TOTAL | FC | KG/H | 384      | 393 | 401 | 410 | 419 | 424 | 432 | 443 | 449 | 454 |
| 11500  | TAS   | KT | 220  | 222      | 227 | 232 | 237 | 241 | 245 | 249 | 254 | 257 | 257 |
|        | TOTAL | FC | KG/H | 380      | 381 | 389 | 398 | 407 | 413 | 421 | 428 | 438 | 443 |
| 11000  | TAS   | KT | 215  | 221      | 224 | 229 | 233 | 238 | 242 | 246 | 251 | 255 | 255 |
|        | TOTAL | FC | KG/H | 364      | 374 | 378 | 386 | 393 | 401 | 416 | 425 | 432 |     |
| 10500  | TAS   | KT | 210  | 218      | 223 | 226 | 231 | 235 | 239 | 243 | 247 | 251 | 251 |
|        | TOTAL | FC | KG/H | 349      | 363 | 371 | 375 | 383 | 390 | 397 | 404 | 411 | 417 |
| 10000  | TAS   | KT | 208  | 213      | 220 | 224 | 229 | 233 | 237 | 241 | 245 | 248 | 248 |
|        | TOTAL | FC | KG/H | 341      | 349 | 360 | 366 | 374 | 381 | 387 | 394 | 401 | 406 |
| 9500   | TAS   | KT | 207  | 211      | 216 | 222 | 226 | 230 | 234 | 238 | 242 | 245 | 245 |
|        | TOTAL | FC | KG/H | 334      | 340 | 349 | 358 | 364 | 370 | 377 | 383 | 390 | 395 |
| 9000   | TAS   | KT | 205  | 209      | 213 | 219 | 224 | 228 | 232 | 235 | 239 | 243 | 243 |
|        | TOTAL | FC | KG/H | 327      | 332 | 339 | 348 | 356 | 362 | 368 | 373 | 380 | 386 |
| 8500   | TAS   | KT | 205  | 207      | 211 | 217 | 221 | 226 | 229 | 233 | 236 | 240 | 240 |
|        | TOTAL | FC | KG/H | 323      | 325 | 331 | 341 | 347 | 354 | 359 | 365 | 370 | 376 |
| 8000   | TAS   | KT | 203  | 207      | 209 | 213 | 219 | 223 | 227 | 230 | 234 | 238 | 238 |
|        | TOTAL | FC | KG/H | 317      | 322 | 324 | 330 | 340 | 345 | 351 | 356 | 362 | 368 |

20 NOVEMBER 1992

SUPPLEMENTARY PERFORMANCE  
MANUALFLIGHT PLANNING  
ALL ENGINES OPERATING

PW118A ENGINES

## LONG RANGE CRUISE

## CRUISE CONFIGURATION

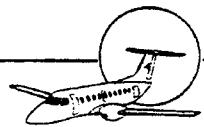
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 15000 FT

| WEIGHT<br>KG |              |    | ISA + °C   |            |            |            |            |            |            |            |            |            |            |
|--------------|--------------|----|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|              |              |    | -40        | -30        | -20        | -10        | -5         | 0          | 10         | 20         | 30         | 40         |            |
| 12000        | TAS<br>TOTAL | FC | KT<br>KG/H | 227<br>387 | 232<br>395 | 237<br>404 | 241<br>411 | 243<br>414 | 245<br>418 | 250<br>427 | 254<br>435 | 258<br>442 | 261<br>447 |
| 11500        | TAS<br>TOTAL | FC | KT<br>KG/H | 224<br>375 | 229<br>383 | 234<br>392 | 239<br>400 | 241<br>404 | 243<br>407 | 246<br>412 | 252<br>424 | 256<br>431 | 259<br>436 |
| 11000        | TAS<br>TOTAL | FC | KT<br>KG/H | 221<br>364 | 226<br>372 | 231<br>380 | 235<br>386 | 238<br>391 | 240<br>395 | 244<br>402 | 248<br>409 | 253<br>418 | 256<br>423 |
| 10500        | TAS<br>TOTAL | FC | KT<br>KG/H | 220<br>357 | 223<br>361 | 228<br>369 | 232<br>375 | 235<br>380 | 237<br>383 | 241<br>390 | 245<br>397 | 249<br>404 | 253<br>410 |
| 10000        | TAS<br>TOTAL | FC | KT<br>KG/H | 215<br>343 | 222<br>354 | 225<br>358 | 230<br>366 | 232<br>369 | 234<br>372 | 238<br>379 | 242<br>385 | 246<br>392 | 249<br>397 |
| 9500         | TAS<br>TOTAL | FC | KT<br>KG/H | 211<br>331 | 218<br>342 | 223<br>350 | 227<br>355 | 229<br>358 | 231<br>361 | 235<br>368 | 240<br>376 | 243<br>381 | 247<br>387 |
| 9000         | TAS<br>TOTAL | FC | KT<br>KG/H | 209<br>323 | 214<br>331 | 220<br>340 | 224<br>345 | 227<br>350 | 229<br>353 | 233<br>359 | 236<br>364 | 241<br>372 | 244<br>376 |
| 8500         | TAS<br>TOTAL | FC | KT<br>KG/H | 207<br>315 | 212<br>323 | 217<br>330 | 222<br>338 | 224<br>340 | 226<br>343 | 230<br>349 | 234<br>355 | 238<br>362 | 242<br>368 |
| 8000         | TAS<br>TOTAL | FC | KT<br>KG/H | 206<br>310 | 210<br>315 | 214<br>321 | 220<br>330 | 222<br>333 | 224<br>336 | 228<br>342 | 231<br>346 | 235<br>352 | 239<br>358 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING  
ALL ENGINES OPERATING**

PW118A ENGINES

**LONG RANGE CRUISE**

## CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 16000 FT**

|        |       |    |      | ISA + °C |     |     |     |     |     |     |     |     |     |     |
|--------|-------|----|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|        |       |    |      | -40      | -30 | -20 | -10 | -5  | 0   | 10  | 20  | 30  | 40  |     |
| WEIGHT | TAS   | FC | KT   | KG/H     | 229 | 234 | 239 | 243 | 245 | 247 | 252 | 256 | 260 | 263 |
| KG     |       |    |      |          | 382 | 390 | 398 | 405 | 409 | 412 | 421 | 429 | 436 | 441 |
| 12000  | TAS   | FC | KT   | KG/H     | 229 | 234 | 239 | 243 | 245 | 247 | 252 | 256 | 260 | 263 |
|        | TOTAL |    | KG/H |          | 382 | 390 | 398 | 405 | 409 | 412 | 421 | 429 | 436 | 441 |
| 11500  | TAS   | FC | KT   | KG/H     | 226 | 231 | 236 | 240 | 242 | 244 | 249 | 254 | 257 | 260 |
|        | TOTAL |    | KG/H |          | 370 | 378 | 386 | 393 | 396 | 399 | 408 | 417 | 422 | 427 |
| 11000  | TAS   | FC | KT   | KG/H     | 222 | 228 | 233 | 237 | 239 | 241 | 245 | 250 | 255 | 258 |
|        | TOTAL |    | KG/H |          | 357 | 366 | 374 | 380 | 384 | 387 | 394 | 403 | 411 | 416 |
| 10500  | TAS   | FC | KT   | KG/H     | 221 | 225 | 229 | 234 | 237 | 239 | 243 | 246 | 251 | 255 |
|        | TOTAL |    | KG/H |          | 349 | 355 | 361 | 369 | 374 | 377 | 383 | 388 | 397 | 403 |
| 10000  | TAS   | FC | KT   | KG/H     | 218 | 223 | 227 | 231 | 233 | 235 | 240 | 244 | 247 | 252 |
|        | TOTAL |    | KG/H |          | 339 | 346 | 352 | 357 | 360 | 364 | 372 | 378 | 383 | 391 |
| 9500   | TAS   | FC | KT   | KG/H     | 212 | 220 | 224 | 228 | 230 | 232 | 237 | 241 | 245 | 248 |
|        | TOTAL |    | KG/H |          | 323 | 336 | 341 | 347 | 350 | 353 | 360 | 367 | 374 | 378 |
| 9000   | TAS   | FC | KT   | KG/H     | 210 | 215 | 222 | 225 | 228 | 230 | 234 | 238 | 242 | 245 |
|        | TOTAL |    | KG/H |          | 315 | 323 | 333 | 337 | 341 | 344 | 350 | 356 | 363 | 367 |
| 8500   | TAS   | FC | KT   | KG/H     | 208 | 212 | 218 | 223 | 225 | 227 | 231 | 235 | 239 | 243 |
|        | TOTAL |    | KG/H |          | 307 | 313 | 322 | 329 | 332 | 334 | 340 | 346 | 353 | 358 |
| 8000   | TAS   | FC | KT   | KG/H     | 207 | 210 | 215 | 220 | 223 | 225 | 229 | 232 | 236 | 240 |
|        | TOTAL |    | KG/H |          | 301 | 305 | 313 | 320 | 324 | 327 | 332 | 337 | 343 | 348 |

20 NOVEMBER 1992

SUPPLEMENTARY PERFORMANCE  
MANUALFLIGHT PLANNING  
ALL ENGINES OPERATING

PW118A ENGINES

## LONG RANGE CRUISE

CRUISE CONFIGURATION  
NP: 85%  
BLEED SWITCH: AUTO  
PACK CONTROL SELECTOR: LOW

ALTITUDE: 17000 FT

| WEIGHT<br>KG |          |      | ISA + °C |     |     |     |     |     |     |     |     |     |     |
|--------------|----------|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |          |      | -40      | -30 | -20 | -10 | -5  | 0   | 10  | 20  | 30  | 40  |     |
| 12000        | TAS      | KT   | 231      | 236 | 241 | 245 | 247 | 250 | 254 | 258 | 262 | 262 | 262 |
|              | TOTAL FC | KG/H | 377      | 385 | 393 | 400 | 403 | 409 | 416 | 423 | 430 | 430 | 431 |
| 11500        | TAS      | KT   | 228      | 233 | 238 | 242 | 244 | 246 | 251 | 255 | 259 | 263 | 263 |
|              | TOTAL FC | KG/H | 365      | 372 | 380 | 387 | 390 | 394 | 402 | 409 | 416 | 423 | 423 |
| 11000        | TAS      | KT   | 224      | 229 | 235 | 239 | 241 | 243 | 247 | 253 | 256 | 260 | 260 |
|              | TOTAL FC | KG/H | 351      | 359 | 368 | 375 | 378 | 381 | 388 | 398 | 403 | 410 | 410 |
| 10500        | TAS      | KT   | 221      | 226 | 231 | 236 | 238 | 241 | 244 | 248 | 254 | 257 | 257 |
|              | TOTAL FC | KG/H | 340      | 348 | 355 | 363 | 366 | 370 | 375 | 382 | 392 | 397 | 397 |
| 10000        | TAS      | KT   | 220      | 223 | 228 | 232 | 235 | 237 | 241 | 245 | 249 | 254 | 254 |
|              | TOTAL FC | KG/H | 333      | 337 | 344 | 350 | 354 | 357 | 364 | 370 | 377 | 385 | 385 |
| 9500         | TAS      | KT   | 215      | 222 | 225 | 230 | 231 | 234 | 238 | 242 | 246 | 250 | 250 |
|              | TOTAL FC | KG/H | 319      | 330 | 333 | 341 | 342 | 346 | 352 | 359 | 365 | 371 | 371 |
| 9000         | TAS      | KT   | 210      | 217 | 223 | 227 | 229 | 231 | 235 | 239 | 243 | 247 | 247 |
|              | TOTAL FC | KG/H | 306      | 316 | 325 | 330 | 333 | 336 | 342 | 348 | 354 | 360 | 360 |
| 8500         | TAS      | KT   | 209      | 213 | 219 | 224 | 226 | 229 | 232 | 236 | 240 | 244 | 244 |
|              | TOTAL FC | KG/H | 299      | 305 | 314 | 321 | 323 | 327 | 332 | 337 | 344 | 349 | 349 |
| .8000        | TAS      | KT   | 207      | 211 | 216 | 221 | 223 | 226 | 230 | 233 | 237 | 241 | 241 |
|              | TOTAL FC | KG/H | 292      | 298 | 305 | 311 | 314 | 318 | 324 | 328 | 334 | 339 | 339 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**LONG RANGE CRUISE**
**CRUISE CONFIGURATION**

NP: 85%

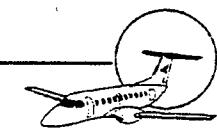
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 18000 FT**
**WEIGHT  
KG**
**ISA + °C**

|       |       |    |      | -40 | -30 | -20 | -10 | -5  | 0   | 10  | 20  | 30  | 40  |
|-------|-------|----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 12000 | TAS   | KT | KG/H | 233 | 238 | 243 | 248 | 251 | 253 | 257 | 261 | 265 | 259 |
|       | TOTAL | FC |      | 372 | 380 | 388 | 397 | 402 | 405 | 412 | 419 | 427 | 418 |
| 11500 | TAS   | KT | KG/H | 230 | 235 | 240 | 244 | 247 | 249 | 253 | 258 | 262 | 265 |
|       | TOTAL | FC |      | 360 | 367 | 375 | 382 | 387 | 390 | 397 | 406 | 413 | 418 |
| 11000 | TAS   | KT | KG/H | 226 | 231 | 237 | 241 | 243 | 245 | 250 | 254 | 258 | 262 |
|       | TOTAL | FC |      | 346 | 354 | 363 | 369 | 372 | 376 | 384 | 391 | 397 | 404 |
| 10500 | TAS   | KT | KG/H | 223 | 228 | 233 | 238 | 240 | 242 | 246 | 251 | 255 | 259 |
|       | TOTAL | FC |      | 335 | 342 | 350 | 357 | 360 | 363 | 370 | 378 | 384 | 391 |
| 10000 | TAS   | KT | KG/H | 221 | 225 | 230 | 235 | 237 | 239 | 243 | 247 | 252 | 256 |
|       | TOTAL | FC |      | 326 | 331 | 338 | 346 | 349 | 352 | 357 | 364 | 372 | 378 |
| 9500  | TAS   | KT | KG/H | 218 | 222 | 227 | 231 | 233 | 236 | 240 | 244 | 248 | 253 |
|       | TOTAL | FC |      | 316 | 321 | 327 | 333 | 336 | 340 | 346 | 352 | 358 | 366 |
| 9000  | TAS   | KT | KG/H | 212 | 220 | 223 | 228 | 230 | 232 | 237 | 241 | 245 | 248 |
|       | TOTAL | FC |      | 301 | 312 | 316 | 323 | 325 | 328 | 335 | 341 | 347 | 352 |
| 8500  | TAS   | KT | KG/H | 209 | 215 | 221 | 225 | 227 | 230 | 233 | 237 | 242 | 245 |
|       | TOTAL | FC |      | 291 | 299 | 308 | 313 | 315 | 319 | 323 | 329 | 337 | 341 |
| 8000  | TAS   | KT | KG/H | 207 | 211 | 217 | 222 | 224 | 227 | 231 | 234 | 238 | 242 |
|       | TOTAL | FC |      | 283 | 289 | 297 | 303 | 306 | 310 | 315 | 319 | 325 | 331 |

20 NOVEMBER 1992

SUPPLEMENTARY PERFORMANCE  
MANUALFLIGHT PLANNING  
ALL ENGINES OPERATING

PW118A ENGINES

## LONG RANGE CRUISE

## CRUISE CONFIGURATION

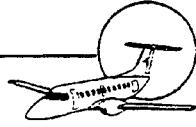
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 19000 FT

| WEIGHT<br>KG | TAS<br>TOTAL FC | KT<br>KG/H | ISA + °C   |            |            |            |            |            |            |            |            |            |
|--------------|-----------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|              |                 |            | -40        | -30        | -20        | -10        | -5         | 0          | 10         | 20         | 30         | 40         |
| 12000        | TAS<br>TOTAL FC | KT<br>KG/H | 235<br>368 | 240<br>375 | 245<br>384 | 251<br>394 | 253<br>397 | 255<br>401 | 259<br>408 | 263<br>415 | 268<br>424 | 257<br>404 |
| 11500        | TAS<br>TOTAL FC | KT<br>KG/H | 232<br>355 | 237<br>363 | 242<br>370 | 247<br>379 | 250<br>384 | 252<br>387 | 256<br>393 | 260<br>400 | 264<br>407 | 262<br>406 |
| 11000        | TAS<br>TOTAL FC | KT<br>KG/H | 228<br>342 | 234<br>351 | 239<br>358 | 243<br>364 | 245<br>367 | 248<br>372 | 253<br>380 | 256<br>385 | 261<br>394 | 264<br>399 |
| 10500        | TAS<br>TOTAL FC | KT<br>KG/H | 225<br>330 | 230<br>337 | 235<br>344 | 240<br>352 | 242<br>355 | 244<br>358 | 248<br>364 | 253<br>372 | 257<br>379 | 261<br>385 |
| 10000        | TAS<br>TOTAL FC | KT<br>KG/H | 221<br>317 | 227<br>326 | 232<br>333 | 237<br>340 | 239<br>343 | 241<br>346 | 245<br>352 | 249<br>358 | 254<br>366 | 258<br>372 |
| 9500         | TAS<br>TOTAL FC | KT<br>KG/H | 220<br>311 | 223<br>314 | 228<br>320 | 233<br>327 | 235<br>330 | 238<br>335 | 242<br>340 | 245<br>345 | 250<br>353 | 255<br>360 |
| 9000         | TAS<br>TOTAL FC | KT<br>KG/H | 215<br>297 | 221<br>305 | 225<br>310 | 229<br>315 | 231<br>318 | 234<br>322 | 238<br>328 | 243<br>335 | 246<br>339 | 251<br>347 |
| 8500         | TAS<br>TOTAL FC | KT<br>KG/H | 210<br>284 | 218<br>295 | 223<br>302 | 226<br>305 | 228<br>308 | 230<br>310 | 234<br>316 | 239<br>323 | 243<br>329 | 246<br>333 |
| 8000         | TAS<br>TOTAL FC | KT<br>KG/H | 208<br>276 | 212<br>281 | 219<br>291 | 223<br>296 | 225<br>298 | 228<br>302 | 232<br>307 | 236<br>313 | 240<br>318 | 244<br>324 |



## FLIGHT PLANNING

### ALL ENGINES OPERATING

PW118A ENGINES

#### LONG RANGE CRUISE

CRUISE CONFIGURATION

NP: 85%

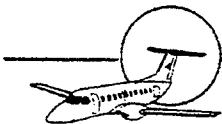
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 20000 FT**

|        |       |    |      | ISA + °C |     |     |     |     |     |     |     |     |     |     |
|--------|-------|----|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|        |       |    |      | -30      | -20 | -15 | -10 | -5  | 0   | 10  | 20  | 30  | 40  |     |
| WEIGHT | TAS   | FC | KT   | KG/H     | 242 | 248 | 251 | 253 | 256 | 258 | 262 | 266 | 271 | 253 |
| KG     | TOTAL | FC | KG/H |          | 371 | 381 | 386 | 389 | 394 | 398 | 405 | 412 | 421 | 390 |
| 12000  | TAS   | FC | KT   | KG/H     | 242 | 248 | 251 | 253 | 256 | 258 | 262 | 266 | 271 | 253 |
|        | TOTAL | FC | KG/H |          | 371 | 381 | 386 | 389 | 394 | 398 | 405 | 412 | 421 | 390 |
| 11500  | TAS   | FC | KT   | KG/H     | 239 | 244 | 247 | 250 | 252 | 254 | 259 | 263 | 267 | 258 |
|        | TOTAL | FC | KG/H |          | 358 | 366 | 371 | 376 | 379 | 382 | 391 | 398 | 405 | 392 |
| 11000  | TAS   | FC | KT   | KG/H     | 236 | 240 | 243 | 245 | 248 | 251 | 255 | 259 | 263 | 267 |
|        | TOTAL | FC | KG/H |          | 346 | 352 | 356 | 359 | 364 | 369 | 375 | 382 | 389 | 395 |
| 10500  | TAS   | FC | KT   | KG/H     | 232 | 237 | 240 | 242 | 244 | 246 | 251 | 255 | 259 | 263 |
|        | TOTAL | FC | KG/H |          | 332 | 340 | 344 | 347 | 350 | 353 | 361 | 367 | 373 | 380 |
| 10000  | TAS   | FC | KT   | KG/H     | 229 | 234 | 236 | 239 | 241 | 243 | 247 | 252 | 256 | 260 |
|        | TOTAL | FC | KG/H |          | 321 | 328 | 331 | 335 | 338 | 341 | 347 | 355 | 361 | 367 |
| 9500   | TAS   | FC | KT   | KG/H     | 225 | 230 | 232 | 235 | 237 | 239 | 243 | 247 | 253 | 256 |
|        | TOTAL | FC | KG/H |          | 309 | 315 | 318 | 322 | 325 | 328 | 333 | 339 | 348 | 353 |
| 9000   | TAS   | FC | KT   | KG/H     | 221 | 226 | 229 | 231 | 233 | 236 | 240 | 244 | 248 | 253 |
|        | TOTAL | FC | KG/H |          | 297 | 303 | 307 | 310 | 312 | 317 | 322 | 328 | 333 | 341 |
| 8500   | TAS   | FC | KT   | KG/H     | 220 | 223 | 225 | 228 | 230 | 232 | 236 | 241 | 245 | 248 |
|        | TOTAL | FC | KG/H |          | 290 | 293 | 296 | 300 | 302 | 305 | 310 | 317 | 322 | 327 |
| 8000   | TAS   | FC | KT   | KG/H     | 214 | 221 | 223 | 225 | 227 | 229 | 233 | 237 | 241 | 245 |
|        | TOTAL | FC | KG/H |          | 276 | 285 | 288 | 290 | 292 | 295 | 300 | 305 | 310 | 316 |

20 NOVEMBER 1992

SUPPLEMENTARY PERFORMANCE  
MANUALFLIGHT PLANNING  
ALL ENGINES OPERATING

PW118A ENGINES

## LONG RANGE CRUISE

## CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 21000 FT

| WEIGHT<br>KG |          |      | ISA + °C |     |     |     |     |     |     |     |     |     |     |
|--------------|----------|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |          |      | -30      | -20 | -15 | -10 | -5  | 0   | 10  | 20  | 30  | 40  |     |
| 12000        | TAS      | KT   | 245      | 251 | 253 | 256 | 258 | 260 | 264 | 269 | 273 | -   | -   |
|              | TOTAL FC | KG/H | 369      | 379 | 382 | 387 | 391 | 394 | 401 | 410 | 417 |     |     |
| 11500        | TAS      | KT   | 241      | 247 | 250 | 252 | 255 | 257 | 261 | 265 | 270 | 257 | 380 |
|              | TOTAL FC | KG/H | 354      | 364 | 369 | 372 | 376 | 380 | 386 | 393 | 402 |     |     |
| 11000        | TAS      | KT   | 238      | 243 | 245 | 248 | 251 | 253 | 257 | 262 | 266 | 263 | 382 |
|              | TOTAL FC | KG/H | 341      | 349 | 352 | 357 | 361 | 365 | 371 | 379 | 386 |     |     |
| 10500        | TAS      | KT   | 234      | 239 | 242 | 244 | 246 | 249 | 254 | 258 | 262 | 266 | 377 |
|              | TOTAL FC | KG/H | 328      | 335 | 339 | 342 | 345 | 350 | 357 | 364 | 370 |     |     |
| 10000        | TAS      | KT   | 231      | 236 | 238 | 241 | 243 | 245 | 250 | 254 | 258 | 262 | 361 |
|              | TOTAL FC | KG/H | 316      | 323 | 326 | 330 | 333 | 336 | 343 | 349 | 355 |     |     |
| 9500         | TAS      | KT   | 227      | 232 | 235 | 237 | 239 | 241 | 245 | 250 | 255 | 258 | 347 |
|              | TOTAL FC | KG/H | 304      | 310 | 314 | 317 | 320 | 322 | 328 | 335 | 343 |     |     |
| 9000         | TAS      | KT   | 223      | 228 | 231 | 233 | 236 | 238 | 242 | 246 | 251 | 255 | 335 |
|              | TOTAL FC | KG/H | 292      | 298 | 302 | 305 | 309 | 311 | 316 | 322 | 329 |     |     |
| 8500         | TAS      | KT   | 221      | 224 | 227 | 229 | 231 | 233 | 239 | 243 | 246 | 251 | 322 |
|              | TOTAL FC | KG/H | 283      | 287 | 290 | 293 | 295 | 298 | 306 | 311 | 315 |     |     |
| 8000         | TAS      | KT   | 216      | 222 | 224 | 226 | 228 | 230 | 234 | 239 | 243 | 246 | 308 |
|              | TOTAL FC | KG/H | 271      | 279 | 281 | 283 | 285 | 288 | 292 | 299 | 304 |     |     |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING  
ALL ENGINES OPERATING**
**PW118A ENGINES****LONG RANGE CRUISE**

## CRUISE CONFIGURATION

NP: 85%

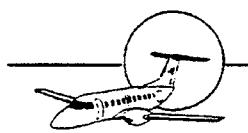
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 22000 FT**

| WEIGHT<br>KG |              |    | ISA + °C   |            |            |            |            |            |            |            |            |            |            |
|--------------|--------------|----|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|              |              |    | -30        | -20        | -15        | -10        | -5         | 0          | 10         | 20         | 30         | 40         |            |
| 12000        | TAS<br>TOTAL | FC | KT<br>KG/H | 248<br>368 | 253<br>375 | 255<br>379 | 257<br>382 | 260<br>387 | 262<br>391 | 267<br>399 | 272<br>408 | 269<br>405 | -          |
| 11500        | TAS<br>TOTAL | FC | KT<br>KG/H | 243<br>351 | 250<br>362 | 252<br>365 | 255<br>369 | 257<br>373 | 259<br>376 | 263<br>383 | 268<br>391 | 273<br>400 | 252<br>367 |
| 11000        | TAS<br>TOTAL | FC | KT<br>KG/H | 240<br>338 | 245<br>345 | 248<br>350 | 251<br>354 | 254<br>359 | 256<br>362 | 260<br>368 | 264<br>375 | 269<br>383 | 259<br>370 |
| 10500        | TAS<br>TOTAL | FC | KT<br>KG/H | 236<br>324 | 242<br>332 | 244<br>335 | 247<br>340 | 250<br>344 | 253<br>349 | 256<br>353 | 260<br>359 | 264<br>366 | 268<br>372 |
| 10000        | TAS<br>TOTAL | FC | KT<br>KG/H | 233<br>312 | 238<br>319 | 240<br>321 | 242<br>324 | 245<br>328 | 247<br>331 | 253<br>340 | 257<br>346 | 261<br>352 | 265<br>358 |
| 9500         | TAS<br>TOTAL | FC | KT<br>KG/H | 229<br>300 | 234<br>306 | 237<br>310 | 239<br>312 | 241<br>315 | 243<br>318 | 248<br>325 | 253<br>332 | 257<br>338 | 261<br>343 |
| 9000         | TAS<br>TOTAL | FC | KT<br>KG/H | 225<br>287 | 230<br>293 | 232<br>296 | 235<br>300 | 237<br>302 | 240<br>306 | 244<br>311 | 248<br>317 | 253<br>324 | 257<br>329 |
| 8500         | TAS<br>TOTAL | FC | KT<br>KG/H | 222<br>277 | 226<br>282 | 229<br>285 | 231<br>288 | 233<br>290 | 236<br>294 | 240<br>299 | 244<br>304 | 248<br>310 | 253<br>316 |
| 8000         | TAS<br>TOTAL | FC | KT<br>KG/H | 220<br>269 | 222<br>271 | 225<br>274 | 227<br>276 | 229<br>279 | 231<br>281 | 236<br>287 | 240<br>292 | 245<br>299 | 249<br>304 |

20 NOVEMBER 1992

SUPPLEMENTARY PERFORMANCE  
MANUALFLIGHT PLANNING  
ALL ENGINES OPERATING

PW118A ENGINES

## LONG RANGE CRUISE

## CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 23000 FT

| WEIGHT<br>KG |              |    | ISA + °C   |            |            |            |            |            |            |            |            |            |            |   |
|--------------|--------------|----|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---|
|              |              |    | -30        | -20        | -15        | -10        | -5         | 0          | 10         | 20         | 30         | 40         |            |   |
| 12000        | TAS<br>TOTAL | FC | KT<br>KG/H | 250<br>364 | 255<br>372 | 258<br>377 | 260<br>381 | 263<br>386 | 266<br>391 | 270<br>398 | 275<br>407 | 265<br>391 | -          | - |
| 11500        | TAS<br>TOTAL | FC | KT<br>KG/H | 246<br>349 | 251<br>357 | 254<br>361 | 256<br>364 | 259<br>369 | 260<br>371 | 266<br>381 | 270<br>388 | 272<br>393 | -          | - |
| 11000        | TAS<br>TOTAL | FC | KT<br>KG/H | 242<br>334 | 248<br>343 | 251<br>348 | 254<br>352 | 256<br>355 | 259<br>360 | 262<br>365 | 267<br>373 | 272<br>381 | 256<br>357 |   |
| 10500        | TAS<br>TOTAL | FC | KT<br>KG/H | 238<br>320 | 243<br>327 | 247<br>333 | 250<br>337 | 252<br>340 | 255<br>344 | 259<br>351 | 263<br>357 | 268<br>365 | 264<br>360 |   |
| 10000        | TAS<br>TOTAL | FC | KT<br>KG/H | 235<br>308 | 240<br>315 | 243<br>319 | 245<br>322 | 248<br>326 | 251<br>330 | 255<br>336 | 259<br>342 | 263<br>348 | 268<br>355 |   |
| 9500         | TAS<br>TOTAL | FC | KT<br>KG/H | 231<br>295 | 236<br>301 | 239<br>305 | 241<br>308 | 243<br>311 | 245<br>313 | 251<br>322 | 255<br>327 | 259<br>333 | 263<br>339 |   |
| 9000         | TAS<br>TOTAL | FC | KT<br>KG/H | 227<br>283 | 232<br>289 | 235<br>293 | 238<br>297 | 240<br>299 | 242<br>302 | 246<br>307 | 251<br>314 | 255<br>319 | 259<br>324 |   |
| 8500         | TAS<br>TOTAL | FC | KT<br>KG/H | 223<br>271 | 228<br>277 | 230<br>279 | 233<br>283 | 236<br>287 | 238<br>289 | 242<br>294 | 246<br>299 | 251<br>306 | 256<br>312 |   |
| 8000         | TAS<br>TOTAL | FC | KT<br>KG/H | 220<br>262 | 224<br>266 | 227<br>269 | 229<br>272 | 231<br>274 | 234<br>277 | 238<br>282 | 242<br>287 | 246<br>292 | 251<br>299 |   |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING  
ALL ENGINES OPERATING**
**PW118A ENGINES****LONG RANGE CRUISE**

## CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 24000 FT**

| WEIGHT<br>KG |              |    | ISA + °C   |            |            |            |            |            |            |            |            |            |            |
|--------------|--------------|----|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|              |              |    | -30        | -20        | -15        | -10        | -5         | 0          | 10         | 20         | 30         | 40         |            |
| 12000        | TAS<br>TOTAL | FC | KT<br>KG/H | 251<br>360 | 257<br>370 | 259<br>373 | 262<br>379 | 266<br>385 | 270<br>391 | 274<br>399 | 279<br>408 | 258<br>378 | -<br>-     |
| 11500        | TAS<br>TOTAL | FC | KT<br>KG/H | 249<br>348 | 254<br>355 | 257<br>360 | 259<br>363 | 261<br>367 | 265<br>373 | 269<br>380 | 274<br>389 | 266<br>379 | -<br>-     |
| 11000        | TAS<br>TOTAL | FC | KT<br>KG/H | 245<br>333 | 251<br>341 | 253<br>344 | 255<br>347 | 258<br>352 | 260<br>355 | 265<br>363 | 270<br>371 | 275<br>379 | -<br>-     |
| 10500        | TAS<br>TOTAL | FC | KT<br>KG/H | 241<br>318 | 247<br>327 | 250<br>331 | 252<br>334 | 255<br>338 | 258<br>342 | 261<br>347 | 265<br>353 | 270<br>361 | 261<br>347 |
| 10000        | TAS<br>TOTAL | FC | KT<br>KG/H | 237<br>304 | 242<br>311 | 245<br>315 | 248<br>319 | 251<br>323 | 254<br>327 | 258<br>333 | 261<br>338 | 266<br>345 | 268<br>349 |
| 9500         | TAS<br>TOTAL | FC | KT<br>KG/H | 233<br>291 | 239<br>299 | 241<br>301 | 244<br>305 | 246<br>308 | 249<br>312 | 253<br>317 | 258<br>324 | 262<br>330 | 266<br>336 |
| 9000         | TAS<br>TOTAL | FC | KT<br>KG/H | 229<br>279 | 235<br>286 | 237<br>288 | 239<br>291 | 242<br>295 | 244<br>297 | 249<br>304 | 253<br>309 | 258<br>316 | 262<br>321 |
| 8500         | TAS<br>TOTAL | FC | KT<br>KG/H | 225<br>267 | 230<br>273 | 233<br>276 | 236<br>280 | 238<br>282 | 240<br>285 | 244<br>290 | 248<br>294 | 253<br>301 | 257<br>306 |
| 8000         | TAS<br>TOTAL | FC | KT<br>KG/H | 221<br>256 | 226<br>261 | 228<br>263 | 231<br>267 | 233<br>269 | 236<br>273 | 240<br>277 | 245<br>283 | 248<br>287 | 253<br>293 |

20 NOVEMBER 1992

SUPPLEMENTARY PERFORMANCE  
MANUALFLIGHT PLANNING  
ALL ENGINES OPERATING

PW118A ENGINES

## LONG RANGE CRUISE

## CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 25000 FT

| WEIGHT<br>KG | TAS<br>TOTAL FC | KT<br>KG/H | ISA + °C   |            |            |            |            |            |            |            |            |            |
|--------------|-----------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|              |                 |            | -20        | -15        | -10        | -5         | 0          | 5          | 10         | 20         | 30         | 40         |
| 12000        | TAS<br>TOTAL FC | KT<br>KG/H | 260<br>370 | 263<br>375 | 265<br>380 | 267<br>385 | 271<br>390 | 275<br>395 | 277<br>399 | 279<br>404 | -          | -          |
| 11500        | TAS<br>TOTAL FC | KT<br>KG/H | 256<br>353 | 259<br>357 | 261<br>361 | 265<br>367 | 267<br>371 | 270<br>376 | 272<br>379 | 278<br>389 | 263<br>367 | -          |
| 11000        | TAS<br>TOTAL FC | KT<br>KG/H | 253<br>338 | 255<br>341 | 258<br>346 | 260<br>349 | 263<br>354 | 265<br>357 | 268<br>362 | 273<br>370 | 271<br>368 | -          |
| 10500        | TAS<br>TOTAL FC | KT<br>KG/H | 250<br>325 | 252<br>327 | 255<br>332 | 257<br>335 | 259<br>338 | 262<br>342 | 264<br>345 | 269<br>353 | 273<br>359 | 255<br>334 |
| 10000        | TAS<br>TOTAL FC | KT<br>KG/H | 245<br>309 | 248<br>313 | 251<br>317 | 253<br>320 | 256<br>324 | 258<br>327 | 260<br>330 | 264<br>336 | 269<br>343 | 264<br>338 |
| 9500         | TAS<br>TOTAL FC | KT<br>KG/H | 241<br>295 | 243<br>298 | 246<br>302 | 249<br>306 | 252<br>309 | 255<br>313 | 256<br>315 | 260<br>320 | 264<br>326 | 269<br>333 |
| 9000         | TAS<br>TOTAL FC | KT<br>KG/H | 237<br>282 | 239<br>284 | 242<br>288 | 244<br>291 | 247<br>295 | 249<br>297 | 252<br>301 | 256<br>306 | 260<br>311 | 264<br>317 |
| 8500         | TAS<br>TOTAL FC | KT<br>KG/H | 233<br>270 | 235<br>272 | 238<br>275 | 240<br>278 | 242<br>280 | 244<br>283 | 246<br>285 | 252<br>293 | 256<br>298 | 260<br>303 |
| 8000         | TAS<br>TOTAL FC | KT<br>KG/H | 228<br>257 | 231<br>260 | 233<br>263 | 236<br>266 | 238<br>268 | 240<br>270 | 243<br>274 | 246<br>277 | 252<br>285 | 256<br>290 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING  
ALL ENGINES OPERATING**
**PW118A ENGINES****LONG RANGE CRUISE**

## CRUISE CONFIGURATION

NP: 85%

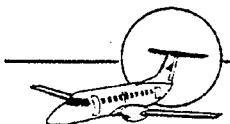
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 26000 FT**

|        |       |    |      | ISA + °C |     |     |     |     |     |     |     |     |     |     |
|--------|-------|----|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|        |       |    |      | -20      | -15 | -10 | -5  | 0   | 5   | 10  | 20  | 30  | 40  |     |
| WEIGHT | TAS   | FC | KT   | KG/H     | 263 | 266 | 269 | 272 | 275 | 278 | 281 | 274 | -   | -   |
| KG     | TOTAL | FC | KG/H |          | 370 | 375 | 380 | 385 | 391 | 395 | 401 | 392 | -   | -   |
| 12000  | TAS   | FC | KT   | KG/H     | 263 | 266 | 269 | 272 | 275 | 278 | 281 | 274 | -   | -   |
|        | TOTAL | FC | KG/H |          | 370 | 375 | 380 | 385 | 391 | 395 | 401 | 392 | -   | -   |
| 11500  | TAS   | FC | KT   | KG/H     | 259 | 262 | 265 | 267 | 270 | 273 | 276 | 281 | -   | -   |
|        | TOTAL | FC | KG/H |          | 352 | 357 | 362 | 365 | 371 | 375 | 380 | 389 | -   | -   |
| 11000  | TAS   | FC | KT   | KG/H     | 255 | 258 | 260 | 263 | 266 | 269 | 271 | 276 | 268 | -   |
|        | TOTAL | FC | KG/H |          | 336 | 340 | 344 | 348 | 353 | 358 | 361 | 369 | 357 | -   |
| 10500  | TAS   | FC | KT   | KG/H     | 251 | 254 | 256 | 259 | 262 | 264 | 266 | 271 | 277 | -   |
|        | TOTAL | FC | KG/H |          | 320 | 325 | 328 | 332 | 337 | 340 | 343 | 350 | 360 | -   |
| 10000  | TAS   | FC | KT   | KG/H     | 248 | 251 | 254 | 256 | 258 | 260 | 262 | 267 | 272 | 260 |
|        | TOTAL | FC | KG/H |          | 307 | 311 | 315 | 318 | 321 | 324 | 327 | 334 | 341 | 325 |
| 9500   | TAS   | FC | KT   | KG/H     | 243 | 246 | 249 | 252 | 254 | 256 | 259 | 263 | 268 | 268 |
|        | TOTAL | FC | KG/H |          | 292 | 296 | 300 | 303 | 306 | 309 | 313 | 318 | 325 | 326 |
| 9000   | TAS   | FC | KT   | KG/H     | 239 | 242 | 244 | 247 | 250 | 253 | 254 | 259 | 263 | 268 |
|        | TOTAL | FC | KG/H |          | 278 | 282 | 284 | 288 | 292 | 296 | 297 | 304 | 309 | 316 |
| 8500   | TAS   | FC | KT   | KG/H     | 235 | 237 | 239 | 242 | 244 | 247 | 250 | 254 | 259 | 263 |
|        | TOTAL | FC | KG/H |          | 266 | 268 | 270 | 274 | 276 | 280 | 284 | 288 | 295 | 300 |
| 8000   | TAS   | FC | KT   | KG/H     | 230 | 233 | 236 | 238 | 240 | 242 | 245 | 249 | 253 | 258 |
|        | TOTAL | FC | KG/H |          | 253 | 256 | 259 | 262 | 264 | 266 | 270 | 274 | 279 | 285 |

20 NOVEMBER 1992

SUPPLEMENTARY PERFORMANCE  
MANUALFLIGHT PLANNING  
ALL ENGINES OPERATING

PW118A ENGINES

## LONG RANGE CRUISE

## CRUISE CONFIGURATION

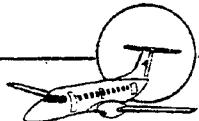
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 27000 FT

| WEIGHT<br>KG | TAS<br>TOTAL FC | KT<br>KG/H | ISA + °C   |            |            |            |            |            |            |            |            |            |
|--------------|-----------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|              |                 |            | -20        | -15        | -10        | -5         | 0          | 5          | 10         | 20         | 30         | 40         |
| 12000        | TAS<br>TOTAL FC | KT<br>KG/H | 265<br>369 | 269<br>375 | 273<br>381 | 276<br>387 | 279<br>393 | 283<br>399 | 287<br>406 | -          | -          | -          |
| 11500        | TAS<br>TOTAL FC | KT<br>KG/H | 262<br>352 | 265<br>357 | 268<br>362 | 272<br>368 | 274<br>373 | 278<br>378 | 280<br>382 | 277<br>380 | -          | -          |
| 11000        | TAS<br>TOTAL FC | KT<br>KG/H | 257<br>334 | 260<br>339 | 263<br>343 | 266<br>348 | 269<br>353 | 272<br>357 | 275<br>362 | 280<br>370 | 261<br>344 | -          |
| 10500        | TAS<br>TOTAL FC | KT<br>KG/H | 254<br>319 | 257<br>324 | 260<br>328 | 262<br>331 | 264<br>334 | 267<br>339 | 270<br>343 | 276<br>352 | 270<br>346 | -          |
| 10000        | TAS<br>TOTAL FC | KT<br>KG/H | 250<br>304 | 252<br>307 | 255<br>311 | 257<br>314 | 260<br>318 | 263<br>322 | 265<br>325 | 270<br>333 | 275<br>340 | 253<br>313 |
| 9500         | TAS<br>TOTAL FC | KT<br>KG/H | 246<br>290 | 250<br>295 | 252<br>298 | 255<br>302 | 257<br>304 | 259<br>306 | 261<br>309 | 265<br>315 | 270<br>322 | 262<br>314 |
| 9000         | TAS<br>TOTAL FC | KT<br>KG/H | 241<br>275 | 244<br>279 | 247<br>282 | 250<br>286 | 252<br>289 | 255<br>292 | 258<br>296 | 261<br>300 | 265<br>306 | 270<br>312 |
| 8500         | TAS<br>TOTAL FC | KT<br>KG/H | 237<br>262 | 240<br>266 | 242<br>268 | 245<br>271 | 248<br>275 | 251<br>279 | 253<br>281 | 257<br>286 | 260<br>290 | 265<br>296 |
| 8000         | TAS<br>TOTAL FC | KT<br>KG/H | 232<br>249 | 235<br>252 | 237<br>254 | 240<br>258 | 242<br>260 | 244<br>262 | 247<br>266 | 252<br>272 | 256<br>276 | 260<br>281 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING  
ALL ENGINES OPERATING**
**PW118A ENGINES****LONG RANGE CRUISE**

## CRUISE CONFIGURATION

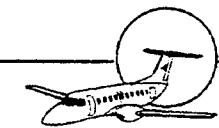
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 28000 FT**

|        |     |    |      | ISA + °C |     |     |      |     |     |     |     |     |     |     |     |     |     |
|--------|-----|----|------|----------|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|        |     |    |      | -20      | -15 | -10 | -5   | 0   | 5   | 10  | 20  | 30  | 40  |     |     |     |     |
| WEIGHT | KG  |    |      | TAS      | FC  | KT  | KG/H | 270 | 273 | 276 | 280 | 284 | 288 | 285 | -   | -   | -   |
| TOTAL  | FC  |    | KG/H | 373      | 378 | 383 | 389  | 273 | 278 | 284 | 295 | 395 | 403 | 399 | -   | -   | -   |
| 12000  | TAS | FC | KT   | 264      | 268 | 271 | 274  | 278 | 282 | 286 | 291 | 296 | 301 | 299 | -   | -   | -   |
| 11500  | TAS | FC | KT   | 351      | 358 | 363 | 367  | 374 | 380 | 387 | 392 | 397 | 402 | 399 | -   | -   | -   |
| 11000  | TAS | FC | KT   | 336      | 261 | 264 | 267  | 270 | 273 | 276 | 279 | 280 | 281 | 283 | -   | -   | -   |
| 10500  | TAS | FC | KT   | 317      | 256 | 259 | 262  | 265 | 268 | 271 | 274 | 276 | 279 | 281 | 266 | 268 | -   |
| 10000  | TAS | FC | KT   | 303      | 253 | 256 | 258  | 261 | 264 | 265 | 269 | 274 | 275 | 276 | -   | -   | -   |
| 9500   | TAS | FC | KT   | 287      | 248 | 251 | 253  | 256 | 258 | 261 | 264 | 269 | 274 | 275 | 260 | 262 | 264 |
| 9000   | TAS | FC | KT   | 274      | 244 | 248 | 250  | 253 | 255 | 258 | 259 | 264 | 269 | 270 | 269 | 271 | 273 |
| 8500   | TAS | FC | KT   | 259      | 239 | 241 | 244  | 247 | 250 | 253 | 256 | 259 | 264 | 268 | 269 | 271 | 273 |
| 8000   | TAS | FC | KT   | 247      | 235 | 238 | 240  | 243 | 245 | 248 | 251 | 254 | 259 | 264 | 268 | 269 | 273 |

SUPPLEMENTARY PERFORMANCE  
MANUALFLIGHT PLANNING  
ALL ENGINES OPERATING

PW118A ENGINES

## LONG RANGE CRUISE

## CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 29000 FT

| WEIGHT<br>KG | TAS<br>TOTAL FC | KT<br>KG/H | ISA + °C   |            |            |            |            |            |            |            |            |            |
|--------------|-----------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|              |                 |            | -20        | -15        | -10        | -5         | 0          | 5          | 10         | 20         | 30         | 40         |
| 12000        | TAS<br>TOTAL FC | KT<br>KG/H | 272<br>373 | 276<br>379 | 280<br>386 | 283<br>865 | 286<br>397 | 288<br>399 | 278<br>386 | -          | -          | -          |
| 11500        | TAS<br>TOTAL FC | KT<br>KG/H | 269<br>355 | 272<br>360 | 275<br>365 | 279<br>371 | 282<br>376 | 287<br>384 | 287<br>385 | -          | -          | -          |
| 11000        | TAS<br>TOTAL FC | KT<br>KG/H | 263<br>334 | 266<br>339 | 270<br>345 | 273<br>350 | 276<br>355 | 280<br>360 | 284<br>367 | 275<br>355 | -          | -          |
| 10500        | TAS<br>TOTAL FC | KT<br>KG/H | 259<br>318 | 263<br>323 | 266<br>327 | 268<br>330 | 271<br>335 | 274<br>340 | 277<br>344 | 285<br>356 | -          | -          |
| 10000        | TAS<br>TOTAL FC | KT<br>KG/H | 255<br>301 | 257<br>304 | 260<br>308 | 263<br>312 | 267<br>318 | 270<br>322 | 271<br>324 | 278<br>334 | 270<br>324 | -          |
| 9500         | TAS<br>TOTAL FC | KT<br>KG/H | 251<br>286 | 254<br>290 | 257<br>294 | 259<br>296 | 262<br>301 | 263<br>303 | 267<br>308 | 272<br>314 | 277<br>321 | -          |
| 9000         | TAS<br>TOTAL FC | KT<br>KG/H | 247<br>272 | 250<br>275 | 252<br>278 | 254<br>280 | 257<br>284 | 259<br>286 | 263<br>292 | 266<br>296 | 271<br>302 | 265<br>295 |
| 8500         | TAS<br>TOTAL FC | KT<br>KG/H | 242<br>257 | 245<br>261 | 248<br>264 | 251<br>268 | 253<br>270 | 256<br>273 | 258<br>276 | 262<br>281 | 266<br>286 | 271<br>292 |
| 8000         | TAS<br>TOTAL FC | KT<br>KG/H | 237<br>243 | 239<br>245 | 242<br>249 | 244<br>251 | 248<br>255 | 251<br>259 | 253<br>261 | 258<br>267 | 261<br>270 | 266<br>276 |



## FLIGHT PLANNING

### ALL ENGINES OPERATING

**PW118A ENGINES**

#### LONG RANGE CRUISE

##### CRUISE CONFIGURATION

NP: 85%

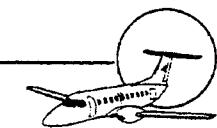
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 30000 FT**

| WEIGHT<br>KG |       |    | ISA + °C |     |     |     |     |     |     |     |     |     |
|--------------|-------|----|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |       |    | -10      | -5  | 0   | 5   | 10  | 15  | 20  | 25  | 30  | 40  |
| 12000        | TAS   | KT | 284      | 288 | 291 | 282 | -   | -   | -   | -   | -   | -   |
|              | TOTAL | FC | KG/H     | 389 | 399 | 400 | 389 | -   | -   | -   | -   | -   |
| 11500        | TAS   | KT | 279      | 283 | 287 | 290 | 280 | -   | -   | -   | -   | -   |
|              | TOTAL | FC | KG/H     | 368 | 374 | 380 | 385 | 374 | -   | -   | -   | -   |
| 11000        | TAS   | KT | 274      | 278 | 281 | 285 | 289 | 281 | -   | -   | -   | -   |
|              | TOTAL | FC | KG/H     | 347 | 353 | 358 | 364 | 370 | 360 | -   | -   | -   |
| 10500        | TAS   | KT | 268      | 272 | 275 | 279 | 282 | 286 | 277 | -   | -   | -   |
|              | TOTAL | FC | KG/H     | 326 | 333 | 337 | 343 | 347 | 353 | 343 | -   | -   |
| 10000        | TAS   | KT | 264      | 267 | 269 | 272 | 277 | 279 | 282 | 275 | -   | -   |
|              | TOTAL | FC | KG/H     | 309 | 313 | 317 | 321 | 328 | 331 | 335 | -   | -   |
| 9500         | TAS   | KT | 259      | 262 | 265 | 268 | 270 | 274 | 277 | 279 | 273 | -   |
|              | TOTAL | FC | KG/H     | 292 | 296 | 300 | 304 | 307 | 312 | 316 | 319 | 313 |
| 9000         | TAS   | KT | 254      | 257 | 260 | 263 | 265 | 268 | 271 | 273 | 276 | 258 |
|              | TOTAL | FC | KG/H     | 276 | 279 | 283 | 287 | 290 | 293 | 297 | 300 | 304 |
| 8500         | TAS   | KT | 250      | 253 | 255 | 257 | 260 | 262 | 265 | 268 | 270 | 270 |
|              | TOTAL | FC | KG/H     | 261 | 265 | 267 | 269 | 273 | 275 | 279 | 283 | 286 |
| 8000         | TAS   | KT | 245      | 248 | 251 | 254 | 256 | 258 | 260 | 262 | 264 | 270 |
|              | TOTAL | FC | KG/H     | 247 | 250 | 253 | 257 | 259 | 261 | 263 | 266 | 268 |

**20 NOVEMBER 1992**

SUPPLEMENTARY PERFORMANCE  
MANUALFLIGHT PLANNING  
ALL ENGINES OPERATING

PW118A ENGINES

## LONG RANGE CRUISE

## CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 31000 FT

| WEIGHT<br>KG | TAS<br>TOTAL FC | KT<br>KG/H | ISA + °C   |            |            |            |            |            |            |            |            |            |
|--------------|-----------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|              |                 |            | -10        | -5         | 0          | 5          | 10         | 15         | 20         | 25         | 30         | 40         |
| 12000        | TAS<br>TOTAL FC | KT<br>KG/H | 288<br>390 | 287<br>396 | 285<br>392 | -          | -          | -          | -          | -          | -          | -          |
| 11500        | TAS<br>TOTAL FC | KT<br>KG/H | 283<br>371 | 287<br>377 | 288<br>379 | 282<br>373 | -          | -          | -          | -          | -          | -          |
| 11000        | TAS<br>TOTAL FC | KT<br>KG/H | 278<br>350 | 282<br>356 | 285<br>361 | 288<br>365 | 282<br>358 | -          | -          | -          | -          | -          |
| 10500        | TAS<br>TOTAL FC | KT<br>KG/H | 272<br>329 | 276<br>334 | 280<br>340 | 284<br>345 | 287<br>350 | 283<br>346 | 269<br>330 | -          | -          | -          |
| 10000        | TAS<br>TOTAL FC | KT<br>KG/H | 267<br>310 | 270<br>314 | 274<br>319 | 278<br>325 | 279<br>330 | 285<br>335 | 281<br>331 | 269<br>316 | -          | -          |
| 9500         | TAS<br>TOTAL FC | KT<br>KG/H | 262<br>292 | 265<br>296 | 268<br>299 | 271<br>304 | 275<br>309 | 278<br>313 | 280<br>316 | 280<br>317 | 268<br>302 | -          |
| 9000         | TAS<br>TOTAL FC | KT<br>KG/H | 257<br>275 | 260<br>278 | 263<br>282 | 266<br>286 | 268<br>289 | 271<br>293 | 274<br>296 | 277<br>300 | 278<br>302 | -          |
| 8500         | TAS<br>TOTAL FC | KT<br>KG/H | 252<br>259 | 255<br>262 | 258<br>266 | 260<br>268 | 263<br>272 | 266<br>276 | 268<br>278 | 270<br>281 | 273<br>284 | 266<br>275 |
| 8000         | TAS<br>TOTAL FC | KT<br>KG/H | 248<br>245 | 251<br>248 | 253<br>251 | 256<br>254 | 258<br>256 | 261<br>259 | 263<br>262 | 265<br>264 | 267<br>267 | 272<br>272 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**LONG RANGE CRUISE**
**CRUISE CONFIGURATION**

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 32000 FT**

| WEIGHT<br>KG |       |    |      | ISA + °C |     |     |     |     |     |     |     |     |     |
|--------------|-------|----|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |       |    |      | -10      | -5  | 0   | 5   | 10  | 15  | 20  | 25  | 30  | 40  |
| 12000        | TAS   | KT | KG/H | 288      | 283 | -   | -   | -   | -   | -   | -   | -   | -   |
|              | TOTAL | FC | KG/H | 399      | 385 | -   | -   | -   | -   | -   | -   | -   | -   |
| 11500        | TAS   | KT | KG/H | 284      | 286 | 284 | -   | -   | -   | -   | -   | -   | -   |
|              | TOTAL | FC | KG/H | 370      | 374 | 373 | -   | -   | -   | -   | -   | -   | -   |
| 11000        | TAS   | KT | KG/H | 281      | 286 | 286 | 285 | -   | -   | -   | -   | -   | -   |
|              | TOTAL | FC | KG/H | 352      | 359 | 359 | 359 | -   | -   | -   | -   | -   | -   |
| 10500        | TAS   | KT | KG/H | 277      | 281 | 284 | 286 | 286 | 275 | -   | -   | -   | -   |
|              | TOTAL | FC | KG/H | 332      | 338 | 343 | 346 | 346 | 333 | -   | -   | -   | -   |
| 10000        | TAS   | KT | KG/H | 271      | 274 | 278 | 281 | 286 | 286 | 275 | -   | -   | -   |
|              | TOTAL | FC | KG/H | 311      | 316 | 321 | 326 | 332 | 333 | 320 | -   | -   | -   |
| 9500         | TAS   | KT | KG/H | 265      | 268 | 272 | 275 | 278 | 282 | 286 | 274 | -   | -   |
|              | TOTAL | FC | KG/H | 292      | 296 | 300 | 305 | 309 | 314 | 320 | 306 | -   | -   |
| 9000         | TAS   | KT | KG/H | 260      | 263 | 266 | 269 | 272 | 275 | 278 | 281 | 271 | -   |
|              | TOTAL | FC | KG/H | 274      | 278 | 282 | 286 | 290 | 293 | 297 | 301 | 291 | -   |
| 8500         | TAS   | KT | KG/H | 255      | 258 | 260 | 263 | 266 | 268 | 271 | 274 | 277 | 257 |
|              | TOTAL | FC | KG/H | 258      | 261 | 264 | 268 | 271 | 274 | 277 | 281 | 285 | 264 |
| 8000         | TAS   | KT | KG/H | 250      | 253 | 256 | 258 | 261 | 263 | 265 | 268 | 271 | 269 |
|              | TOTAL | FC | KG/H | 243      | 246 | 249 | 251 | 255 | 257 | 260 | 263 | 266 | 265 |

20 NOVEMBER 1992

SUPPLEMENTARY PERFORMANCE  
MANUALFLIGHT PLANNING  
ALL ENGINES OPERATING

PW118A ENGINES

## MAXIMUM SPEED CRUISE

CRUISE CONFIGURATION

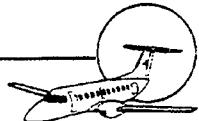
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 5000 FT

| WEIGHT<br>KG |              |    |            | ISA + °C   |            |            |            |            |            |            |            |            |            |
|--------------|--------------|----|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|              |              |    |            | -60        | -40        | -30        | -20        | -10        | 0          | 10         | 20         | 30         | 40         |
| 12000        | TAS<br>TOTAL | FC | KT<br>KG/H | 248<br>621 | 255<br>629 | 258<br>633 | 262<br>637 | 265<br>641 | 267<br>645 | 271<br>649 | 274<br>653 | 274<br>646 | 261<br>591 |
| 11500        | TAS<br>TOTAL | FC | KT<br>KG/H | 248<br>621 | 256<br>629 | 259<br>633 | 262<br>637 | 265<br>641 | 268<br>645 | 272<br>649 | 274<br>653 | 274<br>646 | 262<br>591 |
| 11000        | TAS<br>TOTAL | FC | KT<br>KG/H | 249<br>621 | 256<br>629 | 259<br>633 | 262<br>637 | 265<br>641 | 268<br>645 | 272<br>649 | 274<br>653 | 275<br>646 | 262<br>591 |
| 10500        | TAS<br>TOTAL | FC | KT<br>KG/H | 249<br>621 | 256<br>629 | 260<br>633 | 263<br>637 | 266<br>641 | 268<br>645 | 272<br>649 | 275<br>653 | 275<br>646 | 264<br>592 |
| 10000        | TAS<br>TOTAL | FC | KT<br>KG/H | 249<br>621 | 256<br>629 | 260<br>633 | 263<br>637 | 266<br>641 | 269<br>645 | 272<br>649 | 275<br>653 | 275<br>646 | 264<br>592 |
| 9500         | TAS<br>TOTAL | FC | KT<br>KG/H | 249<br>621 | 256<br>629 | 260<br>633 | 263<br>637 | 266<br>641 | 269<br>645 | 272<br>649 | 275<br>653 | 275<br>646 | 264<br>592 |
| 9000         | TAS<br>TOTAL | FC | KT<br>KG/H | 249<br>621 | 256<br>629 | 260<br>633 | 263<br>637 | 266<br>641 | 269<br>645 | 272<br>649 | 275<br>653 | 275<br>646 | 265<br>592 |
| 8500         | TAS<br>TOTAL | FC | KT<br>KG/H | 249<br>621 | 256<br>629 | 260<br>633 | 263<br>637 | 266<br>641 | 270<br>645 | 272<br>649 | 275<br>653 | 276<br>646 | 265<br>592 |
| 8000         | TAS<br>TOTAL | FC | KT<br>KG/H | 249<br>621 | 256<br>629 | 259<br>633 | 263<br>637 | 267<br>641 | 269<br>645 | 272<br>649 | 275<br>653 | 276<br>646 | 266<br>592 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**MAXIMUM SPEED CRUISE**
**CRUISE CONFIGURATION**

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 6000 FT**

|        |       |    |      | ISA + °C |     |     |     |     |     |     |     |     |     |
|--------|-------|----|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|        |       |    |      | -60      | -40 | -30 | -20 | -10 | 0   | 10  | 20  | 30  | 40  |
| WEIGHT |       | KG |      |          |     |     |     |     |     |     |     |     |     |
| 12000  | TAS   | KT | KG/H | 251      | 258 | 261 | 265 | 268 | 270 | 273 | 276 | 275 | 262 |
|        | TOTAL | FC | KG/H | 614      | 622 | 625 | 629 | 633 | 637 | 640 | 644 | 630 | 577 |
| 11500  | TAS   | KT | KG/H | 251      | 258 | 262 | 265 | 268 | 271 | 274 | 276 | 275 | 262 |
|        | TOTAL | FC | KG/H | 614      | 622 | 625 | 629 | 633 | 637 | 640 | 644 | 630 | 577 |
| 11000  | TAS   | KT | KG/H | 251      | 259 | 262 | 265 | 268 | 271 | 274 | 276 | 276 | 264 |
|        | TOTAL | FC | KG/H | 614      | 622 | 625 | 629 | 633 | 637 | 640 | 644 | 630 | 577 |
| 10500  | TAS   | KT | KG/H | 252      | 259 | 262 | 266 | 269 | 272 | 274 | 277 | 276 | 264 |
|        | TOTAL | FC | KG/H | 614      | 622 | 625 | 629 | 633 | 637 | 640 | 644 | 631 | 577 |
| 10000  | TAS   | KT | KG/H | 252      | 259 | 263 | 266 | 269 | 272 | 274 | 277 | 277 | 266 |
|        | TOTAL | FC | KG/H | 614      | 622 | 625 | 629 | 633 | 637 | 640 | 644 | 631 | 578 |
| 9500   | TAS   | KT | KG/H | 252      | 259 | 263 | 266 | 269 | 272 | 275 | 278 | 277 | 266 |
|        | TOTAL | FC | KG/H | 614      | 622 | 625 | 629 | 633 | 637 | 640 | 644 | 631 | 578 |
| 9000   | TAS   | KT | KG/H | 252      | 259 | 263 | 266 | 269 | 272 | 274 | 278 | 277 | 266 |
|        | TOTAL | FC | KG/H | 614      | 622 | 625 | 629 | 633 | 637 | 640 | 644 | 631 | 578 |
| 8500   | TAS   | KT | KG/H | 252      | 259 | 262 | 266 | 269 | 272 | 275 | 278 | 277 | 267 |
|        | TOTAL | FC | KG/H | 614      | 622 | 625 | 629 | 633 | 637 | 640 | 644 | 631 | 578 |
| 8000   | TAS   | KT | KG/H | 251      | 259 | 262 | 265 | 269 | 271 | 275 | 278 | 277 | 266 |
|        | TOTAL | FC | KG/H | 614      | 622 | 625 | 629 | 633 | 637 | 640 | 644 | 631 | 578 |

20 NOVEMBER 1992

SUPPLEMENTARY PERFORMANCE  
MANUALFLIGHT PLANNING  
ALL ENGINES OPERATING

PW118A ENGINES

## MAXIMUM SPEED CRUISE

## CRUISE CONFIGURATION

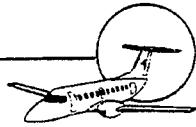
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 7000 FT

| WEIGHT<br>KG | TAS<br>TOTAL FC | KT<br>KG/H | ISA + °C   |            |            |            |            |            |            |            |            |            |
|--------------|-----------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|              |                 |            | -60        | -40        | -30        | -20        | -10        | 0          | 10         | 20         | 30         | 40         |
| 12000        | TAS<br>TOTAL FC | KT<br>KG/H | 253<br>607 | 261<br>614 | 264<br>618 | 267<br>621 | 270<br>625 | 273<br>628 | 276<br>632 | 279<br>635 | 276<br>615 | 263<br>563 |
| 11500        | TAS<br>TOTAL FC | KT<br>KG/H | 254<br>607 | 261<br>614 | 265<br>618 | 267<br>621 | 270<br>625 | 274<br>628 | 277<br>632 | 279<br>635 | 276<br>615 | 264<br>563 |
| 11000        | TAS<br>TOTAL FC | KT<br>KG/H | 254<br>607 | 262<br>614 | 265<br>618 | 267<br>621 | 270<br>625 | 274<br>628 | 277<br>632 | 280<br>635 | 278<br>616 | 265<br>563 |
| 10500        | TAS<br>TOTAL FC | KT<br>KG/H | 253<br>607 | 261<br>614 | 264<br>618 | 268<br>621 | 271<br>625 | 275<br>628 | 277<br>632 | 280<br>635 | 278<br>616 | 266<br>564 |
| 10000        | TAS<br>TOTAL FC | KT<br>KG/H | 253<br>607 | 261<br>614 | 264<br>618 | 268<br>621 | 271<br>625 | 275<br>628 | 278<br>632 | 280<br>635 | 278<br>616 | 266<br>564 |
| 9500         | TAS<br>TOTAL FC | KT<br>KG/H | 253<br>607 | 261<br>614 | 265<br>618 | 268<br>621 | 271<br>625 | 275<br>628 | 278<br>632 | 280<br>635 | 278<br>616 | 268<br>564 |
| 9000         | TAS<br>TOTAL FC | KT<br>KG/H | 253<br>607 | 261<br>614 | 265<br>618 | 268<br>621 | 272<br>625 | 275<br>628 | 278<br>632 | 280<br>635 | 278<br>616 | 268<br>564 |
| 8500         | TAS<br>TOTAL FC | KT<br>KG/H | 253<br>607 | 261<br>614 | 265<br>618 | 269<br>621 | 272<br>625 | 275<br>628 | 278<br>632 | 280<br>635 | 279<br>616 | 269<br>564 |
| 8000         | TAS<br>TOTAL FC | KT<br>KG/H | 254<br>607 | 262<br>614 | 265<br>618 | 268<br>621 | 272<br>625 | 274<br>628 | 277<br>632 | 281<br>635 | 279<br>616 | 268<br>564 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING  
ALL ENGINES OPERATING**
**PW118A ENGINES****MAXIMUM SPEED CRUISE**

## CRUISE CONFIGURATION

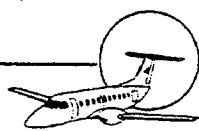
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 8000 FT**

|        |       |    |      | ISA + °C |     |      |     |     |      |     |     |      |     |     |      |
|--------|-------|----|------|----------|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|
|        |       |    |      | -60      | -40 | -30  | -20 | -10 | 0    | 10  | 20  | 30   | 40  |     |      |
| WEIGHT | KG    |    |      | TAS      | KT  | KG/H | TAS | KT  | KG/H | TAS | KT  | KG/H | TAS | KT  | KG/H |
|        | TOTAL | FC | KG/H | 256      | 263 | 600  | 607 | 266 | 611  | 269 | 614 | 273  | 617 | 276 | 621  |
| 12000  | TAS   | FC | KG/H | 256      | 263 | 600  | 607 | 266 | 611  | 269 | 614 | 273  | 617 | 276 | 621  |
| 11500  | TAS   | FC | KG/H | 256      | 263 | 600  | 607 | 267 | 611  | 270 | 614 | 273  | 617 | 276 | 621  |
| 11000  | TAS   | FC | KG/H | 256      | 263 | 600  | 607 | 267 | 611  | 270 | 614 | 273  | 617 | 276 | 621  |
| 10500  | TAS   | FC | KG/H | 256      | 264 | 600  | 607 | 267 | 611  | 271 | 614 | 274  | 617 | 277 | 621  |
| 10000  | TAS   | FC | KG/H | 256      | 264 | 600  | 607 | 267 | 611  | 271 | 614 | 274  | 617 | 277 | 621  |
| 9500   | TAS   | FC | KG/H | 256      | 264 | 600  | 607 | 268 | 611  | 271 | 614 | 274  | 617 | 277 | 621  |
| 9000   | TAS   | FC | KG/H | 256      | 264 | 600  | 607 | 267 | 611  | 271 | 614 | 274  | 617 | 277 | 621  |
| 8500   | TAS   | FC | KG/H | 256      | 264 | 600  | 607 | 267 | 611  | 271 | 614 | 274  | 617 | 278 | 621  |
| 8000   | TAS   | FC | KG/H | 256      | 264 | 600  | 607 | 267 | 611  | 270 | 614 | 275  | 617 | 278 | 621  |
|        | TOTAL | FC | KG/H | 256      | 264 | 600  | 607 | 267 | 611  | 270 | 614 | 275  | 617 | 278 | 621  |

SUPPLEMENTARY PERFORMANCE  
MANUALFLIGHT PLANNING  
ALL ENGINES OPERATING

PW118A ENGINES

## MAXIMUM SPEED CRUISE

CRUISE CONFIGURATION

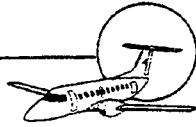
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 9000 FT

| WEIGHT<br>KG |              |    | ISA + °C   |            |            |            |            |            |            |            |            |            |            |
|--------------|--------------|----|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|              |              |    | -60        | -40        | -30        | -20        | -10        | 0          | 10         | 20         | 30         | 40         |            |
| 12000        | TAS<br>TOTAL | FC | KT<br>KG/H | 258<br>594 | 266<br>601 | 269<br>604 | 273<br>607 | 276<br>610 | 279<br>613 | 282<br>617 | 284<br>621 | 277<br>586 | 265<br>536 |
| 11500        | TAS<br>TOTAL | FC | KT<br>KG/H | 258<br>594 | 266<br>601 | 270<br>604 | 273<br>607 | 276<br>610 | 279<br>613 | 282<br>617 | 285<br>621 | 279<br>586 | 266<br>536 |
| 11000        | TAS<br>TOTAL | FC | KT<br>KG/H | 258<br>594 | 266<br>601 | 270<br>604 | 273<br>607 | 277<br>610 | 280<br>613 | 282<br>617 | 285<br>621 | 279<br>587 | 267<br>536 |
| 10500        | TAS<br>TOTAL | FC | KT<br>KG/H | 259<br>594 | 267<br>601 | 270<br>604 | 274<br>607 | 277<br>610 | 280<br>613 | 283<br>617 | 285<br>621 | 280<br>587 | 269<br>537 |
| 10000        | TAS<br>TOTAL | FC | KT<br>KG/H | 259<br>594 | 267<br>601 | 270<br>604 | 274<br>607 | 277<br>610 | 280<br>613 | 283<br>617 | 286<br>621 | 280<br>587 | 269<br>537 |
| 9500         | TAS<br>TOTAL | FC | KT<br>KG/H | 259<br>594 | 267<br>601 | 271<br>604 | 274<br>607 | 277<br>610 | 280<br>613 | 283<br>617 | 286<br>621 | 281<br>587 | 270<br>537 |
| 9000         | TAS<br>TOTAL | FC | KT<br>KG/H | 259<br>594 | 267<br>601 | 271<br>604 | 274<br>607 | 277<br>610 | 280<br>613 | 283<br>617 | 287<br>621 | 281<br>587 | 270<br>537 |
| 8500         | TAS<br>TOTAL | FC | KT<br>KG/H | 259<br>594 | 267<br>601 | 270<br>604 | 274<br>607 | 277<br>610 | 280<br>613 | 283<br>617 | 287<br>621 | 281<br>587 | 271<br>537 |
| 8000         | TAS<br>TOTAL | FC | KT<br>KG/H | 259<br>594 | 266<br>601 | 270<br>604 | 274<br>607 | 277<br>610 | 280<br>613 | 284<br>617 | 286<br>621 | 282<br>587 | 271<br>537 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**MAXIMUM SPEED CRUISE**

CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 10000 FT**

|        |       |    |    | ISA + °C |     |     |     |     |     |     |     |     |     |
|--------|-------|----|----|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|        |       |    |    | -50      | -40 | -30 | -20 | -10 | 0   | 10  | 20  | 30  | 40  |
| WEIGHT | KG    |    |    | TAS      |     |     |     |     |     |     |     |     |     |
|        | TOTAL | FC | KT | KG/H     | 265 | 268 | 271 | 275 | 278 | 281 | 284 | 286 | 278 |
| 12000  |       |    |    | 592      | 595 | 598 | 601 | 604 | 607 | 609 | 613 | 571 | 265 |
| 11500  |       |    |    | 592      | 265 | 268 | 272 | 275 | 278 | 281 | 284 | 287 | 280 |
| 11000  |       |    |    | 592      | 265 | 268 | 272 | 275 | 279 | 282 | 285 | 287 | 280 |
| 10500  |       |    |    | 592      | 266 | 269 | 272 | 276 | 279 | 282 | 285 | 289 | 281 |
| 10000  |       |    |    | 592      | 266 | 269 | 272 | 276 | 279 | 282 | 285 | 289 | 282 |
| 9500   |       |    |    | 592      | 265 | 269 | 273 | 276 | 279 | 282 | 285 | 289 | 282 |
| 9000   |       |    |    | 592      | 266 | 269 | 273 | 276 | 279 | 282 | 286 | 289 | 282 |
| 8500   |       |    |    | 592      | 266 | 270 | 273 | 277 | 280 | 283 | 286 | 289 | 283 |
| 8000   |       |    |    | 592      | 266 | 269 | 273 | 277 | 280 | 283 | 286 | 290 | 283 |

20 NOVEMBER 1992

SUPPLEMENTARY PERFORMANCE  
MANUALFLIGHT PLANNING  
ALL ENGINES OPERATING

PW118A ENGINES

## MAXIMUM SPEED CRUISE

## CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 11000 FT

| WEIGHT<br>KG |              |    | ISA + °C   |            |            |            |            |            |            |            |            |            |            |
|--------------|--------------|----|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|              |              |    | -50        | -40        | -30        | -20        | -10        | 0          | 10         | 20         | 30         | 40         |            |
| 12000        | TAS<br>TOTAL | FC | KT<br>KG/H | 266<br>586 | 270<br>589 | 274<br>592 | 278<br>595 | 281<br>597 | 283<br>600 | 286<br>603 | 289<br>604 | 279<br>557 | 265<br>508 |
| 11500        | TAS<br>TOTAL | FC | KT<br>KG/H | 267<br>586 | 271<br>589 | 275<br>592 | 278<br>595 | 282<br>597 | 284<br>600 | 286<br>603 | 289<br>604 | 280<br>557 | 267<br>509 |
| 11000        | TAS<br>TOTAL | FC | KT<br>KG/H | 267<br>586 | 271<br>589 | 275<br>592 | 279<br>595 | 282<br>597 | 285<br>600 | 288<br>603 | 290<br>604 | 281<br>558 | 269<br>509 |
| 10500        | TAS<br>TOTAL | FC | KT<br>KG/H | 268<br>586 | 272<br>589 | 275<br>592 | 279<br>595 | 282<br>597 | 285<br>600 | 288<br>603 | 291<br>604 | 282<br>558 | 270<br>510 |
| 10000        | TAS<br>TOTAL | FC | KT<br>KG/H | 268<br>586 | 272<br>589 | 276<br>592 | 279<br>595 | 282<br>597 | 286<br>600 | 289<br>603 | 291<br>604 | 283<br>558 | 272<br>510 |
| 9500         | TAS<br>TOTAL | FC | KT<br>KG/H | 268<br>586 | 272<br>589 | 276<br>592 | 279<br>595 | 283<br>597 | 286<br>600 | 289<br>603 | 291<br>604 | 283<br>558 | 272<br>510 |
| 9000         | TAS<br>TOTAL | FC | KT<br>KG/H | 268<br>586 | 272<br>589 | 276<br>592 | 279<br>595 | 283<br>597 | 286<br>600 | 289<br>603 | 291<br>604 | 284<br>559 | 273<br>510 |
| 8500         | TAS<br>TOTAL | FC | KT<br>KG/H | 268<br>586 | 272<br>589 | 275<br>592 | 279<br>595 | 282<br>597 | 286<br>600 | 289<br>603 | 291<br>604 | 284<br>559 | 274<br>511 |
| 8000         | TAS<br>TOTAL | FC | KT<br>KG/H | 267<br>586 | 271<br>589 | 275<br>592 | 279<br>595 | 282<br>597 | 285<br>600 | 289<br>603 | 292<br>604 | 284<br>559 | 274<br>510 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**MAXIMUM SPEED CRUISE**
**CRUISE CONFIGURATION**

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 12000 FT**

| WEIGHT<br>KG |              |    | ISA + °C   |            |            |            |            |            |            |            |            |            |            |
|--------------|--------------|----|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|              |              |    | -50        | -40        | -30        | -20        | -10        | 0          | 10         | 20         | 30         | 40         |            |
| 12000        | TAS<br>TOTAL | FC | KT<br>KG/H | 269<br>581 | 274<br>584 | 276<br>586 | 280<br>589 | 283<br>591 | 286<br>594 | 289<br>597 | 290<br>592 | 280<br>543 | 266<br>495 |
| 11500        | TAS<br>TOTAL | FC | KT<br>KG/H | 270<br>581 | 274<br>584 | 277<br>586 | 280<br>589 | 284<br>591 | 287<br>594 | 290<br>597 | 292<br>592 | 281<br>543 | 268<br>495 |
| 11000        | TAS<br>TOTAL | FC | KT<br>KG/H | 270<br>581 | 274<br>584 | 277<br>586 | 281<br>589 | 284<br>591 | 287<br>594 | 290<br>597 | 292<br>592 | 282<br>543 | 269<br>496 |
| 10500        | TAS<br>TOTAL | FC | KT<br>KG/H | 271<br>581 | 275<br>584 | 279<br>586 | 281<br>589 | 284<br>591 | 288<br>594 | 291<br>597 | 292<br>592 | 283<br>544 | 271<br>496 |
| 10000        | TAS<br>TOTAL | FC | KT<br>KG/H | 271<br>581 | 275<br>584 | 279<br>586 | 281<br>589 | 285<br>591 | 288<br>594 | 291<br>597 | 293<br>592 | 284<br>544 | 273<br>497 |
| 9500         | TAS<br>TOTAL | FC | KT<br>KG/H | 271<br>581 | 275<br>584 | 279<br>586 | 282<br>589 | 285<br>591 | 288<br>594 | 291<br>597 | 294<br>593 | 284<br>544 | 274<br>497 |
| 9000         | TAS<br>TOTAL | FC | KT<br>KG/H | 271<br>581 | 275<br>584 | 279<br>586 | 282<br>589 | 286<br>591 | 289<br>594 | 292<br>597 | 294<br>593 | 285<br>544 | 274<br>497 |
| 8500         | TAS<br>TOTAL | FC | KT<br>KG/H | 271<br>581 | 275<br>584 | 279<br>586 | 282<br>589 | 286<br>591 | 289<br>594 | 292<br>597 | 294<br>593 | 285<br>544 | 275<br>497 |
| 8000         | TAS<br>TOTAL | FC | KT<br>KG/H | 270<br>581 | 275<br>584 | 278<br>586 | 282<br>589 | 285<br>591 | 289<br>594 | 292<br>597 | 293<br>593 | 285<br>544 | 276<br>498 |

20 NOVEMBER 1992

SUPPLEMENTARY PERFORMANCE  
MANUALFLIGHT PLANNING  
ALL ENGINES OPERATING

PW118A ENGINES

## MAXIMUM SPEED CRUISE

## CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 13000 FT

| WEIGHT<br>KG |       |    | ISA + °C |     |     |     |     |     |     |     |     |     |     |
|--------------|-------|----|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |       |    | -50      | -40 | -30 | -20 | -10 | 0   | 10  | 20  | 30  | 40  |     |
| 12000        | TAS   | KT | 271      | 276 | 279 | 283 | 285 | 289 | 292 | 291 | 280 | 265 |     |
|              | TOTAL | FC | KG/H     | 577 | 579 | 581 | 584 | 586 | 588 | 591 | 577 | 528 | 482 |
| 11500        | TAS   | KT | 272      | 276 | 280 | 284 | 287 | 289 | 292 | 291 | 281 | 268 |     |
|              | TOTAL | FC | KG/H     | 577 | 579 | 581 | 584 | 586 | 588 | 590 | 577 | 528 | 482 |
| 11000        | TAS   | KT | 272      | 276 | 280 | 284 | 288 | 290 | 293 | 293 | 282 | 270 |     |
|              | TOTAL | FC | KG/H     | 577 | 579 | 581 | 584 | 586 | 588 | 590 | 578 | 529 | 483 |
| 10500        | TAS   | KT | 273      | 277 | 281 | 284 | 288 | 291 | 294 | 293 | 284 | 272 |     |
|              | TOTAL | FC | KG/H     | 577 | 579 | 581 | 584 | 586 | 588 | 590 | 578 | 529 | 483 |
| 10000        | TAS   | KT | 273      | 277 | 281 | 285 | 288 | 291 | 294 | 294 | 285 | 273 |     |
|              | TOTAL | FC | KG/H     | 577 | 579 | 581 | 584 | 586 | 588 | 590 | 578 | 530 | 484 |
| 9500         | TAS   | KT | 273      | 277 | 281 | 285 | 288 | 291 | 295 | 295 | 285 | 275 |     |
|              | TOTAL | FC | KG/H     | 577 | 579 | 581 | 584 | 586 | 588 | 590 | 578 | 530 | 484 |
| 9000         | TAS   | KT | 273      | 277 | 281 | 285 | 288 | 291 | 294 | 295 | 286 | 276 |     |
|              | TOTAL | FC | KG/H     | 577 | 579 | 581 | 584 | 586 | 588 | 590 | 578 | 530 | 484 |
| 8500         | TAS   | KT | 274      | 278 | 282 | 284 | 288 | 291 | 294 | 295 | 286 | 276 |     |
|              | TOTAL | FC | KG/H     | 577 | 579 | 581 | 584 | 586 | 588 | 590 | 578 | 530 | 484 |
| 8000         | TAS   | KT | 274      | 278 | 282 | 285 | 289 | 292 | 295 | 296 | 287 | 277 |     |
|              | TOTAL | FC | KG/H     | 577 | 579 | 581 | 584 | 586 | 588 | 590 | 579 | 530 | 484 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**MAXIMUM SPEED CRUISE**
**CRUISE CONFIGURATION**

NP: 85%

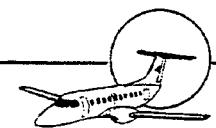
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 14000 FT**

| WEIGHT<br>KG |              |    | ISA + °C   |            |            |            |            |            |            |            |            |            |            |
|--------------|--------------|----|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|              |              |    | -50        | -40        | -30        | -20        | -10        | 0          | 10         | 20         | 30         | 40         |            |
| 12000        | TAS<br>TOTAL | FC | KT<br>KG/H | 275<br>572 | 279<br>574 | 282<br>577 | 285<br>579 | 289<br>581 | 292<br>583 | 295<br>586 | 291<br>560 | 281<br>514 | 266<br>469 |
| 11500        | TAS<br>TOTAL | FC | KT<br>KG/H | 275<br>572 | 279<br>574 | 282<br>577 | 286<br>579 | 289<br>581 | 293<br>583 | 296<br>586 | 292<br>561 | 281<br>514 | 268<br>469 |
| 11000        | TAS<br>TOTAL | FC | KT<br>KG/H | 275<br>572 | 280<br>574 | 284<br>577 | 286<br>579 | 290<br>581 | 293<br>583 | 296<br>586 | 293<br>561 | 283<br>514 | 271<br>470 |
| 10500        | TAS<br>TOTAL | FC | KT<br>KG/H | 276<br>572 | 280<br>574 | 284<br>577 | 287<br>579 | 290<br>581 | 293<br>583 | 297<br>586 | 294<br>562 | 284<br>515 | 272<br>470 |
| 10000        | TAS<br>TOTAL | FC | KT<br>KG/H | 276<br>572 | 280<br>574 | 284<br>577 | 287<br>579 | 290<br>581 | 294<br>583 | 297<br>586 | 295<br>562 | 286<br>515 | 274<br>471 |
| 9500         | TAS<br>TOTAL | FC | KT<br>KG/H | 276<br>572 | 280<br>574 | 284<br>577 | 288<br>579 | 290<br>581 | 294<br>583 | 298<br>586 | 295<br>562 | 286<br>516 | 275<br>471 |
| 9000         | TAS<br>TOTAL | FC | KT<br>KG/H | 276<br>572 | 280<br>574 | 284<br>577 | 288<br>579 | 292<br>581 | 295<br>583 | 298<br>586 | 296<br>562 | 287<br>516 | 277<br>471 |
| 8500         | TAS<br>TOTAL | FC | KT<br>KG/H | 276<br>572 | 280<br>574 | 284<br>577 | 288<br>579 | 291<br>581 | 295<br>583 | 298<br>586 | 296<br>562 | 287<br>516 | 278<br>472 |
| 8000         | TAS<br>TOTAL | FC | KT<br>KG/H | 277<br>572 | 280<br>574 | 284<br>577 | 288<br>579 | 291<br>581 | 294<br>583 | 298<br>586 | 296<br>562 | 288<br>516 | 277<br>472 |

20 NOVEMBER 1992

SUPPLEMENTARY PERFORMANCE  
MANUALFLIGHT PLANNING  
ALL ENGINES OPERATING

PW118A ENGINES

## MAXIMUM SPEED CRUISE

## CRUISE CONFIGURATION

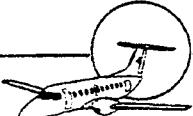
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 15000 FT

| WEIGHT<br>KG |       |    | ISA + °C |     |     |     |     |     |     |     |     |     |
|--------------|-------|----|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |       |    | -40      | -30 | -20 | -10 | -5  | 0   | 10  | 20  | 30  | 40  |
| 12000        | TAS   | KT | 281      | 285 | 288 | 291 | 293 | 294 | 298 | 292 | 280 | 265 |
|              | TOTAL | FC | 570      | 572 | 574 | 576 | 577 | 578 | 582 | 545 | 499 | 456 |
| 11500        | TAS   | KT | 281      | 285 | 289 | 292 | 293 | 295 | 298 | 292 | 282 | 268 |
|              | TOTAL | FC | 570      | 572 | 574 | 576 | 577 | 578 | 582 | 546 | 500 | 456 |
| 11000        | TAS   | KT | 282      | 286 | 290 | 292 | 294 | 295 | 298 | 294 | 284 | 270 |
|              | TOTAL | FC | 570      | 572 | 574 | 576 | 577 | 578 | 582 | 546 | 500 | 457 |
| 10500        | TAS   | KT | 282      | 286 | 290 | 294 | 295 | 297 | 300 | 294 | 285 | 273 |
|              | TOTAL | FC | 570      | 572 | 574 | 576 | 577 | 578 | 582 | 546 | 501 | 458 |
| 10000        | TAS   | KT | 282      | 286 | 290 | 294 | 296 | 297 | 300 | 296 | 286 | 275 |
|              | TOTAL | FC | 570      | 572 | 574 | 576 | 577 | 578 | 582 | 547 | 501 | 458 |
| 9500         | TAS   | KT | 282      | 286 | 290 | 294 | 296 | 297 | 301 | 296 | 287 | 276 |
|              | TOTAL | FC | 570      | 572 | 574 | 576 | 577 | 578 | 582 | 547 | 502 | 458 |
| 9000         | TAS   | KT | 283      | 286 | 290 | 294 | 296 | 297 | 302 | 296 | 288 | 277 |
|              | TOTAL | FC | 570      | 572 | 574 | 576 | 577 | 578 | 582 | 547 | 502 | 459 |
| 8500         | TAS   | KT | 283      | 287 | 291 | 294 | 295 | 297 | 302 | 297 | 288 | 279 |
|              | TOTAL | FC | 570      | 572 | 574 | 576 | 577 | 578 | 582 | 547 | 502 | 459 |
| 8000         | TAS   | KT | 283      | 287 | 291 | 295 | 296 | 298 | 301 | 297 | 289 | 279 |
|              | TOTAL | FC | 570      | 572 | 574 | 576 | 577 | 578 | 582 | 547 | 502 | 459 |

**FLIGHT PLANNING****ALL ENGINES OPERATING****PW118A ENGINES****MAXIMUM SPEED CRUISE**

## CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 16000 FT**

| WEIGHT<br>KG |              |    | ISA + °C   |            |            |            |            |            |            |            |            |            |            |
|--------------|--------------|----|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|              |              |    | -40        | -30        | -20        | -10        | -5         | 0          | 10         | 20         | 30         | 40         |            |
| 12000        | TAS<br>TOTAL | FC | KT<br>KG/H | 284<br>567 | 287<br>569 | 291<br>570 | 295<br>572 | 295<br>573 | 297<br>574 | 300<br>576 | 291<br>530 | 280<br>485 | 264<br>443 |
| 11500        | TAS<br>TOTAL | FC | KT<br>KG/H | 285<br>567 | 288<br>569 | 292<br>570 | 295<br>572 | 297<br>573 | 299<br>574 | 302<br>576 | 293<br>531 | 281<br>486 | 268<br>444 |
| 11000        | TAS<br>TOTAL | FC | KT<br>KG/H | 285<br>567 | 288<br>569 | 292<br>570 | 296<br>572 | 297<br>573 | 299<br>574 | 302<br>576 | 294<br>531 | 283<br>486 | 271<br>445 |
| 10500        | TAS<br>TOTAL | FC | KT<br>KG/H | 285<br>567 | 290<br>569 | 292<br>570 | 296<br>572 | 298<br>573 | 299<br>574 | 303<br>576 | 295<br>532 | 285<br>487 | 274<br>445 |
| 10000        | TAS<br>TOTAL | FC | KT<br>KG/H | 286<br>567 | 290<br>569 | 294<br>570 | 296<br>572 | 298<br>573 | 300<br>574 | 303<br>576 | 296<br>532 | 286<br>487 | 275<br>446 |
| 9500         | TAS<br>TOTAL | FC | KT<br>KG/H | 286<br>567 | 290<br>569 | 294<br>570 | 296<br>572 | 299<br>573 | 300<br>574 | 304<br>576 | 297<br>532 | 288<br>488 | 277<br>446 |
| 9000         | TAS<br>TOTAL | FC | KT<br>KG/H | 286<br>567 | 290<br>569 | 294<br>570 | 297<br>572 | 299<br>573 | 301<br>574 | 304<br>576 | 297<br>532 | 289<br>488 | 278<br>446 |
| 8500         | TAS<br>TOTAL | FC | KT<br>KG/H | 286<br>567 | 290<br>569 | 294<br>570 | 297<br>572 | 299<br>573 | 301<br>574 | 304<br>576 | 298<br>533 | 289<br>488 | 279<br>447 |
| 8000         | TAS<br>TOTAL | FC | KT<br>KG/H | 286<br>567 | 289<br>569 | 293<br>570 | 297<br>572 | 299<br>573 | 301<br>574 | 305<br>576 | 298<br>533 | 290<br>489 | 280<br>447 |

20 NOVEMBER 1992

SUPPLEMENTARY PERFORMANCE  
MANUALFLIGHT PLANNING  
ALL ENGINES OPERATING

PW118A ENGINES

## MAXIMUM SPEED CRUISE

## CRUISE CONFIGURATION

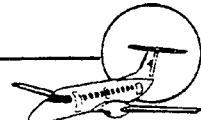
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 17000 FT

| WEIGHT<br>KG |       |    | ISA + °C |     |     |     |     |     |     |     |     |     |  |
|--------------|-------|----|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
|              |       |    | -40      | -30 | -20 | -10 | -5  | 0   | 10  | 20  | 30  | 40  |  |
| 12000        | TAS   | KT | 286      | 291 | 293 | 297 | 299 | 301 | 301 | 291 | 279 | 263 |  |
|              | TOTAL | FC | KG/H     | 564 | 565 | 567 | 568 | 569 | 569 | 516 | 471 | 430 |  |
| 11500        | TAS   | KT | 287      | 291 | 295 | 298 | 299 | 301 | 303 | 293 | 282 | 267 |  |
|              | TOTAL | FC | KG/H     | 564 | 565 | 567 | 568 | 569 | 569 | 516 | 472 | 431 |  |
| 11000        | TAS   | KT | 287      | 292 | 296 | 298 | 300 | 302 | 304 | 295 | 284 | 270 |  |
|              | TOTAL | FC | KG/H     | 564 | 565 | 567 | 568 | 569 | 569 | 517 | 473 | 432 |  |
| 10500        | TAS   | KT | 288      | 292 | 296 | 300 | 301 | 302 | 305 | 295 | 286 | 273 |  |
|              | TOTAL | FC | KG/H     | 564 | 565 | 567 | 568 | 569 | 569 | 517 | 473 | 433 |  |
| 10000        | TAS   | KT | 288      | 292 | 296 | 300 | 302 | 303 | 305 | 297 | 287 | 276 |  |
|              | TOTAL | FC | KG/H     | 564 | 565 | 567 | 568 | 569 | 569 | 518 | 474 | 433 |  |
| 9500         | TAS   | KT | 289      | 292 | 296 | 300 | 302 | 303 | 306 | 298 | 289 | 277 |  |
|              | TOTAL | FC | KG/H     | 564 | 565 | 567 | 568 | 569 | 569 | 518 | 474 | 434 |  |
| 9000         | TAS   | KT | 289      | 293 | 296 | 300 | 302 | 303 | 305 | 298 | 289 | 279 |  |
|              | TOTAL | FC | KG/H     | 564 | 565 | 567 | 568 | 569 | 569 | 518 | 474 | 434 |  |
| 8500         | TAS   | KT | 289      | 293 | 297 | 301 | 303 | 305 | 307 | 299 | 290 | 280 |  |
|              | TOTAL | FC | KG/H     | 564 | 565 | 567 | 568 | 569 | 569 | 519 | 475 | 434 |  |
| 8000         | TAS   | KT | 289      | 293 | 297 | 301 | 302 | 304 | 306 | 299 | 291 | 281 |  |
|              | TOTAL | FC | KG/H     | 564 | 565 | 567 | 568 | 569 | 569 | 518 | 475 | 435 |  |



## FLIGHT PLANNING

### ALL ENGINES OPERATING

**PW118A ENGINES**

#### MAXIMUM SPEED CRUISE

**CRUISE CONFIGURATION**

NP: 85%

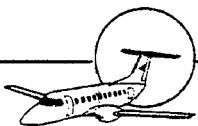
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 18000 FT**

|        |       |    |      | ISA + °C |     |     |      |     |     |     |     |     |     |     |     |     |     |     |
|--------|-------|----|------|----------|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|        |       |    |      | -40      | -30 | -20 | -10  | -5  | 0   | 10  | 20  | 30  | 40  |     |     |     |     |     |
| WEIGHT | KG    |    |      | TAS      | FC  | KT  | KG/H | 290 | 293 | 297 | 299 | 301 | 303 | 302 | 292 | 278 | 261 |     |
|        | TOTAL | FC | KG/H | 290      | 561 | 293 | 562  | 297 | 564 | 299 | 565 | 301 | 565 | 303 | 551 | 292 | 458 | 417 |
| 12000  | TAS   | FC | KT   | 290      | 561 | 293 | 562  | 297 | 564 | 299 | 565 | 301 | 565 | 303 | 551 | 292 | 458 | 417 |
| 11500  | TAS   | FC | KT   | 290      | 561 | 293 | 562  | 297 | 564 | 301 | 565 | 303 | 565 | 305 | 551 | 294 | 459 | 418 |
| 11000  | TAS   | FC | KT   | 291      | 561 | 295 | 562  | 298 | 564 | 302 | 565 | 304 | 565 | 305 | 552 | 294 | 459 | 419 |
| 10500  | TAS   | FC | KT   | 291      | 561 | 295 | 562  | 299 | 564 | 302 | 565 | 304 | 565 | 306 | 552 | 296 | 460 | 420 |
| 10000  | TAS   | FC | KT   | 291      | 561 | 296 | 562  | 300 | 564 | 302 | 565 | 304 | 565 | 306 | 553 | 298 | 460 | 421 |
| 9500   | TAS   | FC | KT   | 291      | 561 | 296 | 562  | 300 | 564 | 304 | 565 | 306 | 565 | 307 | 553 | 298 | 461 | 421 |
| 9000   | TAS   | FC | KT   | 291      | 561 | 296 | 562  | 300 | 564 | 304 | 565 | 305 | 565 | 307 | 553 | 299 | 461 | 422 |
| 8500   | TAS   | FC | KT   | 292      | 561 | 296 | 562  | 300 | 564 | 303 | 565 | 305 | 565 | 307 | 553 | 308 | 461 | 422 |
| 8000   | TAS   | FC | KT   | 292      | 561 | 296 | 562  | 301 | 564 | 304 | 565 | 305 | 565 | 308 | 553 | 308 | 462 | 422 |

**20 NOVEMBER 1992**

SUPPLEMENTARY PERFORMANCE  
MANUALFLIGHT PLANNING  
ALL ENGINES OPERATING

PW118A ENGINES

## MAXIMUM SPEED CRUISE

## CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 19000 FT

| WEIGHT<br>KG |              |    | ISA + °C   |            |            |            |            |            |            |            |            |            |            |
|--------------|--------------|----|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|              |              |    | -40        | -30        | -20        | -10        | -5         | 0          | 10         | 20         | 30         | 40         |            |
| 12000        | TAS<br>TOTAL | FC | KT<br>KG/H | 292<br>559 | 296<br>560 | 299<br>561 | 303<br>562 | 305<br>562 | 307<br>565 | 302<br>536 | 292<br>488 | 278<br>444 | 257<br>404 |
| 11500        | TAS<br>TOTAL | FC | KT<br>KG/H | 293<br>559 | 297<br>560 | 301<br>561 | 304<br>562 | 306<br>562 | 307<br>565 | 304<br>536 | 294<br>489 | 281<br>445 | 263<br>405 |
| 11000        | TAS<br>TOTAL | FC | KT<br>KG/H | 293<br>559 | 297<br>560 | 302<br>561 | 304<br>562 | 306<br>562 | 309<br>565 | 305<br>537 | 295<br>490 | 283<br>446 | 268<br>406 |
| 10500        | TAS<br>TOTAL | FC | KT<br>KG/H | 294<br>553 | 298<br>560 | 302<br>561 | 306<br>562 | 308<br>562 | 310<br>565 | 306<br>537 | 297<br>490 | 286<br>447 | 273<br>408 |
| 10000        | TAS<br>TOTAL | FC | KT<br>KG/H | 294<br>551 | 299<br>560 | 302<br>561 | 306<br>562 | 308<br>562 | 310<br>565 | 307<br>537 | 297<br>490 | 288<br>447 | 276<br>408 |
| 9500         | TAS<br>TOTAL | FC | KT<br>KG/H | 294<br>550 | 299<br>560 | 302<br>561 | 306<br>562 | 308<br>562 | 311<br>565 | 308<br>538 | 299<br>491 | 289<br>448 | 277<br>409 |
| 9000         | TAS<br>TOTAL | FC | KT<br>KG/H | 294<br>549 | 299<br>560 | 303<br>561 | 307<br>562 | 309<br>562 | 311<br>565 | 308<br>538 | 300<br>491 | 290<br>448 | 280<br>410 |
| 8500         | TAS<br>TOTAL | FC | KT<br>KG/H | 294<br>548 | 299<br>560 | 303<br>561 | 307<br>561 | 309<br>562 | 311<br>565 | 309<br>538 | 300<br>491 | 292<br>448 | 281<br>410 |
| 8000         | TAS<br>TOTAL | FC | KT<br>KG/H | 294<br>548 | 299<br>560 | 303<br>561 | 307<br>562 | 309<br>562 | 312<br>565 | 309<br>538 | 301<br>492 | 293<br>449 | 282<br>410 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**MAXIMUM SPEED CRUISE**
**CRUISE CONFIGURATION**

NP : 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 20000 FT**

|        |       |     |    | ISA + °C |      |     |     |     |     |     |     |     |     |     |
|--------|-------|-----|----|----------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|        |       |     |    | -30      | -20  | -15 | -10 | -5  | 0   | 10  | 20  | 30  | 40  |     |
| WEIGHT | KG    | TAS | FC | KT       | KG/H | 299 | 303 | 304 | 306 | 309 | 309 | 302 | 291 | 275 |
| 12000  | TOTAL | FC  |    | KG/H     | 558  | 299 | 303 | 304 | 306 | 309 | 309 | 302 | 291 | 275 |
| 11500  | TOTAL | FC  |    | KG/H     | 558  | 299 | 304 | 306 | 308 | 309 | 311 | 304 | 293 | 279 |
| 11000  | TOTAL | FC  |    | KG/H     | 547  | 299 | 304 | 306 | 308 | 310 | 312 | 306 | 295 | 282 |
| 10500  | TOTAL | FC  |    | KG/H     | 544  | 299 | 306 | 306 | 308 | 312 | 312 | 306 | 297 | 285 |
| 10000  | TOTAL | FC  |    | KG/H     | 542  | 299 | 306 | 308 | 310 | 312 | 314 | 308 | 298 | 287 |
| 9500   | TOTAL | FC  |    | KG/H     | 540  | 299 | 306 | 308 | 310 | 312 | 314 | 308 | 300 | 290 |
| 9000   | TOTAL | FC  |    | KG/H     | 538  | 299 | 306 | 308 | 310 | 312 | 314 | 309 | 301 | 291 |
| 8500   | TOTAL | FC  |    | KG/H     | 537  | 299 | 306 | 309 | 311 | 313 | 315 | 309 | 301 | 293 |
| 8000   | TOTAL | FC  |    | KG/H     | 537  | 299 | 306 | 309 | 311 | 313 | 315 | 310 | 302 | 294 |

20 NOVEMBER 1992



**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**FLIGHT PLANNING  
ALL ENGINES OPERATING**

**PW118A ENGINES**

**MAXIMUM SPEED CRUISE**

**CRUISE CONFIGURATION**

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 21000 FT**

| WEIGHT<br>KG |              |    | ISA + °C   |            |            |            |            |            |            |            |            |            |            |
|--------------|--------------|----|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|              |              |    | -30        | -20        | -15        | -10        | -5         | 0          | 10         | 20         | 30         | 40         |            |
| 12000        | TAS<br>TOTAL | FC | KT<br>KG/H | 298<br>533 | 305<br>550 | 308<br>557 | 310<br>558 | 311<br>559 | 311<br>551 | 302<br>506 | 291<br>462 | 273<br>417 | -<br>-     |
| 11500        | TAS<br>TOTAL | FC | KT<br>KG/H | 298<br>529 | 305<br>545 | 308<br>557 | 310<br>558 | 312<br>559 | 313<br>552 | 304<br>507 | 293<br>462 | 278<br>419 | 257<br>380 |
| 11000        | TAS<br>TOTAL | FC | KT<br>KG/H | 298<br>525 | 305<br>541 | 308<br>548 | 312<br>555 | 314<br>559 | 313<br>552 | 306<br>507 | 296<br>463 | 281<br>420 | 264<br>382 |
| 10500        | TAS<br>TOTAL | FC | KT<br>KG/H | 298<br>522 | 305<br>538 | 308<br>545 | 312<br>552 | 314<br>559 | 315<br>553 | 307<br>508 | 298<br>464 | 285<br>421 | 269<br>383 |
| 10000        | TAS<br>TOTAL | FC | KT<br>KG/H | 298<br>519 | 305<br>535 | 308<br>542 | 312<br>549 | 314<br>559 | 315<br>553 | 308<br>508 | 299<br>465 | 288<br>421 | 274<br>384 |
| 9500         | TAS<br>TOTAL | FC | KT<br>KG/H | 298<br>517 | 305<br>527 | 308<br>539 | 312<br>546 | 315<br>553 | 316<br>554 | 309<br>509 | 301<br>465 | 289<br>422 | 277<br>385 |
| 9000         | TAS<br>TOTAL | FC | KT<br>KG/H | 298<br>515 | 305<br>526 | 308<br>538 | 312<br>544 | 315<br>551 | 316<br>554 | 310<br>509 | 302<br>466 | 291<br>422 | 280<br>385 |
| 8500         | TAS<br>TOTAL | FC | KT<br>KG/H | 298<br>514 | 305<br>525 | 308<br>536 | 312<br>543 | 315<br>550 | 316<br>554 | 310<br>509 | 302<br>465 | 292<br>423 | 281<br>386 |
| 8000         | TAS<br>TOTAL | FC | KT<br>KG/H | 298<br>513 | 305<br>524 | 308<br>535 | 312<br>542 | 315<br>549 | 317<br>554 | 311<br>510 | 303<br>466 | 294<br>423 | 284<br>386 |



## FLIGHT PLANNING

### ALL ENGINES OPERATING

**PW118A ENGINES**

#### MAXIMUM SPEED CRUISE

**CRUISE CONFIGURATION**

NP: 85%

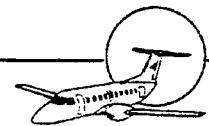
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 22000 FT**

|        |       |    |          | ISA + °C |     |     |     |     |     |     |     |     |     |
|--------|-------|----|----------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|        |       |    |          | -30      | -20 | -15 | -10 | -5  | 0   | 10  | 20  | 30  | 40  |
| WEIGHT | TAS   | KT | ISA + °C |          |     |     |     |     |     |     |     |     |     |
| KG     | TOTAL | FC | KG/H     | 297      | 304 | 307 | 310 | 314 | 310 | 301 | 289 | 271 | -   |
| 12000  | TAS   | KT | ISA + °C | 515      | 529 | 537 | 543 | 552 | 537 | 491 | 448 | 404 | -   |
| 11500  | TAS   | KT | ISA + °C | 510      | 524 | 531 | 538 | 545 | 537 | 492 | 449 | 406 | 367 |
| 11000  | TAS   | KT | ISA + °C | 505      | 520 | 527 | 534 | 540 | 538 | 493 | 450 | 407 | 369 |
| 10500  | TAS   | KT | ISA + °C | 502      | 516 | 523 | 530 | 536 | 539 | 493 | 451 | 408 | 371 |
| 10000  | TAS   | KT | ISA + °C | 498      | 504 | 519 | 526 | 533 | 539 | 494 | 451 | 409 | 372 |
| 9500   | TAS   | KT | ISA + °C | 496      | 505 | 516 | 523 | 530 | 539 | 495 | 452 | 410 | 373 |
| 9000   | TAS   | KT | ISA + °C | 493      | 504 | 514 | 521 | 527 | 534 | 495 | 452 | 410 | 374 |
| 8500   | TAS   | KT | ISA + °C | 492      | 502 | 512 | 519 | 526 | 532 | 495 | 453 | 410 | 374 |
| 8000   | TAS   | KT | ISA + °C | 491      | 501 | 511 | 518 | 524 | 531 | 495 | 453 | 411 | 375 |

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**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**FLIGHT PLANNING  
ALL ENGINES OPERATING**

**PW118A ENGINES**

**MAXIMUM SPEED CRUISE**

**CRUISE CONFIGURATION**

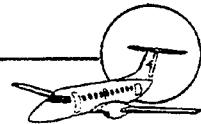
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 23000 FT**

| WEIGHT<br>KG |              |    | ISA + °C   |            |            |            |            |            |            |            |            |            |            |   |
|--------------|--------------|----|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---|
|              |              |    | -30        | -20        | -15        | -10        | -5         | 0          | 10         | 20         | 30         | 40         |            |   |
| 12000        | TAS<br>TOTAL | FC | KT<br>KG/H | 296<br>494 | 302<br>510 | 306<br>517 | 309<br>524 | 312<br>530 | 310<br>521 | 301<br>477 | 286<br>434 | 265<br>391 | -          | - |
| 11500        | TAS<br>TOTAL | FC | KT<br>KG/H | 296<br>490 | 302<br>504 | 306<br>511 | 309<br>518 | 312<br>524 | 312<br>522 | 303<br>477 | 291<br>436 | 273<br>393 | -          | - |
| 11000        | TAS<br>TOTAL | FC | KT<br>KG/H | 296<br>485 | 302<br>500 | 306<br>506 | 309<br>513 | 312<br>519 | 314<br>522 | 305<br>478 | 295<br>437 | 278<br>394 | 256<br>357 |   |
| 10500        | TAS<br>TOTAL | FC | KT<br>KG/H | 296<br>481 | 302<br>495 | 306<br>502 | 309<br>508 | 312<br>515 | 315<br>523 | 307<br>479 | 297<br>437 | 283<br>396 | 265<br>359 |   |
| 10000        | TAS<br>TOTAL | FC | KT<br>KG/H | 296<br>477 | 302<br>487 | 306<br>498 | 309<br>504 | 312<br>511 | 316<br>517 | 308<br>480 | 300<br>438 | 286<br>396 | 270<br>360 |   |
| 9500         | TAS<br>TOTAL | FC | KT<br>KG/H | 296<br>474 | 302<br>484 | 306<br>494 | 309<br>501 | 312<br>507 | 316<br>514 | 310<br>480 | 301<br>439 | 289<br>397 | 275<br>361 |   |
| 9000         | TAS<br>TOTAL | FC | KT<br>KG/H | 296<br>472 | 302<br>482 | 306<br>492 | 309<br>498 | 312<br>504 | 316<br>511 | 311<br>481 | 303<br>439 | 292<br>398 | 279<br>362 |   |
| 8500         | TAS<br>TOTAL | FC | KT<br>KG/H | 296<br>470 | 302<br>480 | 306<br>490 | 309<br>496 | 312<br>502 | 316<br>509 | 313<br>481 | 304<br>440 | 294<br>398 | 282<br>363 |   |
| 8000         | TAS<br>TOTAL | FC | KT<br>KG/H | 296<br>468 | 302<br>479 | 306<br>483 | 309<br>494 | 312<br>501 | 316<br>507 | 312<br>481 | 305<br>440 | 295<br>399 | 283<br>363 |   |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**MAXIMUM SPEED CRUISE**
**CRUISE CONFIGURATION**

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 24000 FT**

| WEIGHT<br>KG |       |    |      | ISA + °C |     |     |     |     |     |     |     |     |     |
|--------------|-------|----|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |       |    |      | -30      | -20 | -15 | -10 | -5  | 0   | 10  | 20  | 30  | 40  |
| 12000        | TAS   | KT | KG/H | 294      | 301 | 304 | 308 | 311 | 310 | 299 | 284 | 258 | -   |
|              | TOTAL | FC | KG/H | 477      | 492 | 499 | 505 | 512 | 505 | 462 | 420 | 378 | -   |
| 11500        | TAS   | KT | KG/H | 294      | 301 | 304 | 308 | 311 | 312 | 303 | 289 | 269 | -   |
|              | TOTAL | FC | KG/H | 472      | 486 | 492 | 499 | 506 | 506 | 463 | 422 | 380 | -   |
| 11000        | TAS   | KT | KG/H | 294      | 301 | 304 | 308 | 311 | 314 | 304 | 293 | 276 | -   |
|              | TOTAL | FC | KG/H | 467      | 480 | 487 | 493 | 499 | 506 | 464 | 423 | 382 | -   |
| 10500        | TAS   | KT | KG/H | 294      | 301 | 304 | 308 | 311 | 314 | 306 | 296 | 282 | 261 |
|              | TOTAL | FC | KG/H | 462      | 475 | 481 | 488 | 494 | 500 | 465 | 424 | 383 | 347 |
| 10000        | TAS   | KT | KG/H | 294      | 301 | 304 | 308 | 311 | 314 | 310 | 299 | 285 | 269 |
|              | TOTAL | FC | KG/H | 458      | 468 | 477 | 483 | 490 | 496 | 466 | 425 | 384 | 348 |
| 9500         | TAS   | KT | KG/H | 294      | 301 | 304 | 308 | 311 | 314 | 310 | 301 | 288 | 274 |
|              | TOTAL | FC | KG/H | 454      | 464 | 473 | 480 | 486 | 492 | 466 | 425 | 385 | 350 |
| 9000         | TAS   | KT | KG/H | 294      | 301 | 304 | 308 | 311 | 314 | 311 | 302 | 291 | 278 |
|              | TOTAL | FC | KG/H | 451      | 461 | 466 | 476 | 482 | 489 | 466 | 426 | 386 | 351 |
| 8500         | TAS   | KT | KG/H | 294      | 301 | 304 | 308 | 311 | 314 | 312 | 304 | 294 | 281 |
|              | TOTAL | FC | KG/H | 449      | 459 | 463 | 474 | 480 | 486 | 467 | 426 | 387 | 351 |
| 8000         | TAS   | KT | KG/H | 294      | 301 | 304 | 308 | 311 | 314 | 313 | 305 | 295 | 284 |
|              | TOTAL | FC | KG/H | 447      | 457 | 462 | 472 | 478 | 484 | 467 | 427 | 387 | 352 |

20 NOVEMBER 1992

SUPPLEMENTARY PERFORMANCE  
MANUALFLIGHT PLANNING  
ALL ENGINES OPERATING

PW118A ENGINES

## MAXIMUM SPEED CRUISE

## CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 25000 FT

| WEIGHT<br>KG |              |    |            | ISA + °C   |            |            |            |            |            |            |            |            |            |
|--------------|--------------|----|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|              |              |    |            | -20        | -15        | -10        | -5         | 0          | 5          | 10         | 20         | 30         | 40         |
| 12000        | TAS<br>TOTAL | FC | KT<br>KG/H | 300<br>475 | 303<br>482 | 306<br>488 | 310<br>495 | 308<br>488 | 304<br>469 | 297<br>447 | 280<br>406 | -          | -          |
| 11500        | TAS<br>TOTAL | FC | KT<br>KG/H | 300<br>468 | 303<br>475 | 306<br>481 | 310<br>488 | 310<br>489 | 306<br>470 | 301<br>449 | 287<br>408 | 263<br>367 | -          |
| 11000        | TAS<br>TOTAL | FC | KT<br>KG/H | 300<br>462 | 303<br>469 | 306<br>475 | 310<br>481 | 312<br>490 | 310<br>471 | 304<br>450 | 292<br>410 | 273<br>370 | -          |
| 10500        | TAS<br>TOTAL | FC | KT<br>KG/H | 300<br>457 | 303<br>463 | 306<br>469 | 310<br>475 | 313<br>482 | 312<br>472 | 306<br>451 | 295<br>411 | 279<br>371 | 255<br>334 |
| 10000        | TAS<br>TOTAL | FC | KT<br>KG/H | 300<br>449 | 303<br>458 | 306<br>464 | 310<br>470 | 313<br>476 | 313<br>473 | 309<br>452 | 299<br>412 | 284<br>372 | 266<br>337 |
| 9500         | TAS<br>TOTAL | FC | KT<br>KG/H | 300<br>446 | 303<br>454 | 306<br>460 | 310<br>466 | 313<br>472 | 315<br>473 | 311<br>452 | 300<br>412 | 288<br>373 | 272<br>338 |
| 9000         | TAS<br>TOTAL | FC | KT<br>KG/H | 300<br>442 | 303<br>446 | 306<br>456 | 310<br>462 | 313<br>468 | 315<br>473 | 312<br>453 | 303<br>413 | 291<br>374 | 277<br>339 |
| 8500         | TAS<br>TOTAL | FC | KT<br>KG/H | 300<br>439 | 303<br>444 | 306<br>453 | 310<br>459 | 313<br>465 | 316<br>474 | 313<br>453 | 305<br>414 | 293<br>375 | 280<br>340 |
| 8000         | TAS<br>TOTAL | FC | KT<br>KG/H | 300<br>437 | 303<br>442 | 306<br>451 | 310<br>456 | 313<br>462 | 316<br>468 | 313<br>453 | 306<br>414 | 296<br>375 | 284<br>341 |



# FLIGHT PLANNING

## ALL ENGINES OPERATING

PW118A ENGINES

## MAXIMUM SPEED CRUISE

CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 26000 FT

WEIGHT  
KG

ISA + °C

|       |       |    |      | -20 | -15 | -10 | -5  | 0   | 5   | 10  | 20  | 30  | 40  |
|-------|-------|----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 12000 | TAS   | KT | 298  | 302 | 305 | 308 | 306 | 301 | 295 | 274 | -   | -   | -   |
|       | TOTAL | FC | KG/H | 460 | 466 | 472 | 478 | 472 | 453 | 433 | 392 | -   | -   |
| 11500 | TAS   | KT | 298  | 302 | 305 | 308 | 310 | 304 | 300 | 283 | -   | -   | -   |
|       | TOTAL | FC | KG/H | 452 | 458 | 465 | 470 | 474 | 454 | 435 | 394 | -   | -   |
| 11000 | TAS   | KT | 298  | 302 | 305 | 308 | 312 | 308 | 303 | 290 | 268 | -   | -   |
|       | TOTAL | FC | KG/H | 446 | 452 | 458 | 464 | 469 | 455 | 436 | 396 | 357 | -   |
| 10500 | TAS   | KT | 298  | 302 | 305 | 308 | 312 | 310 | 305 | 293 | 277 | -   | -   |
|       | TOTAL | FC | KG/H | 440 | 445 | 451 | 457 | 463 | 456 | 437 | 397 | 359 | -   |
| 10000 | TAS   | KT | 298  | 302 | 305 | 308 | 312 | 313 | 309 | 298 | 282 | 260 | 235 |
|       | TOTAL | FC | KG/H | 432 | 440 | 446 | 452 | 457 | 458 | 438 | 399 | 360 | 325 |
| 9500  | TAS   | KT | 298  | 302 | 305 | 308 | 312 | 315 | 310 | 300 | 287 | 270 | 237 |
|       | TOTAL | FC | KG/H | 427 | 435 | 441 | 447 | 452 | 458 | 438 | 399 | 361 | 327 |
| 9000  | TAS   | KT | 298  | 302 | 305 | 308 | 312 | 315 | 312 | 303 | 291 | 276 | 238 |
|       | TOTAL | FC | KG/H | 424 | 428 | 437 | 442 | 448 | 454 | 439 | 400 | 363 | 328 |
| 8500  | TAS   | KT | 298  | 302 | 305 | 308 | 312 | 315 | 313 | 304 | 294 | 280 | 239 |
|       | TOTAL | FC | KG/H | 420 | 425 | 433 | 439 | 444 | 450 | 440 | 401 | 363 | 329 |
| 8000  | TAS   | KT | 298  | 302 | 305 | 308 | 312 | 315 | 314 | 307 | 295 | 283 | 237 |
|       | TOTAL | FC | KG/H | 418 | 422 | 426 | 436 | 441 | 447 | 440 | 401 | 364 | 330 |

20 NOVEMBER 1992



SUPPLEMENTARY PERFORMANCE  
MANUAL

FLIGHT PLANNING  
ALL ENGINES OPERATING

PW118A ENGINES

MAXIMUM SPEED CRUISE

CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 27000 FT

| WEIGHT<br>KG |              |    |            | ISA + °C   |            |            |            |            |            |            |            |            |            |
|--------------|--------------|----|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|              |              |    |            | -20        | -15        | -10        | -5         | 0          | 5          | 10         | 20         | 30         | 40         |
| 12000        | TAS<br>TOTAL | FC | KT<br>KG/H | 297<br>439 | 300<br>451 | 304<br>457 | 307<br>464 | 304<br>456 | 299<br>437 | 291<br>418 | -          | -          | -          |
| 11500        | TAS<br>TOTAL | FC | KT<br>KG/H | 297<br>433 | 300<br>443 | 304<br>449 | 307<br>454 | 308<br>458 | 302<br>439 | 296<br>420 | 279<br>381 | -          | -          |
| 11000        | TAS<br>TOTAL | FC | KT<br>KG/H | 297<br>427 | 300<br>436 | 304<br>442 | 307<br>447 | 310<br>459 | 306<br>440 | 301<br>422 | 285<br>382 | 261<br>344 | -          |
| 10500        | TAS<br>TOTAL | FC | KT<br>KG/H | 297<br>421 | 300<br>429 | 304<br>435 | 307<br>440 | 310<br>446 | 309<br>441 | 305<br>423 | 292<br>384 | 272<br>347 | -          |
| 10000        | TAS<br>TOTAL | FC | KT<br>KG/H | 297<br>415 | 300<br>423 | 304<br>428 | 307<br>434 | 310<br>440 | 311<br>442 | 308<br>424 | 296<br>385 | 281<br>349 | 253<br>313 |
| 9500         | TAS<br>TOTAL | FC | KT<br>KG/H | 297<br>411 | 300<br>418 | 304<br>423 | 307<br>429 | 310<br>434 | 314<br>440 | 310<br>425 | 299<br>386 | 285<br>350 | 265<br>315 |
| 9000         | TAS<br>TOTAL | FC | KT<br>KG/H | 297<br>407 | 300<br>410 | 304<br>418 | 307<br>424 | 310<br>429 | 314<br>435 | 311<br>425 | 302<br>387 | 290<br>351 | 273<br>317 |
| 8500         | TAS<br>TOTAL | FC | KT<br>KG/H | 297<br>403 | 300<br>407 | 304<br>414 | 307<br>420 | 310<br>425 | 314<br>430 | 313<br>426 | 305<br>388 | 293<br>352 | 279<br>318 |
| 8000         | TAS<br>TOTAL | FC | KT<br>KG/H | 297<br>399 | 300<br>404 | 304<br>407 | 307<br>416 | 310<br>422 | 314<br>427 | 315<br>427 | 306<br>389 | 296<br>353 | 282<br>319 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**MAXIMUM SPEED CRUISE**

CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 28000 FT**

|       |       |    |      | ISA + °C |     |     |     |     |     |     |     |     |     |
|-------|-------|----|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|       |       |    |      | -20      | -15 | -10 | -5  | 0   | 5   | 10  | 20  | 30  | 40  |
| 12000 | TAS   | KT | KG/H | 295      | 299 | 302 | 305 | 301 | 295 | 287 | -   | -   | -   |
|       | TOTAL | FC | KG/H | 432      | 438 | 444 | 453 | 440 | 421 | 403 | -   | -   | -   |
| 11500 | TAS   | KT | KG/H | 295      | 299 | 302 | 305 | 306 | 300 | 294 | 271 | -   | -   |
|       | TOTAL | FC | KG/H | 418      | 429 | 435 | 440 | 442 | 423 | 405 | 366 | -   | -   |
| 11000 | TAS   | KT | KG/H | 295      | 299 | 302 | 305 | 309 | 304 | 299 | 281 | -   | -   |
|       | TOTAL | FC | KG/H | 412      | 421 | 427 | 432 | 438 | 425 | 407 | 369 | -   | -   |
| 10500 | TAS   | KT | KG/H | 295      | 299 | 302 | 305 | 309 | 307 | 303 | 288 | 266 | -   |
|       | TOTAL | FC | KG/H | 406      | 413 | 419 | 424 | 430 | 426 | 409 | 371 | 334 | -   |
| 10000 | TAS   | KT | KG/H | 295      | 299 | 302 | 305 | 309 | 311 | 306 | 295 | 276 | -   |
|       | TOTAL | FC | KG/H | 399      | 407 | 412 | 418 | 423 | 427 | 410 | 373 | 337 | -   |
| 9500  | TAS   | KT | KG/H | 295      | 299 | 302 | 305 | 309 | 312 | 309 | 298 | 283 | 260 |
|       | TOTAL | FC | KG/H | 395      | 401 | 406 | 411 | 417 | 423 | 411 | 374 | 338 | 304 |
| 9000  | TAS   | KT | KG/H | 295      | 299 | 302 | 305 | 309 | 312 | 311 | 301 | 288 | 270 |
|       | TOTAL | FC | KG/H | 390      | 393 | 401 | 406 | 411 | 417 | 412 | 375 | 339 | 306 |
| 8500  | TAS   | KT | KG/H | 295      | 299 | 302 | 305 | 309 | 312 | 314 | 304 | 292 | 276 |
|       | TOTAL | FC | KG/H | 385      | 389 | 393 | 401 | 407 | 412 | 413 | 376 | 340 | 307 |
| 8000  | TAS   | KT | KG/H | 295      | 299 | 302 | 305 | 309 | 312 | 315 | 307 | 295 | 282 |
|       | TOTAL | FC | KG/H | 381      | 386 | 389 | 398 | 403 | 408 | 413 | 376 | 341 | 308 |

20 NOVEMBER 1992

SUPPLEMENTARY PERFORMANCE  
MANUALFLIGHT PLANNING  
ALL ENGINES OPERATING

PW118A ENGINES

## MAXIMUM SPEED CRUISE

## CRUISE CONFIGURATION

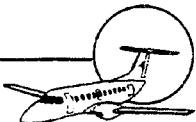
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 29000 FT

| WEIGHT<br>KG |              |    | ISA + °C   |            |            |            |            |            |            |            |            |            |            |
|--------------|--------------|----|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|              |              |    | -20        | -15        | -10        | -5         | 0          | 5          | 10         | 20         | 30         | 40         |            |
| 12000        | TAS<br>TOTAL | FC | KT<br>KG/H | 294<br>420 | 297<br>426 | 300<br>431 | 304<br>437 | 297<br>424 | 289<br>405 | 278<br>386 | -          | -          | -          |
| 11500        | TAS<br>TOTAL | FC | KT<br>KG/H | 294<br>405 | 297<br>416 | 300<br>421 | 304<br>425 | 302<br>426 | 296<br>408 | 288<br>390 | -          | -          | -          |
| 11000        | TAS<br>TOTAL | FC | KT<br>KG/H | 294<br>398 | 297<br>407 | 300<br>413 | 304<br>416 | 307<br>422 | 301<br>410 | 295<br>392 | 275<br>355 | -          | -          |
| 10500        | TAS<br>TOTAL | FC | KT<br>KG/H | 294<br>391 | 297<br>399 | 300<br>404 | 304<br>410 | 307<br>415 | 307<br>412 | 300<br>394 | 285<br>358 | -          | -          |
| 10000        | TAS<br>TOTAL | FC | KT<br>KG/H | 294<br>384 | 297<br>392 | 300<br>397 | 304<br>402 | 307<br>408 | 310<br>413 | 305<br>396 | 292<br>360 | 270<br>324 | -          |
| 9500         | TAS<br>TOTAL | FC | KT<br>KG/H | 294<br>379 | 297<br>385 | 300<br>390 | 304<br>395 | 307<br>401 | 311<br>407 | 309<br>397 | 297<br>361 | 280<br>326 | -          |
| 9000         | TAS<br>TOTAL | FC | KT<br>KG/H | 294<br>373 | 297<br>377 | 300<br>384 | 304<br>389 | 307<br>394 | 311<br>399 | 310<br>398 | 300<br>362 | 286<br>328 | 265<br>295 |
| 8500         | TAS<br>TOTAL | FC | KT<br>KG/H | 294<br>369 | 297<br>373 | 300<br>376 | 304<br>384 | 307<br>389 | 311<br>394 | 313<br>399 | 303<br>363 | 291<br>329 | 275<br>297 |
| 8000         | TAS<br>TOTAL | FC | KT<br>KG/H | 294<br>364 | 297<br>369 | 300<br>372 | 304<br>380 | 307<br>385 | 311<br>390 | 314<br>394 | 306<br>364 | 294<br>330 | 279<br>298 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**MAXIMUM SPEED CRUISE**
**CRUISE CONFIGURATION**

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 30000 FT**

| WEIGHT<br>KG |              |    | ISA + °C   |            |            |            |            |            |            |            |            |            |
|--------------|--------------|----|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|              |              |    | -10        | -5         | 0          | 5          | 10         | 15         | 20         | 25         | 30         | 40         |
| 12000        | TAS<br>TOTAL | FC | KT<br>KG/H | 299<br>420 | 301<br>428 | 293<br>409 | 282<br>389 | -          | -          | -          | -          | -          |
| 11500        | TAS<br>TOTAL | FC | KT<br>KG/H | 299<br>409 | 302<br>415 | 300<br>412 | 292<br>393 | 280<br>374 | -          | -          | -          | -          |
| 11000        | TAS<br>TOTAL | FC | KT<br>KG/H | 299<br>400 | 302<br>405 | 305<br>414 | 299<br>395 | 291<br>377 | 281<br>360 | -          | -          | -          |
| 10500        | TAS<br>TOTAL | FC | KT<br>KG/H | 299<br>391 | 302<br>396 | 306<br>404 | 304<br>397 | 298<br>380 | 289<br>363 | 279<br>344 | -          | -          |
| 10000        | TAS<br>TOTAL | FC | KT<br>KG/H | 299<br>383 | 302<br>388 | 306<br>394 | 308<br>398 | 303<br>382 | 296<br>365 | 288<br>347 | 277<br>329 | -          |
| 9500         | TAS<br>TOTAL | FC | KT<br>KG/H | 299<br>375 | 302<br>380 | 306<br>385 | 309<br>392 | 306<br>383 | 301<br>366 | 294<br>349 | 286<br>331 | 275<br>314 |
| 9000         | TAS<br>TOTAL | FC | KT<br>KG/H | 299<br>369 | 302<br>374 | 306<br>379 | 309<br>383 | 310<br>384 | 305<br>367 | 299<br>350 | 292<br>333 | 283<br>316 |
| 8500         | TAS<br>TOTAL | FC | KT<br>KG/H | 299<br>361 | 302<br>368 | 306<br>373 | 309<br>377 | 312<br>384 | 308<br>368 | 302<br>351 | 297<br>334 | 290<br>318 |
| 8000         | TAS<br>TOTAL | FC | KT<br>KG/H | 299<br>356 | 302<br>363 | 306<br>367 | 309<br>372 | 312<br>377 | 310<br>369 | 305<br>352 | 300<br>335 | 293<br>318 |
|              |              |    |            |            |            |            |            |            |            |            |            | 278<br>287 |

20 NOVEMBER 1992

SUPPLEMENTARY PERFORMANCE  
MANUALFLIGHT PLANNING  
ALL ENGINES OPERATING

PW118A ENGINES

## MAXIMUM SPEED CRUISE

## CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 31000 FT

| WEIGHT<br>KG |              |    | ISA + °C   |            |            |            |            |            |            |            |            |            |
|--------------|--------------|----|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|              |              |    | -10        | -5         | 0          | 5          | 10         | 15         | 20         | 25         | 30         | 40         |
| 12000        | TAS<br>TOTAL | FC | KT<br>KG/H | 298<br>411 | 295<br>411 | 285<br>392 | -          | -          | -          | -          | -          | -          |
| 11500        | TAS<br>TOTAL | FC | KT<br>KG/H | 298<br>400 | 301<br>406 | 294<br>396 | 284<br>377 | -          | -          | -          | -          | -          |
| 11000        | TAS<br>TOTAL | FC | KT<br>KG/H | 298<br>390 | 301<br>395 | 301<br>398 | 293<br>380 | 285<br>362 | -          | -          | -          | -          |
| 10500        | TAS<br>TOTAL | FC | KT<br>KG/H | 298<br>380 | 301<br>385 | 304<br>392 | 300<br>382 | 293<br>365 | 285<br>349 | 269<br>330 | -          | -          |
| 10000        | TAS<br>TOTAL | FC | KT<br>KG/H | 298<br>371 | 301<br>376 | 304<br>382 | 305<br>384 | 300<br>368 | 293<br>352 | 283<br>334 | 269<br>316 | -          |
| 9500         | TAS<br>TOTAL | FC | KT<br>KG/H | 298<br>363 | 301<br>368 | 304<br>374 | 308<br>379 | 304<br>369 | 299<br>353 | 292<br>336 | 281<br>319 | 268<br>302 |
| 9000         | TAS<br>TOTAL | FC | KT<br>KG/H | 298<br>356 | 301<br>361 | 304<br>365 | 308<br>370 | 309<br>371 | 304<br>355 | 297<br>338 | 289<br>321 | 278<br>304 |
| 8500         | TAS<br>TOTAL | FC | KT<br>KG/H | 298<br>350 | 301<br>354 | 304<br>359 | 308<br>364 | 311<br>369 | 307<br>356 | 301<br>339 | 294<br>322 | 287<br>306 |
| 8000         | TAS<br>TOTAL | FC | KT<br>KG/H | 298<br>342 | 301<br>349 | 304<br>353 | 308<br>358 | 311<br>362 | 310<br>357 | 304<br>340 | 299<br>323 | 292<br>307 |
|              |              |    |            |            |            |            |            |            |            |            |            |            |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**MAXIMUM SPEED CRUISE**
**CRUISE CONFIGURATION**

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 32000 FT**

| WEIGHT<br>KG |          |      | ISA + °C |     |     |     |     |     |     |     |     |     |
|--------------|----------|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |          |      | -10      | -5  | 0   | 5   | 10  | 15  | 20  | 25  | 30  | 40  |
| 12000        | TAS      | KT   | 296      | 286 | -   | -   | -   | -   | -   | -   | -   | -   |
|              | TOTAL FC | KG/H | 411      | 393 | -   | -   | -   | -   | -   | -   | -   | -   |
| 11500        | TAS      | KT   | 296      | 296 | 287 | -   | -   | -   | -   | -   | -   | -   |
|              | TOTAL FC | KG/H | 391      | 397 | 379 | -   | -   | -   | -   | -   | -   | -   |
| 11000        | TAS      | KT   | 296      | 300 | 297 | 287 | -   | -   | -   | -   | -   | -   |
|              | TOTAL FC | KG/H | 381      | 386 | 383 | 364 | -   | -   | -   | -   | -   | -   |
| 10500        | TAS      | KT   | 296      | 300 | 302 | 296 | 287 | 275 | -   | -   | -   | -   |
|              | TOTAL FC | KG/H | 370      | 375 | 385 | 367 | 350 | 333 | -   | -   | -   | -   |
| 10000        | TAS      | KT   | 296      | 300 | 303 | 303 | 296 | 287 | 275 | -   | -   | -   |
|              | TOTAL FC | KG/H | 361      | 365 | 372 | 370 | 353 | 337 | 320 | -   | -   | -   |
| 9500         | TAS      | KT   | 296      | 300 | 303 | 306 | 301 | 296 | 287 | 274 | -   | -   |
|              | TOTAL FC | KG/H | 347      | 357 | 362 | 371 | 355 | 340 | 323 | 306 | -   | -   |
| 9000         | TAS      | KT   | 296      | 300 | 303 | 307 | 306 | 301 | 294 | 285 | 273 | -   |
|              | TOTAL FC | KG/H | 342      | 349 | 353 | 359 | 357 | 341 | 325 | 309 | 292 | -   |
| 8500         | TAS      | KT   | 296      | 300 | 303 | 307 | 309 | 306 | 299 | 291 | 284 | 257 |
|              | TOTAL FC | KG/H | 335      | 341 | 346 | 351 | 358 | 343 | 326 | 310 | 295 | 264 |
| 8000         | TAS      | KT   | 296      | 300 | 303 | 307 | 310 | 309 | 303 | 298 | 290 | 271 |
|              | TOTAL FC | KG/H | 329      | 335 | 340 | 344 | 349 | 344 | 328 | 312 | 296 | 267 |

20 NOVEMBER 1992



**EMBRAER**  
**EMB120 Brasilia**  
**SUPPLEMENTARY PERFORMANCE  
MANUAL**

FLIGHT PLANNING

**FLIGHT PLANNING**

**ALL ENGINES OPERATING**

**PW118A/B ENGINES**

**INTERMEDIATE CRUISE**

CRUISE CONFIGURATION

NP: 85%

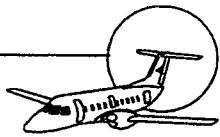
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 5000 FT**

| WEIGHT<br>KG | TAS<br>KT | TOTAL FC<br>KG/H | ISA + °C |     |     |     |     |     |     |     |     |     |
|--------------|-----------|------------------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |           |                  | -60      | -40 | -30 | -20 | -10 | 0   | 10  | 20  | 30  | 40  |
| 12000        | TAS       | KT               | 224      | 231 | 234 | 237 | 239 | 242 | 244 | 247 | 249 | 252 |
|              | TOTAL FC  | KG/H             | 523      | 533 | 537 | 541 | 545 | 550 | 554 | 558 | 562 | 566 |
| 11500        | TAS       | KT               | 225      | 231 | 234 | 237 | 240 | 243 | 245 | 248 | 250 | 253 |
|              | TOTAL FC  | KG/H             | 523      | 533 | 537 | 541 | 545 | 550 | 554 | 558 | 562 | 566 |
| 11000        | TAS       | KT               | 225      | 232 | 235 | 238 | 241 | 243 | 246 | 249 | 251 | 253 |
|              | TOTAL FC  | KG/H             | 523      | 533 | 537 | 541 | 545 | 550 | 554 | 558 | 562 | 566 |
| 10500        | TAS       | KT               | 225      | 232 | 235 | 238 | 241 | 244 | 247 | 249 | 252 | 254 |
|              | TOTAL FC  | KG/H             | 523      | 533 | 537 | 541 | 545 | 550 | 554 | 558 | 562 | 566 |
| 10000        | TAS       | KT               | 226      | 232 | 236 | 239 | 242 | 244 | 247 | 250 | 252 | 255 |
|              | TOTAL FC  | KG/H             | 523      | 533 | 537 | 541 | 545 | 550 | 554 | 558 | 562 | 566 |
| 9500         | TAS       | KT               | 226      | 233 | 236 | 239 | 242 | 245 | 247 | 250 | 253 | 255 |
|              | TOTAL FC  | KG/H             | 523      | 533 | 537 | 541 | 545 | 550 | 554 | 558 | 562 | 566 |
| 9000         | TAS       | KT               | 226      | 233 | 236 | 239 | 242 | 245 | 248 | 251 | 253 | 256 |
|              | TOTAL FC  | KG/H             | 523      | 533 | 537 | 541 | 545 | 550 | 554 | 558 | 562 | 566 |
| 8500         | TAS       | KT               | 226      | 233 | 236 | 240 | 242 | 245 | 248 | 251 | 254 | 256 |
|              | TOTAL FC  | KG/H             | 523      | 533 | 537 | 541 | 546 | 550 | 554 | 558 | 562 | 566 |
| 8000         | TAS       | KT               | 226      | 233 | 236 | 240 | 243 | 245 | 248 | 251 | 254 | 256 |
|              | TOTAL FC  | KG/H             | 523      | 533 | 537 | 541 | 546 | 550 | 554 | 558 | 562 | 566 |

17 MARCH 1999


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING**
**ALL ENGINES OPERATING**
**PW118A/B ENGINES**
**INTERMEDIATE CRUISE**

## CRUISE CONFIGURATION

NP: 85%

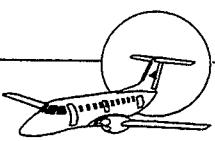
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 6000 FT**

| WEIGHT<br>KG |          |      | ISA + °C |     |     |     |     |     |     |     |     |     |
|--------------|----------|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |          |      | -60      | -40 | -30 | -20 | -10 | 0   | 10  | 20  | 30  | 40  |
| 12000        | TAS      | KT   | 226      | 233 | 236 | 239 | 242 | 244 | 247 | 249 | 251 | 254 |
|              | TOTAL FC | KG/H | 515      | 524 | 528 | 532 | 536 | 540 | 544 | 548 | 552 | 556 |
| 11500        | TAS      | KT   | 227      | 233 | 236 | 239 | 242 | 245 | 247 | 250 | 252 | 255 |
|              | TOTAL FC | KG/H | 515      | 524 | 528 | 532 | 536 | 540 | 544 | 548 | 552 | 556 |
| 11000        | TAS      | KT   | 227      | 234 | 237 | 240 | 243 | 246 | 248 | 251 | 253 | 256 |
|              | TOTAL FC | KG/H | 515      | 524 | 528 | 532 | 536 | 540 | 544 | 548 | 552 | 556 |
| 10500        | TAS      | KT   | 227      | 234 | 238 | 241 | 243 | 246 | 249 | 251 | 254 | 257 |
|              | TOTAL FC | KG/H | 515      | 524 | 528 | 532 | 536 | 540 | 544 | 548 | 552 | 556 |
| 10000        | TAS      | KT   | 228      | 235 | 238 | 241 | 244 | 247 | 249 | 252 | 255 | 257 |
|              | TOTAL FC | KG/H | 515      | 524 | 528 | 533 | 536 | 540 | 544 | 548 | 552 | 556 |
| 9500         | TAS      | KT   | 228      | 235 | 238 | 241 | 244 | 247 | 250 | 253 | 255 | 258 |
|              | TOTAL FC | KG/H | 515      | 524 | 528 | 533 | 536 | 540 | 544 | 548 | 552 | 556 |
| 9000         | TAS      | KT   | 228      | 235 | 238 | 242 | 245 | 247 | 250 | 253 | 256 | 258 |
|              | TOTAL FC | KG/H | 515      | 524 | 528 | 533 | 536 | 540 | 544 | 548 | 552 | 556 |
| 8500         | TAS      | KT   | 228      | 235 | 239 | 242 | 245 | 248 | 250 | 253 | 256 | 259 |
|              | TOTAL FC | KG/H | 515      | 524 | 528 | 533 | 536 | 540 | 544 | 548 | 552 | 556 |
| 8000         | TAS      | KT   | 228      | 235 | 239 | 242 | 245 | 248 | 251 | 253 | 256 | 259 |
|              | TOTAL FC | KG/H | 515      | 524 | 528 | 533 | 536 | 540 | 544 | 548 | 552 | 556 |

17 MARCH 1999



**EMBRAER**  
**EMB120 Brasilia**  
**SUPPLEMENTARY PERFORMANCE  
MANUAL**

FLIGHT PLANNING

**FLIGHT PLANNING**

**ALL ENGINES OPERATING**

**PW118A/B ENGINES**

**INTERMEDIATE CRUISE**

CRUISE CONFIGURATION

NP: 85%

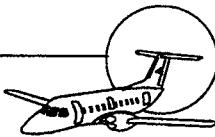
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 7000 FT**

| WEIGHT<br>KG |          |      | ISA + °C |     |     |     |     |     |     |     |     |     |  |
|--------------|----------|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
|              |          |      | -60      | -40 | -30 | -20 | -10 | 0   | 10  | 20  | 30  | 40  |  |
| 12000        | TAS      | KT   | 228      | 235 | 238 | 241 | 244 | 246 | 249 | 251 | 254 | 256 |  |
|              | TOTAL FC | KG/H | 508      | 516 | 520 | 524 | 528 | 532 | 535 | 539 | 542 | 546 |  |
| 11500        | TAS      | KT   | 229      | 235 | 239 | 242 | 244 | 247 | 250 | 252 | 255 | 257 |  |
|              | TOTAL FC | KG/H | 508      | 516 | 520 | 524 | 528 | 532 | 535 | 539 | 542 | 546 |  |
| 11000        | TAS      | KT   | 229      | 236 | 239 | 242 | 245 | 248 | 250 | 253 | 256 | 258 |  |
|              | TOTAL FC | KG/H | 508      | 516 | 520 | 524 | 528 | 532 | 535 | 539 | 542 | 546 |  |
| 10500        | TAS      | KT   | 230      | 236 | 240 | 243 | 246 | 249 | 251 | 254 | 256 | 259 |  |
|              | TOTAL FC | KG/H | 508      | 516 | 520 | 524 | 528 | 532 | 535 | 539 | 542 | 546 |  |
| 10000        | TAS      | KT   | 230      | 237 | 240 | 243 | 246 | 249 | 252 | 254 | 257 | 260 |  |
|              | TOTAL FC | KG/H | 508      | 516 | 520 | 524 | 528 | 532 | 535 | 539 | 542 | 546 |  |
| 9500         | TAS      | KT   | 230      | 237 | 240 | 244 | 247 | 250 | 252 | 255 | 258 | 260 |  |
|              | TOTAL FC | KG/H | 508      | 516 | 520 | 524 | 528 | 532 | 535 | 539 | 542 | 546 |  |
| 9000         | TAS      | KT   | 230      | 237 | 241 | 244 | 247 | 250 | 253 | 255 | 258 | 261 |  |
|              | TOTAL FC | KG/H | 508      | 516 | 520 | 524 | 528 | 532 | 535 | 539 | 542 | 546 |  |
| 8500         | TAS      | KT   | 230      | 238 | 241 | 244 | 247 | 250 | 253 | 256 | 258 | 261 |  |
|              | TOTAL FC | KG/H | 508      | 516 | 520 | 524 | 528 | 532 | 535 | 539 | 542 | 546 |  |
| 8000         | TAS      | KT   | 231      | 238 | 241 | 244 | 247 | 250 | 253 | 256 | 259 | 261 |  |
|              | TOTAL FC | KG/H | 508      | 516 | 520 | 524 | 528 | 532 | 535 | 539 | 542 | 546 |  |

17 MARCH 1999


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING**
**ALL ENGINES OPERATING**
**PW118A/B ENGINES**
**INTERMEDIATE CRUISE**

## CRUISE CONFIGURATION

NP: 85%

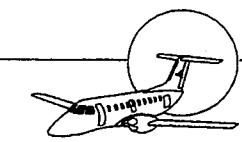
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 8000 FT**

|       |          |      |     | ISA + °C |     |     |     |     |     |     |     |     |    |
|-------|----------|------|-----|----------|-----|-----|-----|-----|-----|-----|-----|-----|----|
|       |          |      |     | -60      | -40 | -30 | -20 | -10 | 0   | 10  | 20  | 30  | 40 |
| 12000 | TAS      | KT   | 230 | 237      | 240 | 243 | 246 | 248 | 251 | 253 | 256 | 258 |    |
|       | TOTAL FC | KG/H | 500 | 508      | 512 | 516 | 519 | 523 | 527 | 530 | 534 | 537 |    |
| 11500 | TAS      | KT   | 231 | 238      | 241 | 244 | 247 | 249 | 252 | 254 | 257 | 259 |    |
|       | TOTAL FC | KG/H | 500 | 508      | 512 | 516 | 519 | 523 | 527 | 530 | 534 | 537 |    |
| 11000 | TAS      | KT   | 231 | 238      | 241 | 245 | 247 | 250 | 253 | 255 | 258 | 260 |    |
|       | TOTAL FC | KG/H | 500 | 508      | 512 | 516 | 519 | 523 | 527 | 530 | 534 | 537 |    |
| 10500 | TAS      | KT   | 232 | 239      | 242 | 245 | 248 | 251 | 254 | 256 | 259 | 262 |    |
|       | TOTAL FC | KG/H | 500 | 508      | 512 | 516 | 519 | 523 | 527 | 530 | 534 | 537 |    |
| 10000 | TAS      | KT   | 232 | 239      | 242 | 246 | 249 | 251 | 254 | 257 | 259 | 262 |    |
|       | TOTAL FC | KG/H | 500 | 508      | 512 | 516 | 519 | 523 | 527 | 530 | 534 | 537 |    |
| 9500  | TAS      | KT   | 232 | 239      | 243 | 246 | 249 | 252 | 255 | 257 | 260 | 263 |    |
|       | TOTAL FC | KG/H | 500 | 508      | 512 | 516 | 519 | 523 | 527 | 530 | 534 | 537 |    |
| 9000  | TAS      | KT   | 233 | 240      | 243 | 246 | 249 | 252 | 255 | 258 | 261 | 264 |    |
|       | TOTAL FC | KG/H | 500 | 508      | 512 | 516 | 519 | 523 | 527 | 530 | 534 | 537 |    |
| 8500  | TAS      | KT   | 233 | 240      | 243 | 247 | 250 | 253 | 255 | 258 | 261 | 264 |    |
|       | TOTAL FC | KG/H | 500 | 508      | 512 | 516 | 519 | 523 | 527 | 530 | 534 | 537 |    |
| 8000  | TAS      | KT   | 233 | 240      | 243 | 247 | 250 | 253 | 256 | 258 | 261 | 264 |    |
|       | TOTAL FC | KG/H | 500 | 508      | 512 | 516 | 519 | 523 | 527 | 530 | 534 | 537 |    |

17 MARCH 1999



**EMBRAER**  
**EMB120 Brasilia**  
**SUPPLEMENTARY PERFORMANCE  
MANUAL**

FLIGHT PLANNING

**FLIGHT PLANNING**

**ALL ENGINES OPERATING**

**PW118A/B ENGINES**

**INTERMEDIATE CRUISE**

CRUISE CONFIGURATION

NP: 85%

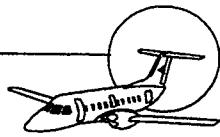
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 9000 FT**

| WEIGHT<br>KG | TAS<br>KT | TOTAL FC<br>KG/H | ISA + °C |     |     |     |     |     |     |     |     |     |
|--------------|-----------|------------------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |           |                  | -60      | -40 | -30 | -20 | -10 | 0   | 10  | 20  | 30  | 40  |
| 12000        | TAS       | KT               | 232      | 239 | 242 | 245 | 248 | 251 | 253 | 255 | 258 | 261 |
|              | TOTAL FC  | KG/H             | 493      | 501 | 504 | 508 | 511 | 515 | 518 | 522 | 525 | 528 |
| 11500        | TAS       | KT               | 233      | 240 | 243 | 246 | 249 | 252 | 254 | 257 | 259 | 262 |
|              | TOTAL FC  | KG/H             | 493      | 501 | 504 | 508 | 511 | 515 | 518 | 522 | 525 | 528 |
| 11000        | TAS       | KT               | 233      | 240 | 244 | 247 | 250 | 253 | 255 | 258 | 260 | 263 |
|              | TOTAL FC  | KG/H             | 493      | 501 | 504 | 508 | 512 | 515 | 518 | 522 | 525 | 528 |
| 10500        | TAS       | KT               | 234      | 241 | 244 | 247 | 250 | 253 | 256 | 259 | 261 | 264 |
|              | TOTAL FC  | KG/H             | 493      | 501 | 504 | 508 | 512 | 515 | 518 | 522 | 525 | 528 |
| 10000        | TAS       | KT               | 234      | 241 | 245 | 248 | 251 | 254 | 257 | 259 | 262 | 265 |
|              | TOTAL FC  | KG/H             | 493      | 501 | 504 | 508 | 512 | 515 | 518 | 522 | 525 | 528 |
| 9500         | TAS       | KT               | 235      | 242 | 245 | 248 | 252 | 254 | 257 | 260 | 263 | 265 |
|              | TOTAL FC  | KG/H             | 494      | 501 | 504 | 508 | 512 | 515 | 518 | 522 | 525 | 528 |
| 9000         | TAS       | KT               | 235      | 242 | 245 | 249 | 252 | 255 | 258 | 260 | 263 | 266 |
|              | TOTAL FC  | KG/H             | 494      | 501 | 504 | 508 | 512 | 515 | 518 | 522 | 525 | 528 |
| 8500         | TAS       | KT               | 235      | 242 | 246 | 249 | 252 | 255 | 258 | 261 | 264 | 266 |
|              | TOTAL FC  | KG/H             | 494      | 501 | 504 | 508 | 512 | 515 | 518 | 522 | 525 | 528 |
| 8000         | TAS       | KT               | 235      | 242 | 246 | 249 | 252 | 255 | 258 | 261 | 264 | 267 |
|              | TOTAL FC  | KG/H             | 494      | 501 | 504 | 508 | 512 | 515 | 518 | 522 | 525 | 528 |

17 MARCH 1999

**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**FLIGHT PLANNING**
**ALL ENGINES OPERATING**
**PW118A/B ENGINES**
**INTERMEDIATE CRUISE**

## CRUISE CONFIGURATION

NP: 85%

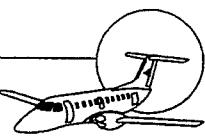
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 10000 FT**

| WEIGHT<br>KG |          |      | ISA + °C |     |     |     |     |     |     |     |     |     |
|--------------|----------|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |          |      | -50      | -40 | -30 | -20 | -10 | 0   | 10  | 20  | 30  | 40  |
| 12000        | TAS      | KT   | 238      | 241 | 245 | 248 | 250 | 253 | 255 | 258 | 260 | 263 |
|              | TOTAL FC | KG/H | 490      | 494 | 497 | 500 | 504 | 507 | 510 | 514 | 517 | 521 |
| 11500        | TAS      | KT   | 239      | 242 | 245 | 248 | 251 | 254 | 256 | 259 | 261 | 264 |
|              | TOTAL FC | KG/H | 490      | 494 | 497 | 500 | 504 | 507 | 510 | 514 | 517 | 520 |
| 11000        | TAS      | KT   | 239      | 243 | 246 | 249 | 252 | 255 | 257 | 260 | 263 | 266 |
|              | TOTAL FC | KG/H | 490      | 494 | 497 | 500 | 504 | 507 | 510 | 514 | 517 | 520 |
| 10500        | TAS      | KT   | 240      | 243 | 247 | 250 | 253 | 256 | 258 | 261 | 264 | 267 |
|              | TOTAL FC | KG/H | 490      | 494 | 497 | 500 | 504 | 507 | 510 | 514 | 517 | 520 |
| 10000        | TAS      | KT   | 240      | 244 | 247 | 250 | 253 | 256 | 259 | 262 | 264 | 267 |
|              | TOTAL FC | KG/H | 490      | 494 | 497 | 500 | 504 | 507 | 510 | 514 | 517 | 520 |
| 9500         | TAS      | KT   | 240      | 244 | 248 | 251 | 254 | 257 | 260 | 262 | 265 | 269 |
|              | TOTAL FC | KG/H | 490      | 494 | 497 | 500 | 504 | 507 | 510 | 514 | 517 | 520 |
| 9000         | TAS      | KT   | 241      | 244 | 248 | 251 | 254 | 257 | 260 | 263 | 266 | 269 |
|              | TOTAL FC | KG/H | 490      | 494 | 497 | 500 | 504 | 507 | 510 | 514 | 517 | 520 |
| 8500         | TAS      | KT   | 241      | 245 | 248 | 251 | 255 | 258 | 261 | 263 | 266 | 269 |
|              | TOTAL FC | KG/H | 490      | 494 | 497 | 500 | 504 | 507 | 510 | 514 | 517 | 520 |
| 8000         | TAS      | KT   | 241      | 245 | 248 | 252 | 255 | 258 | 261 | 264 | 266 | 270 |
|              | TOTAL FC | KG/H | 490      | 494 | 497 | 500 | 504 | 507 | 510 | 514 | 517 | 520 |

17 MARCH 1999



**EMBRAER**  
**EMB120 Brasilia**  
**SUPPLEMENTARY PERFORMANCE  
MANUAL**

FLIGHT PLANNING

**FLIGHT PLANNING**

**ALL ENGINES OPERATING**

**PW118A/B ENGINES**

**INTERMEDIATE CRUISE**

CRUISE CONFIGURATION

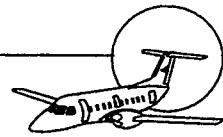
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 11000 FT**

| WEIGHT<br>KG |          | ISA + °C |     |     |     |     |     |     |     |     |     |     |  |
|--------------|----------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
|              |          | -50      | -40 | -30 | -20 | -10 | 0   | 10  | 20  | 30  | 40  |     |  |
| 12000        | TAS      | KT       | 251 | 255 | 258 | 262 | 265 | 268 | 272 | 274 | 269 | 260 |  |
|              | TOTAL FC | KG/H     | 526 | 530 | 535 | 539 | 544 | 548 | 553 | 557 | 531 | 499 |  |
| 11500        | TAS      | KT       | 250 | 254 | 258 | 262 | 265 | 268 | 271 | 274 | 269 | 261 |  |
|              | TOTAL FC | KG/H     | 520 | 527 | 531 | 535 | 540 | 545 | 549 | 553 | 527 | 496 |  |
| 11000        | TAS      | KT       | 250 | 254 | 258 | 261 | 265 | 268 | 271 | 275 | 269 | 261 |  |
|              | TOTAL FC | KG/H     | 516 | 522 | 528 | 532 | 536 | 541 | 546 | 550 | 523 | 492 |  |
| 10500        | TAS      | KT       | 249 | 253 | 258 | 261 | 265 | 268 | 271 | 274 | 269 | 261 |  |
|              | TOTAL FC | KG/H     | 513 | 518 | 524 | 529 | 533 | 537 | 542 | 546 | 520 | 489 |  |
| 10000        | TAS      | KT       | 249 | 253 | 257 | 261 | 265 | 268 | 271 | 274 | 269 | 261 |  |
|              | TOTAL FC | KG/H     | 511 | 515 | 521 | 525 | 530 | 534 | 538 | 543 | 517 | 486 |  |
| 9500         | TAS      | KT       | 249 | 253 | 257 | 261 | 264 | 268 | 271 | 274 | 269 | 262 |  |
|              | TOTAL FC | KG/H     | 509 | 512 | 517 | 522 | 527 | 531 | 535 | 539 | 514 | 483 |  |
| 9000         | TAS      | KT       | 249 | 253 | 256 | 260 | 264 | 267 | 270 | 274 | 269 | 262 |  |
|              | TOTAL FC | KG/H     | 507 | 510 | 514 | 520 | 524 | 528 | 532 | 536 | 510 | 480 |  |
| 8500         | TAS      | KT       | 249 | 252 | 256 | 260 | 264 | 267 | 270 | 273 | 269 | 261 |  |
|              | TOTAL FC | KG/H     | 505 | 509 | 512 | 516 | 521 | 526 | 530 | 534 | 507 | 477 |  |
| 8000         | TAS      | KT       | 248 | 252 | 256 | 259 | 263 | 267 | 270 | 273 | 268 | 261 |  |
|              | TOTAL FC | KG/H     | 504 | 507 | 510 | 513 | 518 | 524 | 527 | 531 | 505 | 474 |  |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING**
**ALL ENGINES OPERATING**
**PW118A/B ENGINES**
**INTERMEDIATE CRUISE**

## CRUISE CONFIGURATION

NP: 85%

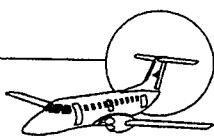
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 12000 FT**

| WEIGHT<br>KG |          |      | ISA + °C |     |     |     |     |     |     |     |     |     |  |
|--------------|----------|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
|              |          |      | -50      | -40 | -30 | -20 | -10 | 0   | 10  | 20  | 30  | 40  |  |
| 12000        | TAS      | KT   | 253      | 257 | 260 | 264 | 267 | 271 | 274 | 276 | 270 | 261 |  |
|              | TOTAL FC | KG/H | 520      | 523 | 528 | 532 | 537 | 541 | 546 | 548 | 519 | 488 |  |
| 11500        | TAS      | KT   | 252      | 257 | 260 | 264 | 267 | 271 | 274 | 276 | 270 | 262 |  |
|              | TOTAL FC | KG/H | 515      | 521 | 524 | 528 | 533 | 537 | 542 | 544 | 515 | 484 |  |
| 11000        | TAS      | KT   | 252      | 256 | 260 | 264 | 267 | 271 | 274 | 276 | 270 | 262 |  |
|              | TOTAL FC | KG/H | 510      | 516 | 521 | 525 | 529 | 533 | 538 | 540 | 511 | 480 |  |
| 10500        | TAS      | KT   | 252      | 256 | 260 | 264 | 267 | 270 | 274 | 276 | 270 | 262 |  |
|              | TOTAL FC | KG/H | 507      | 512 | 518 | 522 | 526 | 530 | 534 | 536 | 508 | 477 |  |
| 10000        | TAS      | KT   | 251      | 255 | 260 | 263 | 267 | 270 | 273 | 276 | 270 | 262 |  |
|              | TOTAL FC | KG/H | 504      | 508 | 514 | 518 | 523 | 527 | 530 | 533 | 504 | 474 |  |
| 9500         | TAS      | KT   | 251      | 255 | 259 | 263 | 267 | 270 | 273 | 276 | 270 | 263 |  |
|              | TOTAL FC | KG/H | 502      | 505 | 510 | 515 | 519 | 524 | 527 | 529 | 501 | 471 |  |
| 9000         | TAS      | KT   | 251      | 255 | 259 | 263 | 266 | 270 | 273 | 276 | 270 | 263 |  |
|              | TOTAL FC | KG/H | 500      | 503 | 507 | 512 | 517 | 520 | 524 | 526 | 498 | 468 |  |
| 8500         | TAS      | KT   | 251      | 255 | 258 | 262 | 266 | 269 | 273 | 275 | 270 | 262 |  |
|              | TOTAL FC | KG/H | 498      | 501 | 504 | 509 | 514 | 518 | 521 | 523 | 494 | 465 |  |
| 8000         | TAS      | KT   | 251      | 254 | 258 | 262 | 265 | 269 | 272 | 275 | 269 | 262 |  |
|              | TOTAL FC | KG/H | 496      | 499 | 502 | 506 | 510 | 515 | 519 | 520 | 491 | 462 |  |

17 MARCH 1999



**EMBRAER**  
**EMB120 Brasilia**  
**SUPPLEMENTARY PERFORMANCE  
MANUAL**

FLIGHT PLANNING

**FLIGHT PLANNING**

**ALL ENGINES OPERATING**

**PW118A/B ENGINES**

**INTERMEDIATE CRUISE**

CRUISE CONFIGURATION

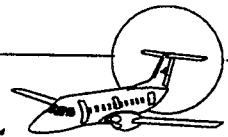
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 13000 FT**

| WEIGHT<br>KG |          |      | ISA + °C |     |     |     |     |     |     |     |     |     |  |
|--------------|----------|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
|              |          |      | -50      | -40 | -30 | -20 | -10 | 0   | 10  | 20  | 30  | 40  |  |
| 12000        | TAS      | KT   | 255      | 259 | 263 | 267 | 270 | 273 | 276 | 278 | 270 | 261 |  |
|              | TOTAL FC | KG/H | 514      | 517 | 522 | 526 | 531 | 535 | 539 | 537 | 507 | 477 |  |
| 11500        | TAS      | KT   | 255      | 259 | 263 | 266 | 270 | 273 | 276 | 278 | 271 | 262 |  |
|              | TOTAL FC | KG/H | 510      | 514 | 518 | 522 | 527 | 531 | 535 | 533 | 503 | 473 |  |
| 11000        | TAS      | KT   | 254      | 259 | 263 | 266 | 270 | 273 | 276 | 278 | 271 | 263 |  |
|              | TOTAL FC | KG/H | 505      | 511 | 514 | 518 | 523 | 527 | 531 | 528 | 498 | 469 |  |
| 10500        | TAS      | KT   | 254      | 258 | 262 | 266 | 270 | 273 | 276 | 278 | 271 | 263 |  |
|              | TOTAL FC | KG/H | 500      | 507 | 511 | 515 | 519 | 523 | 527 | 525 | 495 | 465 |  |
| 10000        | TAS      | KT   | 254      | 258 | 262 | 266 | 269 | 273 | 276 | 278 | 271 | 263 |  |
|              | TOTAL FC | KG/H | 497      | 501 | 508 | 511 | 515 | 519 | 523 | 521 | 491 | 462 |  |
| 9500         | TAS      | KT   | 253      | 257 | 262 | 266 | 269 | 272 | 276 | 277 | 271 | 263 |  |
|              | TOTAL FC | KG/H | 495      | 498 | 503 | 508 | 512 | 516 | 520 | 517 | 488 | 458 |  |
| 9000         | TAS      | KT   | 253      | 257 | 261 | 265 | 269 | 272 | 275 | 277 | 271 | 264 |  |
|              | TOTAL FC | KG/H | 492      | 496 | 500 | 505 | 509 | 513 | 517 | 514 | 485 | 456 |  |
| 8500         | TAS      | KT   | 253      | 257 | 261 | 265 | 268 | 272 | 275 | 277 | 271 | 264 |  |
|              | TOTAL FC | KG/H | 491      | 494 | 497 | 502 | 506 | 510 | 514 | 511 | 481 | 452 |  |
| .8000        | TAS      | KT   | 253      | 257 | 260 | 264 | 268 | 271 | 275 | 276 | 270 | 263 |  |
|              | TOTAL FC | KG/H | 489      | 492 | 495 | 499 | 503 | 508 | 511 | 508 | 478 | 449 |  |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING**
**ALL ENGINES OPERATING**
**PW118A/B ENGINES**
**INTERMEDIATE CRUISE**

## CRUISE CONFIGURATION

NP: 85%

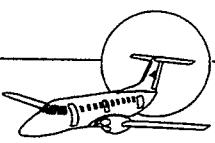
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 14000 FT**

| WEIGHT<br>KG |          |      | ISA + °C |     |     |     |     |     |     |     |     |     |  |
|--------------|----------|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
|              |          |      | -50      | -40 | -30 | -20 | -10 | 0   | 10  | 20  | 30  | 40  |  |
| 12000        | TAS      | KT   | 257      | 261 | 265 | 269 | 272 | 276 | 279 | 278 | 271 | 262 |  |
|              | TOTAL FC | KG/H | 508      | 512 | 517 | 521 | 525 | 529 | 534 | 525 | 495 | 467 |  |
| 11500        | TAS      | KT   | 258      | 261 | 265 | 269 | 272 | 276 | 279 | 278 | 272 | 263 |  |
|              | TOTAL FC | KG/H | 505      | 508 | 512 | 516 | 521 | 525 | 529 | 520 | 491 | 462 |  |
| 11000        | TAS      | KT   | 257      | 261 | 265 | 269 | 272 | 276 | 279 | 278 | 272 | 264 |  |
|              | TOTAL FC | KG/H | 501      | 505 | 508 | 512 | 517 | 521 | 525 | 516 | 487 | 458 |  |
| 10500        | TAS      | KT   | 256      | 261 | 265 | 269 | 272 | 275 | 279 | 278 | 272 | 264 |  |
|              | TOTAL FC | KG/H | 495      | 501 | 505 | 509 | 513 | 516 | 521 | 512 | 482 | 454 |  |
| 10000        | TAS      | KT   | 256      | 260 | 265 | 268 | 272 | 275 | 278 | 278 | 272 | 264 |  |
|              | TOTAL FC | KG/H | 491      | 496 | 502 | 505 | 509 | 513 | 517 | 508 | 479 | 450 |  |
| 9500         | TAS      | KT   | 256      | 260 | 264 | 268 | 272 | 275 | 278 | 278 | 272 | 264 |  |
|              | TOTAL FC | KG/H | 489      | 492 | 497 | 502 | 506 | 510 | 513 | 504 | 476 | 447 |  |
| 9000         | TAS      | KT   | 255      | 259 | 264 | 268 | 271 | 275 | 278 | 278 | 272 | 265 |  |
|              | TOTAL FC | KG/H | 486      | 490 | 494 | 498 | 503 | 507 | 510 | 501 | 472 | 444 |  |
| 8500         | TAS      | KT   | 255      | 259 | 263 | 267 | 271 | 274 | 278 | 278 | 272 | 265 |  |
|              | TOTAL FC | KG/H | 484      | 487 | 491 | 495 | 499 | 503 | 507 | 498 | 469 | 441 |  |
| 8000         | TAS      | KT   | 255      | 259 | 263 | 267 | 270 | 274 | 277 | 277 | 271 | 265 |  |
|              | TOTAL FC | KG/H | 483      | 485 | 488 | 492 | 496 | 500 | 504 | 495 | 466 | 438 |  |

17 MARCH 1999



**EMBRAER**  
**EMB120 Brasilia**  
**SUPPLEMENTARY PERFORMANCE  
MANUAL**

FLIGHT PLANNING

**FLIGHT PLANNING**

**ALL ENGINES OPERATING**

**PW118A/B ENGINES**

**INTERMEDIATE CRUISE**

CRUISE CONFIGURATION

NP: 85%

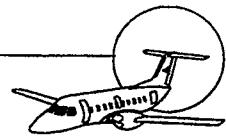
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 15000 FT**

| WEIGHT<br>KG |          |      | ISA + °C |     |     |     |     |     |     |     |     |     |
|--------------|----------|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |          |      | -40      | -30 | -20 | -10 | -5  | 0   | 10  | 20  | 30  | 40  |
| 12000        | TAS      | KT   | 264      | 268 | 272 | 275 | 276 | 278 | 282 | 279 | 272 | 263 |
|              | TOTAL FC | KG/H | 507      | 512 | 516 | 520 | 522 | 524 | 529 | 512 | 483 | 453 |
| 11500        | TAS      | KT   | 264      | 268 | 271 | 275 | 277 | 278 | 281 | 279 | 272 | 263 |
|              | TOTAL FC | KG/H | 503      | 507 | 511 | 516 | 517 | 519 | 524 | 507 | 479 | 451 |
| 11000        | TAS      | KT   | 263      | 267 | 271 | 275 | 276 | 278 | 281 | 279 | 273 | 264 |
|              | TOTAL FC | KG/H | 499      | 503 | 507 | 511 | 513 | 515 | 519 | 503 | 475 | 447 |
| 10500        | TAS      | KT   | 263      | 267 | 271 | 275 | 276 | 278 | 281 | 279 | 273 | 265 |
|              | TOTAL FC | KG/H | 496      | 499 | 503 | 507 | 509 | 511 | 515 | 499 | 471 | 444 |
| 10000        | TAS      | KT   | 263      | 267 | 271 | 274 | 276 | 278 | 281 | 279 | 273 | 265 |
|              | TOTAL FC | KG/H | 491      | 496 | 500 | 503 | 505 | 507 | 511 | 495 | 467 | 439 |
| 9500         | TAS      | KT   | 262      | 267 | 271 | 274 | 276 | 277 | 281 | 279 | 273 | 265 |
|              | TOTAL FC | KG/H | 487      | 492 | 496 | 500 | 501 | 503 | 507 | 491 | 463 | 436 |
| 9000         | TAS      | KT   | 262      | 266 | 270 | 274 | 276 | 277 | 281 | 279 | 273 | 265 |
|              | TOTAL FC | KG/H | 484      | 488 | 493 | 496 | 498 | 500 | 504 | 488 | 460 | 432 |
| 8500         | TAS      | KT   | 261      | 266 | 270 | 273 | 275 | 277 | 280 | 279 | 273 | 266 |
|              | TOTAL FC | KG/H | 481      | 485 | 489 | 493 | 495 | 497 | 501 | 484 | 457 | 429 |
| 8000         | TAS      | KT   | 261      | 265 | 269 | 273 | 275 | 276 | 280 | 278 | 272 | 266 |
|              | TOTAL FC | KG/H | 478      | 482 | 486 | 490 | 492 | 493 | 498 | 481 | 453 | 426 |

17 MARCH 1999


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING**
**ALL ENGINES OPERATING**
**PW118A/B ENGINES**
**INTERMEDIATE CRUISE**

## CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 16000 FT**

| WEIGHT<br>KG |          |      | ISA + °C |     |     |     |     |     |     |     |     |     |  |
|--------------|----------|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
|              |          |      | -40      | -30 | -20 | -10 | -5  | 0   | 10  | 20  | 30  | 40  |  |
| 12000        | TAS      | KT   | 266      | 270 | 274 | 277 | 279 | 281 | 284 | 279 | 272 | 264 |  |
|              | TOTAL FC | KG/H | 503      | 507 | 511 | 515 | 517 | 519 | 524 | 500 | 472 | 443 |  |
| 11500        | TAS      | KT   | 266      | 270 | 274 | 277 | 279 | 281 | 284 | 280 | 273 | 264 |  |
|              | TOTAL FC | KG/H | 499      | 503 | 507 | 511 | 512 | 514 | 519 | 495 | 468 | 441 |  |
| 11000        | TAS      | KT   | 266      | 270 | 274 | 277 | 279 | 281 | 284 | 280 | 273 | 265 |  |
|              | TOTAL FC | KG/H | 494      | 498 | 502 | 506 | 508 | 510 | 514 | 491 | 464 | 437 |  |
| 10500        | TAS      | KT   | 266      | 270 | 273 | 277 | 279 | 281 | 284 | 280 | 274 | 265 |  |
|              | TOTAL FC | KG/H | 490      | 494 | 498 | 502 | 504 | 505 | 509 | 486 | 460 | 433 |  |
| 10000        | TAS      | KT   | 266      | 269 | 273 | 277 | 279 | 280 | 284 | 280 | 274 | 266 |  |
|              | TOTAL FC | KG/H | 487      | 490 | 494 | 497 | 499 | 501 | 505 | 482 | 455 | 429 |  |
| 9500         | TAS      | KT   | 265      | 269 | 273 | 277 | 278 | 280 | 284 | 280 | 274 | 266 |  |
|              | TOTAL FC | KG/H | 482      | 487 | 491 | 494 | 495 | 497 | 501 | 478 | 452 | 425 |  |
| 9000         | TAS      | KT   | 264      | 269 | 273 | 276 | 278 | 280 | 283 | 280 | 274 | 266 |  |
|              | TOTAL FC | KG/H | 478      | 483 | 487 | 490 | 492 | 494 | 498 | 475 | 448 | 421 |  |
| 8500         | TAS      | KT   | 264      | 268 | 272 | 276 | 278 | 280 | 283 | 279 | 274 | 267 |  |
|              | TOTAL FC | KG/H | 475      | 479 | 483 | 487 | 489 | 490 | 494 | 471 | 445 | 418 |  |
| 8000         | TAS      | KT   | 264      | 268 | 272 | 276 | 277 | 279 | 283 | 279 | 273 | 267 |  |
|              | TOTAL FC | KG/H | 472      | 476 | 479 | 483 | 485 | 487 | 491 | 468 | 441 | 415 |  |

17 MARCH 1999



**EMBRAER**  
**EMB120 Brasilia**  
**SUPPLEMENTARY PERFORMANCE  
MANUAL**

FLIGHT PLANNING

**FLIGHT PLANNING**

**ALL ENGINES OPERATING**

**PW118A/B ENGINES**

**INTERMEDIATE CRUISE**

CRUISE CONFIGURATION

NP: 85%

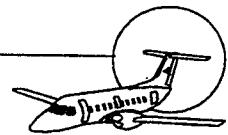
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 17000 FT**

| WEIGHT<br>KG | TAS      | KT   | ISA + °C |     |     |     |     |     |     |     |     |     |
|--------------|----------|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |          |      | -40      | -30 | -20 | -10 | -5  | 0   | 10  | 20  | 30  | 40  |
| 12000        | TAS      | KT   | 269      | 273 | 276 | 280 | 282 | 283 | 286 | 280 | 272 | 263 |
|              | TOTAL FC | KG/H | 499      | 503 | 507 | 511 | 513 | 515 | 516 | 488 | 461 | 430 |
| 11500        | TAS      | KT   | 269      | 273 | 276 | 280 | 282 | 283 | 286 | 280 | 273 | 265 |
|              | TOTAL FC | KG/H | 495      | 499 | 502 | 506 | 508 | 510 | 512 | 484 | 456 | 429 |
| 11000        | TAS      | KT   | 268      | 272 | 276 | 280 | 282 | 283 | 286 | 281 | 274 | 265 |
|              | TOTAL FC | KG/H | 490      | 494 | 498 | 501 | 503 | 505 | 507 | 479 | 453 | 426 |
| 10500        | TAS      | KT   | 268      | 272 | 276 | 280 | 282 | 283 | 286 | 281 | 274 | 266 |
|              | TOTAL FC | KG/H | 486      | 490 | 493 | 497 | 499 | 500 | 502 | 475 | 448 | 422 |
| 10000        | TAS      | KT   | 268      | 272 | 276 | 280 | 281 | 283 | 286 | 281 | 274 | 267 |
|              | TOTAL FC | KG/H | 483      | 486 | 489 | 492 | 495 | 496 | 498 | 471 | 444 | 419 |
| 9500         | TAS      | KT   | 268      | 272 | 276 | 279 | 281 | 283 | 286 | 281 | 274 | 267 |
|              | TOTAL FC | KG/H | 479      | 482 | 485 | 488 | 490 | 491 | 494 | 467 | 440 | 414 |
| 9000         | TAS      | KT   | 267      | 271 | 275 | 279 | 281 | 282 | 285 | 281 | 275 | 267 |
|              | TOTAL FC | KG/H | 473      | 479 | 482 | 485 | 487 | 488 | 490 | 463 | 436 | 410 |
| 8500         | TAS      | KT   | 266      | 271 | 275 | 279 | 280 | 282 | 285 | 280 | 275 | 267 |
|              | TOTAL FC | KG/H | 470      | 474 | 478 | 481 | 483 | 485 | 486 | 459 | 433 | 407 |
| 8000         | TAS      | KT   | 266      | 270 | 274 | 278 | 280 | 282 | 285 | 280 | 274 | 268 |
|              | TOTAL FC | KG/H | 467      | 470 | 474 | 478 | 480 | 481 | 483 | 455 | 429 | 404 |

17 MARCH 1999


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING**
**ALL ENGINES OPERATING**
**PW118A/B ENGINES**
**INTERMEDIATE CRUISE**

## CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 18000 FT**

| WEIGHT<br>KG |          |      | ISA + °C |     |     |     |     |     |     |     |     |     |
|--------------|----------|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |          |      | -40      | -30 | -20 | -10 | -5  | 0   | 10  | 20  | 30  | 40  |
| 12000        | TAS      | KT   | 271      | 275 | 279 | 283 | 284 | 286 | 287 | 280 | 272 | 260 |
|              | TOTAL FC | KG/H | 496      | 499 | 503 | 508 | 509 | 511 | 506 | 477 | 450 | 418 |
| 11500        | TAS      | KT   | 271      | 275 | 279 | 283 | 284 | 286 | 287 | 281 | 273 | 266 |
|              | TOTAL FC | KG/H | 491      | 495 | 498 | 502 | 504 | 506 | 501 | 473 | 446 | 418 |
| 11000        | TAS      | KT   | 271      | 275 | 279 | 283 | 284 | 286 | 287 | 281 | 274 | 265 |
|              | TOTAL FC | KG/H | 486      | 490 | 494 | 497 | 499 | 501 | 497 | 468 | 441 | 416 |
| 10500        | TAS      | KT   | 271      | 275 | 279 | 282 | 284 | 286 | 287 | 282 | 275 | 266 |
|              | TOTAL FC | KG/H | 482      | 486 | 489 | 493 | 494 | 496 | 492 | 464 | 437 | 412 |
| 10000        | TAS      | KT   | 270      | 274 | 278 | 282 | 284 | 286 | 287 | 282 | 275 | 267 |
|              | TOTAL FC | KG/H | 478      | 481 | 485 | 488 | 490 | 491 | 487 | 459 | 433 | 408 |
| 9500         | TAS      | KT   | 270      | 274 | 278 | 282 | 284 | 285 | 287 | 282 | 275 | 268 |
|              | TOTAL FC | KG/H | 476      | 477 | 481 | 484 | 486 | 487 | 483 | 455 | 429 | 404 |
| 9000         | TAS      | KT   | 270      | 274 | 278 | 282 | 283 | 285 | 287 | 282 | 275 | 268 |
|              | TOTAL FC | KG/H | 470      | 474 | 477 | 480 | 482 | 483 | 479 | 451 | 425 | 400 |
| 8500         | TAS      | KT   | 269      | 273 | 278 | 281 | 283 | 285 | 286 | 281 | 275 | 268 |
|              | TOTAL FC | KG/H | 465      | 469 | 473 | 476 | 478 | 479 | 475 | 447 | 421 | 397 |
| 8000         | TAS      | KT   | 269      | 273 | 277 | 281 | 283 | 284 | 286 | 281 | 275 | 268 |
|              | TOTAL FC | KG/H | 462      | 465 | 470 | 473 | 474 | 476 | 472 | 443 | 417 | 393 |

17 MARCH 1999



**EMBRAER**  
**EMB120 Brasilia**  
**SUPPLEMENTARY PERFORMANCE  
MANUAL**

FLIGHT PLANNING

**FLIGHT PLANNING**

**ALL ENGINES OPERATING**

**PW118A/B ENGINES**

**INTERMEDIATE CRUISE**

CRUISE CONFIGURATION

NP: 85%

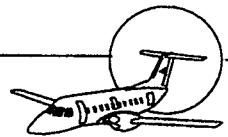
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 19000 FT**

| WEIGHT<br>KG | TAS<br>KT | TOTAL FC<br>KG/H | ISA + °C |     |     |     |     |     |     |     |     |     |
|--------------|-----------|------------------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |           |                  | -40      | -30 | -20 | -10 | -5  | 0   | 10  | 20  | 30  | 40  |
| 12000        | TAS       | KT               | 274      | 278 | 281 | 285 | 287 | 289 | 288 | 281 | 272 | 257 |
|              | TOTAL FC  | KG/H             | 493      | 496 | 500 | 504 | 506 | 508 | 495 | 467 | 439 | 404 |
| 11500        | TAS       | KT               | 273      | 278 | 281 | 285 | 287 | 289 | 288 | 281 | 273 | 263 |
|              | TOTAL FC  | KG/H             | 488      | 491 | 495 | 499 | 501 | 503 | 490 | 462 | 436 | 405 |
| 11000        | TAS       | KT               | 273      | 277 | 281 | 285 | 287 | 289 | 288 | 282 | 274 | 266 |
|              | TOTAL FC  | KG/H             | 483      | 487 | 490 | 493 | 495 | 498 | 485 | 457 | 431 | 404 |
| 10500        | TAS       | KT               | 273      | 277 | 281 | 285 | 287 | 289 | 288 | 282 | 275 | 266 |
|              | TOTAL FC  | KG/H             | 479      | 482 | 485 | 489 | 490 | 493 | 481 | 453 | 427 | 400 |
| 10000        | TAS       | KT               | 273      | 277 | 281 | 285 | 287 | 289 | 288 | 282 | 276 | 268 |
|              | TOTAL FC  | KG/H             | 474      | 478 | 481 | 485 | 486 | 488 | 476 | 449 | 422 | 398 |
| 9500         | TAS       | KT               | 273      | 277 | 281 | 285 | 286 | 289 | 288 | 282 | 276 | 268 |
|              | TOTAL FC  | KG/H             | 471      | 473 | 477 | 480 | 481 | 484 | 472 | 444 | 418 | 394 |
| 9000         | TAS       | KT               | 272      | 276 | 280 | 284 | 286 | 288 | 288 | 282 | 276 | 269 |
|              | TOTAL FC  | KG/H             | 467      | 469 | 473 | 475 | 477 | 479 | 468 | 440 | 414 | 390 |
| 8500         | TAS       | KT               | 271      | 276 | 280 | 284 | 286 | 288 | 287 | 282 | 276 | 269 |
|              | TOTAL FC  | KG/H             | 461      | 466 | 469 | 471 | 473 | 475 | 463 | 436 | 410 | 386 |
| 8000         | TAS       | KT               | 271      | 275 | 280 | 284 | 285 | 287 | 287 | 282 | 276 | 269 |
|              | TOTAL FC  | KG/H             | 457      | 461 | 465 | 468 | 469 | 471 | 459 | 432 | 407 | 382 |

17 MARCH 1999


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING**
**ALL ENGINES OPERATING**
**PW118A/B ENGINES**
**INTERMEDIATE CRUISE**

## CRUISE CONFIGURATION

NP: 85%

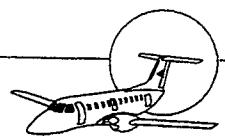
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 20000 FT**

| WEIGHT<br>KG  | ISA + °C |     |     |     |    |   |    |    |    |    |  |  |
|---|----------|-----|-----|-----|----|---|----|----|----|----|--|--|
|   | -30      | -20 | -15 | -10 | -5 | 0 | 10 | 20 | 30 | 40 |  |  |
| 12000 TAS KT 280 284 286 288 290 292 288 281 274 253  |          |     |     |     |    |   |    |    |    |    |  |  |
| TOTAL FC KG/H 494 498 500 501 504 506 484 457 429 390 |          |     |     |     |    |   |    |    |    |    |  |  |
| 11500 TAS KT 280 284 286 288 290 292 288 282 273 260  |          |     |     |     |    |   |    |    |    |    |  |  |
| TOTAL FC KG/H 488 492 494 496 498 500 479 452 426 392 |          |     |     |     |    |   |    |    |    |    |  |  |
| 11000 TAS KT 280 284 286 288 290 292 289 283 274 267  |          |     |     |     |    |   |    |    |    |    |  |  |
| TOTAL FC KG/H 484 487 489 490 493 495 474 447 421 394 |          |     |     |     |    |   |    |    |    |    |  |  |
| 10500 TAS KT 280 284 286 288 290 292 289 283 275 266  |          |     |     |     |    |   |    |    |    |    |  |  |
| TOTAL FC KG/H 479 482 484 485 487 490 470 442 416 392 |          |     |     |     |    |   |    |    |    |    |  |  |
| 10000 TAS KT 280 284 286 288 290 292 289 283 276 268  |          |     |     |     |    |   |    |    |    |    |  |  |
| TOTAL FC KG/H 475 478 479 481 483 485 464 438 412 388 |          |     |     |     |    |   |    |    |    |    |  |  |
| 9500 TAS KT 279 283 286 287 289 292 289 283 277 269   |          |     |     |     |    |   |    |    |    |    |  |  |
| TOTAL FC KG/H 470 473 475 476 478 480 460 433 408 384 |          |     |     |     |    |   |    |    |    |    |  |  |
| 9000 TAS KT 279 283 285 287 289 291 289 283 277 270   |          |     |     |     |    |   |    |    |    |    |  |  |
| TOTAL FC KG/H 465 468 470 471 473 476 455 429 404 380 |          |     |     |     |    |   |    |    |    |    |  |  |
| 8500 TAS KT 279 283 285 287 289 291 288 283 277 270   |          |     |     |     |    |   |    |    |    |    |  |  |
| TOTAL FC KG/H 462 465 466 467 469 471 452 425 399 376 |          |     |     |     |    |   |    |    |    |    |  |  |
| 8000 TAS KT 278 282 284 286 288 290 288 283 277 270   |          |     |     |     |    |   |    |    |    |    |  |  |
| TOTAL FC KG/H 458 462 463 465 467 447 422 396 372     |          |     |     |     |    |   |    |    |    |    |  |  |

17 MARCH 1999



**EMBRAER**  
**EMB120 Brasilia**  
**SUPPLEMENTARY PERFORMANCE  
MANUAL**

FLIGHT PLANNING

**FLIGHT PLANNING**

**ALL ENGINES OPERATING**

**PW118A/B ENGINES**

**INTERMEDIATE CRUISE**

CRUISE CONFIGURATION

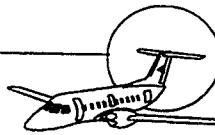
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 21000 FT**

| WEIGHT<br>KG |          | KT   | KG/H | ISA + °C |     |     |     |     |     |     |     |     |    |
|--------------|----------|------|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|----|
|              |          |      |      | -30      | -20 | -15 | -10 | -5  | 0   | 10  | 20  | 30  | 40 |
| 12000        | TAS      | KT   | 283  | 287      | 289 | 291 | 293 | 294 | 288 | 281 | 273 | -   | -  |
|              | TOTAL FC | KG/H | 492  | 496      | 497 | 499 | 501 | 499 | 473 | 447 | 417 | -   | -  |
| 11500        | TAS      | KT   | 283  | 287      | 289 | 291 | 293 | 294 | 289 | 282 | 275 | 257 |    |
|              | TOTAL FC | KG/H | 486  | 490      | 492 | 493 | 496 | 494 | 468 | 442 | 415 | 380 |    |
| 11000        | TAS      | KT   | 282  | 287      | 289 | 291 | 293 | 294 | 289 | 283 | 275 | 264 |    |
|              | TOTAL FC | KG/H | 478  | 484      | 486 | 488 | 491 | 490 | 464 | 437 | 411 | 382 |    |
| 10500        | TAS      | KT   | 281  | 287      | 289 | 291 | 293 | 294 | 289 | 284 | 276 | 268 |    |
|              | TOTAL FC | KG/H | 471  | 480      | 481 | 482 | 485 | 485 | 458 | 433 | 407 | 381 |    |
| 10000        | TAS      | KT   | 281  | 287      | 289 | 290 | 293 | 294 | 290 | 284 | 277 | 268 |    |
|              | TOTAL FC | KG/H | 465  | 475      | 476 | 477 | 480 | 479 | 454 | 428 | 402 | 379 |    |
| 9500         | TAS      | KT   | 280  | 286      | 288 | 290 | 292 | 294 | 290 | 284 | 277 | 269 |    |
|              | TOTAL FC | KG/H | 456  | 470      | 471 | 473 | 475 | 474 | 449 | 423 | 398 | 374 |    |
| 9000         | TAS      | KT   | 279  | 286      | 288 | 290 | 292 | 293 | 290 | 284 | 278 | 270 |    |
|              | TOTAL FC | KG/H | 451  | 465      | 467 | 468 | 471 | 470 | 444 | 419 | 393 | 371 |    |
| 8500         | TAS      | KT   | 278  | 285      | 288 | 289 | 292 | 293 | 289 | 284 | 278 | 271 |    |
|              | TOTAL FC | KG/H | 446  | 459      | 462 | 464 | 466 | 465 | 440 | 414 | 389 | 366 |    |
| 8000         | TAS      | KT   | 278  | 285      | 287 | 289 | 291 | 293 | 289 | 284 | 278 | 271 |    |
|              | TOTAL FC | KG/H | 442  | 455      | 458 | 460 | 462 | 461 | 436 | 410 | 385 | 362 |    |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING**
**ALL ENGINES OPERATING**
**PW118A/B ENGINES**
**INTERMEDIATE CRUISE**

## CRUISE CONFIGURATION

NP: 85%

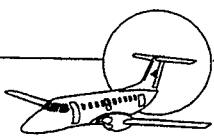
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 22000 FT**

|        |          |      | ISA + °C |     |     |     |     |     |     |     |     |     |  |
|--------|----------|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
|        |          |      | -30      | -20 | -15 | -10 | -5  | 0   | 10  | 20  | 30  | 40  |  |
| WEIGHT |          | KG   |          |     |     |     |     |     |     |     |     |     |  |
| 12000  | TAS      | KT   | 282      | 289 | 291 | 294 | 295 | 294 | 289 | 282 | 270 | -   |  |
|        | TOTAL FC | KG/H | 478      | 493 | 495 | 498 | 498 | 490 | 463 | 438 | 404 | -   |  |
| 11500  | TAS      | KT   | 282      | 289 | 292 | 294 | 295 | 295 | 289 | 282 | 275 | 252 |  |
|        | TOTAL FC | KG/H | 470      | 485 | 489 | 492 | 492 | 485 | 458 | 433 | 405 | 367 |  |
| 11000  | TAS      | KT   | 281      | 288 | 291 | 294 | 296 | 295 | 290 | 283 | 275 | 261 |  |
|        | TOTAL FC | KG/H | 462      | 476 | 483 | 487 | 487 | 480 | 453 | 428 | 402 | 369 |  |
| 10500  | TAS      | KT   | 280      | 287 | 290 | 294 | 296 | 295 | 290 | 284 | 276 | 268 |  |
|        | TOTAL FC | KG/H | 454      | 468 | 474 | 480 | 482 | 475 | 448 | 423 | 397 | 371 |  |
| 10000  | TAS      | KT   | 280      | 286 | 290 | 293 | 295 | 295 | 290 | 284 | 277 | 269 |  |
|        | TOTAL FC | KG/H | 448      | 461 | 467 | 473 | 477 | 470 | 443 | 418 | 392 | 369 |  |
| 9500   | TAS      | KT   | 279      | 286 | 289 | 292 | 295 | 295 | 290 | 285 | 278 | 269 |  |
|        | TOTAL FC | KG/H | 441      | 454 | 460 | 466 | 471 | 465 | 438 | 413 | 388 | 365 |  |
| 9000   | TAS      | KT   | 278      | 285 | 288 | 291 | 295 | 295 | 290 | 285 | 278 | 270 |  |
|        | TOTAL FC | KG/H | 435      | 448 | 454 | 459 | 465 | 460 | 433 | 408 | 384 | 361 |  |
| 8500   | TAS      | KT   | 278      | 284 | 288 | 291 | 294 | 295 | 290 | 285 | 279 | 271 |  |
|        | TOTAL FC | KG/H | 429      | 442 | 448 | 454 | 459 | 456 | 429 | 404 | 379 | 357 |  |
| 8000   | TAS      | KT   | 277      | 284 | 287 | 290 | 293 | 294 | 290 | 285 | 278 | 272 |  |
|        | TOTAL FC | KG/H | 425      | 436 | 442 | 448 | 453 | 451 | 425 | 400 | 374 | 353 |  |

17 MARCH 1999



**EMBRAER**  
**EMB120 Brasilia**  
**SUPPLEMENTARY PERFORMANCE  
MANUAL**

FLIGHT PLANNING

**FLIGHT PLANNING**

**ALL ENGINES OPERATING**

**PW118A/B ENGINES**

**INTERMEDIATE CRUISE**

**CRUISE CONFIGURATION**

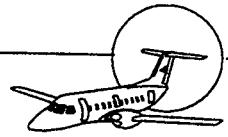
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 23000 FT**

| WEIGHT<br>KG |          | ISA + °C |     |     |     |     |     |     |     |     |     |     |   |
|--------------|----------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---|
|              |          | -30      | -20 | -15 | -10 | -5  | 0   | 10  | 20  | 30  | 40  |     |   |
| 12000        | TAS      | KT       | 282 | 289 | 292 | 295 | 296 | 294 | 288 | 281 | 265 | -   | - |
|              | TOTAL FC | KG/H     | 464 | 479 | 486 | 493 | 491 | 479 | 454 | 429 | 391 | -   | - |
| 11500        | TAS      | KT       | 281 | 288 | 291 | 294 | 297 | 295 | 289 | 282 | 273 | -   | - |
|              | TOTAL FC | KG/H     | 456 | 470 | 477 | 483 | 485 | 473 | 448 | 423 | 393 | -   | - |
| 11000        | TAS      | KT       | 280 | 287 | 291 | 294 | 297 | 295 | 290 | 283 | 275 | 256 |   |
|              | TOTAL FC | KG/H     | 448 | 462 | 468 | 474 | 480 | 468 | 442 | 417 | 390 | 357 |   |
| 10500        | TAS      | KT       | 280 | 287 | 290 | 293 | 296 | 296 | 291 | 284 | 276 | 265 |   |
|              | TOTAL FC | KG/H     | 440 | 453 | 459 | 466 | 472 | 463 | 438 | 413 | 388 | 359 |   |
| 10000        | TAS      | KT       | 279 | 286 | 289 | 292 | 296 | 296 | 291 | 285 | 277 | 269 |   |
|              | TOTAL FC | KG/H     | 432 | 445 | 451 | 457 | 463 | 459 | 433 | 408 | 383 | 359 |   |
| 9500         | TAS      | KT       | 278 | 285 | 288 | 291 | 295 | 296 | 291 | 285 | 278 | 270 |   |
|              | TOTAL FC | KG/H     | 425 | 438 | 443 | 449 | 455 | 452 | 428 | 403 | 378 | 354 |   |
| 9000         | TAS      | KT       | 278 | 285 | 288 | 291 | 294 | 295 | 291 | 286 | 279 | 271 |   |
|              | TOTAL FC | KG/H     | 419 | 431 | 437 | 443 | 448 | 448 | 423 | 398 | 374 | 352 |   |
| 8500         | TAS      | KT       | 277 | 284 | 287 | 290 | 293 | 295 | 291 | 286 | 279 | 272 |   |
|              | TOTAL FC | KG/H     | 413 | 425 | 431 | 436 | 442 | 444 | 418 | 394 | 369 | 348 |   |
| 8000         | TAS      | KT       | 276 | 283 | 286 | 289 | 293 | 295 | 291 | 286 | 279 | 272 |   |
|              | TOTAL FC | KG/H     | 408 | 420 | 425 | 431 | 436 | 440 | 414 | 389 | 364 | 344 |   |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING**
**ALL ENGINES OPERATING**
**PW118A/B ENGINES**
**INTERMEDIATE CRUISE**

## CRUISE CONFIGURATION

NP: 85%

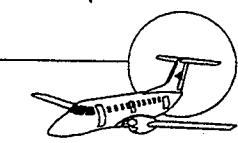
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 24000 FT**

| WEIGHT<br>KG |          |      | ISA + °C |     |     |     |     |     |     |     |     |     |  |
|--------------|----------|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
|              |          |      | -30      | -20 | -15 | -10 | -5  | 0   | 10  | 20  | 30  | 40  |  |
| 12000        | TAS      | KT   | 281      | 288 | 291 | 296 | 296 | 294 | 288 | 282 | 258 | -   |  |
|              | TOTAL FC | KG/H | 452      | 467 | 474 | 484 | 480 | 468 | 444 | 417 | 378 | -   |  |
| 11500        | TAS      | KT   | 280      | 287 | 290 | 294 | 297 | 295 | 289 | 282 | 268 | -   |  |
|              | TOTAL FC | KG/H | 443      | 457 | 463 | 469 | 474 | 462 | 438 | 413 | 383 | -   |  |
| 11000        | TAS      | KT   | 280      | 287 | 290 | 293 | 296 | 295 | 290 | 283 | 276 | -   |  |
|              | TOTAL FC | KG/H | 435      | 448 | 454 | 460 | 466 | 457 | 433 | 408 | 381 | -   |  |
| 10500        | TAS      | KT   | 279      | 286 | 289 | 292 | 296 | 296 | 291 | 284 | 277 | 261 |  |
|              | TOTAL FC | KG/H | 426      | 439 | 445 | 451 | 457 | 452 | 427 | 403 | 378 | 347 |  |
| 10000        | TAS      | KT   | 278      | 285 | 288 | 292 | 295 | 296 | 292 | 285 | 277 | 269 |  |
|              | TOTAL FC | KG/H | 418      | 430 | 436 | 442 | 448 | 447 | 422 | 398 | 374 | 348 |  |
| 9500         | TAS      | KT   | 278      | 284 | 288 | 291 | 294 | 296 | 292 | 286 | 278 | 271 |  |
|              | TOTAL FC | KG/H | 411      | 422 | 428 | 434 | 440 | 442 | 418 | 393 | 369 | 346 |  |
| 9000         | TAS      | KT   | 277      | 284 | 287 | 290 | 293 | 296 | 292 | 286 | 279 | 271 |  |
|              | TOTAL FC | KG/H | 404      | 416 | 421 | 426 | 432 | 436 | 413 | 388 | 364 | 343 |  |
| 8500         | TAS      | KT   | 276      | 283 | 286 | 290 | 293 | 296 | 292 | 286 | 279 | 272 |  |
|              | TOTAL FC | KG/H | 398      | 409 | 415 | 420 | 425 | 431 | 408 | 384 | 360 | 339 |  |
| 8000         | TAS      | KT   | 276      | 282 | 285 | 289 | 292 | 295 | 292 | 286 | 280 | 273 |  |
|              | TOTAL FC | KG/H | 392      | 403 | 408 | 414 | 419 | 424 | 403 | 378 | 356 | 334 |  |

17 MARCH 1999



**EMBRAER**  
**EMB120 Brasilia**  
**SUPPLEMENTARY PERFORMANCE  
MANUAL**

FLIGHT PLANNING

**FLIGHT PLANNING**

**ALL ENGINES OPERATING**

**PW118A/B ENGINES**

**INTERMEDIATE CRUISE**

CRUISE CONFIGURATION

NP: 85%

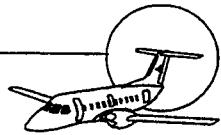
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 25000 FT**

| WEIGHT<br>KG |          |      | ISA + °C |     |     |     |     |     |     |     |     |     |  |
|--------------|----------|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
|              |          |      | -20      | -15 | -10 | -5  | 0   | 5   | 10  | 20  | 30  | 40  |  |
| 12000        | TAS      | KT   | 287      | 291 | 295 | 296 | 294 | 291 | 289 | 280 | -   | -   |  |
|              | TOTAL FC | KG/H | 456      | 462 | 472 | 469 | 457 | 447 | 433 | 406 | -   | -   |  |
| 11500        | TAS      | KT   | 287      | 290 | 293 | 297 | 295 | 292 | 289 | 283 | 263 | -   |  |
|              | TOTAL FC | KG/H | 445      | 451 | 457 | 463 | 452 | 441 | 429 | 402 | 367 | -   |  |
| 11000        | TAS      | KT   | 286      | 289 | 292 | 296 | 295 | 293 | 290 | 283 | 273 | -   |  |
|              | TOTAL FC | KG/H | 435      | 441 | 447 | 453 | 446 | 435 | 423 | 398 | 370 | -   |  |
| 10500        | TAS      | KT   | 285      | 289 | 292 | 295 | 296 | 294 | 291 | 284 | 277 | 255 |  |
|              | TOTAL FC | KG/H | 426      | 431 | 437 | 443 | 440 | 429 | 418 | 393 | 368 | 334 |  |
| 10000        | TAS      | KT   | 285      | 288 | 291 | 294 | 296 | 294 | 292 | 285 | 278 | 265 |  |
|              | TOTAL FC | KG/H | 417      | 423 | 429 | 434 | 436 | 424 | 413 | 388 | 365 | 337 |  |
| 9500         | TAS      | KT   | 284      | 287 | 290 | 294 | 297 | 295 | 292 | 286 | 278 | 271 |  |
|              | TOTAL FC | KG/H | 408      | 414 | 420 | 425 | 430 | 420 | 407 | 383 | 360 | 336 |  |
| 9000         | TAS      | KT   | 283      | 286 | 290 | 293 | 296 | 295 | 292 | 287 | 279 | 272 |  |
|              | TOTAL FC | KG/H | 401      | 407 | 412 | 417 | 423 | 415 | 402 | 379 | 355 | 333 |  |
| 8500         | TAS      | KT   | 282      | 286 | 289 | 292 | 295 | 295 | 293 | 287 | 280 | 272 |  |
|              | TOTAL FC | KG/H | 394      | 400 | 405 | 410 | 415 | 410 | 398 | 374 | 351 | 330 |  |
| 8000         | TAS      | KT   | 282      | 285 | 288 | 291 | 294 | 295 | 293 | 287 | 280 | 273 |  |
|              | TOTAL FC | KG/H | 388      | 394 | 398 | 403 | 409 | 404 | 393 | 369 | 346 | 326 |  |

17 MARCH 1999


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING**
**ALL ENGINES OPERATING**
**PW118A/B ENGINES**
**INTERMEDIATE CRUISE**

## CRUISE CONFIGURATION

NP: 85%

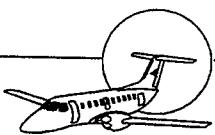
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 26000 FT**

| WEIGHT<br>KG |          |      | ISA + °C |     |     |     |     |     |     |     |     |     |  |
|--------------|----------|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
|              |          |      | -20      | -15 | -10 | -5  | 0   | 5   | 10  | 20  | 30  | 40  |  |
| 12000        | TAS      | KT   | 287      | 290 | 297 | 296 | 293 | 290 | 288 | 274 | -   | -   |  |
|              | TOTAL FC | KG/H | 446      | 452 | 469 | 459 | 447 | 437 | 425 | 392 | -   | -   |  |
| 11500        | TAS      | KT   | 286      | 290 | 294 | 297 | 294 | 292 | 289 | 282 | -   | -   |  |
|              | TOTAL FC | KG/H | 434      | 440 | 451 | 452 | 441 | 431 | 419 | 393 | -   | -   |  |
| 11000        | TAS      | KT   | 285      | 289 | 292 | 296 | 295 | 293 | 290 | 283 | 268 | -   |  |
|              | TOTAL FC | KG/H | 423      | 429 | 435 | 442 | 435 | 425 | 414 | 390 | 357 | -   |  |
| 10500        | TAS      | KT   | 285      | 288 | 291 | 294 | 296 | 294 | 291 | 284 | 277 | -   |  |
|              | TOTAL FC | KG/H | 414      | 419 | 425 | 431 | 430 | 419 | 408 | 384 | 359 | -   |  |
| 10000        | TAS      | KT   | 284      | 287 | 290 | 294 | 296 | 295 | 292 | 285 | 278 | 260 |  |
|              | TOTAL FC | KG/H | 405      | 410 | 415 | 420 | 424 | 414 | 403 | 379 | 356 | 325 |  |
| 9500         | TAS      | KT   | 283      | 287 | 290 | 293 | 296 | 295 | 293 | 286 | 278 | 269 |  |
|              | TOTAL FC | KG/H | 396      | 401 | 407 | 412 | 417 | 409 | 398 | 374 | 352 | 327 |  |
| 9000         | TAS      | KT   | 282      | 286 | 289 | 292 | 295 | 295 | 293 | 287 | 279 | 270 |  |
|              | TOTAL FC | KG/H | 387      | 393 | 398 | 403 | 409 | 404 | 393 | 369 | 347 | 326 |  |
| 8500         | TAS      | KT   | 282      | 285 | 288 | 291 | 295 | 295 | 293 | 287 | 280 | 272 |  |
|              | TOTAL FC | KG/H | 380      | 385 | 390 | 396 | 401 | 398 | 388 | 364 | 342 | 321 |  |
| 8000         | TAS      | KT   | 281      | 284 | 287 | 291 | 294 | 295 | 293 | 288 | 281 | 273 |  |
|              | TOTAL FC | KG/H | 374      | 379 | 383 | 388 | 393 | 393 | 382 | 360 | 337 | 316 |  |

17 MARCH 1999



**EMBRAER**  
**EMB120 Brasilia**  
**SUPPLEMENTARY PERFORMANCE  
MANUAL**

FLIGHT PLANNING

**FLIGHT PLANNING**

**ALL ENGINES OPERATING**

**PW118A/B ENGINES**

**INTERMEDIATE CRUISE**

CRUISE CONFIGURATION

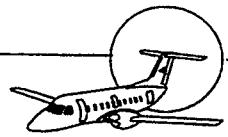
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 27000 FT**

| WEIGHT<br>KG |          |      | ISA + °C |     |     |     |     |     |     |     |     |     |
|--------------|----------|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |          |      | -20      | -15 | -10 | -5  | 0   | 5   | 10  | 20  | 30  | 40  |
| 12000        | TAS      | KT   | 287      | 290 | 296 | 295 | 292 | 289 | 289 | -   | -   | -   |
|              | TOTAL FC | KG/H | 436      | 443 | 458 | 449 | 438 | 427 | 415 | -   | -   | -   |
| 11500        | TAS      | KT   | 286      | 289 | 293 | 296 | 294 | 291 | 289 | 279 | -   | -   |
|              | TOTAL FC | KG/H | 424      | 430 | 440 | 443 | 431 | 421 | 408 | 381 | -   | -   |
| 11000        | TAS      | KT   | 285      | 288 | 292 | 297 | 295 | 292 | 289 | 283 | 261 | -   |
|              | TOTAL FC | KG/H | 409      | 419 | 424 | 436 | 425 | 415 | 405 | 379 | 344 | -   |
| 10500        | TAS      | KT   | 283      | 287 | 291 | 294 | 296 | 294 | 291 | 284 | 271 | -   |
|              | TOTAL FC | KG/H | 398      | 408 | 413 | 420 | 419 | 409 | 399 | 375 | 347 | -   |
| 10000        | TAS      | KT   | 283      | 287 | 290 | 293 | 296 | 294 | 292 | 285 | 278 | 253 |
|              | TOTAL FC | KG/H | 390      | 398 | 403 | 409 | 414 | 403 | 393 | 370 | 347 | 313 |
| 9500         | TAS      | KT   | 282      | 286 | 289 | 292 | 295 | 295 | 293 | 286 | 279 | 264 |
|              | TOTAL FC | KG/H | 382      | 389 | 394 | 399 | 404 | 398 | 388 | 365 | 342 | 315 |
| 9000         | TAS      | KT   | 281      | 285 | 288 | 292 | 295 | 295 | 293 | 287 | 279 | 272 |
|              | TOTAL FC | KG/H | 374      | 380 | 385 | 390 | 395 | 393 | 383 | 360 | 338 | 316 |
| 8500         | TAS      | KT   | 281      | 284 | 287 | 291 | 294 | 296 | 294 | 288 | 280 | 273 |
|              | TOTAL FC | KG/H | 366      | 372 | 377 | 382 | 387 | 388 | 378 | 355 | 333 | 312 |
| 8000         | TAS      | KT   | 280      | 283 | 287 | 290 | 293 | 296 | 294 | 288 | 281 | 273 |
|              | TOTAL FC | KG/H | 358      | 364 | 369 | 374 | 378 | 383 | 373 | 350 | 329 | 309 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING**
**ALL ENGINES OPERATING**
**PW118A/B ENGINES**
**INTERMEDIATE CRUISE**

## CRUISE CONFIGURATION

NP: 85%

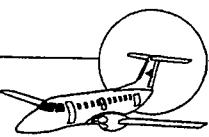
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 28000 FT**

| WEIGHT<br>KG  | ISA + °C  |     |     |    |   |   |    |    |    |    |  |  |
|---|---|-----|-----|----|---|---|----|----|----|----|--|--|
|   | -20   | -15 | -10 | -5 | 0 | 5 | 10 | 20 | 30 | 40 |  |  |
| 12000 TAS KT 286 290 293 294 293 291 286 - - -        | TOTAL FC KG/H 428 434 441 439 429 417 402 - - -         |     |     |    |   |   |    |    |    |    |  |  |
| 11500 TAS KT 286 289 292 296 293 290 288 271 - - -    | TOTAL FC KG/H 415 421 427 433 422 412 400 366 - - -     |     |     |    |   |   |    |    |    |    |  |  |
| 11000 TAS KT 285 288 291 297 294 291 289 281 - - -    | TOTAL FC KG/H 403 408 414 426 416 405 394 369 - - -     |     |     |    |   |   |    |    |    |    |  |  |
| 10500 TAS KT 282 287 290 294 296 293 290 284 266 - -  | TOTAL FC KG/H 388 397 403 409 410 399 389 366 334 - -   |     |     |    |   |   |    |    |    |    |  |  |
| 10000 TAS KT 282 286 289 292 296 294 292 286 276 - -  | TOTAL FC KG/H 378 386 391 397 402 394 384 362 337 - -   |     |     |    |   |   |    |    |    |    |  |  |
| 9500 TAS KT 281 285 288 292 295 295 293 287 278 260 - | TOTAL FC KG/H 370 377 381 386 392 388 378 356 334 304 - |     |     |    |   |   |    |    |    |    |  |  |
| 9000 TAS KT 281 285 288 291 294 296 293 287 279 270 - | TOTAL FC KG/H 362 368 373 377 382 383 373 351 330 306 - |     |     |    |   |   |    |    |    |    |  |  |
| 8500 TAS KT 280 283 287 290 293 296 294 288 280 273 - | TOTAL FC KG/H 353 359 364 369 374 378 368 346 325 304 - |     |     |    |   |   |    |    |    |    |  |  |
| 8000 TAS KT 279 283 286 289 292 296 294 289 281 275 - | TOTAL FC KG/H 346 351 356 361 366 371 363 342 320 301 - |     |     |    |   |   |    |    |    |    |  |  |

17 MARCH 1999



**EMBRAER**  
**EMB120 Brasilia**  
**SUPPLEMENTARY PERFORMANCE  
MANUAL**

FLIGHT PLANNING

**FLIGHT PLANNING**

**ALL ENGINES OPERATING**

**PW118A/B ENGINES**

**INTERMEDIATE CRUISE**

CRUISE CONFIGURATION

NP: 85%

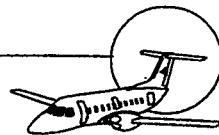
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 29000 FT**

| WEIGHT<br>KG |          |      | ISA + °C |     |     |     |     |     |     |     |     |     |  |
|--------------|----------|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
|              |          |      | -20      | -15 | -10 | -5  | 0   | 5   | 10  | 20  | 30  | 40  |  |
| 12000        | TAS      | KT   | 286      | 289 | 293 | 293 | 291 | 289 | 278 | -   | -   | -   |  |
|              | TOTAL FC | KG/H | 421      | 428 | 435 | 430 | 418 | 404 | 386 | -   | -   | -   |  |
| 11500        | TAS      | KT   | 285      | 288 | 292 | 294 | 293 | 290 | 288 | -   | -   | -   |  |
|              | TOTAL FC | KG/H | 407      | 413 | 419 | 423 | 412 | 402 | 389 | -   | -   | -   |  |
| 11000        | TAS      | KT   | 284      | 287 | 291 | 295 | 293 | 291 | 289 | 275 | -   | -   |  |
|              | TOTAL FC | KG/H | 394      | 400 | 406 | 417 | 406 | 396 | 386 | 355 | -   | -   |  |
| 10500        | TAS      | KT   | 282      | 286 | 289 | 293 | 295 | 292 | 290 | 285 | -   | -   |  |
|              | TOTAL FC | KG/H | 379      | 387 | 393 | 399 | 400 | 390 | 378 | 358 | -   | -   |  |
| 10000        | TAS      | KT   | 281      | 285 | 289 | 292 | 296 | 294 | 291 | 286 | 270 | -   |  |
|              | TOTAL FC | KG/H | 368      | 376 | 381 | 386 | 394 | 384 | 374 | 352 | 324 | -   |  |
| 9500         | TAS      | KT   | 281      | 284 | 288 | 291 | 294 | 295 | 292 | 287 | 279 | -   |  |
|              | TOTAL FC | KG/H | 359      | 366 | 371 | 375 | 380 | 378 | 369 | 348 | 325 | -   |  |
| 9000         | TAS      | KT   | 280      | 284 | 287 | 290 | 293 | 295 | 293 | 288 | 280 | 265 |  |
|              | TOTAL FC | KG/H | 350      | 356 | 361 | 365 | 370 | 373 | 363 | 342 | 321 | 295 |  |
| 8500         | TAS      | KT   | 279      | 283 | 286 | 289 | 292 | 296 | 294 | 288 | 281 | 274 |  |
|              | TOTAL FC | KG/H | 341      | 347 | 352 | 357 | 361 | 366 | 358 | 337 | 316 | 296 |  |
| 8000         | TAS      | KT   | 278      | 282 | 285 | 288 | 291 | 295 | 294 | 289 | 282 | 274 |  |
|              | TOTAL FC | KG/H | 333      | 338 | 343 | 348 | 352 | 357 | 354 | 332 | 311 | 293 |  |

17 MARCH 1999


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING**
**ALL ENGINES OPERATING**
**PW118A/B ENGINES**
**INTERMEDIATE CRUISE**

CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 30000 FT**

| WEIGHT<br>KG |          |      | ISA + °C |     |     |     |     |     |     |     |     |     |
|--------------|----------|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |          |      | -10      | -5  | 0   | 5   | 10  | 15  | 20  | 25  | 30  | 40  |
| 12000        | TAS      | KT   | 293      | 296 | 292 | 282 | -   | -   | -   | -   | -   | -   |
|              | TOTAL FC | KG/H | 427      | 419 | 407 | 389 | -   | -   | -   | -   | -   | -   |
| 11500        | TAS      | KT   | 292      | 293 | 293 | 291 | 280 | -   | -   | -   | -   | -   |
|              | TOTAL FC | KG/H | 413      | 414 | 404 | 390 | 374 | -   | -   | -   | -   | -   |
| 11000        | TAS      | KT   | 290      | 294 | 293 | 292 | 290 | 281 | -   | -   | -   | -   |
|              | TOTAL FC | KG/H | 398      | 407 | 398 | 387 | 376 | 360 | -   | -   | -   | -   |
| 10500        | TAS      | KT   | 289      | 295 | 294 | 293 | 290 | 288 | 279 | -   | -   | -   |
|              | TOTAL FC | KG/H | 384      | 400 | 391 | 381 | 371 | 361 | 344 | -   | -   | -   |
| 10000        | TAS      | KT   | 288      | 291 | 296 | 293 | 291 | 289 | 286 | 277 | -   | -   |
|              | TOTAL FC | KG/H | 372      | 378 | 384 | 374 | 364 | 355 | 344 | 329 | -   | -   |
| 9500         | TAS      | KT   | 287      | 290 | 293 | 294 | 292 | 290 | 287 | 283 | 274 | -   |
|              | TOTAL FC | KG/H | 360      | 365 | 370 | 369 | 359 | 350 | 339 | 327 | 314 | -   |
| 9000         | TAS      | KT   | 286      | 289 | 293 | 295 | 293 | 291 | 288 | 284 | 280 | 258 |
|              | TOTAL FC | KG/H | 350      | 355 | 359 | 363 | 354 | 344 | 334 | 324 | 313 | 283 |
| 8500         | TAS      | KT   | 285      | 288 | 291 | 295 | 294 | 292 | 289 | 285 | 282 | 271 |
|              | TOTAL FC | KG/H | 340      | 345 | 349 | 354 | 349 | 339 | 329 | 318 | 309 | 286 |
| 8000         | TAS      | KT   | 284      | 288 | 291 | 294 | 294 | 292 | 289 | 285 | 282 | 275 |
|              | TOTAL FC | KG/H | 331      | 336 | 341 | 345 | 343 | 335 | 324 | 313 | 303 | 284 |

17 MARCH 1999



EMBRAER  
EMB120 Brasilia  
**SUPPLEMENTARY PERFORMANCE  
MANUAL**

FLIGHT PLANNING

**FLIGHT PLANNING**

**ALL ENGINES OPERATING**

**PW118A/B ENGINES**

**INTERMEDIATE CRUISE**

CRUISE CONFIGURATION

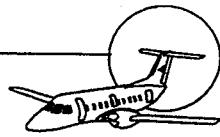
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 31000 FT**

| WEIGHT<br>KG |          |      | ISA + °C |     |     |     |     |     |     |     |     |     |
|--------------|----------|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |          |      | -10      | -5  | 0   | 5   | 10  | 15  | 20  | 25  | 30  | 40  |
| 12000        | TAS      | KT   | 294      | 292 | 285 | -   | -   | -   | -   | -   | -   | -   |
|              | TOTAL FC | KG/H | 406      | 408 | 392 | -   | -   | -   | -   | -   | -   | -   |
| 11500        | TAS      | KT   | 292      | 294 | 291 | 283 | -   | -   | -   | -   | -   | -   |
|              | TOTAL FC | KG/H | 393      | 401 | 392 | 376 | -   | -   | -   | -   | -   | -   |
| 11000        | TAS      | KT   | 291      | 292 | 293 | 291 | 284 | -   | -   | -   | -   | -   |
|              | TOTAL FC | KG/H | 382      | 389 | 389 | 376 | 361 | -   | -   | -   | -   | -   |
| 10500        | TAS      | KT   | 289      | 292 | 294 | 291 | 291 | 284 | 269 | -   | -   | -   |
|              | TOTAL FC | KG/H | 368      | 374 | 381 | 373 | 361 | 348 | 330 | -   | -   | -   |
| 10000        | TAS      | KT   | 288      | 291 | 293 | 294 | 292 | 290 | 282 | 269 | -   | -   |
|              | TOTAL FC | KG/H | 359      | 363 | 370 | 366 | 357 | 348 | 333 | 316 | -   | -   |
| 9500         | TAS      | KT   | 287      | 290 | 293 | 294 | 292 | 290 | 287 | 281 | 268 | -   |
|              | TOTAL FC | KG/H | 350      | 355 | 364 | 362 | 351 | 342 | 331 | 319 | 302 | -   |
| 9000         | TAS      | KT   | 286      | 289 | 292 | 295 | 292 | 290 | 287 | 282 | 278 | -   |
|              | TOTAL FC | KG/H | 341      | 346 | 350 | 353 | 345 | 336 | 327 | 316 | 304 | -   |
| 8500         | TAS      | KT   | 285      | 288 | 291 | 294 | 293 | 291 | 288 | 284 | 282 | 266 |
|              | TOTAL FC | KG/H | 331      | 335 | 340 | 344 | 339 | 330 | 321 | 311 | 300 | 275 |
| 8000         | TAS      | KT   | 284      | 287 | 290 | 292 | 294 | 292 | 289 | 286 | 284 | 273 |
|              | TOTAL FC | KG/H | 321      | 325 | 329 | 333 | 334 | 325 | 315 | 306 | 295 | 275 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING**
**ALL ENGINES OPERATING**
**PW118A/B ENGINES**
**INTERMEDIATE CRUISE**

CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 32000 FT**

| WEIGHT<br>KG  | ISA + °C  |     |    |   |   |    |    |    |    |    |    |  |
|---|---|-----|----|---|---|----|----|----|----|----|----|--|
|   |   | -10 | -5 | 0 | 5 | 10 | 15 | 20 | 25 | 30 | 40 |  |
| 12000 TAS KT 292 285 - - - - - - -                        | TOTAL FC KG/H 407 391 - - - - - - -                             |     |    |   |   |    |    |    |    |    |    |  |
| 11500 TAS KT 291 291 286 - - - - - - -                    | TOTAL FC KG/H 387 393 377 - - - - - - -                         |     |    |   |   |    |    |    |    |    |    |  |
| 11000 TAS KT 291 292 293 286 - - - - - - -                | TOTAL FC KG/H 375 381 378 363 - - - - - - -                     |     |    |   |   |    |    |    |    |    |    |  |
| 10500 TAS KT 289 293 295 292 287 275 - - - - - - -        | TOTAL FC KG/H 363 371 373 362 349 333 - - - - - - -             |     |    |   |   |    |    |    |    |    |    |  |
| 10000 TAS KT 288 291 295 294 292 287 275 - - - - - - -    | TOTAL FC KG/H 354 358 364 358 347 337 320 - - - - - - -         |     |    |   |   |    |    |    |    |    |    |  |
| 9500 TAS KT 287 290 294 293 291 289 287 274 - - - - - - - | TOTAL FC KG/H 345 350 353 352 342 333 323 306 - - - - - - -     |     |    |   |   |    |    |    |    |    |    |  |
| 9000 TAS KT 286 289 292 294 292 289 286 283 - - - - - - - | TOTAL FC KG/H 333 338 343 345 336 327 317 307 292 - - - - - - - |     |    |   |   |    |    |    |    |    |    |  |
| 8500 TAS KT 283 288 291 294 293 291 287 284 - - - - - - - | TOTAL FC KG/H 319 326 331 335 330 322 313 303 293 - - - - - - - |     |    |   |   |    |    |    |    |    |    |  |
| 8000 TAS KT 283 287 290 293 294 293 290 285 - - - - - - - | TOTAL FC KG/H 310 316 320 325 324 316 307 297 288 - - - - - - - |     |    |   |   |    |    |    |    |    |    |  |

17 MARCH 1999

SUPPLEMENTARY PERFORMANCE  
MANUALFLIGHT PLANNING  
ONE ENGINE INOPERATIVE

PW118A ENGINES

## LONG RANGE CRUISE

## CRUISE CONFIGURATION

NP: 100%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 5000 FT

| WEIGHT<br>KG |       |    | ISA + °C |     |     |     |     |     |     |     |     |     |     |     |
|--------------|-------|----|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |       |    | -60      | -40 | -30 | -20 | -10 | 0   | 10  | 20  | 30  | 40  |     |     |
| 12000        | TAS   | KT | 173      | 182 | 185 | 188 | 192 | 195 | 198 | 200 | 187 | 187 | -   | -   |
|              | TOTAL | FC | KG/H     | 342 | 359 | 365 | 371 | 379 | 385 | 391 | 396 | 367 | -   | -   |
| 11500        | TAS   | KT | 171      | 179 | 183 | 186 | 189 | 193 | 196 | 199 | 191 | 191 | -   | -   |
|              | TOTAL | FC | KG/H     | 330 | 345 | 353 | 358 | 364 | 372 | 378 | 384 | 369 | -   | -   |
| 11000        | TAS   | KT | 169      | 177 | 181 | 184 | 187 | 191 | 194 | 197 | 196 | 196 | 167 | 322 |
|              | TOTAL | FC | KG/H     | 319 | 333 | 341 | 346 | 352 | 360 | 365 | 371 | 370 | -   | -   |
| 10500        | TAS   | KT | 167      | 174 | 178 | 182 | 185 | 188 | 191 | 195 | 197 | 197 | 176 | 323 |
|              | TOTAL | FC | KG/H     | 308 | 320 | 327 | 335 | 340 | 346 | 351 | 359 | 363 | -   | -   |
| 10000        | TAS   | KT | 165      | 172 | 176 | 179 | 183 | 186 | 189 | 192 | 196 | 196 | 182 | 323 |
|              | TOTAL | FC | KG/H     | 297 | 309 | 316 | 322 | 329 | 334 | 340 | 345 | 353 | -   | -   |
| 9500         | TAS   | KT | 163      | 170 | 173 | 177 | 180 | 184 | 187 | 190 | 193 | 193 | 185 | 325 |
|              | TOTAL | FC | KG/H     | 287 | 299 | 304 | 311 | 316 | 323 | 329 | 334 | 339 | -   | -   |
| 9000         | TAS   | KT | 161      | 168 | 171 | 175 | 178 | 181 | 184 | 188 | 191 | 191 | 189 | 325 |
|              | TOTAL | FC | KG/H     | 278 | 289 | 294 | 301 | 306 | 311 | 316 | 323 | 328 | -   | -   |
| 8500         | TAS   | KT | 160      | 166 | 169 | 173 | 176 | 179 | 182 | 185 | 188 | 188 | 191 | 321 |
|              | TOTAL | FC | KG/H     | 270 | 280 | 284 | 291 | 296 | 301 | 306 | 311 | 316 | -   | -   |
| 8000         | TAS   | KT | 157      | 165 | 167 | 170 | 174 | 177 | 180 | 183 | 186 | 186 | 189 | 311 |
|              | TOTAL | FC | KG/H     | 260 | 272 | 275 | 280 | 286 | 291 | 296 | 301 | 306 | -   | -   |



## FLIGHT PLANNING

### ONE ENGINE INOPERATIVE

PW118A ENGINES

#### LONG RANGE CRUISE

##### CRUISE CONFIGURATION

NP: 100%

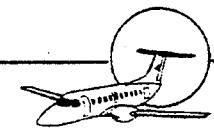
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 6000 FT**

|       |       |      | ISA + °C                          |     |     |     |     |     |     |     |     |     |   |   |
|-------|-------|------|-----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|---|---|
|       |       |      | WEIGHT<br>KG                      |     |     |     |     |     |     |     |     |     |   |   |
|       |       |      | -60 -40 -30 -20 -10 0 10 20 30 40 |     |     |     |     |     |     |     |     |     |   |   |
| TAS   | FC    | KT   | -60                               | -40 | -30 | -20 | -10 | 0   | 10  | 20  | 30  | 40  |   |   |
| 12000 | TOTAL | KG/H | 175                               | 183 | 186 | 190 | 193 | 196 | 199 | 201 | 185 | -   | - | - |
|       |       |      | 340                               | 355 | 361 | 369 | 375 | 381 | 387 | 392 | 357 |     |   |   |
| 11500 | TOTAL | KG/H | 173                               | 180 | 184 | 188 | 191 | 194 | 197 | 200 | 188 | -   | - | - |
|       |       |      | 328                               | 341 | 349 | 356 | 362 | 368 | 374 | 380 | 359 |     |   |   |
| 11000 | TOTAL | KG/H | 170                               | 178 | 182 | 185 | 188 | 192 | 195 | 198 | 195 | -   | - | - |
|       |       |      | 315                               | 329 | 337 | 342 | 348 | 355 | 361 | 367 | 362 |     |   |   |
| 10500 | TOTAL | KG/H | 168                               | 175 | 179 | 183 | 186 | 189 | 193 | 196 | 197 | 174 | - | - |
|       |       |      | 304                               | 316 | 323 | 330 | 336 | 341 | 349 | 354 | 356 | 315 |   |   |
| 10000 | TOTAL | KG/H | 166                               | 173 | 177 | 180 | 184 | 187 | 190 | 194 | 196 | 180 | - | - |
|       |       |      | 293                               | 305 | 312 | 317 | 324 | 329 | 335 | 342 | 346 | 316 |   |   |
| 9500  | TOTAL | KG/H | 163                               | 171 | 174 | 178 | 181 | 185 | 188 | 191 | 194 | 184 | - | - |
|       |       |      | 281                               | 294 | 299 | 306 | 311 | 318 | 323 | 329 | 334 | 317 |   |   |
| 9000  | TOTAL | KG/H | 161                               | 169 | 172 | 176 | 179 | 182 | 185 | 189 | 192 | 189 | - | - |
|       |       |      | 271                               | 284 | 289 | 296 | 301 | 306 | 311 | 318 | 323 | 318 |   |   |
| 8500  | TOTAL | KG/H | 160                               | 166 | 170 | 173 | 176 | 180 | 183 | 186 | 189 | 191 | - | - |
|       |       |      | 264                               | 273 | 279 | 284 | 289 | 295 | 300 | 305 | 310 | 314 |   |   |
| 8000  | TOTAL | KG/H | 158                               | 165 | 168 | 171 | 174 | 178 | 180 | 184 | 187 | 190 | - | - |
|       |       |      | 255                               | 265 | 270 | 274 | 279 | 286 | 289 | 295 | 300 | 305 |   |   |

20 NOVEMBER 1992

SUPPLEMENTARY PERFORMANCE  
MANUALFLIGHT PLANNING  
ONE ENGINE INOPERATIVE

PW118A ENGINES

## LONG RANGE CRUISE

## CRUISE CONFIGURATION

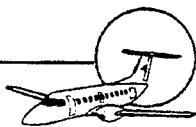
NP: 100%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 7000 FT

| WEIGHT<br>KG |       |    | ISA + °C |     |     |     |     |     |     |     |     |     |     |   |
|--------------|-------|----|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---|
|              |       |    | -60      | -40 | -30 | -20 | -10 | 0   | 10  | 20  | 30  | 40  |     |   |
| 12000        | TAS   | KT | 177      | 184 | 188 | 191 | 194 | 197 | 201 | 202 | 181 | 181 | -   | - |
|              | TOTAL | FC | KG/H     | 339 | 352 | 359 | 365 | 371 | 377 | 386 | 388 | 348 |     |   |
| 11500        | TAS   | KT | 174      | 182 | 186 | 189 | 192 | 195 | 198 | 201 | 188 | 188 | -   | - |
|              | TOTAL | FC | KG/H     | 325 | 339 | 347 | 352 | 358 | 364 | 370 | 376 | 349 |     |   |
| 11000        | TAS   | KT | 171      | 179 | 183 | 186 | 190 | 193 | 196 | 199 | 193 | 193 | -   | - |
|              | TOTAL | FC | KG/H     | 312 | 326 | 333 | 338 | 345 | 351 | 357 | 362 | 352 |     |   |
| 10500        | TAS   | KT | 169      | 177 | 181 | 184 | 187 | 191 | 194 | 197 | 197 | 171 | -   | - |
|              | TOTAL | FC | KG/H     | 300 | 314 | 321 | 326 | 331 | 338 | 344 | 350 | 350 | 307 |   |
| 10000        | TAS   | KT | 167      | 174 | 178 | 182 | 185 | 188 | 191 | 195 | 197 | 179 | -   | - |
|              | TOTAL | FC | KG/H     | 289 | 301 | 308 | 314 | 320 | 325 | 330 | 337 | 341 | 308 |   |
| 9500         | TAS   | KT | 164      | 172 | 175 | 179 | 183 | 186 | 189 | 192 | 196 | 183 | -   | - |
|              | TOTAL | FC | KG/H     | 277 | 290 | 295 | 302 | 308 | 313 | 319 | 324 | 331 | 310 |   |
| 9000         | TAS   | KT | 162      | 169 | 173 | 176 | 180 | 183 | 187 | 190 | 192 | 188 | -   | - |
|              | TOTAL | FC | KG/H     | 267 | 278 | 284 | 289 | 296 | 301 | 308 | 313 | 316 | 310 |   |
| 8500         | TAS   | KT | 160      | 167 | 171 | 174 | 177 | 181 | 184 | 187 | 190 | 192 | -   | - |
|              | TOTAL | FC | KG/H     | 258 | 268 | 275 | 279 | 284 | 290 | 295 | 300 | 305 | 308 |   |
| 8000         | TAS   | KT | 158      | 165 | 168 | 172 | 175 | 178 | 181 | 184 | 188 | 190 | -   | - |
|              | TOTAL | FC | KG/H     | 249 | 259 | 263 | 269 | 274 | 279 | 284 | 288 | 295 | 298 |   |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING**
**ONE ENGINE INOPERATIVE**
**PW118A ENGINES**
**LONG RANGE CRUISE**

## CRUISE CONFIGURATION

NP: 100%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 8000 FT**

|        |       |    | ISA + °C |     |     |     |     |     |     |     |     |     |     |  |
|--------|-------|----|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
|        |       |    | -60      | -40 | -30 | -20 | -10 | 0   | 10  | 20  | 30  | 40  |     |  |
| WEIGHT |       | KG |          |     |     |     |     |     |     |     |     |     |     |  |
| 12000  | TAS   | KT | 179      | 186 | 189 | 193 | 196 | 199 | 202 | 199 | -   | -   |     |  |
|        | TOTAL | FC | KG/H     | 338 | 351 | 356 | 364 | 369 | 376 | 382 | 377 | -   | -   |  |
| 11500  | TAS   | KT | 176      | 183 | 187 | 190 | 194 | 196 | 200 | 202 | 184 | -   |     |  |
|        | TOTAL | FC | KG/H     | 324 | 336 | 343 | 349 | 356 | 360 | 368 | 372 | 339 | -   |  |
| 11000  | TAS   | KT | 173      | 181 | 185 | 188 | 191 | 195 | 197 | 201 | 189 | -   |     |  |
|        | TOTAL | FC | KG/H     | 310 | 324 | 331 | 336 | 341 | 349 | 353 | 360 | 340 | -   |  |
| 10500  | TAS   | KT | 170      | 178 | 182 | 185 | 189 | 192 | 195 | 198 | 196 | -   |     |  |
|        | TOTAL | FC | KG/H     | 297 | 310 | 317 | 322 | 329 | 334 | 340 | 345 | 342 | -   |  |
| 10000  | TAS   | KT | 167      | 175 | 179 | 183 | 186 | 189 | 193 | 196 | 197 | 177 |     |  |
|        | TOTAL | FC | KG/H     | 284 | 297 | 304 | 310 | 315 | 321 | 328 | 333 | 335 | 300 |  |
| 9500   | TAS   | KT | 165      | 173 | 176 | 180 | 184 | 187 | 190 | 194 | 197 | 183 |     |  |
|        | TOTAL | FC | KG/H     | 273 | 286 | 291 | 297 | 304 | 309 | 314 | 321 | 326 | 301 |  |
| 9000   | TAS   | KT | 163      | 170 | 174 | 177 | 181 | 185 | 188 | 191 | 194 | 187 |     |  |
|        | TOTAL | FC | KG/H     | 263 | 274 | 280 | 285 | 291 | 298 | 303 | 308 | 313 | 302 |  |
| 8500   | TAS   | KT | 161      | 168 | 171 | 175 | 178 | 182 | 185 | 188 | 191 | 192 |     |  |
|        | TOTAL | FC | KG/H     | 254 | 264 | 269 | 275 | 279 | 286 | 290 | 295 | 300 | 302 |  |
| 8000   | TAS   | KT | 159      | 166 | 169 | 172 | 176 | 179 | 182 | 186 | 189 | 191 |     |  |
|        | TOTAL | FC | KG/H     | 245 | 255 | 259 | 263 | 269 | 274 | 278 | 285 | 290 | 293 |  |

20 NOVEMBER 1992



EMBRAER  
EMB120 Brasilia

FLIGHT PLANNING

SUPPLEMENTARY PERFORMANCE  
MANUAL

FLIGHT PLANNING  
ONE ENGINE INOPERATIVE

PW118A ENGINES

LONG RANGE CRUISE

CRUISE CONFIGURATION

NP: 100%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 9000 FT

| WEIGHT<br>KG |          |      | ISA + °C |     |     |     |     |     |     |     |     |     |   |  |
|--------------|----------|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|---|--|
|              |          |      | -60      | -40 | -30 | -20 | -10 | 0   | 10  | 20  | 30  | 40  |   |  |
| 12000        | TAS      | KT   | 180      | 187 | 191 | 194 | 197 | 201 | 203 | 196 | -   | -   |   |  |
|              | TOTAL FC | KG/H | 335      | 348 | 355 | 361 | 367 | 375 | 379 | 367 |     |     |   |  |
| 11500        | TAS      | KT   | 178      | 185 | 189 | 192 | 195 | 198 | 202 | 203 | 180 | -   | - |  |
|              | TOTAL FC | KG/H | 323      | 335 | 342 | 347 | 353 | 359 | 367 | 369 | 330 |     |   |  |
| 11000        | TAS      | KT   | 175      | 183 | 186 | 189 | 193 | 195 | 199 | 202 | 189 | -   | - |  |
|              | TOTAL FC | KG/H | 309      | 322 | 327 | 333 | 340 | 343 | 351 | 357 | 331 |     |   |  |
| 10500        | TAS      | KT   | 171      | 180 | 183 | 187 | 190 | 194 | 196 | 199 | 194 | -   | - |  |
|              | TOTAL FC | KG/H | 293      | 308 | 313 | 320 | 325 | 332 | 336 | 342 | 334 |     |   |  |
| 10000        | TAS      | KT   | 169      | 177 | 181 | 184 | 187 | 191 | 195 | 197 | 198 | 174 |   |  |
|              | TOTAL FC | KG/H | 282      | 295 | 302 | 306 | 311 | 318 | 325 | 329 | 331 | 291 |   |  |
| 9500         | TAS      | KT   | 166      | 174 | 178 | 182 | 185 | 188 | 191 | 195 | 197 | 181 |   |  |
|              | TOTAL FC | KG/H | 270      | 282 | 289 | 295 | 300 | 305 | 310 | 316 | 320 | 292 |   |  |
| 9000         | TAS      | KT   | 164      | 171 | 175 | 179 | 182 | 186 | 189 | 192 | 195 | 186 |   |  |
|              | TOTAL FC | KG/H | 260      | 270 | 276 | 283 | 287 | 293 | 298 | 303 | 308 | 294 |   |  |
| 8500         | TAS      | KT   | 161      | 169 | 173 | 176 | 179 | 183 | 186 | 189 | 192 | 191 |   |  |
|              | TOTAL FC | KG/H | 248      | 260 | 266 | 270 | 275 | 281 | 286 | 290 | 295 | 294 |   |  |
| 8000         | TAS      | KT   | 159      | 166 | 170 | 173 | 177 | 180 | 183 | 187 | 190 | 192 |   |  |
|              | TOTAL FC | KG/H | 239      | 249 | 254 | 259 | 265 | 269 | 274 | 280 | 284 | 288 |   |  |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING**
**ONE ENGINE INOPERATIVE**
**PW118A ENGINES**
**LONG RANGE CRUISE**

## CRUISE CONFIGURATION

NP: 100%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 10000 FT**

| WEIGHT<br>KG            | ISA + °C   |            |            |            |            |            |            |            |            |            |        |  |
|-------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--------|--|
|                         |            | -50        | -40        | -30        | -20        | -10        | 0          | 10         | 20         | 30         | 40     |  |
| 12000 TAS TOTAL FC KG/H | 186<br>342 | 189<br>347 | 193<br>354 | 196<br>360 | 199<br>366 | 202<br>372 | 203<br>374 | 194<br>356 | -<br>-     | -<br>-     | -<br>- |  |
| 11500 TAS TOTAL FC KG/H | 183<br>327 | 187<br>334 | 190<br>339 | 194<br>346 | 197<br>352 | 200<br>358 | 202<br>362 | 199<br>357 | -<br>-     | -<br>-     | -<br>- |  |
| 11000 TAS TOTAL FC KG/H | 180<br>312 | 184<br>319 | 188<br>326 | 191<br>331 | 194<br>336 | 197<br>342 | 201<br>349 | 202<br>352 | 185<br>322 | -<br>-     | -<br>- |  |
| 10500 TAS TOTAL FC KG/H | 178<br>300 | 182<br>307 | 185<br>312 | 188<br>317 | 192<br>323 | 195<br>329 | 198<br>334 | 201<br>340 | 190<br>322 | -<br>-     | -<br>- |  |
| 10000 TAS TOTAL FC KG/H | 174<br>285 | 178<br>292 | 182<br>298 | 185<br>303 | 189<br>309 | 192<br>315 | 196<br>321 | 198<br>325 | 197<br>324 | -<br>-     | -<br>- |  |
| 9500 TAS TOTAL FC KG/H  | 171<br>273 | 175<br>279 | 179<br>285 | 183<br>291 | 186<br>296 | 189<br>301 | 193<br>307 | 196<br>312 | 198<br>316 | 178<br>284 | -<br>- |  |
| 9000 TAS TOTAL FC KG/H  | 169<br>262 | 172<br>266 | 176<br>272 | 180<br>279 | 184<br>285 | 187<br>289 | 190<br>294 | 193<br>299 | 197<br>305 | 186<br>285 | -<br>- |  |
| 8500 TAS TOTAL FC KG/H  | 166<br>250 | 170<br>256 | 173<br>261 | 177<br>266 | 181<br>272 | 184<br>277 | 188<br>283 | 190<br>286 | 193<br>291 | 191<br>288 | -<br>- |  |
| 8000 TAS TOTAL FC KG/H  | 163<br>239 | 167<br>245 | 171<br>250 | 174<br>255 | 178<br>260 | 181<br>265 | 185<br>271 | 188<br>275 | 191<br>280 | 192<br>281 | -<br>- |  |

20 NOVEMBER 1992

SUPPLEMENTARY PERFORMANCE  
MANUALFLIGHT PLANNING  
ONE ENGINE INOPERATIVE

PW118A ENGINES

## LONG RANGE CRUISE

## CRUISE CONFIGURATION

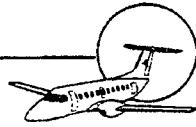
NP: 100%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 11000 FT

| WEIGHT<br>KG |              |    | ISA + °C   |            |            |            |            |            |            |            |            |            |            |     |
|--------------|--------------|----|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-----|
|              |              |    | -50        | -40        | -30        | -20        | -10        | 0          | 10         | 20         | 30         | 40         |            |     |
| 12000        | TAS<br>TOTAL | FC | KT<br>KG/H | 187<br>339 | 191<br>347 | 195<br>354 | 198<br>360 | 201<br>365 | 203<br>369 | 202<br>369 | 189<br>345 | -          | -          | -   |
| 11500        | TAS<br>TOTAL | FC | KT<br>KG/H | 185<br>326 | 188<br>331 | 192<br>338 | 195<br>343 | 199<br>351 | 201<br>355 | 203<br>359 | 196<br>348 | -          | -          | -   |
| 11000        | TAS<br>TOTAL | FC | KT<br>KG/H | 182<br>311 | 186<br>318 | 189<br>323 | 193<br>330 | 195<br>333 | 199<br>341 | 202<br>347 | 203<br>349 | 181<br>313 | -          | -   |
| 10500        | TAS<br>TOTAL | FC | KT<br>KG/H | 179<br>298 | 183<br>304 | 186<br>309 | 190<br>315 | 193<br>320 | 196<br>325 | 200<br>333 | 202<br>337 | 190<br>314 | -          | -   |
| 10000        | TAS<br>TOTAL | FC | KT<br>KG/H | 176<br>284 | 180<br>290 | 184<br>296 | 187<br>301 | 190<br>306 | 194<br>313 | 196<br>316 | 200<br>323 | 195<br>315 | -          | -   |
| 9500         | TAS<br>TOTAL | FC | KT<br>KG/H | 172<br>269 | 177<br>277 | 181<br>283 | 184<br>288 | 188<br>294 | 191<br>299 | 194<br>304 | 197<br>309 | 198<br>310 | 175<br>276 | 184 |
| 9000         | TAS<br>TOTAL | FC | KT<br>KG/H | 170<br>259 | 173<br>263 | 177<br>269 | 182<br>277 | 185<br>281 | 188<br>285 | 192<br>292 | 195<br>296 | 198<br>301 | 184<br>277 | 184 |
| 8500         | TAS<br>TOTAL | FC | KT<br>KG/H | 167<br>247 | 171<br>252 | 175<br>258 | 178<br>263 | 182<br>268 | 186<br>274 | 189<br>279 | 192<br>283 | 195<br>288 | 188<br>278 | 188 |
| 8000         | TAS<br>TOTAL | FC | KT<br>KG/H | 164<br>236 | 168<br>241 | 172<br>247 | 175<br>251 | 179<br>256 | 182<br>261 | 186<br>266 | 189<br>271 | 192<br>275 | 194<br>278 | 194 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING**
**ONE ENGINE INOPERATIVE**
**PW118A ENGINES**
**LONG RANGE CRUISE**

## CRUISE CONFIGURATION

NP: 100%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 12000 FT**

| WEIGHT<br>KG               | ISA + °C   |            |            |            |            |            |            |            |            |            |  |  |
|----------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--|--|
|                            | -50        | -40        | -30        | -20        | -10        | 0          | 10         | 20         | 30         | 40         |  |  |
| 12000 TAS TOTAL FC KT KG/H | 189<br>339 | 193<br>346 | 197<br>353 | 199<br>357 | 202<br>363 | 203<br>366 | 200<br>363 | -<br>-     | -<br>-     | -<br>-     |  |  |
| 11500 TAS TOTAL FC KT KG/H | 186<br>324 | 190<br>331 | 194<br>337 | 197<br>343 | 200<br>349 | 202<br>352 | 203<br>355 | 193<br>337 | -<br>-     | -<br>-     |  |  |
| 11000 TAS TOTAL FC KT KG/H | 184<br>311 | 187<br>316 | 191<br>322 | 194<br>327 | 198<br>334 | 201<br>340 | 202<br>342 | 200<br>340 | -<br>-     | -<br>-     |  |  |
| 10500 TAS TOTAL FC KT KG/H | 181<br>296 | 185<br>303 | 188<br>308 | 191<br>312 | 195<br>319 | 198<br>324 | 201<br>330 | 202<br>332 | 186<br>305 | -<br>-     |  |  |
| 10000 TAS TOTAL FC KT KG/H | 178<br>283 | 182<br>289 | 185<br>294 | 189<br>300 | 192<br>305 | 195<br>309 | 198<br>314 | 202<br>321 | 193<br>308 | -<br>-     |  |  |
| 9500 TAS TOTAL FC KT KG/H  | 174<br>268 | 179<br>276 | 182<br>280 | 185<br>284 | 189<br>291 | 192<br>295 | 196<br>302 | 198<br>305 | 200<br>309 | -<br>-     |  |  |
| 9000 TAS TOTAL FC KT KG/H  | 171<br>256 | 175<br>261 | 179<br>267 | 183<br>273 | 186<br>277 | 189<br>282 | 193<br>288 | 196<br>293 | 198<br>296 | 181<br>269 |  |  |
| 8500 TAS TOTAL FC KT KG/H  | 168<br>244 | 172<br>249 | 176<br>255 | 180<br>260 | 184<br>266 | 186<br>269 | 190<br>275 | 193<br>279 | 197<br>285 | 187<br>271 |  |  |
| 8000 TAS TOTAL FC KT KG/H  | 165<br>232 | 169<br>238 | 173<br>243 | 176<br>247 | 180<br>253 | 184<br>258 | 187<br>262 | 190<br>267 | 193<br>271 | 194<br>273 |  |  |

20 NOVEMBER 1992

SUPPLEMENTARY PERFORMANCE  
MANUALFLIGHT PLANNING  
ONE ENGINE INOPERATIVE

PW118A ENGINES

## LONG RANGE CRUISE

CRUISE CONFIGURATION  
NP: 100%  
BLEED SWITCH: AUTO  
PACK CONTROL SELECTOR: LOW

ALTITUDE: 13000 FT

| WEIGHT<br>KG | TAS   | FC | KT<br>KG/H | ISA + °C |     |     |     |     |     |     |     |     |     |
|--------------|-------|----|------------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |       |    |            | -50      | -40 | -30 | -20 | -10 | 0   | 10  | 20  | 30  | 40  |
| 12000        | TAS   | FC | KT<br>KG/H | 190      | 194 | 197 | 200 | 203 | 204 | 195 | -   | -   | -   |
|              | TOTAL |    | 337        | 344      | 350 | 356 | 362 | 365 | 353 | -   | -   | -   | -   |
| 11500        | TAS   | FC | KT<br>KG/H | 188      | 192 | 195 | 198 | 201 | 203 | 203 | 187 | -   | -   |
|              | TOTAL |    | 323        | 330      | 335 | 341 | 346 | 351 | 352 | 326 | -   | -   | -   |
| 11000        | TAS   | FC | KT<br>KG/H | 185      | 189 | 193 | 196 | 200 | 201 | 204 | 194 | -   | -   |
|              | TOTAL |    | 308        | 315      | 322 | 327 | 334 | 336 | 342 | 327 | -   | -   | -   |
| 10500        | TAS   | FC | KT<br>KG/H | 183      | 186 | 190 | 193 | 196 | 200 | 202 | 203 | -   | -   |
|              | TOTAL |    | 296        | 300      | 307 | 312 | 316 | 323 | 327 | 329 | -   | -   | -   |
| 10000        | TAS   | FC | KT<br>KG/H | 180      | 183 | 187 | 190 | 194 | 196 | 200 | 203 | 191 | -   |
|              | TOTAL |    | 282        | 286      | 292 | 297 | 303 | 306 | 313 | 319 | 297 | -   | -   |
| 9500         | TAS   | FC | KT<br>KG/H | 176      | 180 | 184 | 187 | 190 | 194 | 196 | 201 | 197 | -   |
|              | TOTAL |    | 267        | 273      | 278 | 283 | 288 | 294 | 297 | 305 | 299 | -   | -   |
| 9000         | TAS   | FC | KT<br>KG/H | 173      | 177 | 181 | 184 | 187 | 191 | 194 | 197 | 199 | 178 |
|              | TOTAL |    | 254        | 260      | 265 | 270 | 274 | 280 | 284 | 289 | 292 | 292 | 261 |
| 8500         | TAS   | FC | KT<br>KG/H | 169      | 173 | 177 | 181 | 185 | 188 | 191 | 195 | 197 | 186 |
|              | TOTAL |    | 240        | 246      | 252 | 257 | 263 | 267 | 271 | 277 | 280 | 280 | 262 |
| 8000         | TAS   | FC | KT<br>KG/H | 166      | 170 | 174 | 178 | 182 | 185 | 188 | 191 | 195 | 191 |
|              | TOTAL |    | 229        | 234      | 239 | 245 | 250 | 254 | 259 | 263 | 268 | 268 | 263 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING**
**ONE ENGINE INOPERATIVE**
**PW118A ENGINES**
**LONG RANGE CRUISE**

## CRUISE CONFIGURATION

NP: 100%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 14000 FT**

|        |       |    | ISA + °C |     |     |     |     |     |     |     |     |     |     |  |
|--------|-------|----|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
|        |       |    | -50      | -40 | -30 | -20 | -10 | 0   | 10  | 20  | 30  | 40  |     |  |
| WEIGHT |       | KG |          |     |     |     |     |     |     |     |     |     |     |  |
| 12000  | TAS   | KT | 192      | 195 | 199 | 202 | 203 | 203 | 190 | -   | -   | -   |     |  |
|        | TOTAL | FC | KG/H     | 337 | 342 | 350 | 356 | 359 | 361 | 342 | -   | -   | -   |  |
| 11500  | TAS   | KT | 190      | 193 | 197 | 200 | 202 | 204 | 199 | -   | -   | -   |     |  |
|        | TOTAL | FC | KG/H     | 323 | 328 | 335 | 341 | 345 | 349 | 344 | -   | -   | -   |  |
| 11000  | TAS   | KT | 187      | 191 | 195 | 198 | 201 | 203 | 202 | 192 | -   | -   |     |  |
|        | TOTAL | FC | KG/H     | 308 | 314 | 321 | 326 | 332 | 335 | 318 | -   | -   | -   |  |
| 10500  | TAS   | KT | 184      | 188 | 192 | 195 | 198 | 201 | 203 | 200 | -   | -   |     |  |
|        | TOTAL | FC | KG/H     | 293 | 300 | 306 | 311 | 316 | 321 | 325 | 321 | -   | -   |  |
| 10000  | TAS   | KT | 181      | 185 | 189 | 192 | 195 | 199 | 202 | 202 | 187 | -   |     |  |
|        | TOTAL | FC | KG/H     | 279 | 285 | 291 | 296 | 301 | 307 | 312 | 313 | 289 | -   |  |
| 9500   | TAS   | KT | 178      | 182 | 186 | 189 | 192 | 195 | 199 | 202 | 193 | -   |     |  |
|        | TOTAL | FC | KG/H     | 266 | 272 | 277 | 282 | 286 | 291 | 297 | 302 | 289 | -   |  |
| 9000   | TAS   | KT | 175      | 179 | 182 | 186 | 189 | 192 | 196 | 198 | 200 | 173 |     |  |
|        | TOTAL | FC | KG/H     | 253 | 258 | 262 | 268 | 272 | 277 | 283 | 286 | 289 | 253 |  |
| 8500   | TAS   | KT | 171      | 175 | 179 | 183 | 186 | 189 | 193 | 196 | 199 | 184 |     |  |
|        | TOTAL | FC | KG/H     | 239 | 244 | 250 | 255 | 259 | 263 | 274 | 278 | 255 | 255 |  |
| 8000   | TAS   | KT | 167      | 172 | 175 | 179 | 183 | 186 | 189 | 193 | 196 | 189 |     |  |
|        | TOTAL | FC | KG/H     | 226 | 233 | 236 | 242 | 247 | 251 | 255 | 261 | 265 | 255 |  |

20 NOVEMBER 1992

SUPPLEMENTARY PERFORMANCE  
MANUALFLIGHT PLANNING  
ONE ENGINE INOPERATIVE

PW118A ENGINES

## LONG RANGE CRUISE

## CRUISE CONFIGURATION

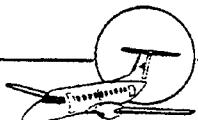
NP: 100%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 15000 FT

| WEIGHT<br>KG |              |    | ISA + °C   |            |            |            |            |            |            |            |            |            |            |   |
|--------------|--------------|----|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---|
|              |              |    | -40        | -30        | -20        | -10        | -5         | 0          | 10         | 20         | 30         | 40         |            |   |
| 12000        | TAS<br>TOTAL | FC | KT<br>KG/H | 196<br>341 | 200<br>349 | 202<br>354 | 204<br>360 | 203<br>359 | 200<br>356 | -          | -          | -          | -          | - |
| 11500        | TAS<br>TOTAL | FC | KT<br>KG/H | 195<br>328 | 198<br>334 | 201<br>340 | 203<br>344 | 203<br>345 | 203<br>346 | 194<br>333 | -          | -          | -          | - |
| 11000        | TAS<br>TOTAL | FC | KT<br>KG/H | 193<br>314 | 196<br>319 | 199<br>325 | 202<br>330 | 203<br>332 | 203<br>332 | 203<br>335 | -          | -          | -          | - |
| 10500        | TAS<br>TOTAL | FC | KT<br>KG/H | 190<br>299 | 193<br>304 | 197<br>310 | 200<br>316 | 201<br>317 | 202<br>319 | 203<br>321 | 194<br>310 | -          | -          | - |
| 10000        | TAS<br>TOTAL | FC | KT<br>KG/H | 187<br>285 | 190<br>289 | 194<br>295 | 197<br>300 | 199<br>303 | 200<br>305 | 202<br>308 | 202<br>309 | 182<br>280 | -          | - |
| 9500         | TAS<br>TOTAL | FC | KT<br>KG/H | 184<br>271 | 187<br>275 | 191<br>281 | 194<br>285 | 196<br>288 | 197<br>290 | 200<br>295 | 203<br>299 | 192<br>281 | -          | - |
| 9000         | TAS<br>TOTAL | FC | KT<br>KG/H | 180<br>256 | 184<br>261 | 187<br>265 | 191<br>271 | 192<br>273 | 194<br>275 | 197<br>280 | 201<br>286 | 198<br>282 | -          | - |
| 8500         | TAS<br>TOTAL | FC | KT<br>KG/H | 177<br>243 | 181<br>248 | 184<br>252 | 188<br>258 | 189<br>259 | 191<br>262 | 194<br>266 | 197<br>270 | 199<br>274 | 180<br>247 | - |
| 8000         | TAS<br>TOTAL | FC | KT<br>KG/H | 173<br>230 | 177<br>235 | 181<br>240 | 184<br>244 | 186<br>246 | 187<br>247 | 191<br>253 | 194<br>257 | 197<br>261 | 187<br>249 | - |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING**
**ONE ENGINE INOPERATIVE**
**PW118A ENGINES**
**LONG RANGE CRUISE**

## CRUISE CONFIGURATION

NP: 100%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 16000 FT**

|        |       |    | ISA + °C |     |     |     |     |     |     |     |     |     |     |   |
|--------|-------|----|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---|
|        |       |    | -40      | -30 | -20 | -10 | -5  | 0   | 10  | 20  | 30  | 40  |     |   |
| WEIGHT | KG    |    |          |     |     |     |     |     |     |     |     |     |     |   |
| 12000  | TAS   | KT | 198      | 202 | 204 | 203 | 202 | 193 | -   | -   | -   | -   | -   | - |
|        | TOTAL | FC | KG/H     | 342 | 351 | 356 | 357 | 358 | 344 | -   | -   | -   | -   | - |
| 11500  | TAS   | KT | 196      | 200 | 202 | 204 | 204 | 204 | -   | -   | -   | -   | -   | - |
|        | TOTAL | FC | KG/H     | 327 | 335 | 339 | 344 | 345 | 347 | -   | -   | -   | -   | - |
| 11000  | TAS   | KT | 194      | 197 | 200 | 203 | 203 | 204 | 197 | -   | -   | -   | -   | - |
|        | TOTAL | FC | KG/H     | 313 | 318 | 323 | 329 | 330 | 332 | 324 | -   | -   | -   | - |
| 10500  | TAS   | KT | 191      | 195 | 198 | 200 | 202 | 203 | 203 | 190 | -   | -   | -   | - |
|        | TOTAL | FC | KG/H     | 297 | 303 | 309 | 312 | 316 | 318 | 319 | 299 | -   | -   | - |
| 10000  | TAS   | KT | 188      | 192 | 196 | 199 | 200 | 201 | 204 | 199 | -   | -   | -   | - |
|        | TOTAL | FC | KG/H     | 282 | 289 | 295 | 300 | 301 | 303 | 308 | 302 | -   | -   | - |
| 9500   | TAS   | KT | 185      | 189 | 193 | 196 | 197 | 199 | 202 | 202 | 188 | -   | -   | - |
|        | TOTAL | FC | KG/H     | 268 | 274 | 280 | 284 | 286 | 289 | 294 | 273 | -   | -   | - |
| 9000   | TAS   | KT | 182      | 186 | 189 | 193 | 194 | 195 | 199 | 202 | 196 | -   | -   | - |
|        | TOTAL | FC | KG/H     | 255 | 260 | 264 | 270 | 271 | 273 | 279 | 283 | 276 | -   | - |
| 8500   | TAS   | KT | 179      | 182 | 186 | 189 | 191 | 193 | 196 | 198 | 201 | 175 | -   | - |
|        | TOTAL | FC | KG/H     | 242 | 246 | 251 | 255 | 258 | 260 | 265 | 268 | 272 | 239 | - |
| 8000   | TAS   | KT | 174      | 179 | 183 | 185 | 187 | 189 | 192 | 196 | 198 | 186 | -   | - |
|        | TOTAL | FC | KG/H     | 227 | 233 | 238 | 241 | 243 | 246 | 250 | 255 | 258 | 241 | - |

20 NOVEMBER 1992

SUPPLEMENTARY PERFORMANCE  
MANUALFLIGHT PLANNING  
ONE ENGINE INOPERATIVE

PW118A ENGINES

## LONG RANGE CRUISE

## CRUISE CONFIGURATION

NP: 100%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 17000 FT

| WEIGHT<br>KG | TAS<br>TOTAL FC | KT<br>KG/H | ISA + °C   |            |            |            |            |            |            |            |            |            |
|--------------|-----------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|              |                 |            | -40        | -30        | -20        | -10        | -5         | 0          | 10         | 20         | 30         | 40         |
| 12000        | TAS<br>TOTAL FC | KT<br>KG/H | 200<br>344 | 203<br>351 | 204<br>355 | 203<br>359 | 194<br>345 | -          | -          | -          | -          | -          |
| 11500        | TAS<br>TOTAL FC | KT<br>KG/H | 197<br>326 | 201<br>334 | 203<br>339 | 204<br>343 | 203<br>343 | 195<br>334 | -          | -          | -          | -          |
| 11000        | TAS<br>TOTAL FC | KT<br>KG/H | 195<br>311 | 198<br>317 | 202<br>324 | 204<br>329 | 204<br>330 | 203<br>329 | -          | -          | -          | -          |
| 10500        | TAS<br>TOTAL FC | KT<br>KG/H | 193<br>297 | 196<br>302 | 200<br>309 | 202<br>313 | 204<br>316 | 203<br>315 | 201<br>315 | -          | -          | -          |
| 10000        | TAS<br>TOTAL FC | KT<br>KG/H | 190<br>282 | 194<br>288 | 197<br>293 | 200<br>298 | 202<br>301 | 203<br>303 | 203<br>304 | 195<br>291 | -          | -          |
| 9500         | TAS<br>TOTAL FC | KT<br>KG/H | 187<br>268 | 191<br>274 | 194<br>278 | 197<br>282 | 199<br>285 | 201<br>289 | 202<br>290 | 202<br>291 | -          | -          |
| 9000         | TAS<br>TOTAL FC | KT<br>KG/H | 184<br>254 | 187<br>258 | 191<br>264 | 194<br>268 | 196<br>271 | 198<br>274 | 200<br>276 | 203<br>281 | 193<br>266 | -          |
| 8500         | TAS<br>TOTAL FC | KT<br>KG/H | 180<br>239 | 184<br>244 | 188<br>250 | 191<br>254 | 192<br>255 | 194<br>258 | 197<br>262 | 201<br>268 | 200<br>267 | -          |
| 8000         | TAS<br>TOTAL FC | KT<br>KG/H | 176<br>226 | 181<br>232 | 184<br>236 | 188<br>241 | 189<br>242 | 190<br>243 | 194<br>248 | 197<br>252 | 200<br>257 | 183<br>233 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING  
ONE ENGINE INOPERATIVE**

PW118A ENGINES

**LONG RANGE CRUISE**

## CRUISE CONFIGURATION

NP: 100%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 18000 FT**

| WEIGHT<br>KG |       |    |      | ISA + °C |     |     |     |     |     |     |     |     |     |
|--------------|-------|----|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |       |    |      | -40      | -30 | -20 | -10 | -5  | 0   | 10  | 20  | 30  | 40  |
| 12000        | TAS   | KT | KG/H | 201      | 204 | 204 | -   | -   | -   | -   | -   | -   | -   |
|              | TOTAL | FC | KG/H | 344      | 352 | 356 | -   | -   | -   | -   | -   | -   | -   |
| 11500        | TAS   | KT | KG/H | 199      | 202 | 204 | 203 | 197 | -   | -   | -   | -   | -   |
|              | TOTAL | FC | KG/H | 328      | 334 | 340 | 342 | 336 | -   | -   | -   | -   | -   |
| 11000        | TAS   | KT | KG/H | 197      | 200 | 203 | 204 | 203 | 199 | -   | -   | -   | -   |
|              | TOTAL | FC | KG/H | 312      | 318 | 324 | 328 | 327 | 324 | -   | -   | -   | -   |
| 10500        | TAS   | KT | KG/H | 194      | 197 | 201 | 204 | 203 | 203 | 194 | -   | -   | -   |
|              | TOTAL | FC | KG/H | 296      | 301 | 308 | 314 | 313 | 314 | 303 | -   | -   | -   |
| 10000        | TAS   | KT | KG/H | 191      | 196 | 198 | 202 | 202 | 203 | 203 | 188 | -   | -   |
|              | TOTAL | FC | KG/H | 281      | 288 | 291 | 298 | 298 | 300 | 302 | 281 | -   | -   |
| 9500         | TAS   | KT | KG/H | 189      | 192 | 196 | 199 | 200 | 201 | 204 | 199 | -   | -   |
|              | TOTAL | FC | KG/H | 267      | 272 | 277 | 282 | 284 | 285 | 290 | 285 | -   | -   |
| 9000         | TAS   | KT | KG/H | 186      | 189 | 193 | 196 | 198 | 199 | 202 | 202 | 189 | -   |
|              | TOTAL | FC | KG/H | 253      | 257 | 263 | 267 | 270 | 271 | 276 | 276 | 257 | -   |
| 8500         | TAS   | KT | KG/H | 182      | 186 | 189 | 193 | 195 | 196 | 200 | 202 | 196 | -   |
|              | TOTAL | FC | KG/H | 239      | 244 | 248 | 253 | 256 | 257 | 263 | 265 | 258 | -   |
| 8000         | TAS   | KT | KG/H | 178      | 182 | 186 | 189 | 191 | 193 | 195 | 198 | 200 | 177 |
|              | TOTAL | FC | KG/H | 224      | 229 | 234 | 238 | 241 | 243 | 246 | 250 | 253 | 226 |

20 NOVEMBER 1992

SUPPLEMENTARY PERFORMANCE  
MANUALFLIGHT PLANNING  
ONE ENGINE INOPERATIVE

PW118A ENGINES

## LONG RANGE CRUISE

## CRUISE CONFIGURATION

NP: 100%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 19000 FT

| WEIGHT<br>KG | TAS<br>TOTAL FC | KT<br>KG/H | ISA + °C   |            |            |            |            |            |            |            |            |    |
|--------------|-----------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|----|
|              |                 |            | -40        | -30        | -20        | -10        | -5         | 0          | 10         | 20         | 30         | 40 |
| 12000        | TAS<br>TOTAL FC | KT<br>KG/H | 203<br>347 | 205<br>354 | 204<br>359 | -          | -          | -          | -          | -          | -          | -  |
| 11500        | TAS<br>TOTAL FC | KT<br>KG/H | 201<br>330 | 203<br>335 | 204<br>340 | 197<br>336 | -          | -          | -          | -          | -          | -  |
| 11000        | TAS<br>TOTAL FC | KT<br>KG/H | 198<br>312 | 201<br>318 | 205<br>326 | 203<br>326 | 201<br>326 | -          | -          | -          | -          | -  |
| 10500        | TAS<br>TOTAL FC | KT<br>KG/H | 195<br>295 | 200<br>304 | 202<br>308 | 203<br>311 | 203<br>312 | 204<br>316 | -          | -          | -          | -  |
| 10000        | TAS<br>TOTAL FC | KT<br>KG/H | 193<br>281 | 197<br>287 | 200<br>292 | 202<br>296 | 203<br>298 | 204<br>300 | 197<br>293 | -          | -          | -  |
| 9500         | TAS<br>TOTAL FC | KT<br>KG/H | 191<br>267 | 194<br>271 | 197<br>276 | 200<br>281 | 201<br>282 | 203<br>286 | 202<br>285 | 193<br>274 | -          | -  |
| 9000         | TAS<br>TOTAL FC | KT<br>KG/H | 187<br>251 | 191<br>257 | 194<br>261 | 198<br>267 | 199<br>268 | 201<br>271 | 202<br>273 | 202<br>274 | -          | -  |
| 8500         | TAS<br>TOTAL FC | KT<br>KG/H | 184<br>238 | 188<br>243 | 192<br>248 | 195<br>252 | 196<br>253 | 198<br>256 | 201<br>260 | 203<br>263 | 194<br>250 | -  |
| 8000         | TAS<br>TOTAL FC | KT<br>KG/H | 180<br>224 | 184<br>228 | 188<br>233 | 191<br>237 | 192<br>238 | 194<br>241 | 197<br>245 | 201<br>250 | 201<br>250 | -  |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**FLIGHT PLANNING**
**ONE ENGINE INOPERATIVE**
**PW118A ENGINES**
**LONG RANGE CRUISE**

CRUISE CONFIGURATION

NP: 100%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 20000 FT**

|        |       |    |      | ISA + °C |     |     |     |     |     |     |     |     |    |
|--------|-------|----|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|----|
|        |       |    |      | -30      | -20 | -15 | -10 | -5  | 0   | 10  | 20  | 30  | 40 |
| WEIGHT | KG    |    |      |          |     |     |     |     |     |     |     |     |    |
| 12000  | TAS   | KT | KG/H | 204      | -   | -   | -   | -   | -   | -   | -   | -   | -  |
|        | TOTAL | FC | KG/H | 354      |     |     |     |     |     |     |     |     |    |
| 11500  | TAS   | KT | KG/H | 205      | 204 | 197 | -   | -   | -   | -   | -   | -   | -  |
|        | TOTAL | FC | KG/H | 339      | 342 | 336 | -   | -   | -   | -   | -   | -   | -  |
| 11000  | TAS   | KT | KG/H | 203      | 204 | 203 | 200 | -   | -   | -   | -   | -   | -  |
|        | TOTAL | FC | KG/H | 320      | 324 | 325 | 324 | -   | -   | -   | -   | -   | -  |
| 10500  | TAS   | KT | KG/H | 201      | 203 | 204 | 204 | 203 | 195 | -   | -   | -   | -  |
|        | TOTAL | FC | KG/H | 303      | 308 | 311 | 312 | 313 | 304 | -   | -   | -   | -  |
| 10000  | TAS   | KT | KG/H | 198      | 202 | 202 | 203 | 204 | 203 | 191 | -   | -   | -  |
|        | TOTAL | FC | KG/H | 286      | 293 | 293 | 296 | 298 | 298 | 283 | -   | -   | -  |
| 9500   | TAS   | KT | KG/H | 195      | 199 | 200 | 202 | 203 | 203 | 202 | -   | -   | -  |
|        | TOTAL | FC | KG/H | 270      | 276 | 278 | 281 | 283 | 284 | 284 | -   | -   | -  |
| 9000   | TAS   | KT | KG/H | 193      | 197 | 198 | 199 | 201 | 202 | 203 | 197 | -   | -  |
|        | TOTAL | FC | KG/H | 257      | 262 | 264 | 265 | 268 | 270 | 272 | 266 | -   | -  |
| 8500   | TAS   | KT | KG/H | 189      | 193 | 195 | 196 | 198 | 200 | 202 | 202 | 189 | -  |
|        | TOTAL | FC | KG/H | 241      | 246 | 249 | 250 | 253 | 256 | 259 | 259 | 241 | -  |
| 8000   | TAS   | KT | KG/H | 186      | 189 | 191 | 193 | 194 | 196 | 199 | 202 | 198 | -  |
|        | TOTAL | FC | KG/H | 228      | 231 | 234 | 236 | 237 | 240 | 244 | 248 | 243 | -  |

20 NOVEMBER 1992



**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CRUISE CONTROL  
ALL ENGINES OPERATING**

**PW118A ENGINES**

**LONG RANGE CRUISE**

**CRUISE CONFIGURATION**

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 5000 FT**

| WEIGHT<br>KG | IAS<br>KT<br>F FLOW<br>KG/H/ENG | TORQUE<br>%<br>F FLOW<br>KG/H/ENG | IOAT ( °C )      |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|--------------|---------------------------------|-----------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|              |                                 |                                   | -50              | -30              | -20              | -10              | 0                | 10               | 20               | 30               | 40               | 50               |
| 12000        | IAS<br>TORQUE<br>F FLOW         | KT<br>%<br>KG/H/ENG               | 217<br>52<br>229 | 216<br>54<br>239 | 217<br>55<br>244 | 217<br>56<br>249 | 217<br>57<br>253 | 216<br>58<br>256 | 215<br>58<br>261 | 215<br>59<br>265 | 215<br>60<br>269 | 214<br>61<br>273 |
| 11500        | IAS<br>TORQUE<br>F FLOW         | KT<br>%<br>KG/H/ENG               | 216<br>51<br>227 | 214<br>52<br>235 | 215<br>54<br>240 | 215<br>55<br>245 | 215<br>55<br>248 | 214<br>56<br>253 | 213<br>57<br>256 | 213<br>57<br>260 | 213<br>58<br>265 | 213<br>59<br>268 |
| 11000        | IAS<br>TORQUE<br>F FLOW         | KT<br>%<br>KG/H/ENG               | 216<br>50<br>225 | 212<br>51<br>230 | 213<br>52<br>236 | 214<br>53<br>241 | 213<br>54<br>245 | 213<br>54<br>248 | 212<br>55<br>253 | 212<br>56<br>256 | 212<br>57<br>260 | 212<br>57<br>265 |
| 10500        | IAS<br>TORQUE<br>F FLOW         | KT<br>%<br>KG/H/ENG               | 215<br>49<br>223 | 211<br>49<br>228 | 211<br>50<br>232 | 211<br>51<br>237 | 212<br>52<br>242 | 211<br>53<br>245 | 210<br>53<br>249 | 210<br>54<br>252 | 210<br>55<br>256 | 210<br>56<br>260 |
| 10000        | IAS<br>TORQUE<br>F FLOW         | KT<br>%<br>KG/H/ENG               | 214<br>48<br>221 | 210<br>48<br>225 | 210<br>49<br>229 | 210<br>50<br>233 | 210<br>51<br>238 | 210<br>52<br>243 | 209<br>52<br>246 | 209<br>53<br>249 | 208<br>53<br>252 | 208<br>54<br>256 |
| 9500         | IAS<br>TORQUE<br>F FLOW         | KT<br>%<br>KG/H/ENG               | 212<br>47<br>217 | 209<br>47<br>223 | 208<br>47<br>225 | 208<br>48<br>229 | 208<br>49<br>235 | 209<br>50<br>239 | 209<br>51<br>243 | 208<br>51<br>246 | 207<br>52<br>249 | 207<br>52<br>252 |
| 9000         | IAS<br>TORQUE<br>F FLOW         | KT<br>%<br>KG/H/ENG               | 210<br>45<br>214 | 208<br>46<br>220 | 207<br>46<br>223 | 206<br>47<br>227 | 207<br>48<br>231 | 207<br>49<br>235 | 207<br>50<br>239 | 207<br>50<br>243 | 206<br>51<br>246 | 206<br>51<br>249 |
| 8500         | IAS<br>TORQUE<br>F FLOW         | KT<br>%<br>KG/H/ENG               | 207<br>44<br>209 | 206<br>45<br>218 | 205<br>45<br>221 | 205<br>46<br>224 | 205<br>46<br>228 | 205<br>47<br>232 | 205<br>48<br>237 | 205<br>49<br>240 | 205<br>50<br>244 | 205<br>50<br>247 |
| 8000         | IAS<br>TORQUE<br>F FLOW         | KT<br>%<br>KG/H/ENG               | 204<br>42<br>205 | 205<br>44<br>215 | 204<br>44<br>217 | 203<br>44<br>221 | 203<br>45<br>224 | 203<br>46<br>228 | 204<br>47<br>233 | 204<br>48<br>238 | 204<br>48<br>242 | 203<br>49<br>243 |

**CRUISE CONTROL****ALL ENGINES OPERATING****PW118A ENGINES****LONG RANGE CRUISE**

## CRUISE CONFIGURATION

NP: 85%

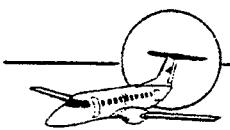
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 6000 FT**

| WEIGHT<br>KG | IAS<br>KT<br>F FLOW | TORQUE<br>%<br>KG/H/ENG | IOAT ( °C )      |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|--------------|---------------------|-------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|              |                     |                         | -50              | -30              | -20              | -10              | 0                | 10               | 20               | 30               | 40               | 50               |
| 12000        | IAS<br>KT<br>F FLOW | TORQUE<br>%<br>KG/H/ENG | 214<br>51<br>223 | 214<br>53<br>234 | 214<br>55<br>238 | 214<br>56<br>244 | 214<br>57<br>248 | 213<br>57<br>251 | 213<br>58<br>254 | 213<br>59<br>259 | 212<br>60<br>263 | 212<br>60<br>266 |
| 11500        | IAS<br>KT<br>F FLOW | TORQUE<br>%<br>KG/H/ENG | 213<br>50<br>220 | 212<br>52<br>229 | 213<br>53<br>235 | 213<br>54<br>239 | 212<br>55<br>243 | 211<br>55<br>246 | 211<br>56<br>251 | 211<br>57<br>255 | 211<br>58<br>259 | 210<br>58<br>262 |
| 11000        | IAS<br>KT<br>F FLOW | TORQUE<br>%<br>KG/H/ENG | 212<br>49<br>219 | 210<br>50<br>226 | 211<br>51<br>231 | 211<br>52<br>236 | 211<br>53<br>239 | 210<br>54<br>242 | 209<br>54<br>246 | 209<br>55<br>250 | 209<br>56<br>253 | 209<br>57<br>259 |
| 10500        | IAS<br>KT<br>F FLOW | TORQUE<br>%<br>KG/H/ENG | 211<br>48<br>216 | 208<br>48<br>222 | 209<br>50<br>227 | 209<br>51<br>231 | 209<br>52<br>236 | 209<br>52<br>239 | 207<br>52<br>242 | 207<br>53<br>245 | 208<br>54<br>250 | 207<br>55<br>253 |
| 10000        | IAS<br>KT<br>F FLOW | TORQUE<br>%<br>KG/H/ENG | 210<br>47<br>214 | 207<br>47<br>219 | 207<br>48<br>223 | 207<br>49<br>228 | 208<br>50<br>232 | 208<br>51<br>236 | 207<br>51<br>239 | 206<br>52<br>242 | 206<br>52<br>246 | 206<br>53<br>250 |
| 9500         | IAS<br>KT<br>F FLOW | TORQUE<br>%<br>KG/H/ENG | 209<br>46<br>211 | 206<br>46<br>216 | 205<br>46<br>219 | 205<br>47<br>224 | 206<br>49<br>228 | 206<br>49<br>232 | 205<br>50<br>235 | 205<br>50<br>239 | 204<br>51<br>242 | 204<br>52<br>246 |
| 9000         | IAS<br>KT<br>F FLOW | TORQUE<br>%<br>KG/H/ENG | 208<br>45<br>209 | 205<br>45<br>214 | 204<br>45<br>217 | 203<br>46<br>219 | 204<br>47<br>225 | 204<br>48<br>230 | 204<br>49<br>233 | 204<br>50<br>236 | 203<br>50<br>239 | 203<br>50<br>242 |
| 8500         | IAS<br>KT<br>F FLOW | TORQUE<br>%<br>KG/H/ENG | 205<br>43<br>204 | 204<br>44<br>211 | 203<br>44<br>214 | 202<br>45<br>217 | 202<br>45<br>221 | 203<br>47<br>226 | 203<br>47<br>230 | 203<br>48<br>233 | 202<br>49<br>237 | 201<br>49<br>239 |
| 8000         | IAS<br>KT<br>F FLOW | TORQUE<br>%<br>KG/H/ENG | 202<br>41<br>200 | 202<br>43<br>208 | 201<br>43<br>211 | 201<br>44<br>215 | 200<br>44<br>218 | 200<br>45<br>222 | 201<br>46<br>227 | 201<br>47<br>231 | 201<br>47<br>234 | 201<br>48<br>236 |

20 NOVEMBER 1992



**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CRUISE CONTROL  
ALL ENGINES OPERATING**

**PW118A ENGINES**

**LONG RANGE CRUISE**

**CRUISE CONFIGURATION**

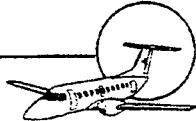
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 7000 FT**

| WEIGHT<br>KG | IOAT ( °C )             |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|--------------|-------------------------|---------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|              |                         |                     | -50              | -30              | -20              | -10              | 0                | 10               | 20               | 30               | 40               | 50               |
| 12000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 211<br>51<br>219 | 212<br>53<br>229 | 212<br>54<br>234 | 212<br>55<br>238 | 211<br>56<br>242 | 211<br>57<br>246 | 211<br>58<br>250 | 210<br>58<br>253 | 210<br>59<br>256 | 209<br>60<br>261 |
| 11500        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 210<br>49<br>216 | 209<br>51<br>224 | 210<br>52<br>229 | 210<br>53<br>234 | 210<br>54<br>237 | 209<br>55<br>241 | 209<br>56<br>245 | 209<br>57<br>250 | 208<br>57<br>253 | 208<br>58<br>256 |
| 11000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 209<br>48<br>213 | 208<br>50<br>221 | 208<br>51<br>225 | 209<br>52<br>230 | 208<br>52<br>234 | 207<br>53<br>237 | 207<br>54<br>240 | 207<br>55<br>244 | 207<br>56<br>249 | 206<br>56<br>251 |
| 10500        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 208<br>47<br>210 | 206<br>48<br>216 | 207<br>49<br>222 | 207<br>50<br>226 | 207<br>51<br>230 | 206<br>52<br>234 | 205<br>52<br>237 | 205<br>53<br>240 | 205<br>53<br>244 | 205<br>54<br>248 |
| 10000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 207<br>46<br>208 | 204<br>46<br>213 | 204<br>47<br>217 | 205<br>49<br>222 | 205<br>49<br>226 | 204<br>50<br>230 | 204<br>50<br>233 | 203<br>51<br>236 | 204<br>52<br>239 | 203<br>53<br>243 |
| 9500         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 207<br>45<br>205 | 203<br>45<br>210 | 202<br>46<br>213 | 203<br>47<br>218 | 204<br>48<br>223 | 203<br>48<br>226 | 202<br>49<br>229 | 202<br>49<br>232 | 202<br>50<br>235 | 202<br>51<br>239 |
| 9000         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 205<br>44<br>203 | 202<br>44<br>208 | 201<br>44<br>211 | 201<br>45<br>214 | 202<br>46<br>219 | 202<br>47<br>223 | 201<br>48<br>226 | 201<br>48<br>229 | 200<br>49<br>232 | 200<br>49<br>235 |
| 8500         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 203<br>42<br>199 | 201<br>43<br>205 | 200<br>43<br>208 | 199<br>44<br>211 | 199<br>45<br>215 | 200<br>46<br>220 | 200<br>47<br>223 | 200<br>47<br>226 | 199<br>47<br>229 | 199<br>48<br>232 |
| 8000         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 200<br>41<br>195 | 199<br>42<br>202 | 198<br>42<br>205 | 198<br>43<br>209 | 198<br>43<br>212 | 198<br>44<br>216 | 199<br>45<br>220 | 199<br>46<br>224 | 198<br>46<br>226 | 197<br>47<br>229 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**LONG RANGE CRUISE**
**CRUISE CONFIGURATION**

NP: 85%

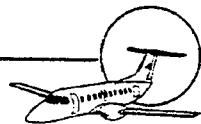
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 8000 FT**

| WEIGHT<br>KG | IOAT ( °C )             |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|--------------|-------------------------|---------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|              | -50                     | -30                 | -20              | -10              | 0                | 10               | 20               | 30               | 40               | 50               |                  |                  |
| 12000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 208<br>50<br>214 | 210<br>53<br>224 | 210<br>54<br>229 | 210<br>55<br>233 | 209<br>55<br>237 | 209<br>56<br>241 | 209<br>57<br>246 | 208<br>58<br>249 | 207<br>59<br>251 | 207<br>60<br>256 |
| 11500        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 207<br>48<br>210 | 208<br>51<br>220 | 208<br>52<br>225 | 208<br>53<br>229 | 207<br>54<br>232 | 207<br>54<br>236 | 206<br>55<br>240 | 207<br>56<br>244 | 206<br>57<br>248 | 205<br>57<br>251 |
| 11000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 206<br>47<br>207 | 205<br>49<br>216 | 206<br>50<br>220 | 206<br>51<br>224 | 206<br>52<br>228 | 205<br>53<br>232 | 204<br>53<br>235 | 204<br>54<br>239 | 204<br>55<br>243 | 204<br>56<br>246 |
| 10500        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 205<br>46<br>204 | 203<br>47<br>211 | 205<br>49<br>216 | 204<br>49<br>220 | 204<br>50<br>224 | 203<br>51<br>228 | 203<br>52<br>231 | 203<br>52<br>234 | 203<br>53<br>238 | 202<br>54<br>241 |
| 10000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 204<br>45<br>202 | 202<br>46<br>207 | 202<br>47<br>212 | 203<br>48<br>217 | 202<br>49<br>221 | 202<br>49<br>223 | 201<br>49<br>226 | 201<br>50<br>230 | 201<br>51<br>234 | 201<br>52<br>238 |
| 9500         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 203<br>44<br>200 | 200<br>44<br>205 | 200<br>45<br>208 | 201<br>46<br>212 | 201<br>47<br>217 | 200<br>48<br>220 | 199<br>48<br>222 | 199<br>48<br>226 | 199<br>49<br>230 | 199<br>50<br>234 |
| 9000         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 202<br>43<br>197 | 199<br>43<br>201 | 199<br>44<br>205 | 199<br>45<br>209 | 199<br>46<br>213 | 199<br>47<br>217 | 198<br>47<br>220 | 198<br>47<br>222 | 198<br>48<br>226 | 198<br>48<br>230 |
| 8500         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 201<br>42<br>194 | 198<br>42<br>199 | 197<br>42<br>201 | 197<br>43<br>206 | 197<br>44<br>210 | 197<br>45<br>213 | 197<br>46<br>217 | 197<br>46<br>220 | 196<br>46<br>222 | 196<br>47<br>226 |
| 8000         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 198<br>40<br>191 | 197<br>41<br>196 | 196<br>41<br>199 | 195<br>42<br>202 | 196<br>43<br>206 | 196<br>43<br>210 | 196<br>44<br>214 | 196<br>45<br>217 | 195<br>45<br>220 | 195<br>46<br>222 |

20 NOVEMBER 1992



**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CRUISE CONTROL  
ALL ENGINES OPERATING**

**PW118A ENGINES**

**LONG RANGE CRUISE**

**CRUISE CONFIGURATION**

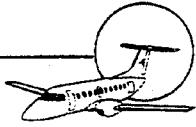
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 9000 FT**

| WEIGHT<br>KG | IOAT ( °C )             |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|--------------|-------------------------|---------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|              | -50                     | -30                 | -20              | -10              | 0                | 10               | 20               | 30               | 40               | 50               |                  |                  |
| 12000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 206<br>50<br>209 | 208<br>53<br>220 | 208<br>54<br>225 | 207<br>54<br>229 | 206<br>55<br>232 | 207<br>56<br>237 | 206<br>57<br>241 | 205<br>58<br>244 | 205<br>58<br>247 | 205<br>59<br>251 |
| 11500        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 204<br>48<br>205 | 206<br>51<br>216 | 205<br>51<br>219 | 206<br>53<br>224 | 205<br>53<br>228 | 204<br>54<br>231 | 204<br>55<br>235 | 204<br>56<br>239 | 203<br>56<br>242 | 203<br>57<br>246 |
| 11000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 203<br>47<br>202 | 204<br>49<br>211 | 204<br>50<br>216 | 204<br>51<br>220 | 203<br>51<br>223 | 203<br>52<br>226 | 202<br>53<br>230 | 202<br>54<br>234 | 202<br>54<br>237 | 201<br>55<br>240 |
| 10500        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 202<br>45<br>199 | 201<br>47<br>207 | 202<br>48<br>212 | 202<br>49<br>215 | 201<br>50<br>219 | 201<br>50<br>222 | 201<br>51<br>226 | 200<br>52<br>229 | 200<br>52<br>232 | 200<br>53<br>236 |
| 10000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 201<br>44<br>196 | 200<br>45<br>203 | 200<br>46<br>208 | 200<br>47<br>211 | 200<br>48<br>215 | 199<br>48<br>218 | 198<br>49<br>220 | 199<br>50<br>225 | 199<br>51<br>229 | 198<br>51<br>232 |
| 9500         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 200<br>43<br>193 | 197<br>44<br>199 | 198<br>45<br>204 | 198<br>46<br>207 | 199<br>47<br>211 | 198<br>47<br>215 | 197<br>47<br>216 | 197<br>48<br>220 | 197<br>49<br>224 | 197<br>50<br>227 |
| 9000         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 199<br>42<br>191 | 196<br>42<br>195 | 196<br>43<br>199 | 197<br>44<br>204 | 197<br>45<br>207 | 197<br>46<br>211 | 196<br>46<br>213 | 195<br>46<br>216 | 195<br>47<br>220 | 195<br>48<br>223 |
| 8500         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 198<br>41<br>189 | 195<br>41<br>193 | 194<br>41<br>195 | 194<br>42<br>200 | 195<br>43<br>204 | 195<br>44<br>207 | 194<br>45<br>211 | 194<br>45<br>213 | 193<br>45<br>216 | 193<br>46<br>220 |
| 8000         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 196<br>40<br>186 | 194<br>40<br>191 | 193<br>40<br>193 | 192<br>41<br>196 | 193<br>42<br>200 | 193<br>43<br>205 | 193<br>43<br>207 | 193<br>44<br>211 | 192<br>44<br>213 | 192<br>45<br>216 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**LONG RANGE CRUISE**
**CRUISE CONFIGURATION**

NP: 85%

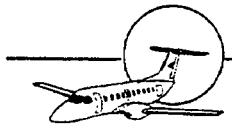
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 10000 FT**

| WEIGHT<br>KG | IOAT ( °C )                      |                             |                             |                             |                             |                             |                             |                             |                             |                             |                  |  |
|--------------|----------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|------------------|--|
|              | -50                              | -40                         | -30                         | -20                         | -10                         | 0                           | 10                          | 20                          | 30                          | 40                          |                  |  |
| 12000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>204<br>50<br>206 | KT<br>%<br>207<br>52<br>214 | KT<br>%<br>206<br>52<br>216 | KT<br>%<br>206<br>53<br>221 | KT<br>%<br>205<br>54<br>224 | KT<br>%<br>205<br>55<br>228 | KT<br>%<br>205<br>56<br>233 | KT<br>%<br>204<br>57<br>237 | KT<br>%<br>204<br>58<br>240 | 203<br>58<br>243 |  |
| 11500        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>202<br>47<br>201 | KT<br>%<br>204<br>49<br>207 | KT<br>%<br>204<br>51<br>212 | KT<br>%<br>203<br>51<br>215 | KT<br>%<br>203<br>52<br>220 | KT<br>%<br>203<br>53<br>223 | KT<br>%<br>202<br>54<br>227 | KT<br>%<br>202<br>55<br>231 | KT<br>%<br>201<br>55<br>233 | 201<br>56<br>237 |  |
| 11000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>200<br>46<br>197 | KT<br>%<br>200<br>47<br>197 | KT<br>%<br>202<br>49<br>207 | KT<br>%<br>202<br>49<br>211 | KT<br>%<br>201<br>50<br>215 | KT<br>%<br>201<br>51<br>218 | KT<br>%<br>201<br>52<br>222 | KT<br>%<br>201<br>53<br>226 | KT<br>%<br>200<br>53<br>229 | 199<br>54<br>232 |  |
| 10500        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>199<br>44<br>194 | KT<br>%<br>199<br>45<br>197 | KT<br>%<br>199<br>47<br>202 | KT<br>%<br>199<br>48<br>206 | KT<br>%<br>199<br>49<br>211 | KT<br>%<br>199<br>49<br>214 | KT<br>%<br>199<br>50<br>217 | KT<br>%<br>198<br>51<br>221 | KT<br>%<br>198<br>51<br>225 | 198<br>52<br>227 |  |
| 10000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>198<br>43<br>191 | KT<br>%<br>197<br>44<br>193 | KT<br>%<br>198<br>45<br>199 | KT<br>%<br>198<br>46<br>202 | KT<br>%<br>198<br>47<br>207 | KT<br>%<br>198<br>48<br>210 | KT<br>%<br>198<br>48<br>213 | KT<br>%<br>197<br>49<br>216 | KT<br>%<br>196<br>49<br>219 | 196<br>50<br>223 |  |
| 9500         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>197<br>42<br>188 | KT<br>%<br>195<br>42<br>190 | KT<br>%<br>195<br>43<br>194 | KT<br>%<br>196<br>44<br>199 | KT<br>%<br>196<br>45<br>203 | KT<br>%<br>196<br>46<br>206 | KT<br>%<br>195<br>46<br>209 | KT<br>%<br>195<br>47<br>212 | KT<br>%<br>195<br>48<br>215 | 195<br>48<br>219 |  |
| 9000         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>196<br>41<br>185 | KT<br>%<br>195<br>41<br>188 | KT<br>%<br>193<br>41<br>190 | KT<br>%<br>194<br>42<br>194 | KT<br>%<br>194<br>44<br>199 | KT<br>%<br>194<br>44<br>202 | KT<br>%<br>194<br>45<br>205 | KT<br>%<br>193<br>45<br>208 | KT<br>%<br>192<br>46<br>211 | 192<br>47<br>215 |  |
| 8500         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>195<br>40<br>183 | KT<br>%<br>194<br>40<br>185 | KT<br>%<br>192<br>40<br>188 | KT<br>%<br>192<br>41<br>190 | KT<br>%<br>192<br>42<br>194 | KT<br>%<br>193<br>43<br>199 | KT<br>%<br>192<br>43<br>201 | KT<br>%<br>191<br>44<br>205 | KT<br>%<br>191<br>44<br>207 | 191<br>45<br>210 |  |
| 8000         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>194<br>39<br>181 | KT<br>%<br>192<br>39<br>183 | KT<br>%<br>191<br>39<br>185 | KT<br>%<br>190<br>40<br>188 | KT<br>%<br>190<br>40<br>191 | KT<br>%<br>190<br>41<br>194 | KT<br>%<br>190<br>41<br>199 | KT<br>%<br>191<br>42<br>201 | KT<br>%<br>190<br>42<br>204 | 189<br>43<br>207 |  |

20 NOVEMBER 1992



SUPPLEMENTARY PERFORMANCE  
MANUAL

CRUISE CONTROL  
ALL ENGINES OPERATING

PW118A ENGINES

LONG RANGE CRUISE

CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 11000 FT

| WEIGHT<br>KG | IOAT ( °C )             |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|--------------|-------------------------|---------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|              |                         |                     | -50              | -40              | -30              | -20              | -10              | 0                | 10               | 20               | 30               | 40               |
| 12000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 205<br>51<br>205 | 204<br>51<br>209 | 203<br>52<br>212 | 203<br>53<br>216 | 203<br>54<br>221 | 203<br>55<br>225 | 203<br>56<br>229 | 202<br>57<br>233 | 202<br>57<br>235 | 202<br>58<br>239 |
| 11500        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 200<br>47<br>198 | 203<br>50<br>204 | 202<br>50<br>208 | 201<br>51<br>211 | 201<br>52<br>215 | 201<br>53<br>220 | 201<br>54<br>223 | 200<br>54<br>226 | 199<br>55<br>229 | 199<br>56<br>234 |
| 11000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 198<br>46<br>193 | 199<br>47<br>199 | 200<br>48<br>203 | 200<br>49<br>207 | 199<br>50<br>210 | 199<br>51<br>214 | 199<br>52<br>218 | 198<br>52<br>221 | 198<br>53<br>224 | 197<br>54<br>228 |
| 10500        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 196<br>44<br>189 | 196<br>45<br>194 | 197<br>46<br>198 | 197<br>47<br>202 | 198<br>48<br>207 | 197<br>49<br>209 | 196<br>49<br>213 | 196<br>50<br>217 | 196<br>51<br>219 | 195<br>51<br>222 |
| 10000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 195<br>43<br>186 | 194<br>43<br>189 | 196<br>45<br>194 | 195<br>45<br>198 | 196<br>46<br>201 | 196<br>47<br>205 | 195<br>48<br>208 | 194<br>48<br>211 | 194<br>49<br>215 | 194<br>50<br>218 |
| 9500         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 194<br>41<br>183 | 193<br>42<br>185 | 193<br>43<br>189 | 194<br>44<br>194 | 194<br>45<br>197 | 193<br>45<br>201 | 193<br>46<br>204 | 192<br>46<br>207 | 192<br>47<br>209 | 192<br>48<br>214 |
| 9000         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 193<br>40<br>180 | 191<br>40<br>182 | 191<br>41<br>185 | 192<br>42<br>189 | 192<br>43<br>194 | 192<br>44<br>197 | 191<br>44<br>199 | 190<br>44<br>202 | 190<br>45<br>205 | 190<br>46<br>209 |
| 8500         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 192<br>39<br>178 | 191<br>39<br>180 | 189<br>40<br>182 | 190<br>40<br>186 | 190<br>41<br>190 | 190<br>42<br>193 | 190<br>43<br>197 | 189<br>43<br>199 | 188<br>43<br>201 | 188<br>44<br>205 |
| 8000         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 191<br>38<br>176 | 189<br>38<br>177 | 188<br>38<br>179 | 188<br>39<br>182 | 188<br>40<br>186 | 188<br>41<br>190 | 188<br>41<br>193 | 188<br>42<br>195 | 187<br>42<br>198 | 187<br>42<br>201 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**LONG RANGE CRUISE**
**CRUISE CONFIGURATION**

NP: 85%

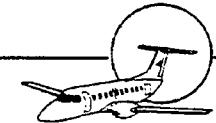
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 12000 FT**

| WEIGHT<br>KG | IOAT ( °C )                      |                             |                             |                             |                             |                             |                             |                             |                             |                             |                             |  |
|--------------|----------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|--|
|              | -50                              | -40                         | -30                         | -20                         | -10                         | 0                           | 10                          | 20                          | 30                          | 40                          |                             |  |
| 12000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>203<br>51<br>202 | KT<br>%<br>202<br>51<br>205 | KT<br>%<br>202<br>52<br>209 | KT<br>%<br>201<br>53<br>213 | KT<br>%<br>201<br>54<br>217 | KT<br>%<br>201<br>55<br>221 | KT<br>%<br>201<br>56<br>225 | KT<br>%<br>200<br>57<br>229 | KT<br>%<br>200<br>58<br>233 | KT<br>%<br>200<br>58<br>236 |  |
| 11500        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>200<br>48<br>196 | KT<br>%<br>200<br>49<br>201 | KT<br>%<br>200<br>50<br>204 | KT<br>%<br>199<br>51<br>207 | KT<br>%<br>199<br>52<br>211 | KT<br>%<br>199<br>53<br>216 | KT<br>%<br>199<br>53<br>219 | KT<br>%<br>198<br>54<br>223 | KT<br>%<br>198<br>55<br>227 | KT<br>%<br>198<br>56<br>230 |  |
| 11000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>196<br>46<br>190 | KT<br>%<br>198<br>47<br>196 | KT<br>%<br>198<br>48<br>199 | KT<br>%<br>197<br>49<br>203 | KT<br>%<br>197<br>49<br>206 | KT<br>%<br>197<br>50<br>210 | KT<br>%<br>197<br>51<br>214 | KT<br>%<br>196<br>52<br>217 | KT<br>%<br>195<br>53<br>220 | KT<br>%<br>196<br>54<br>224 |  |
| 10500        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>194<br>43<br>184 | KT<br>%<br>195<br>45<br>190 | KT<br>%<br>196<br>46<br>195 | KT<br>%<br>195<br>47<br>198 | KT<br>%<br>195<br>48<br>202 | KT<br>%<br>195<br>48<br>205 | KT<br>%<br>194<br>49<br>209 | KT<br>%<br>194<br>50<br>213 | KT<br>%<br>194<br>51<br>215 | KT<br>%<br>193<br>51<br>218 |  |
| 10000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>192<br>42<br>181 | KT<br>%<br>192<br>43<br>185 | KT<br>%<br>194<br>44<br>190 | KT<br>%<br>193<br>45<br>193 | KT<br>%<br>193<br>46<br>197 | KT<br>%<br>193<br>47<br>201 | KT<br>%<br>192<br>47<br>203 | KT<br>%<br>192<br>48<br>207 | KT<br>%<br>192<br>49<br>210 | KT<br>%<br>191<br>49<br>213 |  |
| 9500         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>191<br>41<br>177 | KT<br>%<br>190<br>41<br>181 | KT<br>%<br>191<br>42<br>185 | KT<br>%<br>192<br>43<br>190 | KT<br>%<br>191<br>44<br>193 | KT<br>%<br>191<br>45<br>196 | KT<br>%<br>190<br>45<br>199 | KT<br>%<br>190<br>46<br>203 | KT<br>%<br>190<br>47<br>206 | KT<br>%<br>190<br>47<br>208 |  |
| 9000         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>190<br>39<br>174 | KT<br>%<br>189<br>40<br>178 | KT<br>%<br>189<br>41<br>181 | KT<br>%<br>189<br>42<br>185 | KT<br>%<br>190<br>43<br>189 | KT<br>%<br>189<br>43<br>192 | KT<br>%<br>188<br>43<br>195 | KT<br>%<br>188<br>44<br>198 | KT<br>%<br>188<br>44<br>201 | KT<br>%<br>188<br>45<br>204 |  |
| 8500         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>189<br>38<br>172 | KT<br>%<br>188<br>39<br>174 | KT<br>%<br>187<br>39<br>177 | KT<br>%<br>188<br>40<br>181 | KT<br>%<br>188<br>41<br>185 | KT<br>%<br>188<br>42<br>189 | KT<br>%<br>187<br>42<br>191 | KT<br>%<br>186<br>42<br>193 | KT<br>%<br>186<br>43<br>196 | KT<br>%<br>186<br>44<br>199 |  |
| 8000         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>188<br>37<br>170 | KT<br>%<br>187<br>37<br>172 | KT<br>%<br>185<br>38<br>174 | KT<br>%<br>185<br>38<br>177 | KT<br>%<br>186<br>39<br>181 | KT<br>%<br>186<br>40<br>184 | KT<br>%<br>186<br>41<br>188 | KT<br>%<br>185<br>41<br>190 | KT<br>%<br>184<br>41<br>192 | KT<br>%<br>184<br>42<br>195 |  |

**20 NOVEMBER 1992**



SUPPLEMENTARY PERFORMANCE  
MANUAL

**CRUISE CONTROL**  
**ALL ENGINES OPERATING**

PW118A ENGINES

**LONG RANGE CRUISE**

CRUISE CONFIGURATION

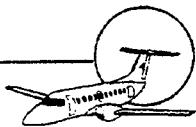
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 13000 FT**

| WEIGHT<br>KG | IAS<br>KT<br>F FLOW KG/H/ENG | TORQUE<br>%<br>KG/H/ENG | IOAT ( °C )      |                  |                  |                  |                  |                  |                  |                  |                  |    |
|--------------|------------------------------|-------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----|
|              |                              |                         | -50              | -40              | -30              | -20              | -10              | 0                | 10               | 20               | 30               | 40 |
| 12000        | IAS<br>KT<br>F FLOW KG/H/ENG | 200<br>50<br>198        | 200<br>51<br>202 | 200<br>52<br>205 | 200<br>53<br>211 | 200<br>54<br>214 | 199<br>55<br>217 | 199<br>56<br>222 | 199<br>57<br>227 | 198<br>58<br>230 | 198<br>58<br>232 |    |
| 11500        | IAS<br>KT<br>F FLOW KG/H/ENG | 200<br>49<br>194        | 198<br>49<br>197 | 198<br>50<br>201 | 197<br>50<br>204 | 197<br>52<br>208 | 197<br>53<br>212 | 197<br>53<br>216 | 196<br>54<br>216 | 196<br>55<br>223 | 196<br>56<br>226 |    |
| 11000        | IAS<br>KT<br>F FLOW KG/H/ENG | 197<br>46<br>189        | 196<br>47<br>193 | 195<br>48<br>196 | 195<br>49<br>199 | 195<br>49<br>202 | 195<br>50<br>206 | 195<br>51<br>211 | 194<br>52<br>214 | 194<br>53<br>217 | 194<br>54<br>220 |    |
| 10500        | IAS<br>KT<br>F FLOW KG/H/ENG | 192<br>43<br>181        | 194<br>45<br>188 | 194<br>46<br>191 | 193<br>47<br>194 | 193<br>47<br>198 | 193<br>48<br>201 | 192<br>49<br>205 | 192<br>50<br>208 | 191<br>50<br>211 | 192<br>51<br>214 |    |
| 10000        | IAS<br>KT<br>F FLOW KG/H/ENG | 190<br>42<br>177        | 190<br>43<br>181 | 192<br>44<br>186 | 191<br>45<br>190 | 191<br>46<br>193 | 191<br>46<br>196 | 191<br>47<br>199 | 190<br>48<br>203 | 190<br>48<br>206 | 189<br>49<br>209 |    |
| 9500         | IAS<br>KT<br>F FLOW KG/H/ENG | 188<br>40<br>174        | 188<br>41<br>177 | 189<br>42<br>181 | 189<br>43<br>185 | 189<br>44<br>189 | 189<br>44<br>191 | 188<br>45<br>195 | 188<br>46<br>197 | 188<br>46<br>201 | 187<br>47<br>204 |    |
| 9000         | IAS<br>KT<br>F FLOW KG/H/ENG | 187<br>39<br>170        | 186<br>39<br>173 | 187<br>40<br>177 | 187<br>41<br>181 | 187<br>42<br>184 | 187<br>43<br>187 | 186<br>43<br>190 | 186<br>44<br>193 | 186<br>44<br>196 | 186<br>45<br>200 |    |
| 8500         | IAS<br>KT<br>F FLOW KG/H/ENG | 186<br>38<br>167        | 185<br>38<br>169 | 184<br>38<br>173 | 185<br>40<br>177 | 185<br>40<br>180 | 185<br>41<br>184 | 185<br>41<br>186 | 184<br>42<br>188 | 184<br>43<br>192 | 184<br>43<br>195 |    |
| 8000         | IAS<br>KT<br>F FLOW KG/H/ENG | 185<br>37<br>165        | 184<br>37<br>167 | 182<br>37<br>169 | 183<br>38<br>173 | 184<br>39<br>177 | 183<br>39<br>180 | 183<br>40<br>182 | 182<br>40<br>184 | 182<br>41<br>188 | 182<br>41<br>191 |    |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**LONG RANGE CRUISE**
**CRUISE CONFIGURATION**

NP: 85%

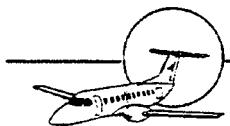
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 14000 FT**

| WEIGHT<br>KG | IOAT ( °C )                      |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|--------------|----------------------------------|---------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|              | -50                              | -40                 | -30              | -20              | -10              | 0                | 10               | 20               | 30               | 40               |                  |                  |
| 12000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 199<br>50<br>196 | 199<br>51<br>200 | 198<br>52<br>203 | 199<br>53<br>208 | 198<br>54<br>211 | 197<br>55<br>215 | 198<br>56<br>220 | 198<br>57<br>224 | 197<br>58<br>226 | 190<br>55<br>223 |
| 11500        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 196<br>48<br>190 | 196<br>49<br>194 | 196<br>50<br>197 | 196<br>51<br>202 | 196<br>52<br>206 | 195<br>53<br>209 | 195<br>53<br>212 | 195<br>55<br>217 | 194<br>55<br>220 | 194<br>56<br>223 |
| 11000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 196<br>47<br>186 | 194<br>47<br>188 | 194<br>48<br>192 | 193<br>48<br>196 | 193<br>49<br>199 | 193<br>50<br>203 | 193<br>51<br>207 | 192<br>52<br>210 | 193<br>53<br>214 | 192<br>53<br>217 |
| 10500        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 192<br>44<br>180 | 192<br>45<br>185 | 192<br>46<br>187 | 191<br>46<br>191 | 191<br>47<br>194 | 191<br>48<br>198 | 191<br>49<br>201 | 190<br>50<br>205 | 190<br>50<br>207 | 190<br>51<br>211 |
| 10000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 188<br>41<br>174 | 190<br>43<br>179 | 190<br>44<br>183 | 190<br>45<br>186 | 189<br>45<br>189 | 188<br>46<br>192 | 189<br>47<br>196 | 188<br>47<br>199 | 188<br>48<br>202 | 187<br>49<br>205 |
| 9500         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 186<br>40<br>169 | 186<br>41<br>174 | 187<br>42<br>177 | 187<br>43<br>181 | 187<br>43<br>185 | 187<br>44<br>188 | 186<br>45<br>191 | 186<br>45<br>194 | 186<br>46<br>197 | 185<br>46<br>199 |
| 9000         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 184<br>38<br>165 | 184<br>39<br>169 | 185<br>40<br>173 | 185<br>41<br>176 | 185<br>42<br>180 | 185<br>42<br>183 | 184<br>43<br>186 | 184<br>43<br>189 | 184<br>44<br>192 | 183<br>45<br>194 |
| 8500         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 183<br>37<br>163 | 182<br>37<br>165 | 182<br>38<br>169 | 183<br>39<br>173 | 183<br>40<br>176 | 183<br>40<br>179 | 182<br>41<br>182 | 182<br>41<br>184 | 182<br>42<br>187 | 182<br>43<br>190 |
| 8000         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 182<br>36<br>160 | 181<br>36<br>161 | 180<br>36<br>164 | 181<br>37<br>169 | 181<br>38<br>172 | 181<br>39<br>175 | 180<br>39<br>177 | 180<br>40<br>179 | 180<br>40<br>182 | 180<br>41<br>186 |

20 NOVEMBER 1992



**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CRUISE CONTROL  
ALL ENGINES OPERATING**

**PW118A ENGINES**

**LONG RANGE CRUISE**

**CRUISE CONFIGURATION**

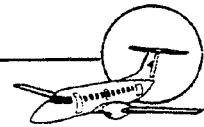
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 15000 FT**

| WEIGHT<br>KG | IOAT ( °C )                      |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|--------------|----------------------------------|---------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|              | -50                              | -40                 | -30              | -20              | -10              | -5               | 0                | 10               | 20               | 30               |                  |                  |
| 12000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 197<br>50<br>194 | 197<br>51<br>197 | 197<br>53<br>202 | 197<br>53<br>205 | 196<br>54<br>208 | 196<br>55<br>210 | 196<br>55<br>213 | 196<br>56<br>217 | 195<br>57<br>220 | 195<br>58<br>223 |
| 11500        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 194<br>48<br>187 | 195<br>49<br>192 | 195<br>50<br>195 | 194<br>51<br>199 | 194<br>52<br>203 | 194<br>52<br>204 | 193<br>53<br>206 | 194<br>54<br>211 | 193<br>55<br>214 | 193<br>55<br>217 |
| 11000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 192<br>46<br>182 | 192<br>47<br>186 | 192<br>48<br>189 | 192<br>49<br>193 | 192<br>49<br>197 | 192<br>50<br>198 | 191<br>50<br>200 | 191<br>51<br>204 | 191<br>52<br>208 | 191<br>53<br>211 |
| 10500        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 191<br>45<br>179 | 190<br>45<br>180 | 190<br>46<br>184 | 189<br>46<br>187 | 189<br>47<br>191 | 189<br>48<br>193 | 189<br>48<br>195 | 189<br>49<br>198 | 188<br>50<br>201 | 188<br>51<br>205 |
| 10000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 188<br>42<br>172 | 188<br>43<br>176 | 188<br>44<br>179 | 187<br>44<br>182 | 187<br>45<br>185 | 187<br>45<br>187 | 187<br>46<br>189 | 186<br>47<br>193 | 186<br>47<br>195 | 186<br>48<br>198 |
| 9500         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 183<br>39<br>165 | 186<br>41<br>171 | 185<br>42<br>175 | 185<br>42<br>178 | 185<br>43<br>181 | 185<br>43<br>182 | 184<br>44<br>184 | 184<br>45<br>187 | 184<br>45<br>190 | 183<br>46<br>193 |
| 9000         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 182<br>38<br>161 | 182<br>39<br>165 | 183<br>40<br>170 | 183<br>40<br>173 | 183<br>41<br>176 | 183<br>42<br>178 | 183<br>42<br>179 | 182<br>42<br>182 | 182<br>43<br>185 | 181<br>44<br>187 |
| 8500         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 180<br>36<br>158 | 180<br>37<br>161 | 180<br>38<br>165 | 181<br>39<br>169 | 181<br>39<br>172 | 181<br>40<br>173 | 180<br>40<br>175 | 180<br>40<br>177 | 180<br>41<br>180 | 180<br>42<br>183 |
| 8000         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 179<br>35<br>155 | 178<br>35<br>158 | 178<br>36<br>161 | 179<br>37<br>164 | 179<br>38<br>168 | 179<br>38<br>169 | 179<br>38<br>171 | 178<br>39<br>173 | 177<br>39<br>175 | 177<br>40<br>178 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**LONG RANGE CRUISE**
**CRUISE CONFIGURATION**

NP: 85%

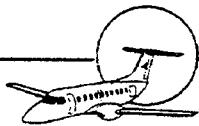
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 16000 FT**

| WEIGHT<br>KG | IOAT ( °C )             |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|--------------|-------------------------|---------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|              |                         | -50                 | -40              | -30              | -20              | -10              | -5               | 0                | 10               | 20               | 30               |                  |
| 12000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 196<br>51<br>191 | 196<br>52<br>195 | 196<br>53<br>199 | 195<br>53<br>203 | 195<br>54<br>206 | 195<br>55<br>209 | 195<br>56<br>212 | 194<br>57<br>214 | 194<br>57<br>218 | 193<br>58<br>221 |
| 11500        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 193<br>48<br>185 | 193<br>49<br>189 | 193<br>50<br>193 | 193<br>51<br>197 | 192<br>52<br>200 | 192<br>52<br>201 | 192<br>53<br>204 | 192<br>54<br>209 | 192<br>55<br>211 | 191<br>55<br>214 |
| 11000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 191<br>46<br>179 | 191<br>47<br>183 | 190<br>48<br>187 | 191<br>49<br>191 | 190<br>50<br>194 | 190<br>50<br>196 | 189<br>50<br>197 | 190<br>52<br>201 | 190<br>52<br>206 | 189<br>53<br>208 |
| 10500        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 189<br>44<br>175 | 188<br>45<br>177 | 188<br>45<br>181 | 188<br>46<br>184 | 188<br>47<br>188 | 187<br>48<br>190 | 187<br>48<br>192 | 187<br>49<br>194 | 187<br>50<br>199 | 187<br>51<br>202 |
| 10000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 187<br>42<br>170 | 186<br>43<br>173 | 186<br>43<br>176 | 185<br>44<br>179 | 185<br>45<br>183 | 185<br>45<br>184 | 185<br>46<br>186 | 185<br>47<br>189 | 184<br>47<br>193 | 184<br>48<br>196 |
| 9500         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 182<br>39<br>163 | 184<br>41<br>169 | 183<br>41<br>171 | 183<br>42<br>174 | 182<br>43<br>176 | 183<br>43<br>179 | 183<br>44<br>180 | 182<br>44<br>184 | 182<br>45<br>187 | 181<br>46<br>189 |
| 9000         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 179<br>37<br>157 | 181<br>39<br>163 | 181<br>40<br>166 | 181<br>40<br>169 | 181<br>41<br>173 | 181<br>41<br>174 | 180<br>41<br>175 | 180<br>42<br>178 | 180<br>43<br>181 | 179<br>43<br>184 |
| 8500         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 178<br>36<br>154 | 177<br>36<br>157 | 179<br>38<br>162 | 179<br>38<br>164 | 179<br>39<br>168 | 179<br>39<br>169 | 178<br>40<br>171 | 178<br>40<br>173 | 178<br>41<br>176 | 177<br>41<br>179 |
| 8000         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 177<br>34<br>151 | 176<br>35<br>154 | 176<br>36<br>157 | 177<br>37<br>161 | 177<br>37<br>163 | 177<br>38<br>165 | 176<br>38<br>166 | 176<br>38<br>169 | 175<br>39<br>171 | 175<br>39<br>174 |

20 NOVEMBER 1992



SUPPLEMENTARY PERFORMANCE  
MANUAL

**CRUISE CONTROL**  
**ALL ENGINES OPERATING**

PW118A ENGINES

**LONG RANGE CRUISE**

CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 17000 FT**

| WEIGHT<br>KG | IAS<br>KT          | TORQUE<br>% | F FLOW<br>KG/H/ENG | IOAT ( °C ) |     |     |     |     |     |     |     |     |     |
|--------------|--------------------|-------------|--------------------|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |                    |             |                    | -50         | -40 | -30 | -20 | -10 | -5  | 0   | 10  | 20  | 30  |
| 12000        | IAS<br>KT          | 195         | 195                | 194         | 194 | 194 | 194 | 194 | 193 | 193 | 192 | 185 | 185 |
|              | TORQUE<br>%        | 51          | 52                 | 53          | 54  | 55  | 55  | 56  | 56  | 57  | 58  | 56  | 56  |
|              | F FLOW<br>KG/H/ENG | 189         | 193                | 197         | 201 | 205 | 207 | 209 | 212 | 216 | 216 | 212 | 212 |
| 11500        | IAS<br>KT          | 192         | 192                | 192         | 191 | 191 | 191 | 191 | 191 | 190 | 190 | 189 | 189 |
|              | TORQUE<br>%        | 48          | 49                 | 50          | 51  | 52  | 53  | 53  | 53  | 54  | 55  | 56  | 56  |
|              | F FLOW<br>KG/H/ENG | 183         | 187                | 191         | 194 | 199 | 200 | 202 | 206 | 209 | 209 | 212 | 212 |
| 11000        | IAS<br>KT          | 189         | 189                | 189         | 189 | 188 | 188 | 188 | 188 | 188 | 188 | 188 | 187 |
|              | TORQUE<br>%        | 46          | 47                 | 48          | 49  | 50  | 50  | 51  | 51  | 52  | 53  | 53  | 53  |
|              | F FLOW<br>KG/H/ENG | 177         | 181                | 185         | 188 | 191 | 193 | 196 | 199 | 202 | 205 | 205 | 205 |
| 10500        | IAS<br>KT          | 186         | 187                | 186         | 186 | 186 | 186 | 186 | 185 | 186 | 186 | 185 | 185 |
|              | TORQUE<br>%        | 44          | 45                 | 46          | 47  | 47  | 48  | 48  | 48  | 49  | 50  | 51  | 51  |
|              | F FLOW<br>KG/H/ENG | 172         | 175                | 178         | 182 | 185 | 187 | 189 | 193 | 196 | 196 | 198 | 198 |
| 10000        | IAS<br>KT          | 185         | 184                | 184         | 184 | 184 | 184 | 183 | 183 | 183 | 183 | 183 | 183 |
|              | TORQUE<br>%        | 42          | 43                 | 43          | 44  | 45  | 45  | 46  | 46  | 47  | 47  | 48  | 48  |
|              | F FLOW<br>KG/H/ENG | 167         | 170                | 173         | 176 | 179 | 181 | 183 | 183 | 186 | 189 | 192 | 192 |
| 9500         | IAS<br>KT          | 182         | 182                | 181         | 181 | 181 | 181 | 181 | 181 | 180 | 180 | 180 | 180 |
|              | TORQUE<br>%        | 40          | 41                 | 41          | 42  | 43  | 43  | 44  | 44  | 45  | 45  | 46  | 46  |
|              | F FLOW<br>KG/H/ENG | 162         | 165                | 167         | 171 | 174 | 175 | 177 | 180 | 183 | 183 | 186 | 186 |
| 9000         | IAS<br>KT          | 178         | 180                | 179         | 179 | 179 | 178 | 178 | 178 | 178 | 178 | 178 | 177 |
|              | TORQUE<br>%        | 37          | 39                 | 39          | 40  | 41  | 41  | 42  | 42  | 43  | 43  | 43  | 43  |
|              | F FLOW<br>KG/H/ENG | 155         | 160                | 163         | 166 | 169 | 170 | 172 | 175 | 178 | 180 | 180 | 180 |
| 8500         | IAS<br>KT          | 175         | 176                | 177         | 177 | 177 | 176 | 176 | 176 | 176 | 176 | 176 | 175 |
|              | TORQUE<br>%        | 35          | 36                 | 37          | 38  | 39  | 39  | 39  | 39  | 40  | 41  | 41  | 41  |
|              | F FLOW<br>KG/H/ENG | 150         | 155                | 158         | 161 | 164 | 166 | 167 | 170 | 173 | 173 | 175 | 175 |
| 8000         | IAS<br>KT          | 174         | 174                | 174         | 174 | 175 | 175 | 174 | 174 | 174 | 174 | 173 | 173 |
|              | TORQUE<br>%        | 34          | 35                 | 36          | 36  | 37  | 37  | 37  | 37  | 38  | 39  | 39  | 39  |
|              | F FLOW<br>KG/H/ENG | 147         | 150                | 154         | 157 | 160 | 161 | 162 | 165 | 168 | 170 | 170 | 170 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**LONG RANGE CRUISE**
**CRUISE CONFIGURATION**

NP: 85%

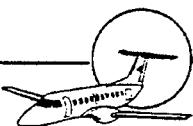
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 18000 FT**

| WEIGHT<br>KG | IAS             | KT        | IOAT ( °C ) |           |           |           |           |           |           |           |           |           |
|--------------|-----------------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|              |                 |           | -50         | -40       | -30       | -20       | -10       | -5        | 0         | 10        | 20        | 30        |
| 12000        | TORQUE %        | 193<br>51 | 193<br>52   | 193<br>53 | 193<br>54 | 192<br>55 | 192<br>56 | 192<br>56 | 191<br>57 | 191<br>58 | 191<br>58 | 176<br>52 |
|              | F FLOW KG/H/ENG | 187       | 192         | 196       | 200       | 204       | 205       | 207       | 211       | 215       | 215       | 200       |
| 11500        | TORQUE %        | 191<br>49 | 191<br>50   | 190<br>51 | 190<br>52 | 190<br>53 | 190<br>53 | 189<br>54 | 189<br>54 | 188<br>55 | 188<br>55 | 180<br>52 |
|              | F FLOW KG/H/ENG | 181       | 185         | 189       | 193       | 197       | 198       | 200       | 204       | 207       | 207       | 202       |
| 11000        | TORQUE %        | 188<br>46 | 188<br>47   | 188<br>48 | 187<br>49 | 187<br>50 | 187<br>51 | 187<br>51 | 186<br>52 | 186<br>53 | 186<br>53 | 185<br>53 |
|              | F FLOW KG/H/ENG | 175       | 179         | 183       | 186       | 189       | 192       | 194       | 197       | 200       | 200       | 203       |
| 10500        | TORQUE %        | 185<br>44 | 185<br>45   | 185<br>46 | 185<br>47 | 184<br>47 | 184<br>48 | 184<br>48 | 184<br>49 | 184<br>50 | 184<br>51 | 183<br>51 |
|              | F FLOW KG/H/ENG | 170       | 173         | 177       | 180       | 183       | 185       | 187       | 191       | 194       | 194       | 196       |
| 10000        | TORQUE %        | 182<br>42 | 182<br>43   | 182<br>43 | 182<br>44 | 182<br>45 | 182<br>46 | 181<br>46 | 181<br>47 | 182<br>48 | 182<br>48 | 181<br>48 |
|              | F FLOW KG/H/ENG | 163       | 167         | 171       | 174       | 177       | 179       | 180       | 184       | 188       | 188       | 190       |
| 9500         | TORQUE %        | 181<br>40 | 180<br>40   | 180<br>41 | 179<br>42 | 179<br>43 | 179<br>43 | 179<br>44 | 179<br>44 | 179<br>45 | 179<br>46 | 179<br>46 |
|              | F FLOW KG/H/ENG | 159       | 162         | 165       | 168       | 172       | 173       | 175       | 178       | 181       | 181       | 184       |
| 9000         | TORQUE %        | 178<br>38 | 178<br>39   | 177<br>39 | 177<br>40 | 176<br>40 | 177<br>41 | 177<br>41 | 176<br>42 | 176<br>43 | 176<br>43 | 176<br>43 |
|              | F FLOW KG/H/ENG | 154       | 157         | 160       | 163       | 165       | 168       | 169       | 172       | 174       | 174       | 177       |
| 8500         | TORQUE %        | 174<br>35 | 175<br>37   | 175<br>37 | 175<br>38 | 174<br>38 | 174<br>39 | 174<br>39 | 174<br>40 | 174<br>40 | 174<br>41 | 173<br>41 |
|              | F FLOW KG/H/ENG | 148       | 152         | 155       | 158       | 160       | 162       | 163       | 167       | 169       | 169       | 172       |
| 8000         | TORQUE %        | 171<br>33 | 172<br>34   | 173<br>35 | 172<br>36 | 173<br>37 | 172<br>37 | 172<br>37 | 172<br>38 | 171<br>38 | 171<br>38 | 171<br>39 |
|              | F FLOW KG/H/ENG | 143       | 147         | 150       | 153       | 156       | 158       | 159       | 161       | 164       | 164       | 167       |

20 NOVEMBER 1992



**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CRUISE CONTROL  
ALL ENGINES OPERATING**

**PW118A ENGINES**

**LONG RANGE CRUISE**

**CRUISE CONFIGURATION**

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 19000 FT**

| WEIGHT<br>KG | IOAT ( °C )             |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|--------------|-------------------------|---------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|              | -50                     | -40                 | -30              | -20              | -10              | -5               | 0                | 10               | 20               | 30               |                  |                  |
| 12000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 192<br>51<br>186 | 192<br>52<br>190 | 192<br>54<br>195 | 192<br>55<br>199 | 191<br>56<br>203 | 191<br>56<br>205 | 191<br>57<br>206 | 190<br>58<br>210 | 187<br>58<br>211 | -<br>-<br>-      |
| 11500        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 190<br>49<br>180 | 189<br>50<br>184 | 189<br>51<br>188 | 189<br>52<br>192 | 189<br>53<br>195 | 188<br>53<br>197 | 188<br>54<br>199 | 187<br>55<br>202 | 187<br>56<br>206 | 171<br>50<br>191 |
| 11000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 187<br>47<br>174 | 187<br>48<br>178 | 186<br>48<br>180 | 186<br>49<br>184 | 186<br>50<br>189 | 186<br>51<br>190 | 185<br>51<br>192 | 185<br>52<br>195 | 184<br>53<br>198 | 175<br>50<br>192 |
| 10500        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 184<br>44<br>168 | 184<br>45<br>172 | 184<br>46<br>174 | 183<br>47<br>178 | 183<br>48<br>181 | 183<br>48<br>183 | 183<br>49<br>185 | 183<br>50<br>189 | 182<br>50<br>191 | 181<br>51<br>193 |
| 10000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 181<br>42<br>162 | 181<br>43<br>165 | 181<br>44<br>169 | 181<br>44<br>172 | 180<br>45<br>174 | 180<br>45<br>176 | 180<br>46<br>178 | 180<br>47<br>182 | 180<br>48<br>185 | 179<br>48<br>187 |
| 9500         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 178<br>40<br>156 | 178<br>40<br>160 | 178<br>41<br>162 | 178<br>42<br>166 | 178<br>43<br>169 | 178<br>43<br>171 | 177<br>43<br>172 | 177<br>44<br>175 | 177<br>45<br>179 | 177<br>46<br>181 |
| 9000         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 177<br>38<br>153 | 176<br>38<br>154 | 175<br>39<br>157 | 175<br>40<br>160 | 175<br>40<br>163 | 175<br>41<br>165 | 175<br>41<br>166 | 174<br>42<br>169 | 174<br>43<br>172 | 174<br>43<br>175 |
| 8500         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 173<br>36<br>146 | 174<br>37<br>150 | 173<br>37<br>152 | 173<br>38<br>155 | 172<br>38<br>157 | 172<br>39<br>159 | 172<br>39<br>161 | 172<br>40<br>164 | 172<br>40<br>166 | 171<br>41<br>168 |
| 8000         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 169<br>33<br>140 | 170<br>34<br>144 | 171<br>35<br>147 | 171<br>36<br>150 | 171<br>36<br>153 | 170<br>37<br>154 | 170<br>37<br>155 | 170<br>38<br>159 | 170<br>38<br>161 | 169<br>39<br>163 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL  
ALL ENGINES OPERATING**
**PW118A ENGINES**
**LONG RANGE CRUISE**
**CRUISE CONFIGURATION**

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 20000 FT**

| WEIGHT<br>KG | IAS             | KT  | IOAT ( °C ) |     |     |     |     |     |     |     |     |     |
|--------------|-----------------|-----|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |                 |     | -50         | -40 | -30 | -20 | -15 | -10 | -5  | 0   | 10  | 20  |
| 12000        | TORQUE %        | 52  | 191         | 191 | 191 | 191 | 190 | 190 | 189 | 189 | 189 | 178 |
|              | F FLOW KG/H/ENG | 185 | 53          | 54  | 55  | 56  | 56  | 57  | 57  | 57  | 59  | 54  |
|              | IAS             | 188 | 188         | 188 | 188 | 188 | 187 | 187 | 187 | 187 | 186 | 183 |
| 11500        | TORQUE %        | 49  | 188         | 188 | 188 | 188 | 187 | 187 | 187 | 187 | 186 | 183 |
|              | F FLOW KG/H/ENG | 178 | 50          | 52  | 53  | 53  | 54  | 54  | 54  | 54  | 55  | 55  |
|              | IAS             | 186 | 185         | 185 | 185 | 185 | 185 | 185 | 184 | 184 | 183 | 183 |
| 11000        | TORQUE %        | 47  | 186         | 185 | 185 | 185 | 185 | 185 | 184 | 184 | 183 | 183 |
|              | F FLOW KG/H/ENG | 172 | 48          | 49  | 50  | 51  | 51  | 51  | 52  | 52  | 52  | 54  |
|              | IAS             | 183 | 183         | 182 | 182 | 182 | 182 | 182 | 182 | 181 | 181 | 181 |
| 10500        | TORQUE %        | 44  | 183         | 183 | 182 | 182 | 182 | 182 | 182 | 181 | 181 | 181 |
|              | F FLOW KG/H/ENG | 166 | 45          | 46  | 47  | 48  | 48  | 49  | 49  | 49  | 50  | 51  |
|              | IAS             | 180 | 180         | 180 | 179 | 179 | 178 | 179 | 179 | 179 | 179 | 178 |
| 10000        | TORQUE %        | 42  | 180         | 180 | 180 | 179 | 179 | 178 | 179 | 179 | 179 | 178 |
|              | F FLOW KG/H/ENG | 160 | 43          | 44  | 45  | 45  | 45  | 46  | 46  | 46  | 47  | 48  |
|              | IAS             | 177 | 177         | 177 | 177 | 176 | 176 | 176 | 175 | 175 | 176 | 176 |
| 9500         | TORQUE %        | 40  | 177         | 177 | 177 | 176 | 176 | 176 | 175 | 175 | 176 | 176 |
|              | F FLOW KG/H/ENG | 154 | 41          | 41  | 42  | 43  | 43  | 43  | 44  | 44  | 45  | 45  |
|              | IAS             | 174 | 174         | 174 | 174 | 174 | 174 | 173 | 173 | 173 | 173 | 173 |
| 9000         | TORQUE %        | 38  | 174         | 174 | 174 | 174 | 174 | 173 | 173 | 173 | 173 | 173 |
|              | F FLOW KG/H/ENG | 148 | 38          | 39  | 40  | 40  | 41  | 41  | 41  | 41  | 42  | 43  |
|              | IAS             | 173 | 172         | 171 | 171 | 171 | 171 | 171 | 171 | 171 | 170 | 170 |
| 8500         | TORQUE %        | 36  | 173         | 172 | 171 | 171 | 171 | 171 | 171 | 171 | 170 | 170 |
|              | F FLOW KG/H/ENG | 144 | 36          | 37  | 37  | 38  | 38  | 39  | 39  | 39  | 40  | 40  |
|              | IAS             | 168 | 170         | 169 | 169 | 169 | 168 | 168 | 168 | 168 | 168 | 168 |
| 8000         | TORQUE %        | 33  | 168         | 170 | 169 | 169 | 169 | 168 | 168 | 168 | 168 | 168 |
|              | F FLOW KG/H/ENG | 138 | 35          | 35  | 36  | 36  | 36  | 36  | 36  | 36  | 37  | 38  |

20 NOVEMBER 1992



**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CRUISE CONTROL  
ALL ENGINES OPERATING**

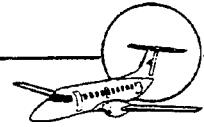
**PW118A ENGINES**

**LONG RANGE CRUISE**

CRUISE CONFIGURATION  
NP: 85%  
BLEED SWITCH: AUTO  
PACK CONTROL SELECTOR: LOW

**ALTITUDE: 21000 FT**

| WEIGHT<br>KG | IAS<br>KT          | TORQUE<br>% | F FLOW<br>KG/H/ENG | IOAT ( °C ) |     |     |     |     |     |     |     |     |     |
|--------------|--------------------|-------------|--------------------|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |                    |             |                    | -50         | -40 | -30 | -20 | -15 | -10 | -5  | 0   | 10  | 20  |
| 12000        | IAS<br>KT          | 190         | 190                | 190         | 189 | 188 | 188 | 188 | 188 | 188 | 188 | 188 | -   |
|              | TORQUE<br>%        | 52          | 54                 | 55          | 56  | 56  | 56  | 57  | 57  | 57  | 58  | 59  | -   |
|              | F FLOW<br>KG/H/ENG | 185         | 189                | 194         | 197 | 198 | 201 | 202 | 202 | 205 | 205 | 209 | -   |
| 11500        | IAS<br>KT          | 187         | 187                | 187         | 187 | 186 | 186 | 185 | 185 | 185 | 185 | 185 | 174 |
|              | TORQUE<br>%        | 50          | 51                 | 52          | 53  | 53  | 54  | 54  | 54  | 55  | 55  | 56  | 52  |
|              | F FLOW<br>KG/H/ENG | 177         | 182                | 187         | 190 | 192 | 193 | 195 | 195 | 197 | 201 | 201 | 190 |
| 11000        | IAS<br>KT          | 184         | 184                | 184         | 184 | 184 | 183 | 183 | 183 | 183 | 183 | 182 | 178 |
|              | TORQUE<br>%        | 47          | 48                 | 49          | 50  | 51  | 51  | 52  | 52  | 52  | 53  | 53  | 52  |
|              | F FLOW<br>KG/H/ENG | 171         | 174                | 179         | 183 | 184 | 186 | 187 | 187 | 190 | 192 | 192 | 192 |
| 10500        | IAS<br>KT          | 181         | 181                | 181         | 181 | 181 | 181 | 180 | 180 | 180 | 180 | 180 | 179 |
|              | TORQUE<br>%        | 45          | 46                 | 46          | 48  | 48  | 48  | 49  | 49  | 49  | 50  | 50  | 51  |
|              | F FLOW<br>KG/H/ENG | 165         | 168                | 171         | 176 | 177 | 179 | 180 | 182 | 185 | 185 | 188 | -   |
| 10000        | IAS<br>KT          | 179         | 179                | 178         | 178 | 178 | 178 | 178 | 178 | 177 | 177 | 177 | 176 |
|              | TORQUE<br>%        | 42          | 43                 | 44          | 45  | 45  | 46  | 46  | 47  | 47  | 47  | 47  | 48  |
|              | F FLOW<br>KG/H/ENG | 158         | 162                | 165         | 168 | 169 | 172 | 173 | 175 | 175 | 178 | 178 | 181 |
| 9500         | IAS<br>KT          | 176         | 176                | 175         | 175 | 175 | 174 | 174 | 175 | 175 | 174 | 174 | 174 |
|              | TORQUE<br>%        | 40          | 41                 | 42          | 42  | 43  | 43  | 43  | 44  | 44  | 45  | 45  | 45  |
|              | F FLOW<br>KG/H/ENG | 152         | 155                | 159         | 161 | 163 | 164 | 166 | 168 | 171 | 171 | 171 | 174 |
| 9000         | IAS<br>KT          | 172         | 173                | 172         | 172 | 172 | 172 | 172 | 172 | 171 | 171 | 172 | 171 |
|              | TORQUE<br>%        | 38          | 38                 | 39          | 40  | 40  | 41  | 41  | 41  | 41  | 42  | 42  | 43  |
|              | F FLOW<br>KG/H/ENG | 147         | 150                | 152         | 156 | 157 | 158 | 160 | 161 | 161 | 165 | 165 | 167 |
| 8500         | IAS<br>KT          | 170         | 170                | 169         | 169 | 170 | 169 | 169 | 169 | 169 | 169 | 169 | 169 |
|              | TORQUE<br>%        | 36          | 36                 | 37          | 38  | 38  | 38  | 38  | 39  | 39  | 40  | 40  | 40  |
|              | F FLOW<br>KG/H/ENG | 142         | 144                | 146         | 150 | 151 | 152 | 154 | 156 | 158 | 158 | 161 | 161 |
| 8000         | IAS<br>KT          | 167         | 168                | 167         | 167 | 166 | 166 | 166 | 167 | 166 | 166 | 166 | 166 |
|              | TORQUE<br>%        | 34          | 34                 | 35          | 35  | 36  | 36  | 36  | 36  | 37  | 37  | 37  | 38  |
|              | F FLOW<br>KG/H/ENG | 136         | 139                | 141         | 144 | 146 | 147 | 148 | 150 | 152 | 152 | 155 | -   |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**LONG RANGE CRUISE**
**CRUISE CONFIGURATION**

NP: 85%

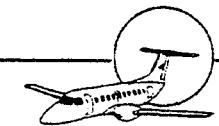
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 22000 FT**

| WEIGHT<br>KG | IOAT ( °C )             |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|--------------|-------------------------|---------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|              | -50                     | -40                 | -30              | -20              | -15              | -10              | -5               | 0                | 10               | 20               |                  |                  |
| 12000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 189<br>53<br>185 | 188<br>54<br>189 | 188<br>55<br>192 | 187<br>56<br>195 | 187<br>57<br>198 | 187<br>57<br>200 | 187<br>58<br>202 | 187<br>58<br>204 | 178<br>56<br>199 | -<br>-<br>-      |
| 11500        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 186<br>50<br>177 | 186<br>51<br>182 | 186<br>52<br>185 | 185<br>53<br>188 | 185<br>54<br>190 | 184<br>54<br>192 | 184<br>55<br>194 | 184<br>56<br>196 | 184<br>57<br>200 | -<br>-<br>-      |
| 11000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 183<br>47<br>170 | 183<br>49<br>174 | 183<br>50<br>178 | 183<br>51<br>182 | 182<br>51<br>183 | 182<br>52<br>185 | 182<br>52<br>187 | 182<br>53<br>188 | 182<br>54<br>192 | 169<br>49<br>181 |
| 10500        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 180<br>45<br>163 | 180<br>46<br>167 | 180<br>47<br>171 | 180<br>48<br>174 | 180<br>48<br>176 | 179<br>49<br>177 | 179<br>49<br>179 | 179<br>50<br>180 | 178<br>50<br>184 | 173<br>49<br>183 |
| 10000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 177<br>42<br>157 | 177<br>43<br>160 | 177<br>44<br>164 | 177<br>45<br>167 | 177<br>46<br>169 | 177<br>46<br>170 | 176<br>46<br>171 | 176<br>47<br>173 | 176<br>48<br>177 | 175<br>49<br>179 |
| 9500         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 174<br>40<br>151 | 174<br>41<br>154 | 174<br>42<br>157 | 174<br>42<br>160 | 173<br>43<br>161 | 174<br>43<br>163 | 174<br>44<br>165 | 174<br>44<br>167 | 173<br>45<br>170 | 172<br>46<br>172 |
| 9000         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 171<br>38<br>145 | 171<br>38<br>147 | 171<br>39<br>151 | 171<br>40<br>154 | 171<br>40<br>155 | 170<br>41<br>156 | 170<br>41<br>158 | 170<br>41<br>159 | 170<br>42<br>163 | 170<br>43<br>165 |
| 8500         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 168<br>35<br>139 | 168<br>36<br>142 | 168<br>37<br>144 | 168<br>38<br>148 | 168<br>38<br>149 | 168<br>38<br>150 | 168<br>39<br>151 | 167<br>39<br>153 | 167<br>40<br>156 | 167<br>41<br>159 |
| 8000         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 167<br>34<br>135 | 165<br>34<br>136 | 165<br>35<br>139 | 165<br>35<br>142 | 165<br>36<br>143 | 165<br>36<br>144 | 165<br>36<br>145 | 165<br>37<br>147 | 165<br>37<br>150 | 164<br>38<br>153 |

20 NOVEMBER 1992



**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CRUISE CONTROL**

**ALL ENGINES OPERATING**

**PW118A ENGINES**

**LONG RANGE CRUISE**

**CRUISE CONFIGURATION**

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 23000 FT**

| WEIGHT<br>KG |                                  |                     | IOAT ( °C )      |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|--------------|----------------------------------|---------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|              |                                  |                     | -50              | -40              | -30              | -20              | -15              | -10              | -5               | 0                | 10               | 20               |
| 12000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 187<br>53<br>184 | 187<br>54<br>188 | 187<br>55<br>192 | 187<br>56<br>194 | 186<br>57<br>198 | 186<br>58<br>200 | 186<br>59<br>203 | 186<br>59<br>205 | -                | -                |
| 11500        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 185<br>50<br>177 | 184<br>51<br>180 | 184<br>53<br>184 | 184<br>54<br>187 | 183<br>54<br>190 | 183<br>55<br>192 | 183<br>55<br>194 | 183<br>56<br>196 | 174<br>53<br>190 | -                |
| 11000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 182<br>48<br>169 | 182<br>49<br>174 | 182<br>50<br>178 | 181<br>51<br>181 | 181<br>51<br>182 | 180<br>52<br>184 | 180<br>52<br>186 | 180<br>53<br>188 | 180<br>54<br>191 | -                |
| 10500        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 179<br>45<br>162 | 179<br>46<br>166 | 179<br>47<br>170 | 178<br>48<br>174 | 178<br>49<br>175 | 178<br>50<br>176 | 178<br>50<br>178 | 177<br>50<br>179 | 178<br>51<br>184 | 164<br>47<br>173 |
| 10000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 176<br>43<br>156 | 176<br>44<br>159 | 176<br>45<br>163 | 176<br>46<br>166 | 176<br>46<br>168 | 175<br>46<br>169 | 175<br>47<br>170 | 174<br>47<br>172 | 174<br>48<br>175 | 170<br>47<br>174 |
| 9500         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 173<br>40<br>149 | 173<br>41<br>152 | 172<br>42<br>155 | 172<br>43<br>159 | 173<br>43<br>161 | 173<br>44<br>162 | 172<br>44<br>164 | 172<br>44<br>165 | 172<br>45<br>168 | 171<br>46<br>171 |
| 9000         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 170<br>38<br>143 | 170<br>39<br>146 | 170<br>40<br>150 | 169<br>40<br>152 | 169<br>40<br>153 | 169<br>41<br>155 | 169<br>42<br>157 | 169<br>42<br>158 | 169<br>43<br>161 | 168<br>43<br>163 |
| 8500         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 167<br>36<br>137 | 167<br>36<br>140 | 167<br>37<br>143 | 167<br>38<br>146 | 167<br>38<br>147 | 166<br>38<br>148 | 166<br>39<br>149 | 166<br>39<br>151 | 166<br>40<br>154 | 166<br>41<br>157 |
| 8000         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 164<br>34<br>132 | 164<br>34<br>135 | 164<br>35<br>137 | 164<br>35<br>140 | 164<br>36<br>141 | 164<br>36<br>142 | 164<br>37<br>144 | 163<br>37<br>145 | 163<br>37<br>147 | 163<br>38<br>151 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**LONG RANGE CRUISE**
**CRUISE CONFIGURATION**

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 24000 FT**

| WEIGHT<br>KG | IAS<br>KT          | TORQUE<br>% | IOAT ( °C ) |     |     |     |     |     |     |     |     |     |
|--------------|--------------------|-------------|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |                    |             | -50         | -40 | -30 | -20 | -15 | -10 | -5  | 0   | 10  | 20  |
| 12000        | IAS<br>KT          | 186         | 185         | 185 | 185 | 185 | 185 | 185 | 185 | 180 | -   | -   |
|              | TORQUE<br>%        | 53          | 55          | 56  | 57  | 58  | 59  | 60  | 60  | 58  | -   | -   |
|              | F FLOW<br>KG/H/ENG | 183         | 188         | 192 | 196 | 199 | 201 | 204 | 204 | 200 | -   | -   |
| 11500        | IAS<br>KT          | 184         | 183         | 183 | 183 | 182 | 182 | 182 | 182 | 182 | -   | -   |
|              | TORQUE<br>%        | 51          | 52          | 53  | 54  | 55  | 55  | 56  | 56  | 57  | -   | -   |
|              | F FLOW<br>KG/H/ENG | 176         | 180         | 184 | 188 | 190 | 192 | 194 | 194 | 197 | -   | -   |
| 11000        | IAS<br>KT          | 181         | 181         | 180 | 180 | 180 | 180 | 179 | 179 | 179 | 169 | -   |
|              | TORQUE<br>%        | 48          | 49          | 50  | 51  | 52  | 53  | 53  | 53  | 54  | 51  | -   |
|              | F FLOW<br>KG/H/ENG | 169         | 173         | 176 | 180 | 182 | 184 | 186 | 186 | 188 | 180 | -   |
| 10500        | IAS<br>KT          | 178         | 178         | 178 | 177 | 177 | 177 | 177 | 177 | 176 | 175 | -   |
|              | TORQUE<br>%        | 46          | 47          | 48  | 49  | 49  | 50  | 50  | 50  | 51  | 51  | -   |
|              | F FLOW<br>KG/H/ENG | 162         | 165         | 169 | 172 | 174 | 176 | 177 | 177 | 179 | 182 | -   |
| 10000        | IAS<br>KT          | 175         | 175         | 175 | 175 | 174 | 174 | 173 | 173 | 173 | 174 | 161 |
|              | TORQUE<br>%        | 43          | 44          | 45  | 46  | 46  | 47  | 47  | 47  | 47  | 49  | 44  |
|              | F FLOW<br>KG/H/ENG | 154         | 158         | 162 | 166 | 167 | 168 | 170 | 170 | 171 | 175 | 164 |
| 9500         | IAS<br>KT          | 172         | 172         | 172 | 172 | 171 | 171 | 171 | 171 | 170 | 170 | 166 |
|              | TORQUE<br>%        | 41          | 41          | 42  | 43  | 44  | 44  | 44  | 44  | 45  | 46  | 45  |
|              | F FLOW<br>KG/H/ENG | 148         | 151         | 155 | 158 | 159 | 161 | 162 | 162 | 164 | 166 | 166 |
| 9000         | IAS<br>KT          | 169         | 169         | 168 | 168 | 168 | 168 | 168 | 168 | 168 | 167 | 167 |
|              | TORQUE<br>%        | 38          | 39          | 40  | 40  | 41  | 41  | 42  | 42  | 42  | 43  | 44  |
|              | F FLOW<br>KG/H/ENG | 142         | 145         | 147 | 151 | 153 | 154 | 155 | 155 | 156 | 159 | 162 |
| 8500         | IAS<br>KT          | 166         | 166         | 166 | 165 | 164 | 165 | 165 | 165 | 165 | 165 | 164 |
|              | TORQUE<br>%        | 36          | 37          | 37  | 38  | 38  | 38  | 39  | 39  | 40  | 40  | 41  |
|              | F FLOW<br>KG/H/ENG | 136         | 139         | 142 | 144 | 145 | 147 | 149 | 149 | 150 | 152 | 155 |
| 8000         | IAS<br>KT          | 162         | 162         | 162 | 162 | 162 | 162 | 161 | 161 | 161 | 162 | 161 |
|              | TORQUE<br>%        | 33          | 34          | 35  | 36  | 36  | 36  | 36  | 36  | 37  | 38  | 38  |
|              | F FLOW<br>KG/H/ENG | 129         | 132         | 135 | 138 | 139 | 140 | 141 | 141 | 142 | 145 | 148 |

20 NOVEMBER 1992



SUPPLEMENTARY PERFORMANCE  
MANUAL

CRUISE CONTROL  
ALL ENGINES OPERATING

PW118A ENGINES

LONG RANGE CRUISE

CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 25000 FT

| WEIGHT<br>KG | IAS<br>KT          | TORQUE<br>% | F FLOW<br>KG/H/ENG | IOAT ( °C ) |     |     |     |     |     |     |     |     |     |
|--------------|--------------------|-------------|--------------------|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |                    |             |                    | -50         | -40 | -30 | -25 | -20 | -15 | -10 | -5  | 0   | 10  |
| 12000        | IAS<br>KT          | 185         | 185                | 185         | 185 | 185 | 185 | 185 | 185 | 185 | 179 | -   | -   |
|              | TORQUE<br>%        | 54          | 56                 | 57          | 58  | 58  | 59  | 60  | 60  | 60  | 58  | -   | -   |
|              | F FLOW<br>KG/H/ENG | 184         | 189                | 194         | 198 | 198 | 200 | 203 | 203 | 203 | 199 | -   | -   |
| 11500        | IAS<br>KT          | 182         | 182                | 182         | 182 | 181 | 181 | 182 | 182 | 182 | 181 | 174 | -   |
|              | TORQUE<br>%        | 51          | 52                 | 53          | 54  | 55  | 56  | 56  | 56  | 56  | 57  | 54  | -   |
|              | F FLOW<br>KG/H/ENG | 176         | 180                | 184         | 187 | 189 | 191 | 193 | 193 | 195 | 189 | -   | -   |
| 11000        | IAS<br>KT          | 179         | 179                | 179         | 179 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | -   |
|              | TORQUE<br>%        | 49          | 50                 | 51          | 52  | 52  | 53  | 53  | 53  | 53  | 54  | 54  | -   |
|              | F FLOW<br>KG/H/ENG | 168         | 172                | 176         | 178 | 179 | 182 | 184 | 186 | 186 | 187 | -   | -   |
| 10500        | IAS<br>KT          | 177         | 177                | 176         | 176 | 176 | 176 | 176 | 176 | 176 | 175 | 175 | 165 |
|              | TORQUE<br>%        | 46          | 47                 | 48          | 48  | 49  | 50  | 50  | 50  | 50  | 51  | 51  | 48  |
|              | F FLOW<br>KG/H/ENG | 162         | 165                | 168         | 170 | 172 | 174 | 176 | 176 | 177 | 179 | 179 | 171 |
| 10000        | IAS<br>KT          | 174         | 174                | 174         | 173 | 173 | 173 | 173 | 173 | 172 | 172 | 172 | 170 |
|              | TORQUE<br>%        | 43          | 44                 | 45          | 46  | 46  | 47  | 47  | 47  | 47  | 48  | 48  | 48  |
|              | F FLOW<br>KG/H/ENG | 154         | 158                | 161         | 163 | 164 | 166 | 167 | 167 | 169 | 171 | 171 | 173 |
| 9500         | IAS<br>KT          | 171         | 170                | 171         | 171 | 171 | 170 | 170 | 170 | 169 | 169 | 169 | 169 |
|              | TORQUE<br>%        | 41          | 42                 | 43          | 43  | 44  | 44  | 44  | 44  | 45  | 45  | 45  | 46  |
|              | F FLOW<br>KG/H/ENG | 147         | 150                | 154         | 156 | 157 | 158 | 160 | 161 | 161 | 162 | 162 | 167 |
| 9000         | IAS<br>KT          | 168         | 167                | 167         | 168 | 168 | 167 | 167 | 167 | 166 | 166 | 166 | 166 |
|              | TORQUE<br>%        | 38          | 39                 | 40          | 41  | 41  | 41  | 42  | 42  | 42  | 42  | 42  | 43  |
|              | F FLOW<br>KG/H/ENG | 140         | 143                | 147         | 149 | 150 | 151 | 152 | 154 | 155 | 155 | 155 | 158 |
| 8500         | IAS<br>KT          | 165         | 165                | 164         | 164 | 164 | 164 | 164 | 164 | 164 | 164 | 164 | 163 |
|              | TORQUE<br>%        | 36          | 37                 | 37          | 38  | 38  | 38  | 38  | 39  | 39  | 40  | 40  | 40  |
|              | F FLOW<br>KG/H/ENG | 134         | 137                | 139         | 141 | 143 | 144 | 146 | 147 | 147 | 148 | 148 | 151 |
| 8000         | IAS<br>KT          | 162         | 161                | 161         | 161 | 161 | 160 | 160 | 160 | 160 | 161 | 161 | 160 |
|              | TORQUE<br>%        | 34          | 34                 | 35          | 35  | 36  | 36  | 36  | 37  | 37  | 37  | 37  | 38  |
|              | F FLOW<br>KG/H/ENG | 129         | 131                | 133         | 135 | 136 | 137 | 138 | 140 | 142 | 144 | 142 | 144 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**LONG RANGE CRUISE**
**CRUISE CONFIGURATION**

NP: 85%

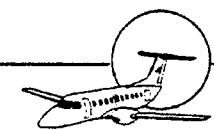
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 26000 FT**

| WEIGHT<br>KG | IOAT ( °C )                            |                        |                        |                        |                        |                        |                        |                        |                        |                        |  |
|--------------|--|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|--|
|              | -50                                    | -40                    | -30                    | -25                    | -20                    | -15                    | -10                    | -5                     | 0                      | 10                     |  |
| 12000        | IAS<br>KT<br>TORQUE<br>F FLOW KG/H/ENG | 184<br>55<br>56<br>184 | 184<br>56<br>57<br>189 | 184<br>58<br>59<br>194 | 184<br>59<br>60<br>198 | 185<br>60<br>58<br>200 | 178<br>58<br>58<br>203 | -<br>-<br>-            | -<br>-<br>-            | -<br>-<br>-            |  |
| 11500        | IAS<br>KT<br>TORQUE<br>F FLOW KG/H/ENG | 181<br>52<br>53<br>176 | 181<br>53<br>54<br>181 | 181<br>54<br>55<br>185 | 181<br>55<br>56<br>188 | 181<br>56<br>57<br>190 | 181<br>57<br>57<br>193 | 173<br>55<br>55<br>194 | -<br>-<br>-            | -<br>-<br>-            |  |
| 11000        | IAS<br>KT<br>TORQUE<br>F FLOW KG/H/ENG | 178<br>49<br>50<br>168 | 178<br>51<br>52<br>172 | 178<br>52<br>53<br>176 | 178<br>53<br>53<br>178 | 178<br>53<br>54<br>181 | 178<br>54<br>54<br>183 | 177<br>54<br>54<br>185 | 170<br>52<br>52<br>180 | -<br>-<br>-            |  |
| 10500        | IAS<br>KT<br>TORQUE<br>F FLOW KG/H/ENG | 175<br>46<br>47<br>160 | 175<br>47<br>48<br>164 | 175<br>49<br>49<br>168 | 175<br>49<br>50<br>170 | 175<br>50<br>51<br>172 | 174<br>51<br>51<br>174 | 174<br>51<br>51<br>176 | 174<br>52<br>52<br>177 | -<br>-<br>-            |  |
| 10000        | IAS<br>KT<br>TORQUE<br>F FLOW KG/H/ENG | 173<br>44<br>45<br>154 | 173<br>45<br>46<br>158 | 173<br>46<br>46<br>160 | 172<br>46<br>47<br>162 | 171<br>47<br>47<br>163 | 172<br>48<br>48<br>166 | 171<br>48<br>48<br>167 | 171<br>48<br>48<br>168 | 161<br>46<br>46<br>163 |  |
| 9500         | IAS<br>KT<br>TORQUE<br>F FLOW KG/H/ENG | 169<br>41<br>42<br>146 | 170<br>42<br>43<br>150 | 170<br>43<br>44<br>153 | 169<br>44<br>44<br>155 | 169<br>44<br>45<br>156 | 168<br>45<br>45<br>157 | 168<br>45<br>45<br>159 | 168<br>46<br>46<br>161 | 167<br>46<br>46<br>162 |  |
| 9000         | IAS<br>KT<br>TORQUE<br>F FLOW KG/H/ENG | 167<br>39<br>41<br>139 | 166<br>39<br>41<br>142 | 167<br>41<br>41<br>146 | 167<br>41<br>42<br>148 | 167<br>42<br>42<br>149 | 166<br>42<br>42<br>150 | 165<br>42<br>42<br>151 | 165<br>43<br>43<br>153 | 165<br>44<br>44<br>154 |  |
| 8500         | IAS<br>KT<br>TORQUE<br>F FLOW KG/H/ENG | 163<br>36<br>37<br>133 | 163<br>37<br>38<br>136 | 163<br>38<br>39<br>138 | 163<br>39<br>39<br>140 | 163<br>39<br>39<br>142 | 163<br>39<br>40<br>144 | 162<br>40<br>40<br>144 | 162<br>40<br>40<br>145 | 162<br>41<br>41<br>147 |  |
| 8000         | IAS<br>KT<br>TORQUE<br>F FLOW KG/H/ENG | 160<br>34<br>35<br>127 | 160<br>35<br>35<br>130 | 160<br>35<br>36<br>132 | 159<br>36<br>36<br>133 | 159<br>36<br>37<br>134 | 160<br>37<br>37<br>135 | 160<br>37<br>37<br>138 | 160<br>37<br>37<br>139 | 159<br>38<br>38<br>140 |  |

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**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CRUISE CONTROL  
ALL ENGINES OPERATING**

**PW118A ENGINES**

**LONG RANGE CRUISE**

**CRUISE CONFIGURATION**

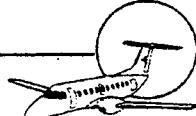
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 27000 FT**

| WEIGHT<br>KG | IOAT ( °C )                                      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |   |
|--------------|--|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|---|
|              | -50  | -40              | -30              | -25              | -20              | -15              | -10              | -5               | 0                | 10               |                  |   |
| 12000        | IAS KT 183<br>TORQUE % 55<br>F FLOW KG/H/ENG 185 | 183<br>57<br>191 | 183<br>58<br>196 | 184<br>60<br>200 | 184<br>61<br>204 | 185<br>58<br>197 | 177<br>58<br>-   | -<br>-           | -<br>-           | -<br>-           | -<br>-           | - |
| 11500        | IAS KT 180<br>TORQUE % 53<br>F FLOW KG/H/ENG 177 | 180<br>54<br>182 | 180<br>55<br>187 | 181<br>56<br>190 | 181<br>57<br>192 | 181<br>58<br>194 | 172<br>55<br>187 | -<br>-           | -<br>-           | -<br>-           | -<br>-           | - |
| 11000        | IAS KT 177<br>TORQUE % 49<br>F FLOW KG/H/ENG 168 | 177<br>51<br>172 | 177<br>52<br>177 | 177<br>53<br>179 | 177<br>54<br>182 | 177<br>54<br>184 | 177<br>55<br>186 | 168<br>52<br>179 | -<br>-           | -<br>-           | -<br>-           | - |
| 10500        | IAS KT 174<br>TORQUE % 47<br>F FLOW KG/H/ENG 160 | 174<br>48<br>165 | 174<br>49<br>168 | 174<br>50<br>170 | 174<br>50<br>172 | 174<br>51<br>175 | 174<br>52<br>176 | 173<br>52<br>178 | 165<br>49<br>171 | -<br>-           | -<br>-           | - |
| 10000        | IAS KT 171<br>TORQUE % 44<br>F FLOW KG/H/ENG 153 | 171<br>45<br>156 | 171<br>46<br>160 | 171<br>47<br>162 | 171<br>47<br>164 | 171<br>48<br>166 | 170<br>48<br>167 | 170<br>49<br>169 | 170<br>49<br>171 | -<br>-           | -<br>-           | - |
| 9500         | IAS KT 169<br>TORQUE % 42<br>F FLOW KG/H/ENG 146 | 169<br>43<br>150 | 169<br>44<br>153 | 168<br>44<br>154 | 167<br>44<br>155 | 167<br>45<br>157 | 167<br>45<br>158 | 167<br>46<br>160 | 167<br>46<br>162 | 158<br>43<br>155 | 158<br>43<br>155 | - |
| 9000         | IAS KT 165<br>TORQUE % 39<br>F FLOW KG/H/ENG 138 | 165<br>40<br>142 | 165<br>41<br>145 | 165<br>41<br>147 | 165<br>42<br>148 | 164<br>42<br>149 | 164<br>42<br>150 | 164<br>43<br>152 | 164<br>43<br>153 | 164<br>43<br>156 | 163<br>44<br>156 | - |
| 8500         | IAS KT 162<br>TORQUE % 36<br>F FLOW KG/H/ENG 132 | 162<br>37<br>135 | 162<br>38<br>138 | 163<br>39<br>140 | 162<br>39<br>141 | 162<br>39<br>142 | 161<br>39<br>143 | 161<br>40<br>144 | 161<br>40<br>146 | 161<br>40<br>149 | 160<br>41<br>149 | - |
| 8000         | IAS KT 159<br>TORQUE % 34<br>F FLOW KG/H/ENG 126 | 159<br>35<br>128 | 159<br>35<br>131 | 158<br>36<br>132 | 158<br>36<br>133 | 159<br>37<br>135 | 159<br>37<br>136 | 158<br>37<br>137 | 158<br>37<br>139 | 158<br>37<br>141 | 157<br>38<br>141 | - |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**LONG RANGE CRUISE**
**CRUISE CONFIGURATION**

NP: 85%

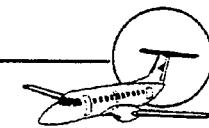
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 28000 FT**

| WEIGHT<br>KG | IOAT ( °C )     |     |     |     |     |     |     |     |     |     |     |
|--------------|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |                 | -50 | -40 | -30 | -25 | -20 | -15 | -10 | -5  | 0   | 10  |
| 12000        | IAS KT          | 183 | 184 | 184 | 185 | 176 | -   | -   | -   | -   | -   |
|              | TORQUE %        | 57  | 59  | 58  | 61  | 59  | -   | -   | -   | -   | -   |
|              | F FLOW KG/H/ENG | 188 | 193 | 198 | 203 | 197 | -   | -   | -   | -   | -   |
| 11500        | IAS KT          | 179 | 179 | 180 | 181 | 181 | 171 | -   | -   | -   | -   |
|              | TORQUE %        | 53  | 55  | 56  | 57  | 58  | 55  | -   | -   | -   | -   |
|              | F FLOW KG/H/ENG | 178 | 183 | 189 | 192 | 195 | 187 | -   | -   | -   | -   |
| 11000        | IAS KT          | 176 | 176 | 176 | 177 | 177 | 177 | 167 | -   | -   | -   |
|              | TORQUE %        | 50  | 52  | 53  | 54  | 55  | 55  | 52  | -   | -   | -   |
|              | F FLOW KG/H/ENG | 169 | 174 | 178 | 181 | 183 | 186 | 178 | -   | -   | -   |
| 10500        | IAS KT          | 173 | 173 | 173 | 173 | 173 | 173 | 173 | 165 | -   | -   |
|              | TORQUE %        | 47  | 48  | 49  | 50  | 51  | 52  | 52  | 50  | -   | -   |
|              | F FLOW KG/H/ENG | 160 | 165 | 169 | 171 | 174 | 175 | 177 | 171 | -   | -   |
| 10000        | IAS KT          | 171 | 170 | 170 | 170 | 170 | 170 | 170 | 169 | 161 | -   |
|              | TORQUE %        | 45  | 46  | 46  | 47  | 48  | 49  | 49  | 49  | 47  | -   |
|              | F FLOW KG/H/ENG | 153 | 156 | 160 | 162 | 164 | 166 | 167 | 169 | 162 | -   |
| 9500         | IAS KT          | 167 | 167 | 166 | 166 | 166 | 166 | 166 | 166 | 165 | -   |
|              | TORQUE %        | 42  | 43  | 44  | 44  | 45  | 45  | 46  | 46  | 47  | -   |
|              | F FLOW KG/H/ENG | 145 | 148 | 151 | 154 | 156 | 157 | 158 | 160 | 162 | -   |
| 9000         | IAS KT          | 165 | 165 | 164 | 164 | 163 | 163 | 163 | 163 | 163 | 154 |
|              | TORQUE %        | 39  | 40  | 41  | 42  | 42  | 42  | 43  | 43  | 43  | 41  |
|              | F FLOW KG/H/ENG | 139 | 142 | 145 | 147 | 147 | 149 | 151 | 152 | 153 | 148 |
| 8500         | IAS KT          | 161 | 161 | 161 | 161 | 161 | 160 | 160 | 160 | 159 | 160 |
|              | TORQUE %        | 36  | 37  | 38  | 39  | 39  | 39  | 40  | 40  | 40  | 42  |
|              | F FLOW KG/H/ENG | 131 | 134 | 137 | 139 | 141 | 141 | 142 | 144 | 145 | 149 |
| 8000         | IAS KT          | 158 | 158 | 158 | 158 | 158 | 158 | 157 | 157 | 156 | 156 |
|              | TORQUE %        | 34  | 35  | 36  | 36  | 37  | 37  | 37  | 37  | 38  | 38  |
|              | F FLOW KG/H/ENG | 125 | 127 | 130 | 132 | 133 | 134 | 135 | 136 | 137 | 140 |

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SUPPLEMENTARY PERFORMANCE  
MANUAL

**CRUISE CONTROL**  
**ALL ENGINES OPERATING**

PW118A ENGINES

**LONG RANGE CRUISE**

CRUISE CONFIGURATION

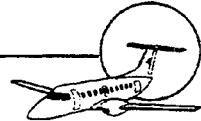
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 29000 FT**

| WEIGHT<br>KG | IAS<br>KT       | TORQUE<br>% | F FLOW KG/H/ENG | IOAT ( °C ) |     |     |     |     |     |     |     |     |     |
|--------------|-----------------|-------------|-----------------|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |                 |             |                 | -50         | -40 | -30 | -25 | -20 | -15 | -10 | -5  | 0   | 10  |
| 12000        | IAS<br>KT       | 181         | 182             | 184         | 174 | -   | -   | -   | -   | -   | -   | -   | -   |
|              | TORQUE<br>%     | 57          | 59              | 61          | 58  | -   | -   | -   | -   | -   | -   | -   | -   |
|              | F FLOW KG/H/ENG | 190         | 196             | 202         | 194 | -   | -   | -   | -   | -   | -   | -   | -   |
| 11500        | IAS<br>KT       | 179         | 179             | 180         | 181 | 171 | -   | -   | -   | -   | -   | -   | -   |
|              | TORQUE<br>%     | 54          | 56              | 58          | 59  | 56  | -   | -   | -   | -   | -   | -   | -   |
|              | F FLOW KG/H/ENG | 180         | 186             | 192         | 195 | 186 | -   | -   | -   | -   | -   | -   | -   |
| 11000        | IAS<br>KT       | 175         | 175             | 176         | 177 | 177 | 167 | -   | -   | -   | -   | -   | -   |
|              | TORQUE<br>%     | 51          | 52              | 54          | 55  | 56  | 53  | -   | -   | -   | -   | -   | -   |
|              | F FLOW KG/H/ENG | 170         | 175             | 180         | 183 | 186 | 178 | -   | -   | -   | -   | -   | -   |
| 10500        | IAS<br>KT       | 172         | 172             | 172         | 173 | 173 | 173 | 164 | -   | -   | -   | -   | -   |
|              | TORQUE<br>%     | 48          | 49              | 50          | 51  | 52  | 53  | 50  | -   | -   | -   | -   | -   |
|              | F FLOW KG/H/ENG | 162         | 166             | 170         | 173 | 175 | 177 | 170 | -   | -   | -   | -   | -   |
| 10000        | IAS<br>KT       | 169         | 169             | 169         | 169 | 169 | 169 | 169 | 169 | 160 | -   | -   | -   |
|              | TORQUE<br>%     | 45          | 46              | 47          | 48  | 49  | 49  | 50  | 47  | -   | -   | -   | -   |
|              | F FLOW KG/H/ENG | 153         | 157             | 161         | 163 | 165 | 167 | 168 | 162 | -   | -   | -   | -   |
| 9500         | IAS<br>KT       | 166         | 166             | 166         | 165 | 165 | 165 | 165 | 165 | 165 | 158 | -   | -   |
|              | TORQUE<br>%     | 42          | 43              | 44          | 45  | 45  | 46  | 46  | 47  | 47  | 44  | -   | -   |
|              | F FLOW KG/H/ENG | 145         | 149             | 152         | 154 | 156 | 157 | 159 | 161 | 154 | -   | -   | -   |
| 9000         | IAS<br>KT       | 163         | 163             | 162         | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | -   |
|              | TORQUE<br>%     | 40          | 40              | 41          | 42  | 42  | 43  | 43  | 43  | 43  | 44  | 44  | -   |
|              | F FLOW KG/H/ENG | 138         | 141             | 143         | 145 | 147 | 149 | 150 | 151 | 153 | -   | -   | -   |
| 8500         | IAS<br>KT       | 160         | 160             | 160         | 160 | 159 | 159 | 159 | 159 | 159 | 158 | 158 | 151 |
|              | TORQUE<br>%     | 37          | 38              | 39          | 39  | 39  | 40  | 40  | 40  | 41  | 41  | 41  | 39  |
|              | F FLOW KG/H/ENG | 131         | 134             | 137         | 138 | 139 | 140 | 142 | 143 | 145 | 145 | 145 | 140 |
| 8000         | IAS<br>KT       | 156         | 156             | 157         | 157 | 157 | 156 | 156 | 155 | 155 | 155 | 155 | 155 |
|              | TORQUE<br>%     | 34          | 35              | 36          | 36  | 37  | 37  | 37  | 38  | 38  | 38  | 38  | 39  |
|              | F FLOW KG/H/ENG | 123         | 126             | 129         | 130 | 133 | 133 | 134 | 135 | 137 | 137 | 137 | 139 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**LONG RANGE CRUISE**
**CRUISE CONFIGURATION**

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 30000 FT**

| WEIGHT<br>KG | IAS<br>KT       | TORQUE<br>% | F FLOW KG/H/ENG | IOAT ( °C ) |     |     |     |     |     |     |     |     |
|--------------|-----------------|-------------|-----------------|-------------|-----|-----|-----|-----|-----|-----|-----|-----|
|              |                 |             |                 | -50         | -40 | -35 | -30 | -25 | -20 | -15 | -10 | -5  |
| 12000        | IAS<br>KT       | 181         | 181             | 181         | 170 | -   | -   | -   | -   | -   | -   | -   |
|              | TORQUE<br>%     | 58          | 59              | 60          | 58  | -   | -   | -   | -   | -   | -   | -   |
|              | F FLOW KG/H/ENG | 193         | 196             | 199         | 191 | -   | -   | -   | -   | -   | -   | -   |
| 11500        | IAS<br>KT       | 178         | 178             | 178         | 168 | -   | -   | -   | -   | -   | -   | -   |
|              | TORQUE<br>%     | 55          | 56              | 57          | 55  | -   | -   | -   | -   | -   | -   | -   |
|              | F FLOW KG/H/ENG | 182         | 188             | 190         | 192 | 184 | -   | -   | -   | -   | -   | -   |
| 11000        | IAS<br>KT       | 175         | 175             | 175         | 176 | 175 | 165 | -   | -   | -   | -   | -   |
|              | TORQUE<br>%     | 52          | 53              | 54          | 55  | 55  | 53  | -   | -   | -   | -   | -   |
|              | F FLOW KG/H/ENG | 172         | 177             | 180         | 184 | 184 | 177 | -   | -   | -   | -   | -   |
| 10500        | IAS<br>KT       | 171         | 172             | 172         | 173 | 172 | 163 | -   | -   | -   | -   | -   |
|              | TORQUE<br>%     | 49          | 50              | 51          | 51  | 52  | 50  | -   | -   | -   | -   | -   |
|              | F FLOW KG/H/ENG | 162         | 167             | 170         | 172 | 175 | 177 | 169 | -   | -   | -   | -   |
| 10000        | IAS<br>KT       | 168         | 168             | 168         | 168 | 168 | 168 | 169 | 160 | -   | -   | -   |
|              | TORQUE<br>%     | 46          | 47              | 47          | 48  | 49  | 49  | 50  | 47  | -   | -   | -   |
|              | F FLOW KG/H/ENG | 153         | 158             | 160         | 162 | 164 | 166 | 169 | 161 | -   | -   | -   |
| 9500         | IAS<br>KT       | 165         | 165             | 165         | 165 | 165 | 165 | 165 | 164 | 157 | -   | -   |
|              | TORQUE<br>%     | 43          | 44              | 44          | 45  | 45  | 46  | 47  | 47  | 45  | -   | -   |
|              | F FLOW KG/H/ENG | 145         | 149             | 151         | 153 | 154 | 157 | 158 | 160 | 154 | -   | -   |
| 9000         | IAS<br>KT       | 162         | 162             | 162         | 162 | 161 | 161 | 161 | 161 | 161 | 154 | 154 |
|              | TORQUE<br>%     | 40          | 41              | 41          | 42  | 42  | 43  | 43  | 44  | 44  | 42  | 42  |
|              | F FLOW KG/H/ENG | 137         | 141             | 142         | 144 | 145 | 147 | 149 | 151 | 152 | 146 | 146 |
| 8500         | IAS<br>KT       | 159         | 159             | 158         | 158 | 158 | 158 | 158 | 158 | 157 | 157 | 157 |
|              | TORQUE<br>%     | 37          | 38              | 38          | 39  | 39  | 40  | 40  | 41  | 41  | 41  | 41  |
|              | F FLOW KG/H/ENG | 130         | 133             | 134         | 136 | 137 | 138 | 140 | 142 | 143 | 145 | 145 |
| 8000         | IAS<br>KT       | 156         | 156             | 156         | 156 | 156 | 155 | 154 | 154 | 154 | 154 | 154 |
|              | TORQUE<br>%     | 35          | 36              | 36          | 36  | 37  | 37  | 37  | 38  | 38  | 38  | 38  |
|              | F FLOW KG/H/ENG | 123         | 126             | 127         | 129 | 130 | 131 | 132 | 133 | 135 | 136 | 136 |

20 NOVEMBER 1992



SUPPLEMENTARY PERFORMANCE  
MANUAL

CRUISE CONTROL  
ALL ENGINES OPERATING

PW118A ENGINES

LONG RANGE CRUISE

CRUISE CONFIGURATION

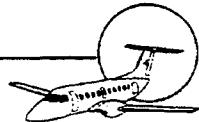
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 31000 FT

| WEIGHT<br>KG | IAS<br>KT          | TORQUE<br>% | F FLOW<br>KG/H/ENG | IOAT ( °C ) |     |     |     |     |     |     |     |     |   |
|--------------|--------------------|-------------|--------------------|-------------|-----|-----|-----|-----|-----|-----|-----|-----|---|
|              |                    |             |                    | -50         | -40 | -35 | -30 | -25 | -20 | -15 | -10 | -5  | 0 |
| 12000        | IAS<br>KT          | 181         | 177                | -           | -   | -   | -   | -   | -   | -   | -   | -   | - |
|              | TORQUE<br>%        | 59          | 59                 | -           | -   | -   | -   | -   | -   | -   | -   | -   | - |
|              | F FLOW<br>KG/H/ENG | 195         | 197                | -           | -   | -   | -   | -   | -   | -   | -   | -   | - |
| 11500        | IAS<br>KT          | 177         | 178                | 175         | -   | -   | -   | -   | -   | -   | -   | -   | - |
|              | TORQUE<br>%        | 56          | 57                 | 57          | -   | -   | -   | -   | -   | -   | -   | -   | - |
|              | F FLOW<br>KG/H/ENG | 185         | 189                | 189         | -   | -   | -   | -   | -   | -   | -   | -   | - |
| 11000        | IAS<br>KT          | 174         | 175                | 175         | 173 | 162 | -   | -   | -   | -   | -   | -   | - |
|              | TORQUE<br>%        | 53          | 54                 | 55          | 55  | 52  | -   | -   | -   | -   | -   | -   | - |
|              | F FLOW<br>KG/H/ENG | 174         | 180                | 182         | 182 | 174 | -   | -   | -   | -   | -   | -   | - |
| 10500        | IAS<br>KT          | 171         | 171                | 172         | 173 | 170 | 161 | -   | -   | -   | -   | -   | - |
|              | TORQUE<br>%        | 49          | 51                 | 52          | 53  | 52  | 50  | -   | -   | -   | -   | -   | - |
|              | F FLOW<br>KG/H/ENG | 164         | 169                | 172         | 175 | 175 | 167 | -   | -   | -   | -   | -   | - |
| 10000        | IAS<br>KT          | 167         | 167                | 168         | 168 | 169 | 169 | 159 | -   | -   | -   | -   | - |
|              | TORQUE<br>%        | 46          | 48                 | 48          | 49  | 50  | 50  | 48  | -   | -   | -   | -   | - |
|              | F FLOW<br>KG/H/ENG | 155         | 159                | 161         | 163 | 166 | 169 | 160 | -   | -   | -   | -   | - |
| 9500         | IAS<br>KT          | 164         | 164                | 164         | 164 | 164 | 164 | 165 | 156 | -   | -   | -   | - |
|              | TORQUE<br>%        | 43          | 44                 | 45          | 45  | 46  | 47  | 47  | 45  | -   | -   | -   | - |
|              | F FLOW<br>KG/H/ENG | 146         | 150                | 151         | 153 | 156 | 157 | 160 | 153 | -   | -   | -   | - |
| 9000         | IAS<br>KT          | 161         | 160                | 160         | 160 | 160 | 161 | 160 | 160 | 154 | -   | -   | - |
|              | TORQUE<br>%        | 40          | 41                 | 42          | 42  | 43  | 43  | 44  | 44  | 42  | -   | -   | - |
|              | F FLOW<br>KG/H/ENG | 137         | 140                | 142         | 144 | 146 | 148 | 150 | 151 | 146 | -   | -   | - |
| 8500         | IAS<br>KT          | 158         | 157                | 157         | 157 | 157 | 157 | 157 | 157 | 156 | 151 | -   | - |
|              | TORQUE<br>%        | 38          | 38                 | 39          | 39  | 40  | 40  | 41  | 41  | 42  | 40  | -   | - |
|              | F FLOW<br>KG/H/ENG | 129         | 133                | 134         | 136 | 137 | 139 | 140 | 142 | 143 | 139 | -   | - |
| 8000         | IAS<br>KT          | 155         | 155                | 154         | 154 | 154 | 153 | 154 | 154 | 153 | 153 | 153 | - |
|              | TORQUE<br>%        | 35          | 36                 | 36          | 36  | 37  | 37  | 38  | 38  | 38  | 39  | 39  | - |
|              | F FLOW<br>KG/H/ENG | 123         | 125                | 126         | 128 | 129 | 130 | 132 | 133 | 134 | 136 | -   | - |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**LONG RANGE CRUISE**
**CRUISE CONFIGURATION**

NP: 85%

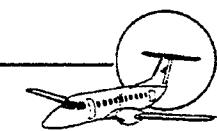
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 32000 FT**

| WEIGHT<br>KG | IOAT ( °C )     |     |     |     |     |     |     |     |     |     |  |
|--------------|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
|              | -50             | -40 | -35 | -30 | -25 | -20 | -15 | -10 | -5  | 0   |  |
| 12000        | IAS<br>KT       | 178 | -   | -   | -   | -   | -   | -   | -   | -   |  |
|              | TORQUE<br>%     | 60  | -   | -   | -   | -   | -   | -   | -   | -   |  |
|              | F FLOW KG/H/ENG | 198 | -   | -   | -   | -   | -   | -   | -   | -   |  |
| 11500        | IAS<br>KT       | 177 | 171 | -   | -   | -   | -   | -   | -   | -   |  |
|              | TORQUE<br>%     | 57  | 56  | -   | -   | -   | -   | -   | -   | -   |  |
|              | F FLOW KG/H/ENG | 188 | 187 | -   | -   | -   | -   | -   | -   | -   |  |
| 11000        | IAS<br>KT       | 174 | 173 | 170 | -   | -   | -   | -   | -   | -   |  |
|              | TORQUE<br>%     | 54  | 55  | 54  | -   | -   | -   | -   | -   | -   |  |
|              | F FLOW KG/H/ENG | 177 | 179 | 179 | -   | -   | -   | -   | -   | -   |  |
| 10500        | IAS<br>KT       | 171 | 170 | 169 | 168 | 158 | -   | -   | -   | -   |  |
|              | TORQUE<br>%     | 50  | 51  | 52  | 52  | 50  | -   | -   | -   | -   |  |
|              | F FLOW KG/H/ENG | 167 | 169 | 172 | 173 | 165 | -   | -   | -   | -   |  |
| 10000        | IAS<br>KT       | 167 | 167 | 168 | 169 | 167 | 156 | -   | -   | -   |  |
|              | TORQUE<br>%     | 47  | 48  | 49  | 50  | 50  | 47  | -   | -   | -   |  |
|              | F FLOW KG/H/ENG | 156 | 160 | 163 | 167 | 167 | 159 | -   | -   | -   |  |
| 9500         | IAS<br>KT       | 163 | 163 | 163 | 164 | 164 | 164 | 155 | -   | -   |  |
|              | TORQUE<br>%     | 44  | 44  | 45  | 46  | 47  | 48  | 45  | -   | -   |  |
|              | F FLOW KG/H/ENG | 147 | 151 | 153 | 155 | 158 | 159 | 152 | -   | -   |  |
| 9000         | IAS<br>KT       | 160 | 160 | 160 | 160 | 160 | 160 | 160 | 152 | -   |  |
|              | TORQUE<br>%     | 41  | 42  | 42  | 43  | 44  | 44  | 45  | 43  | -   |  |
|              | F FLOW KG/H/ENG | 138 | 142 | 144 | 146 | 148 | 149 | 151 | 145 | -   |  |
| 8500         | IAS<br>KT       | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 149 | -   |  |
|              | TORQUE<br>%     | 38  | 39  | 39  | 40  | 40  | 41  | 41  | 40  | -   |  |
|              | F FLOW KG/H/ENG | 130 | 133 | 134 | 136 | 137 | 139 | 141 | 142 | 139 |  |
| 8000         | IAS<br>KT       | 153 | 153 | 153 | 153 | 153 | 153 | 153 | 152 | 147 |  |
|              | TORQUE<br>%     | 35  | 36  | 36  | 37  | 37  | 38  | 38  | 39  | 38  |  |
|              | F FLOW KG/H/ENG | 122 | 125 | 126 | 127 | 129 | 130 | 132 | 133 | 132 |  |

20 NOVEMBER 1992



SUPPLEMENTARY PERFORMANCE  
MANUAL

CRUISE CONTROL  
ALL ENGINES OPERATING

PW118A ENGINES

MAXIMUM SPEED CRUISE

CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 5000 FT

| WEIGHT<br>KG | IOAT ( °C )             |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|--------------|-------------------------|---------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|              | -50                     | -30                 | -20              | -10              | 0                | 10               | 20               | 30               | 40               | 50               |                  |                  |
| 12000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 261<br>84<br>310 | 257<br>84<br>314 | 255<br>84<br>316 | 253<br>84<br>318 | 251<br>84<br>320 | 249<br>84<br>322 | 247<br>84<br>324 | 245<br>84<br>325 | 244<br>84<br>328 | 231<br>73<br>303 |
| 11500        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 261<br>84<br>310 | 257<br>84<br>314 | 255<br>84<br>316 | 253<br>84<br>318 | 252<br>84<br>320 | 250<br>84<br>322 | 248<br>84<br>324 | 246<br>84<br>325 | 245<br>84<br>328 | 232<br>74<br>304 |
| 11000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 261<br>84<br>310 | 258<br>84<br>314 | 256<br>84<br>316 | 254<br>84<br>318 | 252<br>84<br>320 | 250<br>84<br>322 | 248<br>84<br>324 | 246<br>84<br>325 | 245<br>84<br>328 | 233<br>74<br>304 |
| 10500        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 261<br>84<br>310 | 258<br>84<br>314 | 256<br>84<br>316 | 254<br>84<br>318 | 252<br>84<br>320 | 250<br>84<br>322 | 248<br>84<br>324 | 246<br>84<br>325 | 245<br>84<br>328 | 233<br>74<br>304 |
| 10000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 261<br>84<br>310 | 257<br>84<br>314 | 256<br>84<br>316 | 254<br>84<br>318 | 252<br>84<br>320 | 250<br>84<br>322 | 248<br>84<br>324 | 247<br>84<br>325 | 246<br>84<br>328 | 234<br>74<br>304 |
| 9500         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 261<br>84<br>310 | 257<br>84<br>314 | 255<br>84<br>316 | 254<br>84<br>318 | 252<br>84<br>320 | 250<br>84<br>322 | 249<br>84<br>324 | 247<br>84<br>325 | 246<br>84<br>328 | 234<br>74<br>304 |
| 9000         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 261<br>84<br>310 | 257<br>84<br>314 | 256<br>84<br>316 | 254<br>84<br>318 | 252<br>84<br>320 | 250<br>84<br>322 | 249<br>84<br>324 | 248<br>84<br>325 | 246<br>84<br>328 | 234<br>74<br>304 |
| 8500         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 261<br>84<br>310 | 257<br>84<br>314 | 256<br>84<br>316 | 254<br>84<br>318 | 252<br>84<br>320 | 250<br>84<br>322 | 248<br>84<br>324 | 247<br>84<br>325 | 246<br>84<br>328 | 234<br>74<br>304 |
| 8000         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 261<br>84<br>310 | 258<br>84<br>314 | 256<br>84<br>316 | 254<br>84<br>318 | 252<br>84<br>320 | 250<br>84<br>322 | 249<br>84<br>324 | 247<br>84<br>325 | 246<br>84<br>328 | 235<br>74<br>304 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**MAXIMUM SPEED CRUISE**
**CRUISE CONFIGURATION**

NP: 85%

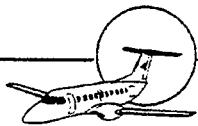
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 6000 FT**

| WEIGHT<br>KG | IAS<br>KT<br>%<br>F FLOW KG/H/ENG | 259<br>84<br>307 | IOAT ( °C )      |                  |                  |                  |                  |                  |                  |                  |                  |    |
|--------------|-----------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----|
|              |                                   |                  | -50              | -30              | -20              | -10              | 0                | 10               | 20               | 30               | 40               | 50 |
| 12000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG  | 259<br>84<br>307 | 255<br>84<br>311 | 253<br>84<br>313 | 251<br>84<br>314 | 249<br>84<br>316 | 247<br>84<br>318 | 246<br>84<br>320 | 245<br>84<br>322 | 241<br>82<br>319 | 225<br>70<br>290 |    |
| 11500        | IAS<br>TORQUE<br>F FLOW KG/H/ENG  | 259<br>84<br>307 | 256<br>84<br>311 | 254<br>84<br>313 | 252<br>84<br>314 | 250<br>84<br>316 | 248<br>84<br>318 | 246<br>84<br>320 | 245<br>84<br>322 | 241<br>82<br>319 | 227<br>70<br>291 |    |
| 11000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG  | 260<br>84<br>307 | 256<br>84<br>311 | 254<br>84<br>313 | 252<br>84<br>314 | 250<br>84<br>316 | 248<br>84<br>318 | 246<br>84<br>320 | 245<br>84<br>322 | 241<br>82<br>319 | 227<br>70<br>291 |    |
| 10500        | IAS<br>TORQUE<br>F FLOW KG/H/ENG  | 260<br>84<br>307 | 256<br>84<br>311 | 254<br>84<br>313 | 252<br>84<br>314 | 250<br>84<br>316 | 248<br>84<br>318 | 247<br>84<br>320 | 246<br>84<br>322 | 242<br>82<br>319 | 228<br>71<br>291 |    |
| 10000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG  | 260<br>84<br>307 | 256<br>84<br>311 | 254<br>84<br>313 | 252<br>84<br>314 | 251<br>84<br>316 | 249<br>84<br>318 | 248<br>84<br>320 | 246<br>84<br>322 | 242<br>82<br>319 | 228<br>71<br>292 |    |
| 9500         | IAS<br>TORQUE<br>F FLOW KG/H/ENG  | 260<br>84<br>307 | 256<br>84<br>311 | 254<br>84<br>313 | 253<br>84<br>314 | 251<br>84<br>316 | 249<br>84<br>318 | 248<br>84<br>320 | 246<br>84<br>322 | 243<br>82<br>319 | 229<br>71<br>292 |    |
| 9000         | IAS<br>TORQUE<br>F FLOW KG/H/ENG  | 260<br>84<br>307 | 256<br>84<br>311 | 254<br>84<br>313 | 253<br>84<br>314 | 251<br>84<br>316 | 249<br>84<br>318 | 248<br>84<br>320 | 246<br>84<br>322 | 243<br>82<br>319 | 229<br>71<br>292 |    |
| 8500         | IAS<br>TORQUE<br>F FLOW KG/H/ENG  | 260<br>84<br>307 | 256<br>84<br>311 | 254<br>84<br>313 | 252<br>84<br>314 | 250<br>84<br>316 | 249<br>84<br>318 | 248<br>84<br>320 | 246<br>84<br>322 | 243<br>82<br>319 | 229<br>71<br>292 |    |
| 8000         | IAS<br>TORQUE<br>F FLOW KG/H/ENG  | 260<br>84<br>307 | 256<br>84<br>311 | 254<br>84<br>313 | 252<br>84<br>314 | 250<br>84<br>316 | 249<br>84<br>318 | 248<br>84<br>320 | 246<br>84<br>322 | 243<br>82<br>319 | 230<br>71<br>292 |    |

20 NOVEMBER 1992



**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CRUISE CONTROL  
ALL ENGINES OPERATING**

**PW118A ENGINES**

**MAXIMUM SPEED CRUISE**

**CRUISE CONFIGURATION**

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 7000 FT**

| WEIGHT<br>KG | IAS<br>KT<br>%<br>F FLOW KG/H/ENG | 258<br>84<br>304    | IOAT ( °C )      |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|--------------|-----------------------------------|---------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|              |                                   |                     | -50              | -30              | -20              | -10              | 0                | 10               | 20               | 30               | 40               | 50               |
| 12000        | IAS<br>TORQUE<br>F FLOW           | KT<br>%<br>KG/H/ENG | 258<br>84<br>304 | 253<br>84<br>307 | 251<br>84<br>309 | 250<br>84<br>311 | 248<br>84<br>313 | 246<br>84<br>314 | 245<br>84<br>316 | 243<br>84<br>319 | 236<br>79<br>307 | 220<br>67<br>278 |
| 11500        | IAS<br>TORQUE<br>F FLOW           | KT<br>%<br>KG/H/ENG | 258<br>84<br>304 | 254<br>84<br>307 | 252<br>84<br>309 | 250<br>84<br>311 | 248<br>84<br>313 | 246<br>84<br>314 | 245<br>84<br>316 | 243<br>84<br>319 | 236<br>79<br>307 | 221<br>67<br>279 |
| 11000        | IAS<br>TORQUE<br>F FLOW           | KT<br>%<br>KG/H/ENG | 258<br>84<br>304 | 254<br>84<br>307 | 252<br>84<br>309 | 250<br>84<br>311 | 248<br>84<br>313 | 246<br>84<br>314 | 246<br>84<br>316 | 244<br>84<br>319 | 237<br>79<br>307 | 222<br>67<br>279 |
| 10500        | IAS<br>TORQUE<br>F FLOW           | KT<br>%<br>KG/H/ENG | 258<br>84<br>304 | 254<br>84<br>307 | 253<br>84<br>309 | 251<br>84<br>311 | 249<br>84<br>313 | 248<br>84<br>314 | 246<br>84<br>316 | 244<br>84<br>319 | 237<br>79<br>307 | 223<br>67<br>279 |
| 10000        | IAS<br>TORQUE<br>F FLOW           | KT<br>%<br>KG/H/ENG | 258<br>84<br>304 | 255<br>84<br>307 | 253<br>84<br>309 | 251<br>84<br>311 | 249<br>84<br>313 | 248<br>84<br>314 | 246<br>84<br>316 | 245<br>84<br>319 | 238<br>79<br>308 | 224<br>67<br>279 |
| 9500         | IAS<br>TORQUE<br>F FLOW           | KT<br>%<br>KG/H/ENG | 259<br>84<br>304 | 255<br>84<br>307 | 253<br>84<br>309 | 251<br>84<br>311 | 249<br>84<br>313 | 248<br>84<br>314 | 246<br>84<br>316 | 245<br>84<br>319 | 238<br>79<br>308 | 224<br>68<br>279 |
| 9000         | IAS<br>TORQUE<br>F FLOW           | KT<br>%<br>KG/H/ENG | 259<br>84<br>304 | 255<br>84<br>307 | 253<br>84<br>309 | 251<br>84<br>311 | 249<br>84<br>313 | 248<br>84<br>314 | 246<br>84<br>316 | 245<br>84<br>319 | 238<br>79<br>308 | 225<br>68<br>280 |
| 8500         | IAS<br>TORQUE<br>F FLOW           | KT<br>%<br>KG/H/ENG | 258<br>84<br>304 | 255<br>84<br>307 | 253<br>84<br>309 | 251<br>84<br>311 | 250<br>84<br>313 | 248<br>84<br>314 | 246<br>84<br>316 | 245<br>84<br>319 | 238<br>79<br>308 | 225<br>68<br>280 |
| 8000         | IAS<br>TORQUE<br>F FLOW           | KT<br>%<br>KG/H/ENG | 258<br>84<br>304 | 254<br>84<br>307 | 252<br>84<br>309 | 251<br>84<br>311 | 249<br>84<br>313 | 248<br>84<br>314 | 246<br>84<br>316 | 245<br>84<br>319 | 239<br>80<br>308 | 225<br>68<br>280 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL  
ALL ENGINES OPERATING**

PW118A ENGINES

**MAXIMUM SPEED CRUISE**

## CRUISE CONFIGURATION

NP: 85%

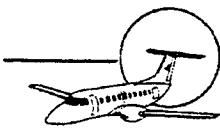
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 8000 FT**

|       |        |          | IOAT ( °C ) |     |     |     |     |     |     |     |     |     |
|-------|--------|----------|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|       |        |          | -50         | -30 | -20 | -10 | 0   | 10  | 20  | 30  | 40  | 50  |
|       | IAS    | KT       | 257         | 253 | 251 | 249 | 247 | 245 | 243 | 241 | 229 | 214 |
|       | TORQUE | %        | 84          | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 75  | 64  |
|       | F FLOW | KG/H/ENG | 301         | 304 | 306 | 307 | 309 | 311 | 312 | 314 | 293 | 266 |
| 12000 | IAS    | KT       | 257         | 253 | 251 | 248 | 247 | 245 | 243 | 242 | 231 | 215 |
|       | TORQUE | %        | 84          | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 75  | 64  |
|       | F FLOW | KG/H/ENG | 301         | 304 | 306 | 307 | 309 | 311 | 312 | 314 | 294 | 267 |
| 11500 | IAS    | KT       | 257         | 253 | 251 | 248 | 247 | 245 | 243 | 242 | 231 | 215 |
|       | TORQUE | %        | 84          | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 75  | 64  |
|       | F FLOW | KG/H/ENG | 301         | 304 | 306 | 307 | 309 | 311 | 312 | 314 | 294 | 267 |
| 11000 | IAS    | KT       | 257         | 253 | 251 | 249 | 248 | 246 | 244 | 242 | 231 | 217 |
|       | TORQUE | %        | 84          | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 76  | 64  |
|       | F FLOW | KG/H/ENG | 301         | 304 | 306 | 307 | 309 | 311 | 312 | 314 | 294 | 267 |
| 10500 | IAS    | KT       | 258         | 254 | 251 | 249 | 248 | 246 | 244 | 242 | 232 | 218 |
|       | TORQUE | %        | 84          | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 76  | 64  |
|       | F FLOW | KG/H/ENG | 301         | 304 | 306 | 307 | 309 | 311 | 312 | 314 | 294 | 267 |
| 10000 | IAS    | KT       | 257         | 253 | 251 | 249 | 248 | 246 | 244 | 243 | 233 | 218 |
|       | TORQUE | %        | 84          | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 76  | 64  |
|       | F FLOW | KG/H/ENG | 301         | 304 | 306 | 307 | 309 | 311 | 312 | 315 | 294 | 268 |
| 9500  | IAS    | KT       | 257         | 253 | 251 | 250 | 248 | 246 | 244 | 243 | 233 | 219 |
|       | TORQUE | %        | 84          | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 76  | 64  |
|       | F FLOW | KG/H/ENG | 301         | 304 | 306 | 307 | 309 | 311 | 312 | 315 | 294 | 268 |
| 9000  | IAS    | KT       | 257         | 254 | 252 | 250 | 248 | 246 | 244 | 243 | 234 | 219 |
|       | TORQUE | %        | 84          | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 76  | 64  |
|       | F FLOW | KG/H/ENG | 301         | 304 | 306 | 307 | 309 | 311 | 312 | 315 | 295 | 268 |
| 8500  | IAS    | KT       | 257         | 254 | 252 | 250 | 248 | 246 | 244 | 243 | 233 | 220 |
|       | TORQUE | %        | 84          | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 76  | 65  |
|       | F FLOW | KG/H/ENG | 301         | 304 | 306 | 307 | 309 | 311 | 312 | 315 | 295 | 268 |
| 8000  | IAS    | KT       | 257         | 254 | 252 | 250 | 248 | 246 | 244 | 243 | 233 | 221 |
|       | TORQUE | %        | 84          | 84  | 84  | 84  | 84  | 84  | 84  | 84  | 76  | 65  |
|       | F FLOW | KG/H/ENG | 301         | 304 | 306 | 307 | 309 | 311 | 312 | 315 | 294 | 268 |

20 NOVEMBER 1992



SUPPLEMENTARY PERFORMANCE  
MANUAL

CRUISE CONTROL  
ALL ENGINES OPERATING

PW118A ENGINES

MAXIMUM SPEED CRUISE

CRUISE CONFIGURATION

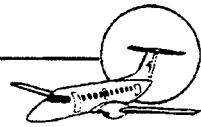
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 9000 FT

| WEIGHT<br>KG | IAS<br>KT<br>F FLOW KG/H/ENG | 255<br>84<br>298    | IOAT ( °C )      |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|--------------|------------------------------|---------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|              |                              |                     | -50              | -30              | -20              | -10              | 0                | 10               | 20               | 30               | 40               | 50               |
| 12000        | IAS<br>TORQUE<br>F FLOW      | KT<br>%<br>KG/H/ENG | 255<br>84<br>298 | 251<br>84<br>301 | 249<br>84<br>303 | 247<br>84<br>304 | 245<br>84<br>306 | 243<br>84<br>307 | 241<br>84<br>309 | 238<br>83<br>307 | 224<br>72<br>281 | 207<br>61<br>254 |
| 11500        | IAS<br>TORQUE<br>F FLOW      | KT<br>%<br>KG/H/ENG | 255<br>84<br>298 | 251<br>84<br>301 | 249<br>84<br>303 | 248<br>84<br>304 | 246<br>84<br>306 | 244<br>84<br>307 | 242<br>84<br>309 | 239<br>83<br>307 | 225<br>72<br>281 | 210<br>61<br>255 |
| 11000        | IAS<br>TORQUE<br>F FLOW      | KT<br>%<br>KG/H/ENG | 256<br>84<br>298 | 252<br>84<br>301 | 250<br>84<br>303 | 248<br>84<br>304 | 246<br>84<br>306 | 244<br>84<br>307 | 242<br>84<br>309 | 239<br>83<br>307 | 226<br>72<br>281 | 211<br>61<br>256 |
| 10500        | IAS<br>TORQUE<br>F FLOW      | KT<br>%<br>KG/H/ENG | 256<br>84<br>298 | 252<br>84<br>301 | 250<br>84<br>303 | 248<br>84<br>304 | 246<br>84<br>306 | 244<br>84<br>307 | 242<br>84<br>309 | 239<br>83<br>308 | 227<br>72<br>282 | 212<br>61<br>256 |
| 10000        | IAS<br>TORQUE<br>F FLOW      | KT<br>%<br>KG/H/ENG | 256<br>84<br>298 | 252<br>84<br>301 | 250<br>84<br>303 | 248<br>84<br>304 | 246<br>84<br>306 | 244<br>84<br>307 | 242<br>84<br>309 | 240<br>83<br>308 | 228<br>72<br>282 | 213<br>61<br>256 |
| 9500         | IAS<br>TORQUE<br>F FLOW      | KT<br>%<br>KG/H/ENG | 256<br>84<br>298 | 252<br>84<br>301 | 250<br>84<br>303 | 248<br>84<br>304 | 246<br>84<br>306 | 245<br>84<br>307 | 243<br>84<br>309 | 241<br>83<br>308 | 228<br>72<br>282 | 214<br>62<br>257 |
| 9000         | IAS<br>TORQUE<br>F FLOW      | KT<br>%<br>KG/H/ENG | 256<br>84<br>298 | 252<br>84<br>301 | 250<br>84<br>303 | 248<br>84<br>304 | 246<br>84<br>306 | 244<br>84<br>307 | 243<br>84<br>309 | 241<br>83<br>308 | 228<br>72<br>282 | 214<br>62<br>257 |
| 8500         | IAS<br>TORQUE<br>F FLOW      | KT<br>%<br>KG/H/ENG | 256<br>84<br>298 | 252<br>84<br>301 | 250<br>84<br>303 | 248<br>84<br>304 | 246<br>84<br>306 | 244<br>84<br>307 | 243<br>84<br>309 | 241<br>83<br>308 | 229<br>73<br>282 | 215<br>62<br>257 |
| 8000         | IAS<br>TORQUE<br>F FLOW      | KT<br>%<br>KG/H/ENG | 256<br>84<br>298 | 252<br>84<br>301 | 250<br>84<br>303 | 248<br>84<br>304 | 246<br>84<br>306 | 245<br>84<br>307 | 243<br>84<br>309 | 240<br>83<br>308 | 229<br>72<br>282 | 216<br>62<br>257 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**MAXIMUM SPEED CRUISE**
**CRUISE CONFIGURATION**
**NP: 85%**
**BLEED SWITCH: AUTO**
**PACK CONTROL SELECTOR: LOW**
**ALTITUDE: 10000 FT**

| WEIGHT<br>KG | IAS<br>KT<br>F FLOW     | TORQUE<br>%<br>KG/H/ENG | IOAT ( °C )      |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|--------------|-------------------------|-------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|              |                         |                         | -50              | -40              | -30              | -20              | -10              | 0                | 10               | 20               | 30               | 40               |
| 12000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG     | 253<br>84<br>295 | 251<br>84<br>297 | 249<br>84<br>298 | 247<br>84<br>300 | 245<br>84<br>301 | 243<br>84<br>303 | 241<br>84<br>304 | 240<br>84<br>307 | 234<br>80<br>297 | 218<br>68<br>268 |
| 11500        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG     | 254<br>84<br>295 | 252<br>84<br>297 | 250<br>84<br>298 | 248<br>84<br>300 | 246<br>84<br>301 | 244<br>84<br>303 | 242<br>84<br>304 | 240<br>84<br>307 | 234<br>80<br>297 | 219<br>69<br>269 |
| 11000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG     | 254<br>84<br>295 | 252<br>84<br>297 | 250<br>84<br>298 | 248<br>84<br>300 | 246<br>84<br>301 | 244<br>84<br>303 | 242<br>84<br>304 | 241<br>84<br>307 | 234<br>80<br>297 | 221<br>69<br>269 |
| 10500        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG     | 254<br>84<br>295 | 252<br>84<br>297 | 250<br>84<br>298 | 248<br>84<br>300 | 246<br>84<br>301 | 244<br>84<br>303 | 243<br>84<br>304 | 242<br>84<br>307 | 236<br>80<br>297 | 221<br>69<br>269 |
| 10000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG     | 254<br>84<br>295 | 252<br>84<br>297 | 250<br>84<br>298 | 249<br>84<br>300 | 247<br>84<br>301 | 245<br>84<br>303 | 243<br>84<br>304 | 242<br>84<br>307 | 236<br>80<br>297 | 222<br>69<br>270 |
| 9500         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG     | 254<br>84<br>295 | 252<br>84<br>297 | 251<br>84<br>298 | 249<br>84<br>300 | 247<br>84<br>301 | 245<br>84<br>303 | 243<br>84<br>304 | 242<br>84<br>307 | 236<br>80<br>297 | 223<br>69<br>270 |
| 9000         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG     | 254<br>84<br>295 | 252<br>84<br>297 | 251<br>84<br>298 | 249<br>84<br>300 | 247<br>84<br>301 | 245<br>84<br>303 | 243<br>84<br>304 | 242<br>84<br>307 | 236<br>80<br>297 | 223<br>69<br>270 |
| 8500         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG     | 254<br>84<br>295 | 252<br>84<br>297 | 250<br>84<br>298 | 248<br>84<br>300 | 247<br>84<br>301 | 245<br>84<br>303 | 244<br>84<br>304 | 242<br>84<br>307 | 237<br>80<br>298 | 224<br>69<br>270 |
| 8000         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG     | 254<br>84<br>295 | 252<br>84<br>297 | 250<br>84<br>298 | 249<br>84<br>300 | 247<br>84<br>301 | 245<br>84<br>303 | 243<br>84<br>304 | 242<br>84<br>307 | 237<br>80<br>298 | 224<br>69<br>270 |

**20 NOVEMBER 1992**

SUPPLEMENTARY PERFORMANCE  
MANUALCRUISE CONTROL  
ALL ENGINES OPERATING

PW118A ENGINES

## MAXIMUM SPEED CRUISE

## CRUISE CONFIGURATION

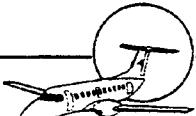
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 11000 FT

| WEIGHT<br>KG | IAS<br>KT<br>F FLOW     | TORQUE<br>%<br>KG/H/ENG | IOAT ( °C )      |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|--------------|-------------------------|-------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|              |                         |                         | -50              | -40              | -30              | -20              | -10              | 0                | 10               | 20               | 30               | 40               |
| 12000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG     | 252<br>84<br>293 | 249<br>84<br>294 | 248<br>84<br>296 | 246<br>84<br>297 | 244<br>84<br>298 | 242<br>84<br>300 | 240<br>84<br>301 | 238<br>84<br>303 | 228<br>76<br>284 | 212<br>65<br>257 |
| 11500        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG     | 252<br>84<br>293 | 250<br>84<br>294 | 248<br>84<br>296 | 246<br>84<br>297 | 244<br>84<br>298 | 242<br>84<br>300 | 240<br>84<br>301 | 238<br>84<br>303 | 228<br>76<br>284 | 214<br>65<br>257 |
| 11000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG     | 252<br>84<br>293 | 250<br>84<br>294 | 248<br>84<br>296 | 246<br>84<br>297 | 244<br>84<br>298 | 242<br>84<br>300 | 241<br>84<br>301 | 239<br>84<br>303 | 230<br>77<br>284 | 215<br>66<br>257 |
| 10500        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG     | 252<br>84<br>293 | 251<br>84<br>294 | 249<br>84<br>296 | 247<br>84<br>297 | 245<br>84<br>298 | 243<br>84<br>300 | 241<br>84<br>301 | 240<br>84<br>303 | 230<br>77<br>284 | 216<br>66<br>258 |
| 10000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG     | 253<br>84<br>293 | 251<br>84<br>294 | 249<br>84<br>296 | 247<br>84<br>297 | 245<br>84<br>298 | 243<br>84<br>300 | 241<br>84<br>301 | 240<br>84<br>303 | 230<br>77<br>285 | 217<br>66<br>258 |
| 9500         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG     | 253<br>84<br>293 | 251<br>84<br>294 | 249<br>84<br>296 | 247<br>84<br>297 | 245<br>84<br>298 | 243<br>84<br>300 | 241<br>84<br>301 | 240<br>84<br>303 | 231<br>77<br>285 | 218<br>66<br>258 |
| 9000         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG     | 253<br>84<br>293 | 251<br>84<br>294 | 249<br>84<br>296 | 247<br>84<br>297 | 245<br>84<br>298 | 243<br>84<br>300 | 241<br>84<br>301 | 240<br>84<br>303 | 231<br>77<br>285 | 219<br>66<br>259 |
| 8500         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG     | 253<br>84<br>293 | 251<br>84<br>294 | 250<br>84<br>296 | 248<br>84<br>297 | 246<br>84<br>298 | 244<br>84<br>300 | 242<br>84<br>301 | 240<br>84<br>303 | 232<br>77<br>285 | 218<br>66<br>258 |
| 8000         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG     | 253<br>84<br>293 | 251<br>84<br>294 | 249<br>84<br>296 | 247<br>84<br>297 | 246<br>84<br>298 | 244<br>84<br>300 | 242<br>84<br>301 | 241<br>84<br>303 | 232<br>77<br>285 | 219<br>66<br>259 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**MAXIMUM SPEED CRUISE**
**CRUISE CONFIGURATION**

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 12000 FT**

| WEIGHT<br>KG | IOAT ( °C )                      |                             |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|--------------|----------------------------------|-----------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|              | -50                              | -40                         | -30              | -20              | -10              | 0                | 10               | 20               | 30               | 40               |                  |
| 12000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>251<br>84<br>291 | 249<br>84<br>292 | 246<br>84<br>293 | 244<br>84<br>294 | 242<br>84<br>296 | 240<br>84<br>297 | 238<br>84<br>299 | 234<br>83<br>295 | 221<br>73<br>271 | 206<br>62<br>245 |
| 11500        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>251<br>84<br>291 | 249<br>84<br>292 | 246<br>84<br>293 | 244<br>84<br>294 | 242<br>84<br>296 | 240<br>84<br>297 | 238<br>84<br>299 | 236<br>83<br>296 | 223<br>73<br>271 | 207<br>62<br>245 |
| 11000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>251<br>84<br>291 | 250<br>84<br>292 | 247<br>84<br>293 | 245<br>84<br>294 | 243<br>84<br>296 | 241<br>84<br>297 | 239<br>84<br>299 | 236<br>83<br>296 | 224<br>73<br>272 | 209<br>62<br>246 |
| 10500        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>252<br>84<br>291 | 250<br>84<br>292 | 247<br>84<br>293 | 245<br>84<br>294 | 243<br>84<br>296 | 241<br>84<br>297 | 239<br>84<br>299 | 236<br>83<br>296 | 224<br>73<br>272 | 211<br>63<br>246 |
| 10000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>252<br>84<br>291 | 250<br>84<br>292 | 247<br>84<br>293 | 245<br>84<br>294 | 243<br>84<br>296 | 241<br>84<br>297 | 240<br>84<br>299 | 236<br>83<br>296 | 226<br>73<br>272 | 212<br>63<br>247 |
| 9500         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>252<br>84<br>291 | 250<br>84<br>292 | 248<br>84<br>293 | 246<br>84<br>294 | 243<br>84<br>296 | 241<br>84<br>297 | 240<br>84<br>299 | 237<br>83<br>296 | 226<br>73<br>272 | 213<br>63<br>247 |
| 9000         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>252<br>84<br>291 | 250<br>84<br>292 | 248<br>84<br>293 | 246<br>84<br>294 | 244<br>84<br>296 | 242<br>84<br>297 | 240<br>84<br>299 | 237<br>83<br>296 | 227<br>73<br>272 | 213<br>63<br>247 |
| 8500         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>252<br>84<br>291 | 250<br>84<br>292 | 248<br>84<br>293 | 246<br>84<br>294 | 244<br>84<br>296 | 242<br>84<br>297 | 240<br>84<br>299 | 237<br>83<br>296 | 226<br>73<br>272 | 214<br>63<br>247 |
| 8000         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>252<br>84<br>291 | 250<br>84<br>292 | 248<br>84<br>293 | 246<br>84<br>294 | 244<br>84<br>296 | 242<br>84<br>297 | 240<br>84<br>299 | 238<br>83<br>296 | 227<br>73<br>273 | 214<br>63<br>247 |

20 NOVEMBER 1992



SUPPLEMENTARY PERFORMANCE  
MANUAL

CRUISE CONTROL  
ALL ENGINES OPERATING

PW118A ENGINES

MAXIMUM SPEED CRUISE

CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 13000 FT

| WEIGHT<br>KG | IOAT ( °C )             |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|--------------|-------------------------|---------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|              |                         |                     | -50              | -40              | -30              | -20              | -10              | 0                | 10               | 20               | 30               | 40               |
| 12000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 249<br>84<br>289 | 247<br>84<br>290 | 244<br>84<br>291 | 242<br>84<br>292 | 240<br>84<br>293 | 238<br>84<br>294 | 236<br>84<br>297 | 229<br>80<br>285 | 216<br>69<br>258 | 199<br>59<br>233 |
| 11500        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 249<br>84<br>289 | 247<br>84<br>290 | 246<br>84<br>291 | 243<br>84<br>292 | 241<br>84<br>293 | 239<br>84<br>294 | 238<br>84<br>297 | 231<br>80<br>285 | 217<br>69<br>259 | 201<br>59<br>234 |
| 11000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 250<br>84<br>289 | 248<br>84<br>290 | 246<br>84<br>291 | 243<br>84<br>292 | 241<br>84<br>293 | 239<br>84<br>294 | 238<br>84<br>297 | 231<br>80<br>285 | 218<br>70<br>259 | 204<br>59<br>235 |
| 10500        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 250<br>84<br>289 | 248<br>84<br>290 | 246<br>84<br>291 | 243<br>84<br>292 | 241<br>84<br>293 | 239<br>84<br>294 | 238<br>84<br>297 | 231<br>80<br>285 | 219<br>70<br>260 | 205<br>60<br>235 |
| 10000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 250<br>84<br>289 | 248<br>84<br>290 | 246<br>84<br>291 | 244<br>84<br>292 | 241<br>84<br>293 | 239<br>84<br>294 | 238<br>84<br>297 | 233<br>80<br>286 | 220<br>70<br>260 | 206<br>60<br>235 |
| 9500         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 250<br>84<br>289 | 248<br>84<br>290 | 246<br>84<br>291 | 244<br>84<br>292 | 242<br>84<br>293 | 241<br>84<br>294 | 239<br>84<br>297 | 233<br>80<br>286 | 221<br>70<br>260 | 207<br>60<br>236 |
| 9000         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 250<br>84<br>289 | 248<br>84<br>290 | 246<br>84<br>291 | 244<br>84<br>292 | 242<br>84<br>293 | 241<br>84<br>294 | 240<br>84<br>297 | 233<br>80<br>286 | 221<br>70<br>260 | 208<br>60<br>236 |
| 8500         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 250<br>84<br>289 | 248<br>84<br>290 | 246<br>84<br>291 | 244<br>84<br>292 | 242<br>84<br>293 | 240<br>84<br>294 | 239<br>84<br>297 | 234<br>80<br>286 | 222<br>70<br>261 | 209<br>60<br>236 |
| 8000         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 250<br>84<br>289 | 248<br>84<br>290 | 246<br>84<br>291 | 244<br>84<br>292 | 242<br>84<br>293 | 240<br>84<br>294 | 239<br>84<br>297 | 233<br>80<br>286 | 221<br>70<br>261 | 210<br>60<br>237 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL  
ALL ENGINES OPERATING**
**PW118A ENGINES****MAXIMUM SPEED CRUISE****CRUISE CONFIGURATION**

NP: 85%

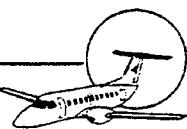
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 14000 FT**

| WEIGHT<br>KG | IAS             | KT        | IOAT ( °C ) |           |           |           |           |           |           |           |           |           |
|--------------|-----------------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|              |                 |           | -50         | -40       | -30       | -20       | -10       | 0         | 10        | 20        | 30        | 40        |
| 12000        | TORQUE %        | 247<br>84 | 245<br>84   | 242<br>84 | 240<br>84 | 238<br>84 | 237<br>84 | 235<br>84 | 224<br>76 | 209<br>66 | 191<br>56 | 191<br>56 |
|              | F FLOW KG/H/ENG | 287       | 288         | 289       | 290       | 291       | 292       | 293       | 271       | 246       | 222       | 222       |
| 11500        | TORQUE %        | 248<br>84 | 246<br>84   | 244<br>84 | 241<br>84 | 239<br>84 | 237<br>84 | 235<br>84 | 224<br>76 | 210<br>66 | 195<br>56 | 195<br>56 |
|              | F FLOW KG/H/ENG | 287       | 288         | 289       | 290       | 291       | 292       | 293       | 271       | 247       | 223       | 223       |
| 11000        | TORQUE %        | 248<br>84 | 246<br>84   | 244<br>84 | 241<br>84 | 239<br>84 | 237<br>84 | 235<br>84 | 225<br>76 | 213<br>66 | 197<br>56 | 197<br>56 |
|              | F FLOW KG/H/ENG | 287       | 288         | 289       | 290       | 291       | 292       | 293       | 272       | 248       | 224       | 224       |
| 10500        | TORQUE %        | 248<br>84 | 246<br>84   | 244<br>84 | 242<br>84 | 240<br>84 | 238<br>84 | 237<br>84 | 227<br>76 | 214<br>66 | 199<br>57 | 199<br>57 |
|              | F FLOW KG/H/ENG | 287       | 288         | 289       | 290       | 291       | 292       | 293       | 272       | 248       | 224       | 224       |
| 10000        | TORQUE %        | 249<br>84 | 247<br>84   | 245<br>84 | 243<br>84 | 241<br>84 | 239<br>84 | 237<br>84 | 227<br>76 | 214<br>66 | 200<br>57 | 200<br>57 |
|              | F FLOW KG/H/ENG | 287       | 288         | 289       | 290       | 291       | 292       | 293       | 273       | 248       | 225       | 225       |
| 9500         | TORQUE %        | 249<br>84 | 247<br>84   | 245<br>84 | 243<br>84 | 241<br>84 | 239<br>84 | 237<br>84 | 227<br>76 | 215<br>67 | 202<br>57 | 202<br>57 |
|              | F FLOW KG/H/ENG | 287       | 288         | 289       | 290       | 291       | 292       | 293       | 273       | 249       | 225       | 225       |
| 9000         | TORQUE %        | 249<br>84 | 247<br>84   | 245<br>84 | 243<br>84 | 241<br>84 | 239<br>84 | 237<br>84 | 228<br>76 | 216<br>67 | 203<br>57 | 203<br>57 |
|              | F FLOW KG/H/ENG | 287       | 288         | 289       | 290       | 291       | 292       | 293       | 273       | 249       | 226       | 226       |
| 8500         | TORQUE %        | 248<br>84 | 247<br>84   | 245<br>84 | 243<br>84 | 241<br>84 | 239<br>84 | 238<br>84 | 228<br>76 | 217<br>67 | 204<br>57 | 204<br>57 |
|              | F FLOW KG/H/ENG | 287       | 288         | 289       | 290       | 291       | 292       | 293       | 273       | 249       | 226       | 226       |
| 8000         | TORQUE %        | 249<br>84 | 247<br>84   | 244<br>84 | 242<br>84 | 240<br>84 | 239<br>84 | 237<br>84 | 229<br>76 | 217<br>67 | 205<br>57 | 205<br>57 |
|              | F FLOW KG/H/ENG | 287       | 288         | 289       | 290       | 291       | 292       | 293       | 273       | 249       | 226       | 226       |

**20 NOVEMBER 1992**



**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CRUISE CONTROL  
ALL ENGINES OPERATING**

**PW118A ENGINES**

**MAXIMUM SPEED CRUISE**

**CRUISE CONFIGURATION**

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 15000 FT**

| WEIGHT<br>KG | IOAT ( °C )             |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|--------------|-------------------------|---------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|              |                         |                     | -50              | -40              | -30              | -20              | -10              | -5               | 0                | 10               | 20               | 30               |
| 12000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 246<br>84<br>285 | 244<br>84<br>286 | 241<br>84<br>287 | 239<br>84<br>288 | 237<br>84<br>289 | 236<br>84<br>289 | 235<br>84<br>291 | 230<br>82<br>284 | 217<br>72<br>259 | 202<br>62<br>235 |
| 11500        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 246<br>84<br>285 | 244<br>84<br>286 | 242<br>84<br>287 | 239<br>84<br>288 | 237<br>84<br>289 | 236<br>84<br>289 | 236<br>84<br>291 | 231<br>82<br>285 | 218<br>72<br>259 | 205<br>63<br>236 |
| 11000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 246<br>84<br>285 | 244<br>84<br>286 | 242<br>84<br>287 | 240<br>84<br>288 | 238<br>84<br>289 | 237<br>84<br>289 | 237<br>84<br>291 | 232<br>82<br>285 | 220<br>72<br>260 | 206<br>63<br>236 |
| 10500        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 247<br>84<br>285 | 245<br>84<br>286 | 243<br>84<br>287 | 241<br>84<br>288 | 239<br>84<br>289 | 237<br>84<br>289 | 237<br>84<br>291 | 233<br>82<br>285 | 221<br>72<br>260 | 208<br>63<br>237 |
| 10000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 247<br>84<br>285 | 245<br>84<br>286 | 243<br>84<br>287 | 241<br>84<br>288 | 239<br>84<br>289 | 238<br>84<br>289 | 237<br>84<br>291 | 233<br>82<br>285 | 221<br>72<br>260 | 209<br>63<br>237 |
| 9500         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 247<br>84<br>285 | 245<br>84<br>286 | 243<br>84<br>287 | 241<br>84<br>288 | 239<br>84<br>289 | 238<br>84<br>289 | 237<br>84<br>291 | 233<br>82<br>285 | 222<br>73<br>261 | 210<br>63<br>238 |
| 9000         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 247<br>84<br>285 | 245<br>84<br>286 | 243<br>84<br>287 | 241<br>84<br>288 | 239<br>84<br>289 | 238<br>84<br>289 | 238<br>84<br>291 | 234<br>82<br>286 | 223<br>73<br>261 | 210<br>63<br>238 |
| 8500         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 248<br>84<br>285 | 245<br>84<br>286 | 243<br>84<br>287 | 241<br>84<br>288 | 239<br>84<br>289 | 238<br>84<br>289 | 238<br>84<br>291 | 234<br>82<br>286 | 223<br>73<br>261 | 211<br>64<br>238 |
| 8000         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 248<br>84<br>285 | 246<br>84<br>286 | 244<br>84<br>287 | 242<br>84<br>288 | 240<br>84<br>289 | 239<br>84<br>289 | 238<br>84<br>291 | 234<br>82<br>285 | 224<br>73<br>261 | 212<br>64<br>238 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**MAXIMUM SPEED CRUISE**
**CRUISE CONFIGURATION**

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 16000 FT**

| WEIGHT<br>KG | IOAT ( °C )             |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|--------------|-------------------------|---------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|              |                         | -50                 | -40              | -30              | -20              | -10              | -5               | 0                | 10               | 20               | 30               |                  |
| 12000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 244<br>84<br>283 | 242<br>84<br>284 | 239<br>84<br>285 | 237<br>84<br>286 | 235<br>84<br>286 | 234<br>84<br>288 | 233<br>84<br>289 | 224<br>78<br>272 | 210<br>68<br>246 | 194<br>59<br>223 |
| 11500        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 244<br>84<br>283 | 242<br>84<br>284 | 240<br>84<br>285 | 237<br>84<br>286 | 235<br>84<br>286 | 235<br>84<br>288 | 234<br>84<br>289 | 226<br>78<br>272 | 213<br>69<br>247 | 198<br>59<br>224 |
| 11000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 245<br>84<br>283 | 243<br>84<br>284 | 241<br>84<br>285 | 239<br>84<br>286 | 236<br>84<br>286 | 236<br>84<br>288 | 235<br>84<br>289 | 227<br>78<br>273 | 214<br>69<br>248 | 200<br>60<br>225 |
| 10500        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 245<br>84<br>283 | 243<br>84<br>284 | 241<br>84<br>285 | 239<br>84<br>286 | 237<br>84<br>286 | 236<br>84<br>288 | 235<br>84<br>289 | 227<br>78<br>273 | 215<br>69<br>248 | 201<br>60<br>225 |
| 10000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 245<br>84<br>283 | 243<br>84<br>284 | 241<br>84<br>285 | 239<br>84<br>286 | 237<br>84<br>286 | 236<br>84<br>288 | 235<br>84<br>289 | 228<br>79<br>273 | 216<br>69<br>249 | 204<br>60<br>226 |
| 9500         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 245<br>84<br>283 | 243<br>84<br>284 | 241<br>84<br>285 | 239<br>84<br>286 | 237<br>84<br>286 | 236<br>84<br>288 | 236<br>84<br>289 | 228<br>79<br>273 | 217<br>69<br>249 | 205<br>60<br>226 |
| 9000         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 246<br>84<br>283 | 243<br>84<br>284 | 241<br>84<br>285 | 239<br>84<br>286 | 237<br>84<br>286 | 237<br>84<br>288 | 236<br>84<br>289 | 229<br>79<br>274 | 218<br>69<br>249 | 206<br>60<br>227 |
| 8500         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 246<br>84<br>283 | 244<br>84<br>284 | 242<br>84<br>285 | 240<br>84<br>286 | 238<br>84<br>286 | 237<br>84<br>288 | 236<br>84<br>289 | 229<br>79<br>274 | 218<br>69<br>249 | 206<br>61<br>227 |
| 8000         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 246<br>84<br>283 | 244<br>84<br>284 | 242<br>84<br>285 | 240<br>84<br>286 | 238<br>84<br>286 | 237<br>84<br>288 | 237<br>84<br>289 | 229<br>79<br>274 | 218<br>69<br>249 | 207<br>61<br>227 |

20 NOVEMBER 1992



**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CRUISE CONTROL  
ALL ENGINES OPERATING**

**PW118A ENGINES**

**MAXIMUM SPEED CRUISE**

**CRUISE CONFIGURATION**

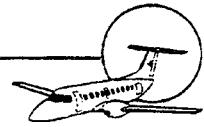
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 17000 FT**

| WEIGHT<br>KG | IOAT ( °C )             |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|--------------|-------------------------|---------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|              | -50                     | -40                 | -30              | -20              | -10              | -5               | 0                | 10               | 20               | 30               |                  |                  |
| 12000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 242<br>84<br>282 | 240<br>84<br>283 | 237<br>84<br>283 | 235<br>84<br>284 | 233<br>84<br>286 | 232<br>84<br>287 | 230<br>83<br>284 | 218<br>74<br>259 | 203<br>65<br>234 | 187<br>56<br>212 |
| 11500        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 243<br>84<br>282 | 241<br>84<br>283 | 239<br>84<br>283 | 236<br>84<br>284 | 235<br>84<br>286 | 234<br>84<br>287 | 232<br>83<br>284 | 220<br>74<br>260 | 206<br>65<br>235 | 190<br>56<br>213 |
| 11000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 243<br>84<br>282 | 241<br>84<br>283 | 239<br>84<br>283 | 237<br>84<br>284 | 235<br>84<br>286 | 234<br>84<br>287 | 232<br>83<br>284 | 221<br>75<br>260 | 208<br>65<br>236 | 193<br>57<br>214 |
| 10500        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 243<br>84<br>282 | 241<br>84<br>283 | 239<br>84<br>283 | 237<br>84<br>284 | 235<br>84<br>286 | 234<br>84<br>287 | 232<br>83<br>284 | 221<br>75<br>260 | 210<br>66<br>237 | 196<br>57<br>215 |
| 10000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 244<br>84<br>282 | 242<br>84<br>283 | 240<br>84<br>283 | 238<br>84<br>284 | 236<br>84<br>286 | 236<br>84<br>287 | 234<br>84<br>284 | 223<br>75<br>261 | 211<br>66<br>237 | 197<br>57<br>215 |
| 9500         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 245<br>84<br>282 | 243<br>84<br>283 | 240<br>84<br>283 | 238<br>84<br>284 | 237<br>84<br>286 | 236<br>84<br>287 | 234<br>84<br>284 | 224<br>75<br>261 | 212<br>66<br>237 | 199<br>57<br>216 |
| 9000         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 245<br>84<br>282 | 243<br>84<br>283 | 241<br>84<br>283 | 239<br>84<br>284 | 237<br>84<br>286 | 236<br>84<br>287 | 234<br>84<br>284 | 224<br>75<br>261 | 213<br>66<br>238 | 200<br>57<br>216 |
| 8500         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 244<br>84<br>282 | 242<br>84<br>283 | 240<br>84<br>283 | 238<br>84<br>284 | 236<br>84<br>286 | 235<br>84<br>287 | 234<br>84<br>284 | 225<br>75<br>262 | 213<br>66<br>238 | 201<br>57<br>216 |
| 8000         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 244<br>84<br>282 | 242<br>84<br>283 | 240<br>84<br>283 | 238<br>84<br>284 | 237<br>84<br>286 | 236<br>84<br>287 | 234<br>84<br>284 | 224<br>75<br>261 | 213<br>66<br>238 | 202<br>58<br>217 |

**CRUISE CONTROL****ALL ENGINES OPERATING****PW118A ENGINES****MAXIMUM SPEED CRUISE**

## CRUISE CONFIGURATION

NP: 85%

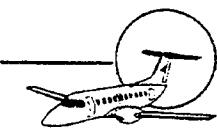
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 18000 FT**

| WEIGHT<br>KG |                                  |                     | IOAT ( °C )      |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|--------------|----------------------------------|---------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|              |                                  |                     | -50              | -40              | -30              | -20              | -10              | -5               | 0                | 10               | 20               | 30               |
| 12000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 241<br>84<br>281 | 239<br>84<br>281 | 237<br>84<br>282 | 234<br>84<br>282 | 233<br>84<br>285 | 231<br>84<br>283 | 226<br>80<br>273 | 212<br>71<br>247 | 197<br>61<br>223 | 176<br>52<br>200 |
| 11500        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 241<br>84<br>281 | 239<br>84<br>281 | 237<br>84<br>282 | 234<br>84<br>282 | 233<br>84<br>285 | 231<br>84<br>283 | 226<br>80<br>273 | 213<br>71<br>247 | 199<br>62<br>224 | 181<br>53<br>202 |
| 11000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 241<br>84<br>281 | 239<br>84<br>281 | 237<br>84<br>282 | 235<br>84<br>282 | 233<br>84<br>285 | 231<br>84<br>283 | 227<br>80<br>274 | 215<br>71<br>248 | 201<br>62<br>225 | 186<br>53<br>203 |
| 10500        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 243<br>84<br>281 | 240<br>84<br>281 | 238<br>84<br>282 | 236<br>84<br>282 | 235<br>84<br>285 | 233<br>84<br>283 | 229<br>81<br>274 | 216<br>71<br>248 | 203<br>62<br>225 | 189<br>54<br>204 |
| 10000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 243<br>84<br>281 | 241<br>84<br>281 | 238<br>84<br>282 | 236<br>84<br>282 | 235<br>84<br>285 | 233<br>84<br>283 | 229<br>81<br>274 | 217<br>71<br>249 | 205<br>63<br>226 | 181<br>54<br>205 |
| 9500         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 243<br>84<br>281 | 241<br>84<br>281 | 239<br>84<br>282 | 236<br>84<br>282 | 235<br>84<br>285 | 233<br>84<br>283 | 229<br>81<br>274 | 218<br>71<br>249 | 206<br>63<br>226 | 193<br>54<br>205 |
| 9000         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 243<br>84<br>281 | 241<br>84<br>281 | 239<br>84<br>282 | 237<br>84<br>282 | 235<br>84<br>285 | 234<br>84<br>283 | 230<br>81<br>275 | 219<br>72<br>250 | 207<br>63<br>227 | 194<br>54<br>206 |
| 8500         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 243<br>84<br>281 | 241<br>84<br>281 | 239<br>84<br>282 | 237<br>84<br>282 | 236<br>84<br>285 | 234<br>84<br>283 | 230<br>81<br>275 | 219<br>72<br>250 | 208<br>63<br>227 | 196<br>55<br>206 |
| 8000         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 243<br>84<br>281 | 241<br>84<br>281 | 239<br>84<br>282 | 237<br>84<br>282 | 236<br>84<br>285 | 234<br>84<br>283 | 231<br>81<br>275 | 220<br>72<br>250 | 209<br>63<br>227 | 197<br>55<br>206 |

20 NOVEMBER 1992



SUPPLEMENTARY PERFORMANCE  
MANUAL

CRUISE CONTROL  
ALL ENGINES OPERATING

PW118A ENGINES

MAXIMUM SPEED CRUISE

CRUISE CONFIGURATION

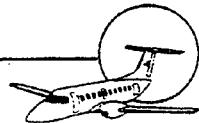
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 19000 FT

| WEIGHT<br>KG | IAS<br>KT<br>%<br>F FLOW KG/H/ENG     | IOAT ( °C )      |                  |                  |                  |                  |                  |                  |                  |                  |                  |  |
|--------------|---------------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--|
|              |                                       | -50              | -40              | -30              | -20              | -10              | -5               | 0                | 10               | 20               | 30               |  |
| 12000        | IAS<br>TORQUE<br>%<br>F FLOW KG/H/ENG | 239<br>84<br>279 | 237<br>84<br>280 | 235<br>84<br>281 | 232<br>84<br>282 | 230<br>84<br>281 | 225<br>81<br>273 | 219<br>76<br>260 | 205<br>67<br>235 | 188<br>58<br>211 | -<br>-<br>-      |  |
| 11500        | IAS<br>TORQUE<br>%<br>F FLOW KG/H/ENG | 239<br>84<br>279 | 237<br>84<br>280 | 235<br>84<br>281 | 233<br>84<br>282 | 230<br>84<br>281 | 226<br>81<br>273 | 220<br>77<br>261 | 207<br>67<br>236 | 191<br>58<br>212 | 171<br>50<br>191 |  |
| 11000        | IAS<br>TORQUE<br>%<br>F FLOW KG/H/ENG | 241<br>84<br>279 | 238<br>84<br>280 | 236<br>84<br>281 | 234<br>84<br>282 | 232<br>84<br>282 | 228<br>81<br>274 | 222<br>77<br>262 | 209<br>68<br>236 | 195<br>59<br>214 | 177<br>50<br>192 |  |
| 10500        | IAS<br>TORQUE<br>%<br>F FLOW KG/H/ENG | 241<br>84<br>279 | 239<br>84<br>280 | 236<br>84<br>281 | 234<br>84<br>282 | 232<br>84<br>282 | 228<br>81<br>274 | 223<br>77<br>262 | 210<br>68<br>237 | 197<br>59<br>214 | 181<br>51<br>193 |  |
| 10000        | IAS<br>TORQUE<br>%<br>F FLOW KG/H/ENG | 241<br>84<br>279 | 239<br>84<br>280 | 237<br>84<br>281 | 235<br>84<br>282 | 233<br>84<br>282 | 229<br>81<br>274 | 223<br>77<br>262 | 211<br>68<br>237 | 199<br>59<br>215 | 184<br>51<br>194 |  |
| 9500         | IAS<br>TORQUE<br>%<br>F FLOW KG/H/ENG | 241<br>83<br>278 | 239<br>84<br>280 | 237<br>84<br>281 | 235<br>84<br>282 | 233<br>84<br>282 | 229<br>81<br>274 | 224<br>77<br>263 | 212<br>68<br>238 | 200<br>60<br>215 | 186<br>51<br>195 |  |
| 9000         | IAS<br>TORQUE<br>%<br>F FLOW KG/H/ENG | 241<br>84<br>279 | 239<br>84<br>280 | 237<br>84<br>281 | 235<br>84<br>282 | 233<br>84<br>282 | 230<br>81<br>275 | 225<br>77<br>263 | 213<br>68<br>238 | 201<br>60<br>216 | 188<br>52<br>196 |  |
| 8500         | IAS<br>TORQUE<br>%<br>F FLOW KG/H/ENG | 241<br>83<br>277 | 240<br>84<br>280 | 237<br>84<br>281 | 236<br>84<br>282 | 234<br>84<br>282 | 230<br>81<br>275 | 225<br>77<br>263 | 214<br>68<br>238 | 203<br>60<br>216 | 190<br>52<br>196 |  |
| 8000         | IAS<br>TORQUE<br>%<br>F FLOW KG/H/ENG | 241<br>83<br>277 | 240<br>84<br>280 | 238<br>84<br>281 | 236<br>84<br>282 | 234<br>84<br>282 | 231<br>82<br>275 | 226<br>77<br>263 | 215<br>68<br>239 | 204<br>60<br>217 | 192<br>52<br>197 |  |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**MAXIMUM SPEED CRUISE**
**CRUISE CONFIGURATION**

NP: 85%

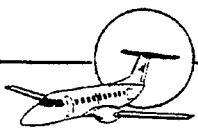
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 20000 FT**

| WEIGHT<br>KG | IAS<br>KT<br>F FLOW KG/H/ENG | TORQUE<br>%<br>KG/H/ENG | IOAT ( °C )      |                  |                  |                  |                  |                  |                  |                  |                  |    |
|--------------|------------------------------|-------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----|
|              |                              |                         | -50              | -40              | -30              | -20              | -15              | -10              | -5               | 0                | 10               | 20 |
| 12000        | IAS<br>KT<br>F FLOW KG/H/ENG | 237<br>83<br>274        | 235<br>84<br>279 | 233<br>84<br>279 | 231<br>84<br>281 | 229<br>84<br>280 | 225<br>81<br>272 | 219<br>77<br>260 | 213<br>73<br>248 | 198<br>64<br>223 | 178<br>54<br>200 |    |
| 11500        | IAS<br>KT<br>F FLOW KG/H/ENG | 237<br>82<br>272        | 236<br>84<br>279 | 234<br>84<br>279 | 232<br>84<br>281 | 231<br>84<br>280 | 227<br>81<br>273 | 221<br>77<br>261 | 215<br>73<br>249 | 200<br>64<br>224 | 183<br>55<br>201 |    |
| 11000        | IAS<br>KT<br>F FLOW KG/H/ENG | 237<br>81<br>271        | 236<br>84<br>279 | 234<br>84<br>279 | 233<br>84<br>281 | 231<br>84<br>280 | 227<br>82<br>273 | 222<br>77<br>262 | 216<br>73<br>249 | 203<br>64<br>225 | 187<br>56<br>202 |    |
| 10500        | IAS<br>KT<br>F FLOW KG/H/ENG | 237<br>81<br>269        | 237<br>83<br>275 | 235<br>84<br>279 | 233<br>84<br>281 | 231<br>84<br>280 | 228<br>82<br>274 | 223<br>78<br>262 | 217<br>73<br>250 | 204<br>64<br>225 | 190<br>56<br>204 |    |
| 10000        | IAS<br>KT<br>F FLOW KG/H/ENG | 237<br>81<br>268        | 237<br>82<br>273 | 235<br>84<br>279 | 233<br>84<br>281 | 232<br>84<br>280 | 228<br>82<br>274 | 223<br>78<br>262 | 218<br>74<br>250 | 206<br>65<br>226 | 192<br>56<br>204 |    |
| 9500         | IAS<br>KT<br>F FLOW KG/H/ENG | 237<br>80<br>267        | 237<br>82<br>273 | 236<br>84<br>279 | 233<br>84<br>281 | 232<br>84<br>280 | 229<br>82<br>274 | 224<br>78<br>263 | 219<br>74<br>251 | 207<br>65<br>227 | 194<br>56<br>205 |    |
| 9000         | IAS<br>KT<br>F FLOW KG/H/ENG | 237<br>80<br>266        | 237<br>82<br>272 | 235<br>84<br>279 | 234<br>84<br>281 | 233<br>84<br>281 | 229<br>82<br>274 | 224<br>78<br>263 | 219<br>74<br>251 | 208<br>65<br>227 | 196<br>57<br>206 |    |
| 8500         | IAS<br>KT<br>F FLOW KG/H/ENG | 237<br>80<br>266        | 237<br>82<br>271 | 236<br>84<br>279 | 234<br>84<br>281 | 233<br>84<br>281 | 230<br>82<br>274 | 225<br>78<br>263 | 220<br>74<br>251 | 209<br>65<br>227 | 197<br>57<br>206 |    |
| 8000         | IAS<br>KT<br>F FLOW KG/H/ENG | 237<br>80<br>266        | 237<br>81<br>271 | 236<br>84<br>279 | 234<br>84<br>281 | 233<br>84<br>281 | 230<br>82<br>274 | 225<br>78<br>263 | 220<br>74<br>251 | 210<br>65<br>228 | 198<br>57<br>206 |    |

20 NOVEMBER 1992



**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CRUISE CONTROL  
ALL ENGINES OPERATING**

**PW118A ENGINES**

**MAXIMUM SPEED CRUISE**

**CRUISE CONFIGURATION**

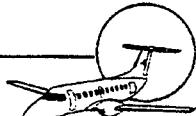
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 21000 FT**

| WEIGHT<br>KG | IOAT ( °C )             |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|--------------|-------------------------|---------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|              |                         |                     | -50              | -40              | -30              | -20              | -15              | -10              | -5               | 0                | 10               | 20               |
| 12000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 232<br>80<br>265 | 232<br>82<br>273 | 231<br>84<br>279 | 228<br>84<br>279 | 225<br>82<br>272 | 219<br>78<br>260 | 212<br>73<br>248 | 206<br>69<br>236 | 189<br>60<br>211 | -<br>-<br>-      |
| 11500        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 232<br>79<br>263 | 232<br>82<br>271 | 232<br>84<br>279 | 230<br>84<br>279 | 226<br>82<br>273 | 221<br>78<br>261 | 215<br>74<br>249 | 208<br>69<br>237 | 193<br>60<br>212 | 174<br>52<br>190 |
| 11000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 232<br>79<br>261 | 232<br>81<br>269 | 232<br>83<br>275 | 230<br>84<br>279 | 227<br>82<br>273 | 222<br>78<br>261 | 216<br>74<br>249 | 210<br>70<br>238 | 196<br>61<br>214 | 179<br>52<br>192 |
| 10500        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 232<br>78<br>260 | 232<br>80<br>265 | 232<br>82<br>274 | 232<br>84<br>279 | 228<br>82<br>274 | 222<br>78<br>262 | 217<br>74<br>250 | 211<br>70<br>238 | 198<br>61<br>214 | 183<br>53<br>193 |
| 10000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 232<br>78<br>258 | 232<br>79<br>263 | 232<br>82<br>272 | 232<br>84<br>279 | 229<br>82<br>274 | 224<br>78<br>262 | 219<br>74<br>250 | 213<br>70<br>239 | 200<br>61<br>215 | 185<br>53<br>194 |
| 9500         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 232<br>77<br>257 | 232<br>79<br>262 | 232<br>81<br>271 | 232<br>84<br>279 | 229<br>82<br>274 | 225<br>78<br>263 | 219<br>74<br>251 | 214<br>70<br>239 | 202<br>62<br>216 | 189<br>54<br>195 |
| 9000         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 232<br>77<br>256 | 232<br>79<br>261 | 232<br>81<br>270 | 232<br>83<br>276 | 230<br>82<br>274 | 225<br>78<br>263 | 220<br>74<br>251 | 215<br>70<br>240 | 203<br>62<br>216 | 191<br>54<br>196 |
| 8500         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 232<br>77<br>256 | 232<br>78<br>261 | 232<br>81<br>269 | 232<br>83<br>276 | 230<br>82<br>274 | 226<br>79<br>263 | 221<br>75<br>251 | 216<br>70<br>240 | 203<br>62<br>216 | 191<br>54<br>196 |
| 8000         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 232<br>77<br>255 | 232<br>78<br>260 | 232<br>81<br>269 | 232<br>83<br>275 | 230<br>82<br>274 | 225<br>79<br>263 | 220<br>74<br>251 | 215<br>70<br>240 | 204<br>62<br>217 | 193<br>54<br>196 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**MAXIMUM SPEED CRUISE**
**CRUISE CONFIGURATION**

NP: 85%

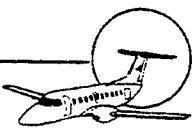
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 22000 FT**

| WEIGHT<br>KG | IOAT ( °C )             |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |   |
|--------------|-------------------------|---------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|---|
|              | -50                     | -40                 | -30              | -20              | -15              | -10              | -5               | 0                | 10               | 20               |                  |                  |   |
| 12000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 227<br>78<br>257 | 227<br>80<br>264 | 227<br>82<br>271 | 225<br>82<br>272 | 219<br>78<br>260 | 213<br>74<br>248 | 205<br>70<br>236 | 198<br>65<br>224 | 179<br>56<br>200 | -                | - |
| 11500        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 227<br>77<br>254 | 227<br>79<br>261 | 227<br>81<br>268 | 226<br>82<br>273 | 220<br>78<br>260 | 214<br>74<br>248 | 208<br>70<br>237 | 201<br>66<br>225 | 185<br>57<br>201 | -                | - |
| 11000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 227<br>76<br>252 | 227<br>78<br>259 | 227<br>80<br>266 | 226<br>82<br>273 | 221<br>78<br>261 | 216<br>74<br>249 | 210<br>70<br>238 | 203<br>66<br>226 | 188<br>57<br>202 | 169<br>49<br>181 |   |
| 10500        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 227<br>75<br>250 | 227<br>78<br>257 | 227<br>80<br>264 | 227<br>81<br>270 | 223<br>79<br>262 | 218<br>75<br>250 | 212<br>70<br>238 | 206<br>66<br>227 | 192<br>58<br>204 | 174<br>50<br>183 |   |
| 10000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 227<br>75<br>249 | 227<br>76<br>254 | 227<br>79<br>262 | 227<br>81<br>268 | 224<br>79<br>262 | 218<br>75<br>250 | 213<br>71<br>239 | 207<br>67<br>227 | 194<br>58<br>204 | 179<br>50<br>184 |   |
| 9500         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 227<br>74<br>247 | 227<br>76<br>252 | 227<br>78<br>261 | 227<br>80<br>267 | 224<br>79<br>262 | 219<br>75<br>250 | 214<br>71<br>239 | 208<br>67<br>228 | 196<br>58<br>205 | 182<br>51<br>185 |   |
| 9000         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 227<br>74<br>246 | 227<br>76<br>251 | 227<br>78<br>259 | 227<br>80<br>266 | 225<br>79<br>263 | 220<br>75<br>251 | 215<br>71<br>240 | 209<br>67<br>228 | 197<br>59<br>205 | 185<br>51<br>186 |   |
| 8500         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 227<br>74<br>246 | 227<br>75<br>251 | 227<br>78<br>259 | 227<br>80<br>265 | 225<br>79<br>263 | 220<br>75<br>251 | 215<br>71<br>240 | 210<br>67<br>229 | 199<br>59<br>206 | 187<br>51<br>187 |   |
| 8000         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 227<br>74<br>245 | 227<br>75<br>250 | 227<br>78<br>258 | 227<br>79<br>264 | 226<br>79<br>263 | 221<br>75<br>251 | 216<br>71<br>240 | 210<br>67<br>229 | 199<br>59<br>206 | 187<br>51<br>187 |   |

20 NOVEMBER 1992



**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CRUISE CONTROL  
ALL ENGINES OPERATING**

**PW118A ENGINES**

**MAXIMUM SPEED CRUISE**

**CRUISE CONFIGURATION**

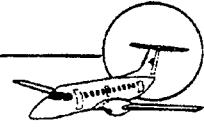
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 23000 FT**

| WEIGHT<br>KG | IOAT ( °C )             |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|--------------|-------------------------|---------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|              |                         |                     | -50              | -40              | -30              | -20              | -15              | -10              | -5               | 0                | 10               | 20               |
| 12000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 223<br>75<br>248 | 223<br>77<br>256 | 223<br>79<br>262 | 218<br>78<br>259 | 213<br>74<br>247 | 206<br>70<br>235 | 199<br>66<br>224 | 191<br>62<br>212 | -<br>-<br>-      | -<br>-<br>-      |
| 11500        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 223<br>74<br>246 | 223<br>76<br>253 | 223<br>78<br>259 | 220<br>78<br>260 | 214<br>74<br>248 | 208<br>70<br>236 | 201<br>66<br>225 | 194<br>62<br>214 | 174<br>53<br>190 | -<br>-<br>-      |
| 11000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 223<br>73<br>244 | 223<br>76<br>250 | 223<br>77<br>257 | 221<br>78<br>260 | 216<br>75<br>249 | 210<br>71<br>237 | 204<br>67<br>226 | 196<br>63<br>215 | 180<br>54<br>192 | -<br>-<br>-      |
| 10500        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 223<br>73<br>242 | 223<br>75<br>248 | 223<br>77<br>255 | 222<br>79<br>261 | 217<br>75<br>249 | 211<br>71<br>238 | 206<br>67<br>227 | 199<br>63<br>215 | 184<br>55<br>193 | 164<br>47<br>173 |
| 10000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 223<br>72<br>240 | 223<br>73<br>244 | 223<br>76<br>253 | 223<br>78<br>259 | 218<br>75<br>250 | 213<br>71<br>239 | 207<br>67<br>227 | 201<br>63<br>216 | 187<br>55<br>194 | 171<br>47<br>174 |
| 9500         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 223<br>72<br>238 | 223<br>73<br>243 | 223<br>76<br>251 | 223<br>77<br>257 | 219<br>75<br>250 | 214<br>71<br>239 | 208<br>67<br>228 | 202<br>63<br>217 | 189<br>55<br>194 | 175<br>48<br>175 |
| 9000         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 223<br>71<br>237 | 223<br>73<br>241 | 223<br>75<br>249 | 223<br>77<br>256 | 219<br>75<br>250 | 214<br>71<br>239 | 209<br>67<br>228 | 204<br>64<br>217 | 191<br>55<br>195 | 178<br>48<br>176 |
| 8500         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 223<br>71<br>236 | 223<br>72<br>241 | 223<br>75<br>248 | 223<br>77<br>254 | 220<br>75<br>251 | 215<br>71<br>239 | 210<br>68<br>228 | 205<br>64<br>218 | 193<br>56<br>196 | 181<br>48<br>177 |
| 8000         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 223<br>71<br>235 | 223<br>72<br>240 | 223<br>74<br>248 | 223<br>76<br>254 | 221<br>75<br>251 | 216<br>72<br>240 | 211<br>68<br>229 | 206<br>64<br>218 | 194<br>56<br>196 | 182<br>49<br>178 |



# CRUISE CONTROL

## ALL ENGINES OPERATING

PW118A ENGINES

**MAXIMUM SPEED CRUISE**

## CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 24000 FT**

| WEIGHT<br>KG | IAS<br>KT          | TORQUE<br>% | F FLOW<br>KG/H/ENG | IOAT ( °C ) |     |     |     |     |     |     |     |    |    |
|--------------|--------------------|-------------|--------------------|-------------|-----|-----|-----|-----|-----|-----|-----|----|----|
|              |                    |             |                    | -50         | -40 | -30 | -20 | -15 | -10 | -5  | 0   | 10 | 20 |
| 12000        | IAS<br>KT          | 218         | 218                | 218         | 212 | 205 | 198 | 190 | 181 | -   | -   | -  | -  |
|              | TORQUE<br>%        | 73          | 75                 | 77          | 74  | 70  | 66  | 62  | 58  | -   | -   | -  | -  |
|              | F FLOW<br>KG/H/ENG | 240         | 248                | 255         | 247 | 235 | 223 | 212 | 200 | -   | -   | -  | -  |
| 11500        | IAS<br>KT          | 218         | 218                | 218         | 214 | 207 | 201 | 193 | 185 | -   | -   | -  | -  |
|              | TORQUE<br>%        | 72          | 74                 | 76          | 75  | 71  | 67  | 63  | 59  | -   | -   | -  | -  |
|              | F FLOW<br>KG/H/ENG | 237         | 245                | 251         | 247 | 236 | 225 | 213 | 202 | -   | -   | -  | -  |
| 11000        | IAS<br>KT          | 218         | 218                | 218         | 215 | 210 | 204 | 197 | 190 | 169 | -   | -  | -  |
|              | TORQUE<br>%        | 71          | 73                 | 75          | 75  | 71  | 67  | 63  | 59  | 51  | -   | -  | -  |
|              | F FLOW<br>KG/H/ENG | 235         | 242                | 248         | 248 | 237 | 226 | 214 | 203 | 180 | -   | -  | -  |
| 10500        | IAS<br>KT          | 218         | 218                | 218         | 216 | 211 | 205 | 199 | 192 | 176 | -   | -  | -  |
|              | TORQUE<br>%        | 70          | 72                 | 74          | 75  | 71  | 67  | 64  | 60  | 51  | -   | -  | -  |
|              | F FLOW<br>KG/H/ENG | 233         | 240                | 246         | 249 | 237 | 226 | 215 | 204 | 182 | -   | -  | -  |
| 10000        | IAS<br>KT          | 218         | 218                | 218         | 217 | 212 | 207 | 201 | 194 | 179 | 161 | -  | -  |
|              | TORQUE<br>%        | 70          | 72                 | 73          | 75  | 71  | 68  | 64  | 60  | 52  | 44  | -  | -  |
|              | F FLOW<br>KG/H/ENG | 231         | 237                | 243         | 249 | 238 | 227 | 216 | 205 | 183 | 164 | -  | -  |
| 9500         | IAS<br>KT          | 218         | 218                | 218         | 218 | 213 | 208 | 202 | 196 | 182 | 167 | -  | -  |
|              | TORQUE<br>%        | 69          | 70                 | 73          | 75  | 72  | 68  | 64  | 60  | 52  | 45  | -  | -  |
|              | F FLOW<br>KG/H/ENG | 229         | 233                | 241         | 247 | 238 | 228 | 217 | 206 | 184 | 166 | -  | -  |
| 9000         | IAS<br>KT          | 218         | 218                | 218         | 218 | 214 | 209 | 203 | 198 | 185 | 171 | -  | -  |
|              | TORQUE<br>%        | 68          | 70                 | 72          | 74  | 72  | 68  | 64  | 60  | 52  | 45  | -  | -  |
|              | F FLOW<br>KG/H/ENG | 228         | 232                | 240         | 246 | 239 | 228 | 217 | 207 | 185 | 167 | -  | -  |
| 8500         | IAS<br>KT          | 218         | 218                | 218         | 218 | 215 | 210 | 205 | 199 | 187 | 174 | -  | -  |
|              | TORQUE<br>%        | 68          | 69                 | 72          | 74  | 72  | 68  | 64  | 61  | 53  | 46  | -  | -  |
|              | F FLOW<br>KG/H/ENG | 226         | 231                | 238         | 244 | 239 | 228 | 218 | 207 | 186 | 168 | -  | -  |
| 8000         | IAS<br>KT          | 218         | 218                | 218         | 218 | 215 | 211 | 206 | 200 | 189 | 177 | -  | -  |
|              | TORQUE<br>%        | 68          | 69                 | 71          | 73  | 72  | 68  | 64  | 61  | 53  | 46  | -  | -  |
|              | F FLOW<br>KG/H/ENG | 225         | 230                | 237         | 243 | 239 | 229 | 218 | 207 | 186 | 169 | -  | -  |

20 NOVEMBER 1992



SUPPLEMENTARY PERFORMANCE  
MANUAL

CRUISE CONTROL  
ALL ENGINES OPERATING

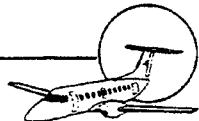
PW118A ENGINES

MAXIMUM SPEED CRUISE

CRUISE CONFIGURATION  
NP: 85%  
BLEED SWITCH: AUTO  
PACK CONTROL SELECTOR: LOW

ALTITUDE: 25000 FT

| WEIGHT<br>KG | IAS<br>KT<br>%  | TORQUE<br>F FLOW KG/H/ENG | IOAT ( °C ) |           |           |           |           |           |           |           |           |    |
|--------------|-----------------|---------------------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----|
|              |                 |                           | -50         | -40       | -30       | -25       | -20       | -15       | -10       | -5        | 0         | 10 |
| 12000        | IAS<br>KT<br>%  | 214<br>71                 | 214<br>73   | 214<br>75 | 210<br>74 | 204<br>70 | 197<br>67 | 190<br>63 | 180<br>59 | -         | -         | -  |
|              | F FLOW KG/H/ENG | 233                       | 241         | 248       | 244       | 234       | 222       | 211       | 200       | -         | -         | -  |
| 11500        | IAS<br>KT<br>%  | 214<br>70                 | 214<br>72   | 214<br>74 | 213<br>74 | 207<br>71 | 201<br>67 | 194<br>63 | 185<br>59 | 175<br>55 | -         | -  |
|              | F FLOW KG/H/ENG | 230                       | 237         | 244       | 246       | 235       | 224       | 213       | 201       | 190       | -         | -  |
| 11000        | IAS<br>KT<br>%  | 214<br>69                 | 214<br>71   | 214<br>73 | 214<br>74 | 209<br>71 | 203<br>67 | 196<br>64 | 189<br>60 | 181<br>56 | -         | -  |
|              | F FLOW KG/H/ENG | 227                       | 234         | 240       | 246       | 236       | 225       | 214       | 203       | 192       | -         | -  |
| 10500        | IAS<br>KT<br>%  | 214<br>68                 | 214<br>70   | 214<br>72 | 214<br>73 | 210<br>71 | 204<br>68 | 199<br>64 | 192<br>60 | 185<br>56 | 165<br>48 |    |
|              | F FLOW KG/H/ENG | 225                       | 232         | 237       | 241       | 237       | 225       | 215       | 204       | 193       | 171       |    |
| 10000        | IAS<br>KT<br>%  | 214<br>67                 | 214<br>69   | 214<br>71 | 214<br>72 | 212<br>72 | 207<br>68 | 200<br>64 | 194<br>60 | 187<br>57 | 171<br>49 |    |
|              | F FLOW KG/H/ENG | 223                       | 229         | 235       | 238       | 237       | 226       | 215       | 205       | 194       | 173       |    |
| 9500         | IAS<br>KT<br>%  | 214<br>67                 | 214<br>68   | 214<br>70 | 214<br>71 | 213<br>72 | 208<br>68 | 203<br>64 | 196<br>61 | 190<br>57 | 175<br>49 |    |
|              | F FLOW KG/H/ENG | 221                       | 227         | 233       | 236       | 238       | 227       | 216       | 206       | 195       | 174       |    |
| 9000         | IAS<br>KT<br>%  | 214<br>66                 | 214<br>67   | 214<br>70 | 214<br>70 | 214<br>71 | 209<br>68 | 204<br>65 | 198<br>61 | 192<br>57 | 178<br>50 |    |
|              | F FLOW KG/H/ENG | 219                       | 223         | 231       | 234       | 236       | 227       | 217       | 206       | 196       | 175       |    |
| 8500         | IAS<br>KT<br>%  | 214<br>65                 | 214<br>67   | 214<br>69 | 214<br>70 | 214<br>71 | 209<br>68 | 204<br>65 | 199<br>61 | 193<br>57 | 181<br>50 |    |
|              | F FLOW KG/H/ENG | 218                       | 222         | 229       | 232       | 235       | 228       | 217       | 207       | 196       | 176       |    |
| 8000         | IAS<br>KT<br>%  | 214<br>65                 | 214<br>66   | 214<br>69 | 214<br>69 | 214<br>70 | 209<br>68 | 204<br>65 | 199<br>61 | 193<br>58 | 181<br>50 |    |
|              | F FLOW KG/H/ENG | 217                       | 221         | 228       | 231       | 234       | 228       | 217       | 207       | 197       | 177       |    |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**MAXIMUM SPEED CRUISE**
**CRUISE CONFIGURATION**

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 26000 FT**

|       | WEIGHT<br>KG                     | IOAT ( °C )      |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|-------|----------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|       |                                  | -50              | -40              | -30              | -25              | -20              | -15              | -10              | -5               | 0                | 10               |
| 12000 | IAS<br>TORQUE<br>F FLOW KG/H/ENG | 209<br>68<br>226 | 209<br>71<br>234 | 209<br>73<br>242 | 203<br>70<br>232 | 196<br>67<br>222 | 189<br>63<br>210 | 179<br>59<br>199 | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      |
| 11500 | IAS<br>TORQUE<br>F FLOW KG/H/ENG | 209<br>68<br>223 | 209<br>70<br>231 | 209<br>71<br>236 | 206<br>70<br>233 | 200<br>67<br>223 | 193<br>63<br>212 | 185<br>60<br>201 | 174<br>55<br>189 | -<br>-<br>-      | -<br>-<br>-      |
| 11000 | IAS<br>TORQUE<br>F FLOW KG/H/ENG | 209<br>67<br>220 | 209<br>69<br>227 | 209<br>71<br>234 | 207<br>71<br>234 | 202<br>67<br>224 | 196<br>64<br>213 | 189<br>60<br>202 | 181<br>56<br>192 | 170<br>52<br>180 | -<br>-<br>-      |
| 10500 | IAS<br>TORQUE<br>F FLOW KG/H/ENG | 209<br>66<br>217 | 209<br>68<br>224 | 209<br>69<br>230 | 209<br>70<br>234 | 205<br>68<br>225 | 198<br>64<br>214 | 191<br>60<br>203 | 184<br>57<br>193 | 176<br>53<br>182 | -<br>-<br>-      |
| 10000 | IAS<br>TORQUE<br>F FLOW KG/H/ENG | 209<br>65<br>215 | 209<br>67<br>221 | 209<br>68<br>227 | 209<br>69<br>230 | 206<br>68<br>226 | 201<br>64<br>215 | 195<br>61<br>205 | 187<br>57<br>194 | 180<br>53<br>184 | 161<br>46<br>163 |
| 9500  | IAS<br>TORQUE<br>F FLOW KG/H/ENG | 209<br>64<br>213 | 209<br>66<br>219 | 209<br>68<br>224 | 209<br>69<br>227 | 207<br>68<br>226 | 202<br>65<br>216 | 197<br>61<br>205 | 190<br>57<br>195 | 183<br>54<br>185 | 167<br>46<br>165 |
| 9000  | IAS<br>TORQUE<br>F FLOW KG/H/ENG | 209<br>64<br>211 | 209<br>65<br>217 | 209<br>67<br>222 | 209<br>68<br>225 | 208<br>68<br>227 | 203<br>65<br>216 | 198<br>61<br>206 | 192<br>58<br>196 | 185<br>54<br>185 | 171<br>47<br>166 |
| 8500  | IAS<br>TORQUE<br>F FLOW KG/H/ENG | 209<br>63<br>209 | 209<br>64<br>213 | 209<br>66<br>220 | 209<br>67<br>223 | 209<br>68<br>227 | 205<br>65<br>217 | 199<br>61<br>206 | 193<br>58<br>196 | 187<br>54<br>186 | 174<br>47<br>167 |
| 8000  | IAS<br>TORQUE<br>F FLOW KG/H/ENG | 209<br>63<br>208 | 209<br>64<br>212 | 209<br>66<br>219 | 209<br>67<br>222 | 209<br>68<br>224 | 205<br>65<br>217 | 200<br>62<br>207 | 195<br>58<br>197 | 189<br>55<br>187 | 177<br>47<br>168 |

20 NOVEMBER 1992



SUPPLEMENTARY PERFORMANCE  
MANUAL

CRUISE CONTROL  
ALL ENGINES OPERATING

PW118A ENGINES

MAXIMUM SPEED CRUISE

CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 27000 FT

| WEIGHT<br>KG | IOAT ( °C )                           |                  |                  |                  |                  |                  |                  |                  |                  |                  |  |
|--------------|---------------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--|
|              | -50                                   | -40              | -30              | -25              | -20              | -15              | -10              | -5               | 0                | 10               |  |
| 12000        | IAS<br>KT<br>%<br>F FLOW KG/H/ENG     | 205<br>66<br>219 | 205<br>68<br>228 | 202<br>70<br>230 | 196<br>66<br>220 | 187<br>63<br>209 | 178<br>59<br>198 | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      |  |
| 11500        | IAS<br>TORQUE<br>%<br>F FLOW KG/H/ENG | 205<br>65<br>216 | 205<br>68<br>224 | 204<br>70<br>231 | 198<br>67<br>221 | 192<br>63<br>211 | 184<br>60<br>200 | 174<br>56<br>189 | -<br>-<br>-      | -<br>-<br>-      |  |
| 11000        | IAS<br>TORQUE<br>%<br>F FLOW KG/H/ENG | 205<br>65<br>213 | 205<br>67<br>220 | 205<br>69<br>227 | 200<br>67<br>222 | 195<br>64<br>212 | 188<br>60<br>202 | 180<br>57<br>191 | 170<br>53<br>180 | -<br>-<br>-      |  |
| 10500        | IAS<br>TORQUE<br>%<br>F FLOW KG/H/ENG | 205<br>64<br>210 | 205<br>66<br>217 | 205<br>68<br>223 | 203<br>67<br>223 | 198<br>64<br>213 | 192<br>61<br>203 | 184<br>57<br>192 | 176<br>53<br>182 | 165<br>49<br>171 |  |
| 10000        | IAS<br>TORQUE<br>%<br>F FLOW KG/H/ENG | 205<br>63<br>207 | 205<br>65<br>214 | 205<br>66<br>219 | 205<br>67<br>225 | 200<br>65<br>214 | 194<br>61<br>204 | 188<br>58<br>194 | 181<br>54<br>184 | 171<br>50<br>173 |  |
| 9500         | IAS<br>TORQUE<br>%<br>F FLOW KG/H/ENG | 205<br>62<br>205 | 205<br>64<br>211 | 205<br>65<br>216 | 205<br>66<br>219 | 201<br>65<br>215 | 196<br>61<br>205 | 190<br>58<br>194 | 184<br>54<br>185 | 175<br>51<br>174 |  |
| 9000         | IAS<br>TORQUE<br>%<br>F FLOW KG/H/ENG | 205<br>61<br>203 | 205<br>63<br>209 | 205<br>65<br>214 | 205<br>65<br>217 | 203<br>65<br>216 | 197<br>61<br>205 | 192<br>58<br>195 | 186<br>55<br>185 | 180<br>51<br>176 |  |
| 8500         | IAS<br>TORQUE<br>%<br>F FLOW KG/H/ENG | 205<br>61<br>201 | 205<br>62<br>205 | 205<br>64<br>212 | 205<br>65<br>214 | 204<br>65<br>216 | 199<br>62<br>206 | 194<br>58<br>196 | 188<br>55<br>186 | 181<br>51<br>176 |  |
| 8000         | IAS<br>TORQUE<br>%<br>F FLOW KG/H/ENG | 205<br>60<br>199 | 205<br>61<br>203 | 205<br>63<br>210 | 205<br>64<br>213 | 205<br>65<br>215 | 200<br>62<br>206 | 194<br>58<br>196 | 189<br>55<br>187 | 183<br>52<br>177 |  |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**MAXIMUM SPEED CRUISE**
**CRUISE CONFIGURATION**

NP: 85%

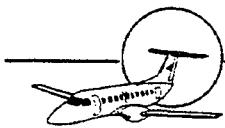
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 28000 FT**

| WEIGHT<br>KG | IOAT ( °C )                      |                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|--------------|----------------------------------|---------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|              | -50                              | -40                 | -30              | -25              | -20              | -15              | -10              | -5               | 0                | 10               |                  |
| 12000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 200<br>66<br>217 | 200<br>68<br>222 | 194<br>66<br>218 | 186<br>62<br>207 | 176<br>59<br>197 | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      |                  |
| 11500        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 200<br>64<br>210 | 200<br>66<br>218 | 196<br>66<br>219 | 190<br>63<br>209 | 183<br>60<br>199 | 173<br>56<br>188 | -<br>-<br>-      | -<br>-<br>-      |                  |
| 11000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 200<br>63<br>207 | 200<br>65<br>214 | 200<br>67<br>220 | 194<br>63<br>210 | 187<br>60<br>201 | 179<br>57<br>190 | 169<br>53<br>179 | -<br>-<br>-      |                  |
| 10500        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 200<br>62<br>204 | 200<br>64<br>210 | 200<br>66<br>215 | 196<br>64<br>211 | 191<br>61<br>202 | 184<br>57<br>192 | 175<br>54<br>181 | 165<br>50<br>171 |                  |
| 10000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 200<br>61<br>200 | 200<br>62<br>207 | 200<br>63<br>212 | 198<br>64<br>212 | 193<br>61<br>203 | 187<br>58<br>193 | 180<br>54<br>183 | 172<br>51<br>173 | 161<br>47<br>162 |
| 9500         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 200<br>60<br>198 | 200<br>62<br>204 | 200<br>63<br>209 | 200<br>64<br>212 | 195<br>61<br>204 | 189<br>58<br>194 | 183<br>55<br>184 | 176<br>51<br>174 | 168<br>47<br>164 |
| 9000         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 200<br>59<br>196 | 200<br>61<br>201 | 200<br>62<br>206 | 200<br>63<br>209 | 197<br>62<br>205 | 191<br>58<br>194 | 186<br>55<br>185 | 179<br>51<br>175 | 172<br>48<br>165 |
| 8500         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 200<br>58<br>193 | 200<br>60<br>199 | 200<br>61<br>204 | 200<br>62<br>206 | 198<br>62<br>205 | 193<br>58<br>195 | 188<br>55<br>186 | 182<br>52<br>176 | 175<br>48<br>166 |
| 8000         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG | 200<br>58<br>192 | 200<br>59<br>195 | 200<br>61<br>202 | 200<br>62<br>204 | 199<br>62<br>205 | 195<br>59<br>196 | 189<br>55<br>186 | 183<br>52<br>177 | 177<br>49<br>167 |
|              |                                  |                     |                  |                  |                  |                  |                  |                  |                  |                  | 164<br>42<br>150 |

20 NOVEMBER 1992



SUPPLEMENTARY PERFORMANCE  
MANUAL

**CRUISE CONTROL**  
**ALL ENGINES OPERATING**

PW118A ENGINES

**MAXIMUM SPEED CRUISE**

CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 29000 FT**

| WEIGHT<br>KG | IAS<br>KT       | TORQUE<br>% | F FLOW KG/H/ENG | IOAT ( °C ) |     |     |     |     |     |     |     |     |    |
|--------------|-----------------|-------------|-----------------|-------------|-----|-----|-----|-----|-----|-----|-----|-----|----|
|              |                 |             |                 | -50         | -40 | -30 | -25 | -20 | -15 | -10 | -5  | 0   | 10 |
| 12000        | IAS<br>KT       | 196         | 196             | 184         | 174 | -   | -   | -   | -   | -   | -   | -   | -  |
|              | TORQUE<br>%     | 64          | 67              | 62          | 58  | -   | -   | -   | -   | -   | -   | -   | -  |
|              | F FLOW KG/H/ENG | 212         | 220             | 205         | 194 | -   | -   | -   | -   | -   | -   | -   | -  |
| 11500        | IAS<br>KT       | 196         | 196             | 188         | 181 | 171 | -   | -   | -   | -   | -   | -   | -  |
|              | TORQUE<br>%     | 63          | 65              | 63          | 59  | 56  | -   | -   | -   | -   | -   | -   | -  |
|              | F FLOW KG/H/ENG | 207         | 214             | 207         | 197 | 186 | -   | -   | -   | -   | -   | -   | -  |
| 11000        | IAS<br>KT       | 196         | 196             | 192         | 186 | 177 | 167 | -   | -   | -   | -   | -   | -  |
|              | TORQUE<br>%     | 61          | 64              | 63          | 60  | 57  | 53  | -   | -   | -   | -   | -   | -  |
|              | F FLOW KG/H/ENG | 200         | 208             | 208         | 199 | 189 | 178 | -   | -   | -   | -   | -   | -  |
| 10500        | IAS<br>KT       | 196         | 196             | 195         | 189 | 183 | 175 | 164 | -   | -   | -   | -   | -  |
|              | TORQUE<br>%     | 60          | 62              | 63          | 60  | 57  | 54  | 50  | -   | -   | -   | -   | -  |
|              | F FLOW KG/H/ENG | 197         | 204             | 210         | 200 | 191 | 180 | 170 | -   | -   | -   | -   | -  |
| 10000        | IAS<br>KT       | 196         | 196             | 196         | 192 | 186 | 179 | 171 | 160 | -   | -   | -   | -  |
|              | TORQUE<br>%     | 59          | 61              | 63          | 61  | 58  | 54  | 51  | 47  | -   | -   | -   | -  |
|              | F FLOW KG/H/ENG | 194         | 200             | 205         | 201 | 192 | 182 | 172 | 162 | -   | -   | -   | -  |
| 9500         | IAS<br>KT       | 196         | 196             | 196         | 194 | 188 | 182 | 175 | 168 | 158 | -   | -   | -  |
|              | TORQUE<br>%     | 58          | 59              | 61          | 61  | 58  | 55  | 51  | 48  | 44  | -   | -   | -  |
|              | F FLOW KG/H/ENG | 191         | 197             | 202         | 202 | 193 | 183 | 173 | 164 | 154 | -   | -   | -  |
| 9000         | IAS<br>KT       | 196         | 196             | 196         | 195 | 190 | 185 | 179 | 172 | 164 | -   | -   | -  |
|              | TORQUE<br>%     | 57          | 59              | 60          | 61  | 58  | 55  | 52  | 48  | 45  | -   | -   | -  |
|              | F FLOW KG/H/ENG | 189         | 194             | 199         | 203 | 194 | 184 | 175 | 165 | 156 | -   | -   | -  |
| 8500         | IAS<br>KT       | 196         | 196             | 196         | 196 | 192 | 187 | 181 | 175 | 168 | 151 | -   | -  |
|              | TORQUE<br>%     | 56          | 58              | 59          | 60  | 59  | 55  | 52  | 49  | 45  | 39  | -   | -  |
|              | F FLOW KG/H/ENG | 186         | 191             | 196         | 198 | 194 | 185 | 175 | 166 | 157 | 140 | -   | -  |
| 8000         | IAS<br>KT       | 196         | 196             | 196         | 196 | 194 | 189 | 183 | 178 | 171 | 157 | 151 | -  |
|              | TORQUE<br>%     | 55          | 57              | 58          | 59  | 59  | 56  | 52  | 49  | 46  | 40  | -   | -  |
|              | F FLOW KG/H/ENG | 184         | 189             | 194         | 196 | 195 | 186 | 176 | 167 | 158 | 142 | -   | -  |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**MAXIMUM SPEED CRUISE**
**CRUISE CONFIGURATION**

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 30000 FT**

|       | WEIGHT<br>KG                          | IOAT ( °C )      |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|-------|---------------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|       |                                       | -50              | -40              | -35              | -30              | -25              | -20              | -15              | -10              | -5               | 0                |
| 12000 | IAS KT<br>TORQUE %<br>F FLOW KG/H/ENG | 191<br>63<br>208 | 189<br>65<br>213 | 181<br>61<br>202 | 170<br>58<br>191 | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      | -                |
| 11500 | IAS KT<br>TORQUE %<br>F FLOW KG/H/ENG | 191<br>61<br>202 | 191<br>64<br>210 | 187<br>62<br>205 | 178<br>59<br>194 | 168<br>55<br>184 | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      | -                |
| 11000 | IAS KT<br>TORQUE %<br>F FLOW KG/H/ENG | 191<br>60<br>198 | 191<br>62<br>206 | 190<br>63<br>206 | 184<br>59<br>196 | 176<br>56<br>187 | 165<br>53<br>177 | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      | -                |
| 10500 | IAS KT<br>TORQUE %<br>F FLOW KG/H/ENG | 191<br>58<br>191 | 191<br>60<br>197 | 191<br>62<br>200 | 187<br>60<br>198 | 181<br>57<br>189 | 173<br>54<br>179 | 163<br>50<br>169 | -<br>-<br>-      | -<br>-<br>-      | -                |
| 10000 | IAS KT<br>TORQUE %<br>F FLOW KG/H/ENG | 191<br>57<br>188 | 191<br>59<br>194 | 191<br>60<br>197 | 190<br>60<br>199 | 184<br>57<br>190 | 178<br>54<br>181 | 170<br>51<br>171 | 160<br>47<br>161 | -<br>-<br>-      | -                |
| 9500  | IAS KT<br>TORQUE %<br>F FLOW KG/H/ENG | 191<br>56<br>184 | 191<br>58<br>190 | 191<br>58<br>193 | 191<br>59<br>196 | 187<br>58<br>191 | 181<br>55<br>182 | 175<br>52<br>173 | 167<br>48<br>163 | 157<br>45<br>154 | -                |
| 9000  | IAS KT<br>TORQUE %<br>F FLOW KG/H/ENG | 191<br>55<br>181 | 191<br>56<br>187 | 191<br>57<br>189 | 191<br>58<br>192 | 190<br>58<br>192 | 184<br>55<br>183 | 178<br>52<br>174 | 171<br>49<br>165 | 164<br>45<br>156 | 154<br>42<br>146 |
| 8500  | IAS KT<br>TORQUE %<br>F FLOW KG/H/ENG | 191<br>54<br>179 | 191<br>56<br>184 | 191<br>56<br>186 | 191<br>57<br>189 | 191<br>58<br>191 | 186<br>55<br>184 | 181<br>52<br>175 | 175<br>49<br>166 | 168<br>46<br>157 | 160<br>43<br>148 |
| 8000  | IAS KT<br>TORQUE %<br>F FLOW KG/H/ENG | 191<br>53<br>177 | 191<br>55<br>181 | 191<br>55<br>184 | 191<br>56<br>186 | 191<br>57<br>188 | 188<br>56<br>185 | 183<br>53<br>176 | 177<br>49<br>166 | 171<br>46<br>158 | 164<br>43<br>149 |

20 NOVEMBER 1992



**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CRUISE CONTROL  
ALL ENGINES OPERATING**

**PW118A ENGINES**

**MAXIMUM SPEED CRUISE**

**CRUISE CONFIGURATION**

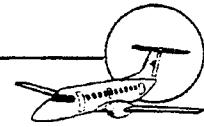
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 31000 FT**

| WEIGHT<br>KG | IOAT ( °C )     |     |     |     |     |     |     |     |     |     |     |   |
|--------------|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---|
|              | -50             | -40 | -35 | -30 | -25 | -20 | -15 | -10 | -5  | 0   |     |   |
| 12000        | IAS<br>KT       | 187 | 178 | -   | -   | -   | -   | -   | -   | -   | -   | - |
|              | TORQUE<br>%     | 62  | 61  | -   | -   | -   | -   | -   | -   | -   | -   | - |
|              | F FLOW KG/H/ENG | 207 | 200 | -   | -   | -   | -   | -   | -   | -   | -   | - |
| 11500        | IAS<br>KT       | 187 | 184 | 175 | -   | -   | -   | -   | -   | -   | -   | - |
|              | TORQUE<br>%     | 60  | 61  | 58  | -   | -   | -   | -   | -   | -   | -   | - |
|              | F FLOW KG/H/ENG | 199 | 202 | 192 | -   | -   | -   | -   | -   | -   | -   | - |
| 11000        | IAS<br>KT       | 187 | 187 | 181 | 174 | 162 | -   | -   | -   | -   | -   | - |
|              | TORQUE<br>%     | 59  | 60  | 59  | 56  | 52  | -   | -   | -   | -   | -   | - |
|              | F FLOW KG/H/ENG | 194 | 201 | 194 | 184 | 174 | -   | -   | -   | -   | -   | - |
| 10500        | IAS<br>KT       | 187 | 187 | 185 | 179 | 171 | 161 | -   | -   | -   | -   | - |
|              | TORQUE<br>%     | 57  | 59  | 59  | 56  | 53  | 50  | -   | -   | -   | -   | - |
|              | F FLOW KG/H/ENG | 189 | 196 | 196 | 187 | 177 | 167 | -   | -   | -   | -   | - |
| 10000        | IAS<br>KT       | 187 | 187 | 187 | 182 | 176 | 169 | 159 | -   | -   | -   | - |
|              | TORQUE<br>%     | 55  | 58  | 58  | 57  | 54  | 51  | 48  | -   | -   | -   | - |
|              | F FLOW KG/H/ENG | 182 | 188 | 192 | 188 | 179 | 170 | 160 | -   | -   | -   | - |
| 9500         | IAS<br>KT       | 187 | 187 | 187 | 186 | 180 | 174 | 166 | 156 | -   | -   | - |
|              | TORQUE<br>%     | 54  | 56  | 57  | 57  | 55  | 52  | 48  | 45  | -   | -   | - |
|              | F FLOW KG/H/ENG | 179 | 185 | 188 | 189 | 181 | 172 | 162 | 153 | -   | -   | - |
| 9000         | IAS<br>KT       | 187 | 187 | 187 | 187 | 184 | 177 | 170 | 163 | 154 | -   | - |
|              | TORQUE<br>%     | 53  | 55  | 56  | 56  | 55  | 52  | 49  | 46  | 42  | -   | - |
|              | F FLOW KG/H/ENG | 176 | 181 | 184 | 187 | 182 | 173 | 164 | 155 | 146 | -   | - |
| 8500         | IAS<br>KT       | 187 | 187 | 187 | 187 | 186 | 180 | 174 | 167 | 160 | 151 |   |
|              | TORQUE<br>%     | 52  | 54  | 55  | 55  | 55  | 52  | 49  | 46  | 43  | 40  |   |
|              | F FLOW KG/H/ENG | 173 | 178 | 180 | 183 | 183 | 174 | 165 | 156 | 147 | 139 |   |
| 8000         | IAS<br>KT       | 187 | 187 | 187 | 187 | 187 | 182 | 177 | 171 | 164 | 156 |   |
|              | TORQUE<br>%     | 52  | 53  | 54  | 54  | 55  | 53  | 50  | 47  | 43  | 40  |   |
|              | F FLOW KG/H/ENG | 171 | 175 | 178 | 180 | 182 | 175 | 166 | 157 | 149 | 140 |   |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**MAXIMUM SPEED CRUISE**
**CRUISE CONFIGURATION**

NP: 85%

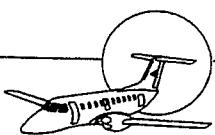
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 32000 FT**

| WEIGHT<br>KG | IAS<br>KT       | TORQUE<br>% | F FLOW KG/H/ENG | IOAT ( °C ) |     |     |     |     |     |     |     |    |
|--------------|-----------------|-------------|-----------------|-------------|-----|-----|-----|-----|-----|-----|-----|----|
|              |                 |             |                 | -50         | -40 | -35 | -30 | -25 | -20 | -15 | -10 | -5 |
| 12000        | IAS<br>KT       | 182         | -               | -           | -   | -   | -   | -   | -   | -   | -   | -  |
|              | TORQUE<br>%     | 62          | -               | -           | -   | -   | -   | -   | -   | -   | -   | -  |
|              | F FLOW KG/H/ENG | 206         | -               | -           | -   | -   | -   | -   | -   | -   | -   | -  |
| 11500        | IAS<br>KT       | 183         | 173             | -           | -   | -   | -   | -   | -   | -   | -   | -  |
|              | TORQUE<br>%     | 59          | 57              | -           | -   | -   | -   | -   | -   | -   | -   | -  |
|              | F FLOW KG/H/ENG | 198         | 189             | -           | -   | -   | -   | -   | -   | -   | -   | -  |
| 11000        | IAS<br>KT       | 183         | 179             | 171         | -   | -   | -   | -   | -   | -   | -   | -  |
|              | TORQUE<br>%     | 58          | 58              | 55          | -   | -   | -   | -   | -   | -   | -   | -  |
|              | F FLOW KG/H/ENG | 190         | 192             | 182         | -   | -   | -   | -   | -   | -   | -   | -  |
| 10500        | IAS<br>KT       | 183         | 183             | 176         | 169 | 158 | -   | -   | -   | -   | -   | -  |
|              | TORQUE<br>%     | 56          | 56              | 56          | 53  | 50  | -   | -   | -   | -   | -   | -  |
|              | F FLOW KG/H/ENG | 185         | 191             | 184         | 175 | 165 | -   | -   | -   | -   | -   | -  |
| 10000        | IAS<br>KT       | 183         | 183             | 181         | 174 | 167 | 156 | -   | -   | -   | -   | -  |
|              | TORQUE<br>%     | 55          | 55              | 56          | 53  | 51  | 47  | -   | -   | -   | -   | -  |
|              | F FLOW KG/H/ENG | 180         | 186             | 186         | 177 | 168 | 159 | -   | -   | -   | -   | -  |
| 9500         | IAS<br>KT       | 183         | 183             | 183         | 179 | 172 | 164 | 155 | -   | -   | -   | -  |
|              | TORQUE<br>%     | 53          | 54              | 55          | 54  | 51  | 48  | 45  | -   | -   | -   | -  |
|              | F FLOW KG/H/ENG | 174         | 180             | 183         | 178 | 170 | 161 | 152 | -   | -   | -   | -  |
| 9000         | IAS<br>KT       | 183         | 183             | 183         | 182 | 177 | 169 | 162 | 152 | -   | -   | -  |
|              | TORQUE<br>%     | 52          | 53              | 54          | 54  | 52  | 49  | 46  | 43  | -   | -   | -  |
|              | F FLOW KG/H/ENG | 171         | 176             | 180         | 180 | 172 | 163 | 154 | 145 | -   | -   | -  |
| 8500         | IAS<br>KT       | 183         | 183             | 183         | 183 | 179 | 173 | 167 | 159 | 151 | -   | -  |
|              | TORQUE<br>%     | 51          | 52              | 53          | 54  | 52  | 49  | 46  | 43  | 40  | -   | -  |
|              | F FLOW KG/H/ENG | 167         | 173             | 175         | 178 | 172 | 164 | 155 | 147 | 138 | -   | -  |
| 8000         | IAS<br>KT       | 183         | 183             | 183         | 183 | 181 | 176 | 170 | 164 | 157 | 148 | -  |
|              | TORQUE<br>%     | 50          | 51              | 52          | 53  | 52  | 50  | 47  | 44  | 41  | 38  | -  |
|              | F FLOW KG/H/ENG | 165         | 170             | 172         | 174 | 174 | 165 | 156 | 148 | 140 | 132 | -  |

20 NOVEMBER 1992



**EMBRAER**  
**EMB120 Brasilia**  
**SUPPLEMENTARY PERFORMANCE  
MANUAL**

CRUISE CONTROL

**CRUISE CONTROL**  
**ALL ENGINES OPERATING**  
**INTERMEDIATE CRUISE**

**PW118A/B ENGINES**

**CRUISE CONFIGURATION**

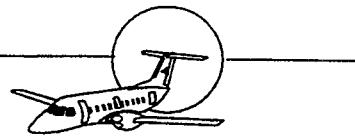
NP: 85%

BLEED SWITCH : AUTO

PACK CONTROL SELECTOR : LOW

**ALTITUDE: 5000 FT**

| WEIGHT<br>KG | IOAT (° C) |          |     |     |     |     |     |     |     |     |     |     |
|--------------|------------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              | -50        | -30      | -20 | -10 | 0   | 10  | 20  | 30  | 40  | 50  |     |     |
| 12000        | IAS        | KT       | 235 | 232 | 230 | 229 | 227 | 225 | 223 | 222 | 221 | 219 |
|              | TORQUE     | %        | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  |
|              | F FLOW     | KG/H/ENG | 262 | 266 | 268 | 270 | 273 | 274 | 277 | 279 | 280 | 283 |
| 11500        | IAS        | KT       | 236 | 232 | 231 | 229 | 227 | 226 | 224 | 223 | 221 | 220 |
|              | TORQUE     | %        | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  |
|              | F FLOW     | KG/H/ENG | 262 | 266 | 268 | 270 | 273 | 274 | 277 | 279 | 280 | 283 |
| 11000        | IAS        | KT       | 236 | 233 | 231 | 230 | 228 | 226 | 225 | 223 | 222 | 221 |
|              | TORQUE     | %        | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  |
|              | F FLOW     | KG/H/ENG | 262 | 266 | 268 | 270 | 273 | 274 | 277 | 279 | 280 | 283 |
| 10500        | IAS        | KT       | 237 | 233 | 232 | 230 | 229 | 227 | 225 | 224 | 223 | 221 |
|              | TORQUE     | %        | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  |
|              | F FLOW     | KG/H/ENG | 262 | 266 | 268 | 270 | 273 | 274 | 277 | 279 | 280 | 283 |
| 10000        | IAS        | KT       | 237 | 234 | 232 | 231 | 229 | 227 | 226 | 224 | 223 | 222 |
|              | TORQUE     | %        | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  |
|              | F FLOW     | KG/H/ENG | 262 | 266 | 268 | 270 | 272 | 274 | 277 | 279 | 280 | 283 |
| 9500         | IAS        | KT       | 237 | 234 | 232 | 231 | 229 | 228 | 226 | 225 | 224 | 222 |
|              | TORQUE     | %        | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  |
|              | F FLOW     | KG/H/ENG | 262 | 266 | 268 | 270 | 272 | 274 | 277 | 279 | 280 | 283 |
| 9000         | IAS        | KT       | 237 | 234 | 233 | 231 | 230 | 228 | 227 | 225 | 224 | 223 |
|              | TORQUE     | %        | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  |
|              | F FLOW     | KG/H/ENG | 262 | 266 | 268 | 270 | 272 | 274 | 277 | 279 | 280 | 283 |
| 8500         | IAS        | KT       | 237 | 234 | 233 | 231 | 230 | 228 | 227 | 225 | 224 | 223 |
|              | TORQUE     | %        | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  |
|              | F FLOW     | KG/H/ENG | 262 | 266 | 268 | 270 | 272 | 274 | 277 | 279 | 280 | 283 |
| 8000         | IAS        | KT       | 237 | 234 | 233 | 231 | 230 | 228 | 227 | 226 | 224 | 223 |
|              | TORQUE     | %        | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  |
|              | F FLOW     | KG/H/ENG | 262 | 266 | 268 | 270 | 272 | 274 | 277 | 279 | 280 | 283 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ALL ENGINES OPERATING**
**PW118A/B ENGINES**
**INTERMEDIATE CRUISE**

## CRUISE CONFIGURATION

NP: 85%

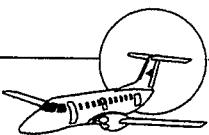
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 6000 FT**

| WEIGHT<br>KG | IAS    | KT       | 234 | 230 | 229 | 227 | 225 | 224 | 222 | 220 | 220 | 219 | 217 | IOAT (° C) |     |
|--------------|--------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|-----|
|              |        |          |     |     |     |     |     |     |     |     |     |     |     | -50        | -30 |
| 12000        | TORQUE | %        | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65         | 65  |
|              | F FLOW | KG/H/ENG | 258 | 262 | 264 | 266 | 268 | 270 | 272 | 274 | 276 | 276 | 276 | 278        | 278 |
|              | IAS    | KT       | 234 | 231 | 229 | 228 | 226 | 224 | 223 | 221 | 220 | 220 | 220 | 220        | 218 |
| 11500        | TORQUE | %        | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65         | 65  |
|              | F FLOW | KG/H/ENG | 258 | 262 | 264 | 266 | 268 | 270 | 272 | 274 | 276 | 276 | 276 | 276        | 278 |
|              | IAS    | KT       | 235 | 231 | 230 | 228 | 227 | 225 | 223 | 222 | 220 | 220 | 220 | 220        | 219 |
| 11000        | TORQUE | %        | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65         | 65  |
|              | F FLOW | KG/H/ENG | 258 | 262 | 264 | 266 | 268 | 270 | 272 | 274 | 276 | 276 | 276 | 276        | 278 |
|              | IAS    | KT       | 235 | 232 | 230 | 229 | 227 | 225 | 224 | 222 | 221 | 221 | 220 | 220        | 220 |
| 10500        | TORQUE | %        | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65         | 65  |
|              | F FLOW | KG/H/ENG | 258 | 262 | 264 | 266 | 268 | 270 | 272 | 274 | 276 | 276 | 276 | 276        | 278 |
|              | IAS    | KT       | 236 | 232 | 231 | 229 | 228 | 226 | 224 | 223 | 222 | 222 | 222 | 222        | 220 |
| 10000        | TORQUE | %        | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65         | 65  |
|              | F FLOW | KG/H/ENG | 258 | 262 | 264 | 266 | 268 | 270 | 272 | 274 | 276 | 276 | 276 | 276        | 278 |
|              | IAS    | KT       | 236 | 233 | 231 | 229 | 228 | 226 | 225 | 223 | 222 | 222 | 222 | 222        | 221 |
| 9500         | TORQUE | %        | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65         | 65  |
|              | F FLOW | KG/H/ENG | 258 | 262 | 264 | 266 | 268 | 270 | 272 | 274 | 276 | 276 | 276 | 276        | 278 |
|              | IAS    | KT       | 236 | 233 | 231 | 230 | 228 | 227 | 225 | 224 | 222 | 222 | 222 | 222        | 221 |
| 9000         | TORQUE | %        | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65         | 65  |
|              | F FLOW | KG/H/ENG | 258 | 262 | 264 | 266 | 268 | 270 | 272 | 274 | 276 | 276 | 276 | 276        | 278 |
|              | IAS    | KT       | 236 | 233 | 231 | 230 | 228 | 227 | 225 | 224 | 223 | 223 | 223 | 223        | 221 |
| 8500         | TORQUE | %        | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65         | 65  |
|              | F FLOW | KG/H/ENG | 258 | 262 | 264 | 266 | 268 | 270 | 272 | 274 | 276 | 276 | 276 | 276        | 278 |
|              | IAS    | KT       | 236 | 233 | 231 | 230 | 229 | 227 | 226 | 224 | 223 | 223 | 223 | 223        | 221 |
| 8000         | TORQUE | %        | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65         | 65  |
|              | F FLOW | KG/H/ENG | 258 | 262 | 264 | 266 | 268 | 270 | 272 | 274 | 276 | 276 | 276 | 276        | 278 |

17 MARCH 1999



**EMBRAER**  
**EMB120 Brasilia**  
**SUPPLEMENTARY PERFORMANCE  
MANUAL**

CRUISE CONTROL

**CRUISE CONTROL**

**ALL ENGINES OPERATING**

**PW118A/B ENGINES**

**INTERMEDIATE CRUISE**

**CRUISE CONFIGURATION**

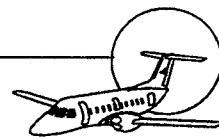
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 7000 FT**

| WEIGHT<br>KG | IOAT (° C) |          |     |     |     |     |     |     |     |     |     |     |
|--------------|------------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              | -50        | -30      | -20 | -10 | 0   | 10  | 20  | 30  | 40  | 50  |     |     |
| 12000        | IAS        | KT       | 232 | 229 | 227 | 225 | 224 | 222 | 220 | 219 | 217 | 216 |
|              | TORQUE     | %        | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  |
|              | F FLOW     | KG/H/ENG | 254 | 259 | 260 | 262 | 264 | 266 | 268 | 270 | 272 | 274 |
| 11500        | IAS        | KT       | 233 | 229 | 228 | 226 | 224 | 223 | 221 | 220 | 218 | 217 |
|              | TORQUE     | %        | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  |
|              | F FLOW     | KG/H/ENG | 254 | 259 | 260 | 262 | 264 | 266 | 268 | 270 | 272 | 274 |
| 11000        | IAS        | KT       | 233 | 230 | 228 | 227 | 225 | 223 | 222 | 220 | 219 | 217 |
|              | TORQUE     | %        | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  |
|              | F FLOW     | KG/H/ENG | 254 | 259 | 260 | 262 | 264 | 266 | 268 | 270 | 272 | 274 |
| 10500        | IAS        | KT       | 234 | 230 | 229 | 227 | 226 | 224 | 222 | 221 | 220 | 218 |
|              | TORQUE     | %        | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  |
|              | F FLOW     | KG/H/ENG | 254 | 259 | 260 | 262 | 264 | 266 | 268 | 270 | 272 | 274 |
| 10000        | IAS        | KT       | 234 | 231 | 229 | 228 | 226 | 224 | 223 | 221 | 220 | 219 |
|              | TORQUE     | %        | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  |
|              | F FLOW     | KG/H/ENG | 254 | 259 | 260 | 262 | 264 | 266 | 268 | 270 | 272 | 274 |
| 9500         | IAS        | KT       | 234 | 231 | 230 | 228 | 226 | 225 | 223 | 222 | 221 | 219 |
|              | TORQUE     | %        | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  |
|              | F FLOW     | KG/H/ENG | 254 | 259 | 260 | 262 | 264 | 266 | 268 | 270 | 272 | 274 |
| 9000         | IAS        | KT       | 235 | 231 | 230 | 228 | 227 | 225 | 224 | 222 | 221 | 220 |
|              | TORQUE     | %        | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  |
|              | F FLOW     | KG/H/ENG | 254 | 259 | 260 | 262 | 264 | 266 | 268 | 270 | 272 | 274 |
| 8500         | IAS        | KT       | 235 | 232 | 230 | 229 | 227 | 225 | 224 | 223 | 221 | 220 |
|              | TORQUE     | %        | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  |
|              | F FLOW     | KG/H/ENG | 254 | 259 | 260 | 262 | 264 | 266 | 268 | 270 | 272 | 274 |
| 8000         | IAS        | KT       | 235 | 232 | 230 | 229 | 227 | 226 | 224 | 223 | 222 | 220 |
|              | TORQUE     | %        | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  |
|              | F FLOW     | KG/H/ENG | 254 | 259 | 260 | 262 | 264 | 266 | 268 | 270 | 272 | 274 |

SUPPLEMENTARY PERFORMANCE  
MANUAL

## CRUISE CONTROL

ALL ENGINES OPERATING

PW118A/B ENGINES

INTERMEDIATE CRUISE

CRUISE CONFIGURATION  
NP: 85%  
BLEED SWITCH : AUTO  
PACK CONTROL SELECTOR : LOW

ALTITUDE: 8000 FT

| WEIGHT<br>KG | IAS    | KT       | IOAT (° C) |     |     |     |     |     |     |     |     |     |
|--------------|--------|----------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |        |          | -50        | -30 | -20 | -10 | 0   | 10  | 20  | 30  | 40  | 50  |
| 12000        | TORQUE | %        | 65         | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 64  |
|              | F FLOW | KG/H/ENG | 251        | 255 | 257 | 259 | 260 | 262 | 264 | 266 | 268 | 266 |
|              | IAS    | KT       | 231        | 227 | 226 | 224 | 222 | 220 | 219 | 217 | 215 | 213 |
| 11500        | TORQUE | %        | 65         | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 64  |
|              | F FLOW | KG/H/ENG | 251        | 255 | 257 | 259 | 260 | 262 | 264 | 266 | 268 | 267 |
|              | IAS    | KT       | 232        | 228 | 226 | 225 | 223 | 221 | 219 | 218 | 216 | 215 |
| 11000        | TORQUE | %        | 65         | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 64  |
|              | F FLOW | KG/H/ENG | 251        | 255 | 257 | 259 | 260 | 262 | 264 | 266 | 268 | 267 |
|              | IAS    | KT       | 232        | 229 | 227 | 225 | 224 | 222 | 220 | 219 | 217 | 217 |
| 10500        | TORQUE | %        | 65         | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 64  |
|              | F FLOW | KG/H/ENG | 251        | 255 | 257 | 259 | 260 | 262 | 264 | 266 | 268 | 267 |
|              | IAS    | KT       | 232        | 229 | 227 | 226 | 224 | 222 | 221 | 219 | 218 | 218 |
| 10000        | TORQUE | %        | 65         | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 64  |
|              | F FLOW | KG/H/ENG | 251        | 255 | 257 | 259 | 260 | 262 | 264 | 266 | 268 | 268 |
|              | IAS    | KT       | 233        | 229 | 228 | 226 | 225 | 223 | 221 | 220 | 219 | 218 |
| 9500         | TORQUE | %        | 65         | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 64  |
|              | F FLOW | KG/H/ENG | 251        | 255 | 257 | 259 | 260 | 262 | 264 | 266 | 268 | 268 |
|              | IAS    | KT       | 233        | 230 | 228 | 227 | 225 | 223 | 222 | 220 | 219 | 219 |
| 9000         | TORQUE | %        | 65         | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 64  |
|              | F FLOW | KG/H/ENG | 251        | 255 | 257 | 259 | 260 | 262 | 264 | 266 | 268 | 268 |
|              | IAS    | KT       | 233        | 230 | 228 | 227 | 225 | 224 | 222 | 221 | 220 | 219 |
| 8500         | TORQUE | %        | 65         | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  |
|              | F FLOW | KG/H/ENG | 251        | 255 | 257 | 259 | 260 | 262 | 264 | 266 | 268 | 268 |
|              | IAS    | KT       | 233        | 230 | 229 | 227 | 226 | 224 | 223 | 221 | 220 | 220 |
| 8000         | TORQUE | %        | 65         | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  |
|              | F FLOW | KG/H/ENG | 251        | 255 | 257 | 259 | 260 | 262 | 264 | 266 | 268 | 268 |
|              | IAS    | KT       | 234        | 230 | 229 | 227 | 226 | 224 | 223 | 221 | 220 | 221 |

17 MARCH 1999

SUPPLEMENTARY PERFORMANCE  
MANUAL

## CRUISE CONTROL

ALL ENGINES OPERATING

PW118A/B ENGINES

INTERMEDIATE CRUISE

## CRUISE CONFIGURATION

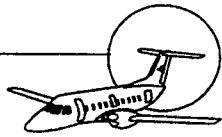
NP: 85%

BLEED SWITCH : AUTO

PACK CONTROL SELECTOR : LOW

## ALTITUDE: 9000 FT

| WEIGHT<br>KG | IOAT (° C)          |     |     |     |     |     |     |     |     |     |  |
|--------------|---------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
|              | -50                 | -30 | -20 | -10 | 0   | 10  | 20  | 30  | 40  | 50  |  |
| 12000        | IAS KT 229          | 226 | 224 | 222 | 220 | 219 | 217 | 215 | 214 | 207 |  |
|              | TORQUE % 65         | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 61  |  |
|              | F FLOW KG/H/ENG 248 | 251 | 253 | 255 | 257 | 259 | 260 | 262 | 264 | 254 |  |
| 11500        | IAS KT 230          | 227 | 225 | 223 | 221 | 219 | 218 | 216 | 215 | 210 |  |
|              | TORQUE % 65         | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 61  |  |
|              | F FLOW KG/H/ENG 248 | 251 | 253 | 255 | 257 | 259 | 260 | 262 | 264 | 255 |  |
| 11000        | IAS KT 231          | 227 | 225 | 224 | 222 | 220 | 219 | 217 | 216 | 211 |  |
|              | TORQUE % 65         | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 61  |  |
|              | F FLOW KG/H/ENG 248 | 251 | 253 | 255 | 257 | 259 | 260 | 262 | 264 | 256 |  |
| 10500        | IAS KT 231          | 228 | 226 | 224 | 223 | 221 | 219 | 218 | 216 | 212 |  |
|              | TORQUE % 65         | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 61  |  |
|              | F FLOW KG/H/ENG 248 | 251 | 253 | 255 | 257 | 259 | 260 | 262 | 264 | 256 |  |
| 10000        | IAS KT 231          | 228 | 226 | 225 | 223 | 222 | 220 | 218 | 217 | 213 |  |
|              | TORQUE % 65         | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 61  |  |
|              | F FLOW KG/H/ENG 248 | 251 | 253 | 255 | 257 | 259 | 260 | 262 | 264 | 256 |  |
| 9500         | IAS KT 232          | 228 | 227 | 225 | 224 | 222 | 220 | 219 | 218 | 214 |  |
|              | TORQUE % 65         | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 62  |  |
|              | F FLOW KG/H/ENG 248 | 251 | 253 | 255 | 257 | 259 | 260 | 262 | 264 | 257 |  |
| 9000         | IAS KT 232          | 229 | 227 | 226 | 224 | 222 | 221 | 219 | 218 | 214 |  |
|              | TORQUE % 65         | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 62  |  |
|              | F FLOW KG/H/ENG 248 | 251 | 253 | 255 | 257 | 259 | 260 | 262 | 264 | 257 |  |
| 8500         | IAS KT 232          | 229 | 227 | 226 | 224 | 223 | 221 | 220 | 218 | 215 |  |
|              | TORQUE % 65         | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 62  |  |
|              | F FLOW KG/H/ENG 248 | 251 | 253 | 255 | 257 | 259 | 260 | 262 | 264 | 257 |  |
| 8000         | IAS KT 232          | 229 | 228 | 226 | 224 | 223 | 221 | 220 | 219 | 216 |  |
|              | TORQUE % 65         | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 62  |  |
|              | F FLOW KG/H/ENG 248 | 251 | 253 | 255 | 257 | 259 | 260 | 262 | 264 | 257 |  |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ALL ENGINES OPERATING**
**PW118A/B ENGINES**
**INTERMEDIATE CRUISE**

## CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH : AUTO

PACK CONTROL SELECTOR : LOW

**ALTITUDE: 10000 FT**

| WEIGHT<br>KG | IOAT (° C) |          |     |     |     |     |     |     |     |     |     |     |
|--------------|------------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              | -50        | -40      | -30 | -20 | -10 | 0   | 10  | 20  | 30  | 40  |     |     |
| 12000        | IAS        | KT       | 228 | 226 | 224 | 222 | 221 | 219 | 217 | 215 | 213 | 212 |
|              | TORQUE     | %        | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  |
|              | F FLOW     | KG/H/ENG | 245 | 247 | 248 | 250 | 252 | 253 | 255 | 256 | 258 | 259 |
| 11500        | IAS        | KT       | 229 | 227 | 225 | 223 | 222 | 220 | 218 | 216 | 215 | 213 |
|              | TORQUE     | %        | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  |
|              | F FLOW     | KG/H/ENG | 245 | 247 | 248 | 250 | 252 | 253 | 255 | 256 | 258 | 259 |
| 11000        | IAS        | KT       | 229 | 227 | 226 | 224 | 222 | 220 | 219 | 217 | 216 | 214 |
|              | TORQUE     | %        | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  |
|              | F FLOW     | KG/H/ENG | 245 | 247 | 248 | 250 | 252 | 253 | 255 | 256 | 258 | 259 |
| 10500        | IAS        | KT       | 230 | 228 | 226 | 225 | 223 | 221 | 219 | 218 | 216 | 215 |
|              | TORQUE     | %        | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  |
|              | F FLOW     | KG/H/ENG | 245 | 247 | 248 | 250 | 252 | 253 | 255 | 256 | 258 | 259 |
| 10000        | IAS        | KT       | 230 | 228 | 227 | 225 | 223 | 222 | 220 | 218 | 217 | 216 |
|              | TORQUE     | %        | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  |
|              | F FLOW     | KG/H/ENG | 245 | 247 | 248 | 250 | 252 | 253 | 255 | 256 | 258 | 259 |
| 9500         | IAS        | KT       | 230 | 229 | 227 | 225 | 224 | 222 | 221 | 219 | 218 | 216 |
|              | TORQUE     | %        | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  |
|              | F FLOW     | KG/H/ENG | 245 | 247 | 248 | 250 | 252 | 253 | 255 | 256 | 258 | 259 |
| 9000         | IAS        | KT       | 231 | 229 | 227 | 226 | 224 | 223 | 221 | 219 | 218 | 217 |
|              | TORQUE     | %        | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  |
|              | F FLOW     | KG/H/ENG | 245 | 247 | 248 | 250 | 252 | 253 | 255 | 256 | 258 | 259 |
| 8500         | IAS        | KT       | 231 | 229 | 228 | 226 | 224 | 223 | 221 | 220 | 218 | 217 |
|              | TORQUE     | %        | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  |
|              | F FLOW     | KG/H/ENG | 245 | 247 | 248 | 250 | 252 | 253 | 255 | 256 | 258 | 259 |
| 8000         | IAS        | KT       | 231 | 229 | 228 | 226 | 225 | 223 | 222 | 220 | 219 | 217 |
|              | TORQUE     | %        | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  | 65  |
|              | F FLOW     | KG/H/ENG | 245 | 247 | 248 | 250 | 252 | 253 | 255 | 256 | 258 | 259 |

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**EMBRAER**  
**EMB 120 Brasilia**  
**SUPPLEMENTARY PERFORMANCE  
MANUAL**

CRUISE CONTROL

**CRUISE CONTROL**

**ALL ENGINES OPERATING**

**PW118A/B ENGINES**

**INTERMEDIATE CRUISE**

**CRUISE CONFIGURATION**

NP: 85%

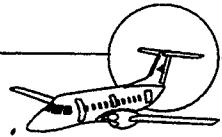
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 11000 FT**

| WEIGHT<br>KG | IOAT (° C) |          |     |     |     |     |     |     |     |     |     |     |
|--------------|------------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              | -50        | -40      | -30 | -20 | -10 | 0   | 10  | 20  | 30  | 40  |     |     |
| 12000        | IAS        | KT       | 237 | 235 | 233 | 232 | 230 | 228 | 227 | 226 | 219 | 207 |
|              | TORQUE     | %        | 73  | 73  | 73  | 73  | 74  | 74  | 74  | 75  | 70  | 63  |
|              | F FLOW     | KG/H/ENG | 263 | 265 | 267 | 269 | 272 | 274 | 276 | 279 | 269 | 251 |
| 11500        | IAS        | KT       | 236 | 235 | 233 | 232 | 230 | 228 | 227 | 226 | 219 | 208 |
|              | TORQUE     | %        | 72  | 72  | 73  | 73  | 73  | 73  | 74  | 74  | 70  | 62  |
|              | F FLOW     | KG/H/ENG | 260 | 264 | 265 | 268 | 270 | 272 | 274 | 277 | 267 | 250 |
| 11000        | IAS        | KT       | 236 | 234 | 233 | 231 | 230 | 228 | 227 | 226 | 219 | 208 |
|              | TORQUE     | %        | 71  | 72  | 72  | 72  | 72  | 73  | 73  | 74  | 69  | 62  |
|              | F FLOW     | KG/H/ENG | 258 | 261 | 264 | 266 | 268 | 270 | 272 | 275 | 265 | 248 |
| 10500        | IAS        | KT       | 235 | 234 | 233 | 231 | 230 | 228 | 227 | 226 | 219 | 208 |
|              | TORQUE     | %        | 71  | 71  | 71  | 72  | 72  | 72  | 72  | 73  | 69  | 61  |
|              | F FLOW     | KG/H/ENG | 257 | 259 | 262 | 264 | 266 | 269 | 271 | 274 | 264 | 246 |
| 10000        | IAS        | KT       | 235 | 234 | 232 | 231 | 230 | 228 | 226 | 225 | 219 | 208 |
|              | TORQUE     | %        | 70  | 70  | 71  | 71  | 71  | 72  | 72  | 72  | 68  | 61  |
|              | F FLOW     | KG/H/ENG | 255 | 258 | 260 | 263 | 265 | 267 | 269 | 272 | 262 | 245 |
| 9500         | IAS        | KT       | 235 | 233 | 232 | 231 | 229 | 228 | 226 | 225 | 219 | 209 |
|              | TORQUE     | %        | 70  | 70  | 70  | 71  | 71  | 71  | 71  | 72  | 67  | 60  |
|              | F FLOW     | KG/H/ENG | 254 | 256 | 259 | 261 | 263 | 266 | 268 | 270 | 260 | 244 |
| 9000         | IAS        | KT       | 235 | 233 | 232 | 230 | 229 | 227 | 226 | 225 | 219 | 209 |
|              | TORQUE     | %        | 69  | 70  | 70  | 70  | 70  | 71  | 71  | 71  | 67  | 60  |
|              | F FLOW     | KG/H/ENG | 253 | 255 | 257 | 260 | 262 | 264 | 266 | 268 | 259 | 242 |
| 8500         | IAS        | KT       | 235 | 233 | 231 | 230 | 229 | 227 | 226 | 225 | 218 | 209 |
|              | TORQUE     | %        | 69  | 69  | 69  | 70  | 70  | 70  | 70  | 71  | 66  | 59  |
|              | F FLOW     | KG/H/ENG | 253 | 254 | 256 | 258 | 261 | 263 | 265 | 267 | 258 | 241 |
| 8000         | IAS        | KT       | 234 | 233 | 231 | 230 | 228 | 227 | 226 | 225 | 218 | 208 |
|              | TORQUE     | %        | 69  | 69  | 69  | 69  | 69  | 70  | 70  | 70  | 66  | 59  |
|              | F FLOW     | KG/H/ENG | 252 | 253 | 255 | 257 | 259 | 262 | 263 | 266 | 256 | 239 |

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**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ALL ENGINES OPERATING**
**PW118A/B ENGINES**
**INTERMEDIATE CRUISE**
**CRUISE CONFIGURATION**

NP: 85%

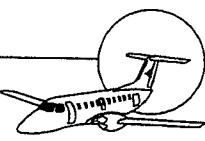
BLEED SWITCH : AUTO

PACK CONTROL SELECTOR : LOW

**ALTITUDE: 12000 FT**

| WEIGHT<br>KG | IAS    | KT       | 235 | 233 | 232 | 230 | 228 | 227 | 225 | 223 | 214 | 202 | IOAT | (° C) |     |     |     |   |    |    |    |    |
|--------------|--------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-------|-----|-----|-----|---|----|----|----|----|
|              |        |          |     |     |     |     |     |     |     |     |     |     | -50  | -40   | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 |
| 12000        | TORQUE | %        | 73  | 73  | 73  | 73  | 74  | 74  | 74  | 74  | 74  | 68  | 61   |       |     |     |     |   |    |    |    |    |
|              | F FLOW | KG/H/ENG | 260 | 262 | 264 | 267 | 269 | 271 | 273 | 273 | 274 | 259 | 242  |       |     |     |     |   |    |    |    |    |
|              | IAS    | KT       | 235 | 233 | 231 | 230 | 228 | 227 | 225 | 223 | 223 | 214 | 203  |       |     |     |     |   |    |    |    |    |
| 11500        | TORQUE | %        | 72  | 72  | 72  | 73  | 73  | 73  | 73  | 74  | 74  | 67  | 60   |       |     |     |     |   |    |    |    |    |
|              | F FLOW | KG/H/ENG | 258 | 260 | 262 | 265 | 267 | 269 | 271 | 272 | 272 | 257 | 240  |       |     |     |     |   |    |    |    |    |
|              | IAS    | KT       | 234 | 233 | 231 | 230 | 228 | 227 | 225 | 223 | 223 | 214 | 203  |       |     |     |     |   |    |    |    |    |
| 11000        | TORQUE | %        | 71  | 72  | 72  | 72  | 72  | 72  | 73  | 73  | 73  | 66  | 59   |       |     |     |     |   |    |    |    |    |
|              | F FLOW | KG/H/ENG | 256 | 259 | 261 | 263 | 265 | 267 | 269 | 270 | 270 | 255 | 239  |       |     |     |     |   |    |    |    |    |
|              | IAS    | KT       | 234 | 233 | 231 | 230 | 228 | 227 | 225 | 223 | 223 | 214 | 204  |       |     |     |     |   |    |    |    |    |
| 10500        | TORQUE | %        | 70  | 71  | 71  | 72  | 72  | 72  | 72  | 72  | 72  | 66  | 59   |       |     |     |     |   |    |    |    |    |
|              | F FLOW | KG/H/ENG | 254 | 257 | 259 | 261 | 263 | 265 | 267 | 268 | 268 | 254 | 237  |       |     |     |     |   |    |    |    |    |
|              | IAS    | KT       | 234 | 232 | 231 | 230 | 229 | 228 | 226 | 225 | 223 | 214 | 204  |       |     |     |     |   |    |    |    |    |
| 10000        | TORQUE | %        | 70  | 70  | 71  | 71  | 71  | 71  | 72  | 72  | 72  | 65  | 58   |       |     |     |     |   |    |    |    |    |
|              | F FLOW | KG/H/ENG | 252 | 255 | 258 | 260 | 262 | 264 | 265 | 266 | 266 | 252 | 235  |       |     |     |     |   |    |    |    |    |
|              | IAS    | KT       | 233 | 232 | 231 | 229 | 228 | 226 | 225 | 223 | 223 | 214 | 204  |       |     |     |     |   |    |    |    |    |
| 9500         | TORQUE | %        | 70  | 70  | 70  | 70  | 70  | 71  | 71  | 71  | 71  | 65  | 58   |       |     |     |     |   |    |    |    |    |
|              | F FLOW | KG/H/ENG | 251 | 253 | 256 | 258 | 260 | 262 | 264 | 266 | 266 | 251 | 234  |       |     |     |     |   |    |    |    |    |
|              | IAS    | KT       | 233 | 232 | 230 | 229 | 227 | 226 | 224 | 222 | 222 | 214 | 204  |       |     |     |     |   |    |    |    |    |
| 9000         | TORQUE | %        | 69  | 69  | 70  | 70  | 70  | 70  | 70  | 71  | 71  | 64  | 57   |       |     |     |     |   |    |    |    |    |
|              | F FLOW | KG/H/ENG | 250 | 252 | 254 | 257 | 259 | 261 | 262 | 263 | 263 | 249 | 233  |       |     |     |     |   |    |    |    |    |
|              | IAS    | KT       | 233 | 231 | 230 | 228 | 227 | 226 | 224 | 222 | 222 | 214 | 204  |       |     |     |     |   |    |    |    |    |
| 8500         | TORQUE | %        | 69  | 69  | 69  | 69  | 69  | 70  | 70  | 70  | 70  | 64  | 57   |       |     |     |     |   |    |    |    |    |
|              | F FLOW | KG/H/ENG | 249 | 251 | 253 | 255 | 257 | 259 | 261 | 261 | 261 | 247 | 231  |       |     |     |     |   |    |    |    |    |
|              | IAS    | KT       | 233 | 231 | 229 | 228 | 227 | 225 | 224 | 222 | 222 | 214 | 204  |       |     |     |     |   |    |    |    |    |
| 8000         | TORQUE | %        | 69  | 69  | 69  | 69  | 69  | 69  | 70  | 70  | 70  | 63  | 56   |       |     |     |     |   |    |    |    |    |
|              | F FLOW | KG/H/ENG | 248 | 250 | 251 | 254 | 256 | 258 | 260 | 260 | 260 | 246 | 230  |       |     |     |     |   |    |    |    |    |

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**EMBRAER**  
**EMB120 Brasilia**  
**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CRUISE CONTROL**

**CRUISE CONTROL**

**ALL ENGINES OPERATING**

**PW118A/B ENGINES**

**INTERMEDIATE CRUISE**

**CRUISE CONFIGURATION**

NP: 85%

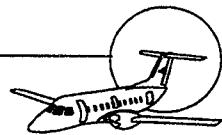
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 13000 FT**

| WEIGHT<br>KG |        |          | IOAT (° C) |     |     |     |     |     |     |     |     |     |
|--------------|--------|----------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |        |          | -50        | -40 | -30 | -20 | -10 | 0   | 10  | 20  | 30  | 40  |
| 12000        | IAS    | KT       | 233        | 232 | 230 | 229 | 227 | 225 | 224 | 219 | 209 | 199 |
|              | TORQUE | %        | 72         | 73  | 73  | 73  | 74  | 74  | 75  | 72  | 65  | 59  |
|              | F FLOW | KG/H/ENG | 257        | 260 | 262 | 264 | 266 | 268 | 271 | 266 | 249 | 233 |
| 11500        | IAS    | KT       | 233        | 232 | 230 | 228 | 227 | 225 | 224 | 219 | 209 | 199 |
|              | TORQUE | %        | 72         | 72  | 72  | 73  | 73  | 73  | 74  | 72  | 65  | 58  |
|              | F FLOW | KG/H/ENG | 256        | 258 | 260 | 262 | 264 | 266 | 269 | 264 | 248 | 232 |
| 11000        | IAS    | KT       | 233        | 231 | 230 | 228 | 226 | 225 | 224 | 219 | 209 | 199 |
|              | TORQUE | %        | 71         | 72  | 72  | 72  | 72  | 73  | 73  | 71  | 64  | 57  |
|              | F FLOW | KG/H/ENG | 254        | 256 | 258 | 260 | 262 | 264 | 267 | 263 | 246 | 230 |
| 10500        | IAS    | KT       | 232        | 231 | 230 | 228 | 226 | 225 | 224 | 219 | 210 | 199 |
|              | TORQUE | %        | 70         | 71  | 71  | 71  | 72  | 72  | 73  | 70  | 64  | 57  |
|              | F FLOW | KG/H/ENG | 252        | 255 | 256 | 258 | 260 | 262 | 265 | 261 | 244 | 228 |
| 10000        | IAS    | KT       | 232        | 231 | 229 | 228 | 226 | 225 | 223 | 219 | 210 | 199 |
|              | TORQUE | %        | 70         | 70  | 71  | 71  | 71  | 71  | 72  | 70  | 63  | 56  |
|              | F FLOW | KG/H/ENG | 250        | 252 | 255 | 256 | 259 | 260 | 263 | 259 | 242 | 227 |
| 9500         | IAS    | KT       | 232        | 230 | 229 | 228 | 226 | 224 | 223 | 219 | 210 | 199 |
|              | TORQUE | %        | 69         | 70  | 70  | 70  | 71  | 71  | 71  | 69  | 62  | 56  |
|              | F FLOW | KG/H/ENG | 248        | 250 | 253 | 255 | 257 | 259 | 261 | 257 | 241 | 225 |
| 9000         | IAS    | KT       | 232        | 230 | 229 | 227 | 226 | 224 | 223 | 219 | 210 | 200 |
|              | TORQUE | %        | 69         | 69  | 70  | 70  | 70  | 70  | 71  | 69  | 62  | 55  |
|              | F FLOW | KG/H/ENG | 247        | 249 | 251 | 253 | 255 | 257 | 260 | 256 | 239 | 224 |
| 8500         | IAS    | KT       | 231        | 230 | 228 | 227 | 225 | 224 | 223 | 219 | 210 | 200 |
|              | TORQUE | %        | 69         | 69  | 69  | 69  | 70  | 70  | 70  | 68  | 61  | 55  |
|              | F FLOW | KG/H/ENG | 246        | 247 | 250 | 252 | 254 | 256 | 258 | 254 | 238 | 222 |
| 8000         | IAS    | KT       | 231        | 229 | 228 | 227 | 225 | 224 | 222 | 219 | 209 | 200 |
|              | TORQUE | %        | 68         | 68  | 68  | 69  | 69  | 69  | 70  | 67  | 61  | 54  |
|              | F FLOW | KG/H/ENG | 245        | 246 | 248 | 250 | 252 | 254 | 257 | 252 | 236 | 221 |

**17 MARCH 1999**


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ALL ENGINES OPERATING**
**PW118A/B ENGINES**
**INTERMEDIATE CRUISE**
**CRUISE CONFIGURATION**

NP: 85%

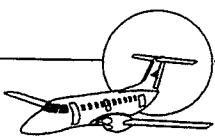
BLEED SWITCH : AUTO

PACK CONTROL SELECTOR : LOW

**ALTITUDE: 14000 FT**

| WEIGHT<br>KG | IOAT (° C) |          |     |     |     |     |     |     |     |     |     |     |
|--------------|------------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              | -50        | -40      | -30 | -20 | -10 | 0   | 10  | 20  | 30  | 40  |     |     |
| 12000        | IAS        | KT       | 232 | 230 | 228 | 227 | 225 | 223 | 222 | 214 | 204 | 191 |
|              | TORQUE     | %        | 73  | 73  | 73  | 74  | 74  | 74  | 74  | 70  | 63  | 56  |
|              | F FLOW     | KG/H/ENG | 255 | 258 | 260 | 262 | 264 | 265 | 268 | 257 | 241 | 222 |
| 11500        | IAS        | KT       | 232 | 230 | 228 | 227 | 225 | 223 | 222 | 215 | 204 | 195 |
|              | TORQUE     | %        | 72  | 72  | 72  | 73  | 73  | 73  | 74  | 69  | 63  | 56  |
|              | F FLOW     | KG/H/ENG | 253 | 256 | 257 | 259 | 261 | 263 | 266 | 255 | 239 | 223 |
| 11000        | IAS        | KT       | 232 | 230 | 228 | 227 | 225 | 223 | 222 | 215 | 205 | 195 |
|              | TORQUE     | %        | 71  | 71  | 72  | 72  | 72  | 73  | 73  | 68  | 62  | 55  |
|              | F FLOW     | KG/H/ENG | 252 | 253 | 255 | 257 | 259 | 261 | 264 | 253 | 237 | 221 |
| 10500        | IAS        | KT       | 231 | 230 | 228 | 226 | 225 | 223 | 222 | 215 | 205 | 195 |
|              | TORQUE     | %        | 71  | 71  | 71  | 71  | 72  | 72  | 72  | 68  | 61  | 55  |
|              | F FLOW     | KG/H/ENG | 250 | 252 | 253 | 256 | 257 | 259 | 262 | 251 | 235 | 220 |
| 10000        | IAS        | KT       | 231 | 229 | 228 | 226 | 225 | 223 | 222 | 215 | 205 | 195 |
|              | TORQUE     | %        | 70  | 70  | 71  | 71  | 71  | 71  | 72  | 67  | 61  | 54  |
|              | F FLOW     | KG/H/ENG | 247 | 250 | 252 | 254 | 255 | 257 | 260 | 249 | 233 | 218 |
| 9500         | IAS        | KT       | 230 | 229 | 228 | 226 | 224 | 223 | 221 | 215 | 205 | 195 |
|              | TORQUE     | %        | 69  | 70  | 70  | 70  | 71  | 71  | 71  | 67  | 60  | 54  |
|              | F FLOW     | KG/H/ENG | 245 | 248 | 250 | 252 | 254 | 256 | 258 | 248 | 232 | 217 |
| 9000         | IAS        | KT       | 230 | 228 | 227 | 226 | 224 | 222 | 221 | 215 | 205 | 195 |
|              | TORQUE     | %        | 69  | 69  | 69  | 70  | 70  | 70  | 70  | 66  | 60  | 53  |
|              | F FLOW     | KG/H/ENG | 244 | 246 | 248 | 250 | 252 | 254 | 256 | 246 | 230 | 215 |
| 8500         | IAS        | KT       | 230 | 228 | 227 | 225 | 224 | 222 | 221 | 214 | 205 | 195 |
|              | TORQUE     | %        | 68  | 69  | 69  | 69  | 69  | 70  | 70  | 65  | 59  | 53  |
|              | F FLOW     | KG/H/ENG | 243 | 245 | 247 | 249 | 251 | 252 | 255 | 244 | 229 | 214 |
| 8000         | IAS        | KT       | 229 | 228 | 226 | 225 | 223 | 222 | 221 | 214 | 205 | 196 |
|              | TORQUE     | %        | 68  | 68  | 68  | 69  | 69  | 69  | 69  | 65  | 59  | 52  |
|              | F FLOW     | KG/H/ENG | 242 | 243 | 245 | 247 | 249 | 251 | 253 | 243 | 227 | 213 |

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**EMBRAER**  
**EMB120 Brasilia**  
**SUPPLEMENTARY PERFORMANCE**  
**MANUAL**

CRUISE CONTROL

**CRUISE CONTROL**  
**ALL ENGINES OPERATING**  
**INTERMEDIATE CRUISE**

CRUISE CONFIGURATION

NP: 85%

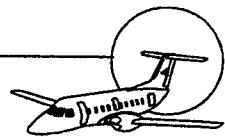
BLEED SWITCH : AUTO

PACK CONTROL SELECTOR : LOW

**ALTITUDE: 15000 FT**

| WEIGHT<br>KG | IOAT (° C)          |     |     |     |     |     |     |     |     |     |  |  |
|--------------|---------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
|              | -50                 | -40 | -30 | -20 | -10 | -5  | 0   | 10  | 20  | 30  |  |  |
| 12000        | IAS KT 230          | 229 | 227 | 225 | 223 | 222 | 222 | 219 | 209 | 198 |  |  |
|              | TORQUE % 73         | 73  | 73  | 74  | 74  | 74  | 74  | 73  | 67  | 61  |  |  |
|              | F FLOW KG/H/ENG 253 | 255 | 258 | 259 | 261 | 262 | 264 | 263 | 247 | 231 |  |  |
| 11500        | IAS KT 230          | 228 | 227 | 225 | 223 | 222 | 222 | 219 | 210 | 199 |  |  |
|              | TORQUE % 72         | 72  | 72  | 73  | 73  | 73  | 73  | 73  | 67  | 60  |  |  |
|              | F FLOW KG/H/ENG 251 | 253 | 255 | 257 | 259 | 260 | 262 | 261 | 245 | 230 |  |  |
| 11000        | IAS KT 230          | 228 | 227 | 225 | 223 | 222 | 222 | 219 | 210 | 200 |  |  |
|              | TORQUE % 71         | 71  | 71  | 72  | 72  | 72  | 72  | 72  | 66  | 60  |  |  |
|              | F FLOW KG/H/ENG 249 | 251 | 253 | 255 | 257 | 258 | 259 | 258 | 244 | 228 |  |  |
| 10500        | IAS KT 230          | 228 | 226 | 225 | 223 | 222 | 222 | 219 | 210 | 200 |  |  |
|              | TORQUE % 71         | 71  | 71  | 71  | 71  | 72  | 72  | 71  | 65  | 59  |  |  |
|              | F FLOW KG/H/ENG 248 | 249 | 251 | 253 | 255 | 256 | 257 | 256 | 242 | 227 |  |  |
| 10000        | IAS KT 229          | 228 | 226 | 225 | 223 | 222 | 221 | 219 | 210 | 200 |  |  |
|              | TORQUE % 70         | 70  | 70  | 71  | 71  | 71  | 71  | 71  | 65  | 58  |  |  |
|              | F FLOW KG/H/ENG 245 | 248 | 249 | 251 | 253 | 254 | 255 | 254 | 240 | 225 |  |  |
| 9500         | IAS KT 229          | 228 | 226 | 224 | 223 | 222 | 221 | 219 | 210 | 201 |  |  |
|              | TORQUE % 69         | 70  | 70  | 70  | 70  | 70  | 70  | 70  | 64  | 58  |  |  |
|              | F FLOW KG/H/ENG 243 | 246 | 248 | 249 | 251 | 252 | 253 | 253 | 238 | 223 |  |  |
| 9000         | IAS KT 228          | 227 | 226 | 224 | 222 | 222 | 221 | 218 | 210 | 201 |  |  |
|              | TORQUE % 69         | 69  | 69  | 69  | 70  | 70  | 70  | 69  | 64  | 57  |  |  |
|              | F FLOW KG/H/ENG 242 | 244 | 246 | 247 | 249 | 250 | 252 | 251 | 236 | 221 |  |  |
| 8500         | IAS KT 228          | 227 | 225 | 224 | 222 | 221 | 221 | 218 | 210 | 201 |  |  |
|              | TORQUE % 68         | 68  | 68  | 69  | 69  | 69  | 69  | 69  | 63  | 57  |  |  |
|              | F FLOW KG/H/ENG 240 | 242 | 244 | 246 | 248 | 249 | 250 | 249 | 235 | 220 |  |  |
| 8000         | IAS KT 228          | 226 | 225 | 223 | 222 | 221 | 220 | 218 | 210 | 201 |  |  |
|              | TORQUE % 68         | 68  | 68  | 69  | 69  | 69  | 69  | 68  | 62  | 56  |  |  |
|              | F FLOW KG/H/ENG 239 | 240 | 242 | 244 | 246 | 247 | 249 | 247 | 233 | 218 |  |  |

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**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ALL ENGINES OPERATING**
**PW118A/B ENGINES**
**INTERMEDIATE CRUISE**

## CRUISE CONFIGURATION

NP: 85%

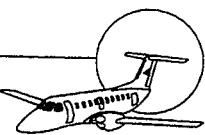
BLEED SWITCH : AUTO

PACK CONTROL SELECTOR : LOW

**ALTITUDE: 16000 FT**

| WEIGHT<br>KG | IOAT (° C)          |     |     |     |     |     |     |     |     |     |    |  |
|--------------|---------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|--|
|              | -50                 | -40 | -30 | -20 | -10 | -5  | 0   | 10  | 20  | 30  |    |  |
| 12000        | IAS KT 229          | 227 | 225 | 223 | 221 | 221 | 220 | 214 | 204 | 194 |    |  |
|              | TORQUE % 73         | 73  | 73  | 74  | 74  | 74  | 75  | 71  | 65  | 59  |    |  |
|              | F FLOW KG/H/ENG 252 | 253 | 255 | 257 | 259 | 261 | 262 | 254 | 238 | 223 |    |  |
| 11500        | IAS KT 228          | 227 | 225 | 223 | 221 | 221 | 220 | 215 | 205 | 194 |    |  |
|              | TORQUE % 72         | 72  | 72  | 73  | 73  | 73  | 73  | 74  | 71  | 64  | 58 |  |
|              | F FLOW KG/H/ENG 249 | 251 | 253 | 255 | 257 | 258 | 260 | 252 | 236 | 222 |    |  |
| 11000        | IAS KT 228          | 227 | 225 | 223 | 221 | 221 | 220 | 215 | 205 | 195 |    |  |
|              | TORQUE % 71         | 71  | 72  | 72  | 72  | 72  | 73  | 73  | 70  | 64  | 58 |  |
|              | F FLOW KG/H/ENG 247 | 249 | 251 | 253 | 254 | 256 | 257 | 250 | 235 | 220 |    |  |
| 10500        | IAS KT 228          | 226 | 225 | 223 | 221 | 221 | 220 | 215 | 205 | 196 |    |  |
|              | TORQUE % 71         | 71  | 71  | 71  | 72  | 72  | 72  | 69  | 63  | 57  |    |  |
|              | F FLOW KG/H/ENG 245 | 247 | 249 | 251 | 252 | 254 | 255 | 248 | 233 | 218 |    |  |
| 10000        | IAS KT 228          | 226 | 225 | 223 | 221 | 221 | 220 | 215 | 206 | 196 |    |  |
|              | TORQUE % 70         | 70  | 70  | 70  | 71  | 71  | 71  | 72  | 68  | 62  | 56 |  |
|              | F FLOW KG/H/ENG 244 | 245 | 247 | 249 | 250 | 252 | 253 | 246 | 231 | 216 |    |  |
| 9500         | IAS KT 228          | 226 | 224 | 223 | 221 | 220 | 220 | 215 | 206 | 196 |    |  |
|              | TORQUE % 69         | 69  | 70  | 70  | 70  | 70  | 71  | 71  | 68  | 62  | 56 |  |
|              | F FLOW KG/H/ENG 242 | 244 | 245 | 247 | 248 | 250 | 251 | 244 | 229 | 214 |    |  |
| 9000         | IAS KT 227          | 226 | 224 | 223 | 221 | 220 | 220 | 215 | 206 | 196 |    |  |
|              | TORQUE % 69         | 69  | 69  | 69  | 70  | 70  | 70  | 70  | 67  | 61  | 55 |  |
|              | F FLOW KG/H/ENG 239 | 242 | 243 | 245 | 247 | 248 | 249 | 242 | 227 | 213 |    |  |
| 8500         | IAS KT 227          | 225 | 224 | 222 | 221 | 220 | 219 | 214 | 206 | 196 |    |  |
|              | TORQUE % 68         | 68  | 68  | 69  | 69  | 69  | 70  | 67  | 61  | 55  |    |  |
|              | F FLOW KG/H/ENG 237 | 239 | 242 | 243 | 245 | 246 | 248 | 240 | 226 | 211 |    |  |
| 8000         | IAS KT 226          | 225 | 223 | 222 | 220 | 220 | 219 | 214 | 206 | 197 |    |  |
|              | TORQUE % 68         | 68  | 68  | 68  | 69  | 69  | 69  | 66  | 60  | 54  |    |  |
|              | F FLOW KG/H/ENG 236 | 237 | 240 | 242 | 244 | 244 | 246 | 238 | 224 | 210 |    |  |

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**EMBRAER**  
**EMB120 Brasilia**  
**SUPPLEMENTARY PERFORMANCE  
MANUAL**

CRUISE CONTROL

**CRUISE CONTROL**

**ALL ENGINES OPERATING**

**PW118A/B ENGINES**

**INTERMEDIATE CRUISE**

CRUISE CONFIGURATION

NP: 85%

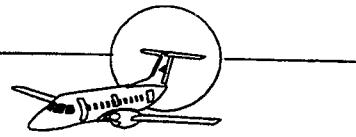
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 17000 FT**

| WEIGHT<br>KG | IAS             | KT  | IOAT (° C) |     |     |     |     |     |     |     |     |    |
|--------------|-----------------|-----|------------|-----|-----|-----|-----|-----|-----|-----|-----|----|
|              |                 |     | -50        | -40 | -30 | -20 | -10 | -5  | 0   | 10  | 20  | 30 |
| 12000        | TORQUE %        | 227 | 225        | 223 | 222 | 220 | 219 | 218 | 209 | 199 | 186 |    |
|              | F FLOW KG/H/ENG | 73  | 73         | 73  | 74  | 74  | 75  | 74  | 69  | 63  | 56  |    |
|              | IAS             | 250 | 252        | 254 | 256 | 258 | 260 | 259 | 245 | 230 | 213 |    |
| 11500        | TORQUE %        | 227 | 225        | 223 | 222 | 220 | 219 | 218 | 210 | 200 | 189 |    |
|              | F FLOW KG/H/ENG | 72  | 72         | 73  | 73  | 73  | 74  | 73  | 68  | 62  | 56  |    |
|              | IAS             | 248 | 250        | 251 | 253 | 255 | 257 | 256 | 243 | 228 | 213 |    |
| 11000        | TORQUE %        | 227 | 225        | 223 | 222 | 220 | 219 | 218 | 210 | 200 | 190 |    |
|              | F FLOW KG/H/ENG | 71  | 72         | 72  | 72  | 72  | 73  | 72  | 67  | 61  | 55  |    |
|              | IAS             | 246 | 247        | 249 | 251 | 253 | 255 | 254 | 241 | 226 | 212 |    |
| 10500        | TORQUE %        | 227 | 225        | 223 | 222 | 220 | 219 | 218 | 210 | 201 | 190 |    |
|              | F FLOW KG/H/ENG | 71  | 71         | 71  | 72  | 72  | 72  | 72  | 67  | 61  | 55  |    |
|              | IAS             | 243 | 245        | 247 | 249 | 251 | 252 | 252 | 238 | 224 | 210 |    |
| 10000        | TORQUE %        | 226 | 225        | 223 | 221 | 220 | 219 | 218 | 210 | 201 | 191 |    |
|              | F FLOW KG/H/ENG | 70  | 70         | 70  | 71  | 71  | 72  | 71  | 66  | 60  | 54  |    |
|              | IAS             | 241 | 243        | 245 | 246 | 249 | 250 | 249 | 236 | 222 | 208 |    |
| 9500         | TORQUE %        | 226 | 224        | 223 | 221 | 219 | 219 | 218 | 210 | 201 | 192 |    |
|              | F FLOW KG/H/ENG | 70  | 70         | 70  | 70  | 70  | 71  | 70  | 65  | 59  | 54  |    |
|              | IAS             | 240 | 241        | 243 | 244 | 246 | 248 | 248 | 234 | 220 | 206 |    |
| 9000         | TORQUE %        | 226 | 224        | 222 | 221 | 219 | 219 | 217 | 210 | 201 | 192 |    |
|              | F FLOW KG/H/ENG | 69  | 69         | 69  | 69  | 70  | 70  | 70  | 65  | 59  | 53  |    |
|              | IAS             | 237 | 240        | 241 | 243 | 244 | 246 | 246 | 233 | 218 | 205 |    |
| 8500         | TORQUE %        | 225 | 224        | 222 | 221 | 219 | 218 | 217 | 210 | 201 | 192 |    |
|              | F FLOW KG/H/ENG | 68  | 68         | 69  | 69  | 69  | 70  | 69  | 64  | 58  | 52  |    |
|              | IAS             | 235 | 238        | 239 | 241 | 243 | 244 | 244 | 231 | 217 | 203 |    |
| 8000         | TORQUE %        | 225 | 223        | 222 | 220 | 219 | 218 | 217 | 210 | 201 | 192 |    |
|              | F FLOW KG/H/ENG | 67  | 68         | 68  | 68  | 69  | 69  | 69  | 63  | 58  | 52  |    |
|              | IAS             | 234 | 235        | 237 | 239 | 241 | 243 | 242 | 229 | 215 | 202 |    |

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**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ALL ENGINES OPERATING**
**PW118A/B ENGINES**
**INTERMEDIATE CRUISE**

## CRUISE CONFIGURATION

NP: 85%

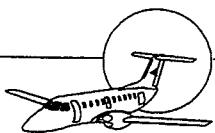
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 18000 FT**

| WEIGHT<br>KG | IOAT (° C) |          |     |     |     |     |     |     |     |     |     |     |
|--------------|------------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              | -50        | -40      | -30 | -20 | -10 | -5  | 0   | 10  | 20  | 30  |     |     |
| 12000        | IAS        | KT       | 225 | 223 | 222 | 220 | 219 | 217 | 214 | 204 | 194 | 176 |
|              | TORQUE     | %        | 73  | 73  | 73  | 74  | 74  | 74  | 72  | 66  | 60  | 52  |
|              | F FLOW     | KG/H/ENG | 248 | 250 | 252 | 254 | 257 | 257 | 252 | 236 | 220 | 200 |
| 11500        | IAS        | KT       | 225 | 223 | 222 | 220 | 219 | 217 | 214 | 205 | 195 | 181 |
|              | TORQUE     | %        | 72  | 72  | 73  | 73  | 74  | 73  | 72  | 66  | 60  | 53  |
|              | F FLOW     | KG/H/ENG | 246 | 248 | 250 | 252 | 255 | 254 | 250 | 234 | 220 | 202 |
| 11000        | IAS        | KT       | 225 | 223 | 222 | 220 | 219 | 217 | 214 | 205 | 195 | 186 |
|              | TORQUE     | %        | 71  | 72  | 72  | 72  | 73  | 73  | 71  | 65  | 59  | 53  |
|              | F FLOW     | KG/H/ENG | 244 | 246 | 247 | 249 | 252 | 252 | 248 | 232 | 218 | 203 |
| 10500        | IAS        | KT       | 225 | 223 | 222 | 220 | 218 | 217 | 214 | 206 | 196 | 185 |
|              | TORQUE     | %        | 71  | 71  | 71  | 71  | 72  | 72  | 70  | 64  | 59  | 53  |
|              | F FLOW     | KG/H/ENG | 242 | 243 | 245 | 247 | 249 | 249 | 245 | 230 | 216 | 202 |
| 10000        | IAS        | KT       | 225 | 223 | 221 | 220 | 218 | 217 | 214 | 206 | 197 | 186 |
|              | TORQUE     | %        | 70  | 70  | 71  | 71  | 71  | 71  | 69  | 64  | 58  | 52  |
|              | F FLOW     | KG/H/ENG | 240 | 241 | 243 | 245 | 247 | 247 | 243 | 228 | 214 | 200 |
| 9500         | IAS        | KT       | 225 | 223 | 221 | 219 | 218 | 217 | 214 | 206 | 197 | 187 |
|              | TORQUE     | %        | 69  | 70  | 70  | 70  | 71  | 70  | 69  | 63  | 57  | 52  |
|              | F FLOW     | KG/H/ENG | 238 | 240 | 241 | 243 | 245 | 245 | 241 | 226 | 212 | 199 |
| 9000         | IAS        | KT       | 224 | 222 | 221 | 219 | 218 | 217 | 214 | 206 | 197 | 187 |
|              | TORQUE     | %        | 69  | 69  | 69  | 69  | 70  | 70  | 68  | 62  | 57  | 51  |
|              | F FLOW     | KG/H/ENG | 236 | 237 | 239 | 241 | 243 | 243 | 239 | 224 | 210 | 197 |
| 8500         | IAS        | KT       | 224 | 222 | 220 | 219 | 218 | 216 | 214 | 206 | 197 | 188 |
|              | TORQUE     | %        | 68  | 68  | 69  | 69  | 69  | 69  | 67  | 62  | 56  | 50  |
|              | F FLOW     | KG/H/ENG | 233 | 236 | 237 | 239 | 241 | 241 | 237 | 222 | 209 | 195 |
| 8000         | IAS        | KT       | 223 | 222 | 220 | 219 | 217 | 216 | 213 | 205 | 197 | 188 |
|              | TORQUE     | %        | 67  | 68  | 68  | 68  | 69  | 69  | 67  | 61  | 55  | 50  |
|              | F FLOW     | KG/H/ENG | 231 | 233 | 235 | 237 | 239 | 239 | 235 | 220 | 207 | 193 |

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EMBRAER

EMB120 Brasilia

# SUPPLEMENTARY PERFORMANCE MANUAL

CRUISE CONTROL

## CRUISE CONTROL

ALL ENGINES OPERATING

PW118A/B ENGINES

INTERMEDIATE CRUISE

CRUISE CONFIGURATION

NP: 85%

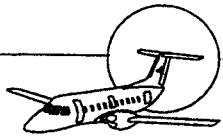
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 19000 FT**

| WEIGHT<br>KG | IOAT (° C) |          |     |     |     |     |     |     |     |     |     |     |
|--------------|------------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              | -50        | -40      | -30 | -20 | -10 | -5  | 0   | 10  | 20  | 30  |     |     |
| 12000        | IAS        | KT       | 224 | 222 | 220 | 218 | 217 | 214 | 209 | 199 | 188 | -   |
|              | TORQUE     | %        | 73  | 73  | 74  | 74  | 74  | 73  | 70  | 64  | 58  | -   |
|              | F FLOW     | KG/H/ENG | 247 | 249 | 251 | 253 | 255 | 251 | 243 | 228 | 211 | -   |
| 11500        | IAS        | KT       | 224 | 222 | 220 | 218 | 217 | 214 | 209 | 200 | 189 | 171 |
|              | TORQUE     | %        | 72  | 72  | 73  | 73  | 73  | 72  | 69  | 63  | 57  | 50  |
|              | F FLOW     | KG/H/ENG | 245 | 247 | 249 | 250 | 252 | 248 | 241 | 226 | 210 | 191 |
| 11000        | IAS        | KT       | 223 | 222 | 220 | 218 | 217 | 214 | 210 | 200 | 190 | 177 |
|              | TORQUE     | %        | 71  | 72  | 72  | 72  | 73  | 71  | 69  | 63  | 57  | 50  |
|              | F FLOW     | KG/H/ENG | 243 | 244 | 246 | 248 | 250 | 246 | 239 | 224 | 210 | 192 |
| 10500        | IAS        | KT       | 223 | 221 | 220 | 218 | 217 | 214 | 210 | 201 | 191 | 181 |
|              | TORQUE     | %        | 70  | 71  | 71  | 72  | 72  | 71  | 68  | 62  | 56  | 51  |
|              | F FLOW     | KG/H/ENG | 240 | 242 | 244 | 245 | 247 | 244 | 237 | 222 | 208 | 193 |
| 10000        | IAS        | KT       | 223 | 221 | 220 | 218 | 216 | 214 | 210 | 201 | 192 | 181 |
|              | TORQUE     | %        | 70  | 70  | 71  | 71  | 71  | 70  | 67  | 61  | 56  | 50  |
|              | F FLOW     | KG/H/ENG | 238 | 240 | 241 | 243 | 245 | 241 | 235 | 220 | 206 | 192 |
| 9500         | IAS        | KT       | 223 | 221 | 219 | 218 | 216 | 214 | 210 | 201 | 192 | 182 |
|              | TORQUE     | %        | 69  | 70  | 70  | 70  | 70  | 69  | 66  | 61  | 55  | 50  |
|              | F FLOW     | KG/H/ENG | 236 | 238 | 239 | 241 | 243 | 239 | 232 | 218 | 204 | 191 |
| 9000         | IAS        | KT       | 222 | 221 | 219 | 218 | 216 | 214 | 210 | 201 | 192 | 183 |
|              | TORQUE     | %        | 69  | 69  | 69  | 69  | 70  | 68  | 66  | 60  | 55  | 49  |
|              | F FLOW     | KG/H/ENG | 234 | 235 | 237 | 239 | 240 | 237 | 230 | 216 | 202 | 189 |
| 8500         | IAS        | KT       | 222 | 221 | 219 | 217 | 216 | 213 | 210 | 201 | 192 | 183 |
|              | TORQUE     | %        | 68  | 68  | 69  | 69  | 69  | 68  | 65  | 59  | 54  | 49  |
|              | F FLOW     | KG/H/ENG | 232 | 234 | 235 | 236 | 238 | 235 | 228 | 214 | 200 | 187 |
| 8000         | IAS        | KT       | 221 | 220 | 219 | 217 | 215 | 213 | 209 | 201 | 193 | 183 |
|              | TORQUE     | %        | 67  | 68  | 68  | 68  | 68  | 67  | 64  | 59  | 53  | 48  |
|              | F FLOW     | KG/H/ENG | 229 | 232 | 234 | 235 | 236 | 233 | 226 | 212 | 199 | 186 |

17 MARCH 1999


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ALL ENGINES OPERATING**
**PW118A/B ENGINES**
**INTERMEDIATE CRUISE**

## CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 20000 FT**

|       | WEIGHT |          | IOAT (° C) |     |     |     |     |     |     |     |     |     |
|-------|--------|----------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|       |        | KG       | -50        | -40 | -30 | -20 | -15 | -10 | -5  | 0   | 10  | 20  |
| 12000 | IAS    | KT       | 222        | 220 | 218 | 217 | 216 | 213 | 209 | 204 | 194 | 178 |
|       | TORQUE | %        | 73         | 74  | 74  | 74  | 74  | 73  | 70  | 68  | 62  | 54  |
|       | F FLOW | KG/H/ENG | 246        | 249 | 250 | 253 | 253 | 249 | 242 | 235 | 220 | 200 |
| 11500 | IAS    | KT       | 222        | 220 | 218 | 217 | 216 | 213 | 209 | 204 | 195 | 183 |
|       | TORQUE | %        | 72         | 73  | 73  | 74  | 74  | 72  | 70  | 67  | 61  | 55  |
|       | F FLOW | KG/H/ENG | 243        | 246 | 248 | 250 | 250 | 247 | 240 | 233 | 218 | 201 |
| 11000 | IAS    | KT       | 222        | 220 | 218 | 217 | 216 | 213 | 209 | 205 | 195 | 185 |
|       | TORQUE | %        | 72         | 72  | 72  | 73  | 73  | 71  | 69  | 66  | 61  | 55  |
|       | F FLOW | KG/H/ENG | 242        | 244 | 248 | 248 | 248 | 245 | 238 | 230 | 216 | 200 |
| 10500 | IAS    | KT       | 221        | 220 | 218 | 217 | 216 | 214 | 210 | 205 | 196 | 186 |
|       | TORQUE | %        | 71         | 71  | 71  | 72  | 72  | 71  | 68  | 66  | 60  | 55  |
|       | F FLOW | KG/H/ENG | 239        | 241 | 242 | 245 | 245 | 242 | 235 | 228 | 213 | 200 |
| 10000 | IAS    | KT       | 222        | 220 | 218 | 217 | 216 | 213 | 210 | 205 | 196 | 186 |
|       | TORQUE | %        | 70         | 71  | 70  | 71  | 71  | 70  | 67  | 65  | 59  | 54  |
|       | F FLOW | KG/H/ENG | 237        | 240 | 240 | 242 | 243 | 240 | 233 | 226 | 211 | 198 |
| 9500  | IAS    | KT       | 221        | 220 | 218 | 217 | 216 | 213 | 209 | 205 | 197 | 187 |
|       | TORQUE | %        | 69         | 70  | 70  | 70  | 70  | 69  | 67  | 64  | 59  | 53  |
|       | F FLOW | KG/H/ENG | 234        | 237 | 238 | 240 | 240 | 238 | 230 | 224 | 209 | 196 |
| 9000  | IAS    | KT       | 221        | 219 | 218 | 216 | 215 | 213 | 209 | 205 | 197 | 188 |
|       | TORQUE | %        | 69         | 69  | 69  | 70  | 70  | 69  | 66  | 63  | 58  | 53  |
|       | F FLOW | KG/H/ENG | 232        | 234 | 235 | 238 | 238 | 235 | 229 | 222 | 207 | 195 |
| 8500  | IAS    | KT       | 220        | 219 | 217 | 216 | 215 | 213 | 209 | 205 | 197 | 188 |
|       | TORQUE | %        | 68         | 68  | 68  | 69  | 69  | 68  | 65  | 63  | 57  | 52  |
|       | F FLOW | KG/H/ENG | 230        | 232 | 233 | 236 | 236 | 233 | 227 | 220 | 205 | 193 |
| 8000  | IAS    | KT       | 220        | 219 | 217 | 216 | 215 | 213 | 209 | 205 | 197 | 188 |
|       | TORQUE | %        | 67         | 68  | 68  | 68  | 68  | 67  | 65  | 62  | 57  | 51  |
|       | F FLOW | KG/H/ENG | 228        | 230 | 231 | 233 | 234 | 231 | 225 | 217 | 203 | 191 |

17 MARCH 1999



**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CRUISE CONTROL**

**ALL ENGINES OPERATING**

**PW118A/B ENGINES**

**INTERMEDIATE CRUISE**

**CRUISE CONFIGURATION**

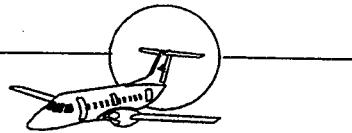
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 21000 FT**

| WEIGHT<br>KG | IAS    | KT       | 220 | 219 | 217 | 215 | 212 | 208 | 203 | 199 | 189 | -   | IOAT (° C) |     |     |     |     |     |     |     |     |     |     |     |     |
|--------------|--------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |        |          |     |     |     |     |     |     |     |     |     |     | -50        | -40 | -30 | -20 | -15 | -10 | -5  | 0   | 10  | 20  |     |     |     |
| 12000        | TORQUE | %        | 73  | 74  | 74  | 75  | 73  | 71  | 68  | 65  | 65  | 60  | -          | 220 | 219 | 218 | 217 | 215 | 212 | 208 | 203 | 199 | 189 | -   |     |
|              | F FLOW | KG/H/ENG | 245 | 248 | 250 | 252 | 248 | 241 | 234 | 227 | 227 | 227 | 211        |     |     |     |     |     |     |     |     |     |     |     |     |
|              | IAS    | KT       | 219 | 218 | 217 | 215 | 213 | 209 | 204 | 199 | 199 | 199 | 188        |     |     |     |     |     |     |     |     |     |     |     |     |
| 11500        | TORQUE | %        | 72  | 73  | 73  | 74  | 72  | 70  | 67  | 65  | 65  | 65  | 59         | -   | 220 | 219 | 218 | 217 | 215 | 213 | 209 | 204 | 199 | 188 | 174 |
|              | F FLOW | KG/H/ENG | 241 | 245 | 247 | 249 | 246 | 239 | 232 | 224 | 224 | 224 | 210        |     |     |     |     |     |     |     |     |     |     |     |     |
|              | IAS    | KT       | 219 | 218 | 218 | 215 | 213 | 209 | 205 | 200 | 200 | 200 | 190        |     |     |     |     |     |     |     |     |     |     |     |     |
| 11000        | TORQUE | %        | 70  | 72  | 73  | 73  | 72  | 69  | 67  | 64  | 64  | 64  | 59         | -   | 220 | 219 | 218 | 217 | 215 | 213 | 209 | 205 | 200 | 190 | 178 |
|              | F FLOW | KG/H/ENG | 237 | 242 | 246 | 246 | 243 | 236 | 230 | 222 | 222 | 222 | 208        |     |     |     |     |     |     |     |     |     |     |     |     |
|              | IAS    | KT       | 218 | 218 | 217 | 215 | 213 | 209 | 205 | 200 | 200 | 200 | 191        |     |     |     |     |     |     |     |     |     |     |     |     |
| 10500        | TORQUE | %        | 69  | 71  | 72  | 72  | 71  | 69  | 66  | 63  | 63  | 63  | 58         | -   | 220 | 219 | 218 | 217 | 215 | 213 | 209 | 205 | 200 | 191 | 181 |
|              | F FLOW | KG/H/ENG | 234 | 240 | 242 | 244 | 241 | 234 | 227 | 220 | 220 | 220 | 206        |     |     |     |     |     |     |     |     |     |     |     |     |
|              | IAS    | KT       | 218 | 218 | 216 | 215 | 213 | 209 | 205 | 200 | 200 | 200 | 192        |     |     |     |     |     |     |     |     |     |     |     |     |
| 10000        | TORQUE | %        | 68  | 70  | 71  | 71  | 70  | 68  | 65  | 63  | 63  | 63  | 57         | -   | 220 | 219 | 218 | 217 | 215 | 213 | 209 | 205 | 201 | 192 | 182 |
|              | F FLOW | KG/H/ENG | 231 | 237 | 239 | 241 | 238 | 232 | 225 | 218 | 218 | 218 | 204        |     |     |     |     |     |     |     |     |     |     |     |     |
|              | IAS    | KT       | 218 | 218 | 217 | 215 | 213 | 209 | 205 | 201 | 201 | 201 | 192        |     |     |     |     |     |     |     |     |     |     |     |     |
| 9500         | TORQUE | %        | 67  | 69  | 70  | 71  | 71  | 69  | 67  | 64  | 62  | 62  | 56         | -   | 220 | 219 | 218 | 217 | 215 | 213 | 209 | 205 | 201 | 192 | 182 |
|              | F FLOW | KG/H/ENG | 228 | 234 | 238 | 238 | 236 | 229 | 223 | 216 | 216 | 216 | 202        |     |     |     |     |     |     |     |     |     |     |     |     |
|              | IAS    | KT       | 217 | 218 | 217 | 215 | 213 | 209 | 205 | 201 | 201 | 201 | 193        |     |     |     |     |     |     |     |     |     |     |     |     |
| 9000         | TORQUE | %        | 66  | 68  | 69  | 69  | 70  | 69  | 66  | 64  | 61  | 61  | 56         | -   | 220 | 219 | 218 | 217 | 215 | 213 | 209 | 205 | 201 | 192 | 183 |
|              | F FLOW | KG/H/ENG | 225 | 231 | 235 | 236 | 234 | 227 | 220 | 213 | 213 | 213 | 200        |     |     |     |     |     |     |     |     |     |     |     |     |
|              | IAS    | KT       | 217 | 217 | 216 | 215 | 213 | 209 | 205 | 201 | 201 | 201 | 193        |     |     |     |     |     |     |     |     |     |     |     |     |
| 8500         | TORQUE | %        | 66  | 68  | 69  | 69  | 69  | 68  | 66  | 63  | 60  | 60  | 55         | -   | 220 | 219 | 218 | 217 | 215 | 213 | 209 | 205 | 201 | 192 | 184 |
|              | F FLOW | KG/H/ENG | 222 | 228 | 232 | 234 | 231 | 225 | 218 | 211 | 211 | 211 | 198        |     |     |     |     |     |     |     |     |     |     |     |     |
|              | IAS    | KT       | 216 | 216 | 216 | 214 | 212 | 209 | 205 | 201 | 201 | 201 | 192        |     |     |     |     |     |     |     |     |     |     |     |     |
| 8000         | TORQUE | %        | 65  | 67  | 69  | 69  | 69  | 67  | 65  | 62  | 60  | 60  | 54         | -   | 220 | 219 | 218 | 217 | 215 | 213 | 209 | 205 | 201 | 192 | 184 |
|              | F FLOW | KG/H/ENG | 220 | 226 | 232 | 233 | 228 | 223 | 216 | 211 | 210 | 210 | 196        |     |     |     |     |     |     |     |     |     |     |     |     |
|              | IAS    | KT       | 216 | 216 | 216 | 214 | 212 | 209 | 205 | 201 | 201 | 201 | 192        |     |     |     |     |     |     |     |     |     |     |     |     |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ALL ENGINES OPERATING**
**PW118A/B ENGINES**
**INTERMEDIATE CRUISE**
**CRUISE CONFIGURATION**

NP: 85%

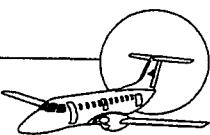
BLEED SWITCH : AUTO

PACK CONTROL SELECTOR : LOW

**ALTITUDE: 22000 FT**

| WEIGHT<br>KG | IOAT (° C) |          |     |     |     |     |     |     |     |     |     |     |
|--------------|------------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              | -50        | -40      | -30 | -20 | -15 | -10 | -5  | 0   | 10  | 20  |     |     |
| 12000        | IAS        | KT       | 216 | 216 | 215 | 212 | 208 | 203 | 198 | 193 | 179 | -   |
|              | TORQUE     | %        | 71  | 74  | 75  | 73  | 71  | 68  | 66  | 63  | 56  | -   |
|              | F FLOW     | KG/H/ENG | 239 | 247 | 250 | 246 | 240 | 233 | 226 | 219 | 200 | -   |
| 11500        | IAS        | KT       | 215 | 216 | 216 | 212 | 208 | 204 | 199 | 194 | 185 | -   |
|              | TORQUE     | %        | 70  | 72  | 74  | 73  | 70  | 68  | 65  | 63  | 57  | -   |
|              | F FLOW     | KG/H/ENG | 235 | 242 | 248 | 245 | 238 | 230 | 223 | 217 | 201 | -   |
| 11000        | IAS        | KT       | 215 | 215 | 215 | 212 | 209 | 204 | 200 | 195 | 184 | 169 |
|              | TORQUE     | %        | 69  | 71  | 73  | 72  | 70  | 67  | 64  | 62  | 56  | 49  |
|              | F FLOW     | KG/H/ENG | 231 | 238 | 244 | 241 | 236 | 228 | 221 | 214 | 201 | 181 |
| 10500        | IAS        | KT       | 214 | 215 | 215 | 212 | 209 | 204 | 200 | 195 | 186 | 174 |
|              | TORQUE     | %        | 67  | 69  | 71  | 71  | 69  | 66  | 64  | 61  | 56  | 50  |
|              | F FLOW     | KG/H/ENG | 227 | 234 | 240 | 239 | 233 | 226 | 219 | 212 | 198 | 183 |
| 10000        | IAS        | KT       | 214 | 214 | 214 | 213 | 209 | 205 | 200 | 196 | 187 | 178 |
|              | TORQUE     | %        | 66  | 68  | 70  | 70  | 68  | 65  | 63  | 60  | 55  | 50  |
|              | F FLOW     | KG/H/ENG | 224 | 230 | 236 | 237 | 231 | 224 | 216 | 210 | 196 | 183 |
| 9500         | IAS        | KT       | 213 | 214 | 214 | 212 | 209 | 205 | 201 | 196 | 187 | 178 |
|              | TORQUE     | %        | 65  | 67  | 69  | 69  | 67  | 65  | 62  | 60  | 54  | 49  |
|              | F FLOW     | KG/H/ENG | 220 | 227 | 233 | 234 | 228 | 221 | 214 | 208 | 194 | 182 |
| 9000         | IAS        | KT       | 213 | 213 | 213 | 212 | 209 | 205 | 201 | 197 | 188 | 178 |
|              | TORQUE     | %        | 64  | 66  | 68  | 69  | 67  | 64  | 61  | 59  | 54  | 49  |
|              | F FLOW     | KG/H/ENG | 217 | 224 | 229 | 233 | 226 | 219 | 212 | 206 | 192 | 180 |
| 8500         | IAS        | KT       | 212 | 213 | 213 | 212 | 208 | 205 | 201 | 197 | 188 | 179 |
|              | TORQUE     | %        | 64  | 65  | 67  | 68  | 66  | 63  | 61  | 58  | 53  | 48  |
|              | F FLOW     | KG/H/ENG | 215 | 221 | 226 | 230 | 224 | 217 | 210 | 203 | 190 | 178 |
| 8000         | IAS        | KT       | 212 | 212 | 212 | 211 | 208 | 204 | 200 | 197 | 188 | 179 |
|              | TORQUE     | %        | 63  | 65  | 66  | 67  | 65  | 63  | 60  | 58  | 52  | 48  |
|              | F FLOW     | KG/H/ENG | 212 | 218 | 224 | 227 | 222 | 215 | 208 | 201 | 188 | 176 |

17 MARCH 1999



**EMBRAER**  
**EMB120 Brasilia**  
**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CRUISE CONTROL**

**CRUISE CONTROL**

**ALL ENGINES OPERATING**

**PW118A/B ENGINES**

**INTERMEDIATE CRUISE**

**CRUISE CONFIGURATION**

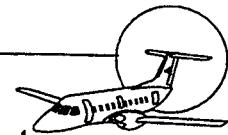
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 23000 FT**

| WEIGHT<br>KG | IOAT (° C) |          |     |     |     |     |     |     |     |     |     |     |
|--------------|------------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              | -50        | -40      | -30 | -20 | -15 | -10 | -5  | 0   | 10  | 20  |     |     |
| 12000        | IAS        | KT       | 212 | 212 | 212 | 207 | 203 | 198 | 192 | 189 | -   | -   |
|              | TORQUE     | %        | 70  | 72  | 74  | 71  | 69  | 66  | 64  | 61  | -   | -   |
|              | F FLOW     | KG/H/ENG | 233 | 241 | 247 | 239 | 232 | 225 | 218 | 210 | -   | -   |
| 11500        | IAS        | KT       | 212 | 212 | 212 | 207 | 203 | 199 | 194 | 188 | 174 | -   |
|              | TORQUE     | %        | 68  | 71  | 73  | 70  | 68  | 65  | 63  | 60  | 53  | -   |
|              | F FLOW     | KG/H/ENG | 229 | 236 | 242 | 236 | 229 | 223 | 215 | 209 | 190 | -   |
| 11000        | IAS        | KT       | 211 | 211 | 211 | 208 | 204 | 199 | 195 | 190 | 180 | -   |
|              | TORQUE     | %        | 67  | 69  | 71  | 70  | 67  | 65  | 62  | 60  | 54  | -   |
|              | F FLOW     | KG/H/ENG | 225 | 232 | 238 | 234 | 227 | 220 | 213 | 206 | 192 | -   |
| 10500        | IAS        | KT       | 210 | 211 | 211 | 208 | 204 | 200 | 195 | 191 | 180 | 164 |
|              | TORQUE     | %        | 66  | 68  | 70  | 69  | 66  | 64  | 61  | 59  | 54  | 47  |
|              | F FLOW     | KG/H/ENG | 221 | 228 | 234 | 232 | 225 | 218 | 211 | 204 | 191 | 173 |
| 10000        | IAS        | KT       | 210 | 210 | 210 | 208 | 204 | 200 | 196 | 191 | 181 | 171 |
|              | TORQUE     | %        | 65  | 67  | 68  | 68  | 66  | 63  | 61  | 58  | 53  | 47  |
|              | F FLOW     | KG/H/ENG | 217 | 223 | 229 | 229 | 222 | 216 | 209 | 202 | 189 | 174 |
| 9500         | IAS        | KT       | 209 | 210 | 210 | 208 | 204 | 200 | 196 | 192 | 182 | 173 |
|              | TORQUE     | %        | 64  | 65  | 67  | 67  | 65  | 63  | 60  | 58  | 52  | 48  |
|              | F FLOW     | KG/H/ENG | 214 | 220 | 225 | 227 | 220 | 213 | 207 | 200 | 187 | 174 |
| 9000         | IAS        | KT       | 209 | 209 | 209 | 208 | 204 | 200 | 196 | 192 | 183 | 173 |
|              | TORQUE     | %        | 63  | 64  | 66  | 67  | 64  | 62  | 59  | 57  | 52  | 47  |
|              | F FLOW     | KG/H/ENG | 210 | 217 | 222 | 225 | 217 | 211 | 204 | 198 | 185 | 173 |
| 8500         | IAS        | KT       | 208 | 209 | 209 | 208 | 204 | 200 | 196 | 192 | 183 | 174 |
|              | TORQUE     | %        | 62  | 63  | 65  | 66  | 63  | 61  | 59  | 56  | 51  | 46  |
|              | F FLOW     | KG/H/ENG | 208 | 214 | 219 | 222 | 215 | 209 | 202 | 196 | 183 | 171 |
| 8000         | IAS        | KT       | 208 | 208 | 208 | 207 | 204 | 200 | 196 | 192 | 184 | 175 |
|              | TORQUE     | %        | 61  | 63  | 64  | 65  | 63  | 60  | 58  | 55  | 50  | 46  |
|              | F FLOW     | KG/H/ENG | 205 | 211 | 216 | 219 | 214 | 206 | 200 | 193 | 181 | 170 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ALL ENGINES OPERATING**
**PW118A/B ENGINES**
**INTERMEDIATE CRUISE**

## CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH : AUTO

PACK CONTROL SELECTOR : LOW

**ALTITUDE: 24000 FT**

|       | WEIGHT<br>KG    | IAS | KT  | 208 | 209 | 209 | 202 | 197 | 191 | 186 | 181 | - | - | IOAT (° C) |     |     |     |
|-------|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---|---|------------|-----|-----|-----|
|       |                 |     |     |     |     |     |     |     |     |     |     |   |   | -50        | -40 | -30 | -20 |
| 12000 | TORQUE %        | 208 | 209 | 209 | 202 | 197 | 191 | 186 | 181 | -   | -   |   |   |            |     |     |     |
|       | F FLOW KG/H/ENG | 68  | 71  | 73  | 69  | 66  | 64  | 61  | 58  | -   | -   |   |   |            |     |     |     |
|       | IAS             | 228 | 236 | 243 | 231 | 224 | 217 | 210 | 200 | -   | -   |   |   |            |     |     |     |
| 11500 | TORQUE %        | 207 | 208 | 208 | 202 | 198 | 193 | 188 | 184 | -   | -   |   |   |            |     |     |     |
|       | F FLOW KG/H/ENG | 67  | 69  | 72  | 68  | 66  | 63  | 61  | 58  | -   | -   |   |   |            |     |     |     |
|       | IAS             | 223 | 231 | 237 | 228 | 221 | 215 | 208 | 201 | -   | -   |   |   |            |     |     |     |
| 11000 | TORQUE %        | 207 | 207 | 207 | 203 | 199 | 194 | 189 | 183 | 169 | -   |   |   |            |     |     |     |
|       | F FLOW KG/H/ENG | 66  | 68  | 70  | 67  | 65  | 62  | 60  | 58  | 51  | -   |   |   |            |     |     |     |
|       | IAS             | 219 | 226 | 232 | 226 | 219 | 212 | 206 | 199 | 180 | -   |   |   |            |     |     |     |
| 10500 | TORQUE %        | 207 | 207 | 207 | 203 | 199 | 195 | 190 | 185 | 176 | -   |   |   |            |     |     |     |
|       | F FLOW KG/H/ENG | 64  | 66  | 68  | 66  | 64  | 62  | 59  | 57  | 51  | -   |   |   |            |     |     |     |
|       | IAS             | 215 | 222 | 227 | 223 | 217 | 210 | 203 | 197 | 182 | -   |   |   |            |     |     |     |
| 10000 | TORQUE %        | 206 | 206 | 206 | 203 | 200 | 195 | 191 | 186 | 176 | 161 | - |   |            |     |     |     |
|       | F FLOW KG/H/ENG | 63  | 65  | 67  | 66  | 63  | 61  | 59  | 56  | 51  | 44  | - |   |            |     |     |     |
|       | IAS             | 211 | 217 | 223 | 221 | 214 | 207 | 201 | 195 | 182 | 164 | - |   |            |     |     |     |
| 9500  | TORQUE %        | 206 | 206 | 206 | 203 | 200 | 196 | 191 | 187 | 177 | 167 | - |   |            |     |     |     |
|       | F FLOW KG/H/ENG | 62  | 64  | 65  | 65  | 63  | 60  | 58  | 55  | 50  | 45  | - |   |            |     |     |     |
|       | IAS             | 208 | 213 | 219 | 218 | 213 | 205 | 199 | 192 | 180 | 166 | - |   |            |     |     |     |
| 9000  | TORQUE %        | 205 | 205 | 205 | 204 | 200 | 196 | 192 | 187 | 178 | 170 | - |   |            |     |     |     |
|       | F FLOW KG/H/ENG | 61  | 63  | 64  | 64  | 62  | 60  | 57  | 55  | 50  | 45  | - |   |            |     |     |     |
|       | IAS             | 204 | 210 | 215 | 217 | 210 | 203 | 197 | 190 | 178 | 167 | - |   |            |     |     |     |
| 8500  | TORQUE %        | 205 | 205 | 205 | 204 | 200 | 196 | 192 | 188 | 179 | 170 | - |   |            |     |     |     |
|       | F FLOW KG/H/ENG | 60  | 62  | 63  | 64  | 61  | 59  | 56  | 54  | 49  | 44  | - |   |            |     |     |     |
|       | IAS             | 201 | 207 | 212 | 215 | 207 | 201 | 194 | 188 | 176 | 164 | - |   |            |     |     |     |
| 8000  | TORQUE %        | 204 | 204 | 204 | 203 | 200 | 196 | 192 | 188 | 179 | 170 | - |   |            |     |     |     |
|       | F FLOW KG/H/ENG | 59  | 61  | 62  | 63  | 60  | 58  | 56  | 53  | 48  | 44  | - |   |            |     |     |     |
|       | IAS             | 198 | 204 | 208 | 211 | 205 | 198 | 192 | 186 | 174 | 163 | - |   |            |     |     |     |

17 MARCH 1999



**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CRUISE CONTROL**

**ALL ENGINES OPERATING**

**PW118A/B ENGINES**

**INTERMEDIATE CRUISE**

**CRUISE CONFIGURATION**

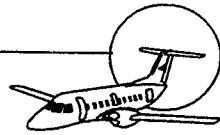
NP: 85%

BLEED SWITCH : AUTO

PACK CONTROL SELECTOR : LOW

**ALTITUDE: 25000 FT**

| WEIGHT<br>KG |        |          | IOAT (° C) |     |     |     |     |     |     |     |     |     |
|--------------|--------|----------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |        |          | -50        | -40 | -30 | -25 | -20 | -15 | -10 | -5  | 0   | 10  |
| 12000        | IAS    | KT       | 205        | 205 | 204 | 200 | 196 | 191 | 187 | 180 | -   | -   |
|              | TORQUE | %        | 67         | 70  | 71  | 68  | 67  | 64  | 62  | 59  | -   | -   |
|              | F FLOW | KG/H/ENG | 224        | 232 | 235 | 229 | 223 | 216 | 209 | 200 | -   | -   |
| 11500        | IAS    | KT       | 203        | 204 | 205 | 201 | 197 | 192 | 187 | 184 | 175 | -   |
|              | TORQUE | %        | 65         | 68  | 70  | 68  | 66  | 63  | 61  | 59  | 55  | -   |
|              | F FLOW | KG/H/ENG | 218        | 226 | 232 | 226 | 220 | 214 | 207 | 200 | 190 | -   |
| 11000        | IAS    | KT       | 203        | 204 | 204 | 201 | 198 | 193 | 188 | 183 | 180 | -   |
|              | TORQUE | %        | 64         | 67  | 69  | 67  | 65  | 63  | 60  | 58  | 56  | -   |
|              | F FLOW | KG/H/ENG | 214        | 221 | 227 | 223 | 218 | 211 | 205 | 198 | 190 | -   |
| 10500        | IAS    | KT       | 203        | 203 | 203 | 202 | 198 | 194 | 190 | 185 | 180 | 165 |
|              | TORQUE | %        | 63         | 65  | 66  | 66  | 64  | 62  | 60  | 57  | 55  | 48  |
|              | F FLOW | KG/H/ENG | 210        | 216 | 222 | 222 | 215 | 209 | 203 | 196 | 190 | 171 |
| 10000        | IAS    | KT       | 202        | 203 | 203 | 203 | 199 | 195 | 190 | 186 | 181 | 171 |
|              | TORQUE | %        | 61         | 63  | 65  | 66  | 63  | 61  | 59  | 56  | 54  | 49  |
|              | F FLOW | KG/H/ENG | 206        | 212 | 217 | 220 | 213 | 207 | 200 | 194 | 187 | 173 |
| 9500         | IAS    | KT       | 202        | 202 | 202 | 202 | 199 | 195 | 191 | 186 | 182 | 173 |
|              | TORQUE | %        | 60         | 62  | 64  | 64  | 63  | 60  | 58  | 56  | 53  | 48  |
|              | F FLOW | KG/H/ENG | 202        | 208 | 213 | 216 | 210 | 204 | 198 | 191 | 185 | 171 |
| 9000         | IAS    | KT       | 201        | 202 | 202 | 202 | 199 | 196 | 191 | 187 | 183 | 173 |
|              | TORQUE | %        | 59         | 61  | 62  | 63  | 62  | 60  | 57  | 55  | 53  | 48  |
|              | F FLOW | KG/H/ENG | 198        | 204 | 209 | 212 | 208 | 203 | 196 | 189 | 183 | 171 |
| 8500         | IAS    | KT       | 201        | 201 | 201 | 201 | 199 | 195 | 191 | 187 | 183 | 174 |
|              | TORQUE | %        | 58         | 60  | 61  | 62  | 61  | 59  | 57  | 54  | 52  | 47  |
|              | F FLOW | KG/H/ENG | 195        | 200 | 205 | 207 | 206 | 199 | 193 | 187 | 181 | 169 |
| 8000         | IAS    | KT       | 200        | 200 | 200 | 200 | 199 | 195 | 191 | 187 | 183 | 174 |
|              | TORQUE | %        | 57         | 59  | 60  | 61  | 60  | 58  | 56  | 54  | 51  | 47  |
|              | F FLOW | KG/H/ENG | 192        | 197 | 202 | 204 | 203 | 197 | 191 | 185 | 179 | 167 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ALL ENGINES OPERATING**
**PW118A/B ENGINES**
**INTERMEDIATE CRUISE**

## CRUISE CONFIGURATION

NP: 85%

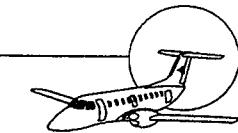
BLEED SWITCH : AUTO

PACK CONTROL SELECTOR : LOW

**ALTITUDE: 26000 FT**

| WEIGHT<br>KG |        |          |     | -50 | -40 | -30 | -25 | -20 | -15 | -10 | -5  | 0   | 10 | IOAT      (° C) |
|--------------|--------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----------------|
| 12000        | IAS    | KT       | 202 | 201 | 199 | 195 | 190 | 184 | 179 | -   | -   | -   | -  |                 |
|              | TORQUE | %        | 67  | 69  | 68  | 66  | 64  | 62  | 59  | -   | -   | -   | -  |                 |
|              | F FLOW | KG/H/ENG | 222 | 228 | 227 | 221 | 216 | 209 | 199 | -   | -   | -   | -  |                 |
| 11500        | IAS    | KT       | 201 | 201 | 200 | 196 | 191 | 186 | 183 | 174 | -   | -   | -  |                 |
|              | TORQUE | %        | 65  | 67  | 68  | 65  | 64  | 61  | 59  | 55  | -   | -   | -  |                 |
|              | F FLOW | KG/H/ENG | 215 | 222 | 225 | 219 | 213 | 206 | 200 | 189 | -   | -   | -  |                 |
| 11000        | IAS    | KT       | 199 | 200 | 200 | 197 | 193 | 187 | 182 | 179 | 170 | -   | -  |                 |
|              | TORQUE | %        | 63  | 65  | 67  | 65  | 63  | 61  | 58  | 56  | 52  | -   | -  |                 |
|              | F FLOW | KG/H/ENG | 208 | 216 | 222 | 217 | 210 | 204 | 198 | 191 | 180 | -   | -  |                 |
| 10500        | IAS    | KT       | 199 | 199 | 199 | 197 | 193 | 189 | 184 | 179 | 175 | -   | -  |                 |
|              | TORQUE | %        | 61  | 63  | 65  | 64  | 62  | 60  | 58  | 55  | 53  | -   | -  |                 |
|              | F FLOW | KG/H/ENG | 204 | 211 | 217 | 213 | 208 | 202 | 195 | 189 | 181 | -   | -  |                 |
| 10000        | IAS    | KT       | 199 | 199 | 199 | 197 | 194 | 190 | 185 | 180 | 175 | 161 | -  |                 |
|              | TORQUE | %        | 60  | 62  | 63  | 63  | 61  | 59  | 57  | 54  | 52  | 46  | -  |                 |
|              | F FLOW | KG/H/ENG | 200 | 206 | 212 | 211 | 205 | 199 | 192 | 187 | 180 | 163 | -  |                 |
| 9500         | IAS    | KT       | 198 | 198 | 198 | 198 | 194 | 190 | 186 | 181 | 177 | 167 | -  |                 |
|              | TORQUE | %        | 59  | 61  | 62  | 62  | 60  | 58  | 56  | 54  | 51  | 46  | -  |                 |
|              | F FLOW | KG/H/ENG | 196 | 202 | 208 | 208 | 203 | 196 | 190 | 184 | 178 | 165 | -  |                 |
| 9000         | IAS    | KT       | 197 | 198 | 198 | 198 | 195 | 191 | 186 | 182 | 177 | 168 | -  |                 |
|              | TORQUE | %        | 57  | 59  | 61  | 62  | 60  | 58  | 55  | 53  | 51  | 46  | -  |                 |
|              | F FLOW | KG/H/ENG | 192 | 198 | 203 | 205 | 201 | 194 | 188 | 182 | 176 | 164 | -  |                 |
| 8500         | IAS    | KT       | 197 | 197 | 197 | 197 | 195 | 191 | 187 | 183 | 178 | 169 | -  |                 |
|              | TORQUE | %        | 56  | 58  | 59  | 60  | 59  | 57  | 55  | 52  | 50  | 45  | -  |                 |
|              | F FLOW | KG/H/ENG | 189 | 194 | 199 | 201 | 198 | 192 | 186 | 180 | 174 | 162 | -  |                 |
| 8000         | IAS    | KT       | 196 | 197 | 197 | 197 | 195 | 191 | 187 | 183 | 179 | 169 | -  |                 |
|              | TORQUE | %        | 55  | 57  | 57  | 59  | 58  | 56  | 54  | 52  | 49  | 45  | -  |                 |
|              | F FLOW | KG/H/ENG | 185 | 191 | 195 | 197 | 195 | 190 | 183 | 177 | 172 | 160 | -  |                 |

17 MARCH 1999



**EMBRAER**  
**EMB120 Brasilia**  
**SUPPLEMENTARY PERFORMANCE  
MANUAL**

CRUISE CONTROL

**CRUISE CONTROL**

**ALL ENGINES OPERATING**

**PW118A/B ENGINES**

**INTERMEDIATE CRUISE**

CRUISE CONFIGURATION

NP: 85%

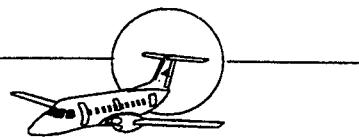
BLEED SWITCH : AUTO

PACK CONTROL SELECTOR : LOW

**ALTITUDE: 27000 FT**

| WEIGHT<br>KG | IOAT (° C)      |     |     |     |     |     |     |     |     |     |  |
|--------------|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
|              | -50             | -40 | -30 | -25 | -20 | -15 | -10 | -5  | 0   | 10  |  |
| 12000        | IAS KT          | 198 | 200 | 193 | 188 | 186 | 178 | -   | -   | -   |  |
|              | TORQUE %        | 66  | 69  | 66  | 64  | 62  | 59  | -   | -   | -   |  |
|              | F FLOW KG/H/ENG | 218 | 230 | 220 | 214 | 208 | 198 | -   | -   | -   |  |
| 11500        | IAS KT          | 197 | 198 | 194 | 190 | 185 | 183 | 174 | -   | -   |  |
|              | TORQUE %        | 64  | 66  | 65  | 63  | 61  | 59  | 56  | -   | -   |  |
|              | F FLOW KG/H/ENG | 212 | 220 | 217 | 211 | 206 | 199 | 189 | -   | -   |  |
| 11000        | IAS KT          | 196 | 196 | 195 | 191 | 187 | 182 | 179 | 170 | -   |  |
|              | TORQUE %        | 62  | 64  | 65  | 63  | 61  | 58  | 56  | 53  | -   |  |
|              | F FLOW KG/H/ENG | 205 | 212 | 215 | 209 | 203 | 197 | 190 | 180 | -   |  |
| 10500        | IAS KT          | 195 | 196 | 196 | 192 | 188 | 184 | 178 | 175 | 165 |  |
|              | TORQUE %        | 60  | 62  | 64  | 62  | 60  | 58  | 55  | 53  | 49  |  |
|              | F FLOW KG/H/ENG | 199 | 206 | 211 | 206 | 201 | 194 | 188 | 181 | 171 |  |
| 10000        | IAS KT          | 195 | 195 | 195 | 193 | 189 | 185 | 180 | 176 | 171 |  |
|              | TORQUE %        | 58  | 60  | 62  | 61  | 59  | 57  | 55  | 52  | 50  |  |
|              | F FLOW KG/H/ENG | 195 | 202 | 207 | 203 | 198 | 192 | 186 | 179 | 173 |  |
| 9500         | IAS KT          | 194 | 195 | 195 | 193 | 189 | 185 | 181 | 176 | 173 |  |
|              | TORQUE %        | 57  | 59  | 61  | 60  | 58  | 56  | 54  | 52  | 50  |  |
|              | F FLOW KG/H/ENG | 191 | 197 | 202 | 201 | 195 | 189 | 183 | 177 | 171 |  |
| 9000         | IAS KT          | 194 | 194 | 194 | 193 | 190 | 186 | 181 | 177 | 172 |  |
|              | TORQUE %        | 56  | 58  | 59  | 59  | 58  | 55  | 53  | 51  | 49  |  |
|              | F FLOW KG/H/ENG | 187 | 193 | 197 | 198 | 193 | 187 | 181 | 175 | 169 |  |
| 8500         | IAS KT          | 193 | 193 | 193 | 193 | 190 | 186 | 182 | 178 | 173 |  |
|              | TORQUE %        | 55  | 56  | 58  | 58  | 57  | 55  | 53  | 50  | 48  |  |
|              | F FLOW KG/H/ENG | 183 | 188 | 193 | 195 | 191 | 184 | 179 | 173 | 167 |  |
| 8000         | IAS KT          | 193 | 193 | 193 | 193 | 190 | 186 | 182 | 178 | 174 |  |
|              | TORQUE %        | 54  | 55  | 57  | 56  | 56  | 54  | 52  | 50  | 47  |  |
|              | F FLOW KG/H/ENG | 179 | 184 | 189 | 191 | 188 | 182 | 176 | 171 | 165 |  |

17 MARCH 1999

SUPPLEMENTARY PERFORMANCE  
MANUAL

## CRUISE CONTROL

ALL ENGINES OPERATING

PW118A/B ENGINES

INTERMEDIATE CRUISE

## CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH : AUTO

PACK CONTROL SELECTOR : LOW

ALTITUDE: 28000 FT

| WEIGHT<br>KG | IAS    | KT       | IOAT (° C) |     |     |     |     |     |     |     |     |     |
|--------------|--------|----------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |        |          | -50        | -40 | -30 | -25 | -20 | -15 | -10 | -5  | 0   | 10  |
| 12000        | TORQUE | %        | 64         | 67  | 64  | 62  | 59  | -   | -   | -   | -   | -   |
|              | F FLOW | KG/H/ENG | 216        | 223 | 213 | 206 | 197 | -   | -   | -   | -   | -   |
|              | IAS    | KT       | 194        | 195 | 189 | 186 | 176 | -   | -   | -   | -   | -   |
| 11500        | TORQUE | %        | 63         | 66  | 63  | 61  | 59  | 56  | -   | -   | -   | -   |
|              | F FLOW | KG/H/ENG | 209        | 220 | 210 | 204 | 197 | 188 | -   | -   | -   | -   |
|              | IAS    | KT       | 193        | 195 | 189 | 186 | 182 | 173 | -   | -   | -   | -   |
| 11000        | TORQUE | %        | 62         | 63  | 62  | 60  | 59  | 56  | 53  | -   | -   | -   |
|              | F FLOW | KG/H/ENG | 203        | 210 | 207 | 202 | 196 | 189 | 179 | -   | -   | -   |
|              | IAS    | KT       | 193        | 194 | 190 | 185 | 182 | 178 | 169 | -   | -   | -   |
| 10500        | TORQUE | %        | 59         | 61  | 61  | 60  | 58  | 56  | 53  | 50  | -   | -   |
|              | F FLOW | KG/H/ENG | 195        | 203 | 204 | 199 | 194 | 187 | 180 | 171 | -   | -   |
|              | IAS    | KT       | 191        | 192 | 191 | 187 | 183 | 178 | 174 | 165 | -   | -   |
| 10000        | TORQUE | %        | 57         | 59  | 61  | 59  | 57  | 55  | 53  | 51  | 47  | -   |
|              | F FLOW | KG/H/ENG | 190        | 197 | 201 | 196 | 191 | 185 | 179 | 173 | 162 | -   |
|              | IAS    | KT       | 191        | 191 | 191 | 187 | 184 | 179 | 176 | 171 | 161 | -   |
| 9500         | TORQUE | %        | 56         | 58  | 59  | 58  | 56  | 54  | 52  | 50  | 47  | -   |
|              | F FLOW | KG/H/ENG | 186        | 192 | 197 | 194 | 188 | 182 | 176 | 170 | 164 | -   |
|              | IAS    | KT       | 190        | 191 | 191 | 188 | 184 | 180 | 176 | 173 | 167 | -   |
| 9000         | TORQUE | %        | 55         | 56  | 58  | 57  | 55  | 53  | 51  | 49  | 47  | 41  |
|              | F FLOW | KG/H/ENG | 182        | 187 | 192 | 191 | 186 | 180 | 174 | 168 | 162 | 148 |
|              | IAS    | KT       | 190        | 190 | 190 | 189 | 185 | 181 | 176 | 172 | 168 | 154 |
| 8500         | TORQUE | %        | 53         | 55  | 56  | 56  | 55  | 53  | 50  | 48  | 46  | 42  |
|              | F FLOW | KG/H/ENG | 177        | 183 | 187 | 189 | 184 | 178 | 171 | 166 | 160 | 149 |
|              | IAS    | KT       | 189        | 190 | 190 | 189 | 186 | 181 | 178 | 174 | 169 | 161 |
| 8000         | TORQUE | %        | 52         | 54  | 55  | 56  | 54  | 52  | 50  | 48  | 46  | 41  |
|              | F FLOW | KG/H/ENG | 174        | 179 | 184 | 186 | 181 | 175 | 169 | 164 | 158 | 148 |

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**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CRUISE CONTROL**

**ALL ENGINES OPERATING**

**PW118A/B ENGINES**

**INTERMEDIATE CRUISE**

**CRUISE CONFIGURATION**

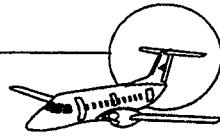
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 29000 FT**

| WEIGHT<br>KG | IAS    | KT       | 191 | 191 | 184 | 174 | IOAT |     | (° C) |     |     |
|--------------|--------|----------|-----|-----|-----|-----|------|-----|-------|-----|-----|
|              |        |          |     |     |     |     | -50  | -40 | -30   | -25 | -20 |
| 12000        | TORQUE | %        | 62  | 65  | 62  | 58  | -    | -   | -     | -   | -   |
|              | F FLOW | KG/H/ENG | 208 | 217 | 204 | 194 | -    | -   | -     | -   | -   |
|              | IAS    | KT       | 190 | 190 | 184 | 181 | 171  | -   | -     | -   | -   |
| 11500        | TORQUE | %        | 61  | 63  | 61  | 59  | 56   | -   | -     | -   | -   |
|              | F FLOW | KG/H/ENG | 204 | 207 | 203 | 196 | 186  | -   | -     | -   | -   |
|              | IAS    | KT       | 189 | 191 | 184 | 179 | 177  | 167 | -     | -   | -   |
| 11000        | TORQUE | %        | 58  | 61  | 60  | 58  | 56   | 53  | -     | -   | -   |
|              | F FLOW | KG/H/ENG | 195 | 202 | 200 | 195 | 188  | 178 | -     | -   | -   |
|              | IAS    | KT       | 189 | 188 | 185 | 181 | 178  | 174 | 164   | -   | -   |
| 10500        | TORQUE | %        | 57  | 60  | 59  | 58  | 56   | 54  | 50    | -   | -   |
|              | F FLOW | KG/H/ENG | 193 | 199 | 197 | 192 | 187  | 179 | 170   | -   | -   |
|              | IAS    | KT       | 187 | 188 | 186 | 182 | 178  | 174 | 170   | 160 | -   |
| 10000        | TORQUE | %        | 56  | 58  | 58  | 57  | 55   | 53  | 51    | 47  | -   |
|              | F FLOW | KG/H/ENG | 185 | 193 | 194 | 189 | 184  | 178 | 171   | 162 | -   |
|              | IAS    | KT       | 186 | 187 | 187 | 183 | 179  | 175 | 171   | 167 | 158 |
| 9500         | TORQUE | %        | 54  | 56  | 58  | 56  | 54   | 52  | 50    | 48  | 44  |
|              | F FLOW | KG/H/ENG | 181 | 187 | 192 | 186 | 181  | 175 | 170   | 163 | 154 |
|              | IAS    | KT       | 186 | 186 | 186 | 184 | 180  | 176 | 171   | 167 | 163 |
| 9000         | TORQUE | %        | 53  | 55  | 56  | 55  | 53   | 51  | 49    | 47  | 45  |
|              | F FLOW | KG/H/ENG | 176 | 182 | 187 | 184 | 179  | 173 | 167   | 162 | 155 |
|              | IAS    | KT       | 186 | 186 | 186 | 184 | 181  | 177 | 172   | 168 | 164 |
| 8500         | TORQUE | %        | 52  | 53  | 55  | 54  | 53   | 51  | 49    | 46  | 44  |
|              | F FLOW | KG/H/ENG | 173 | 178 | 182 | 181 | 176  | 171 | 165   | 159 | 154 |
|              | IAS    | KT       | 185 | 185 | 185 | 184 | 181  | 177 | 173   | 170 | 164 |
| 8000         | TORQUE | %        | 51  | 51  | 54  | 54  | 52   | 50  | 48    | 46  | 44  |
|              | F FLOW | KG/H/ENG | 168 | 173 | 178 | 179 | 174  | 169 | 163   | 157 | 152 |
|              | IAS    | KT       | 185 | 185 | 185 | 184 | 181  | 177 | 173   | 170 | 166 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ALL ENGINES OPERATING**
**PW118A/B ENGINES**
**INTERMEDIATE CRUISE**

## CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 30000 FT**

| WEIGHT<br>KG | IOAT (° C)          |     |     |     |     |     |     |     |     |     |  |
|--------------|---------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
|              | -50                 | -40 | -35 | -30 | -25 | -20 | -15 | -10 | -5  | 0   |  |
| 12000        | IAS KT 187          | 184 | 181 | 170 | -   | -   | -   | -   | -   | -   |  |
|              | TORQUE % 62         | 63  | 61  | 58  | -   | -   | -   | -   | -   | -   |  |
|              | F FLOW KG/H/ENG 204 | 209 | 201 | 191 | -   | -   | -   | -   | -   | -   |  |
| 11500        | IAS KT 186          | 186 | 183 | 178 | 168 | -   | -   | -   | -   | -   |  |
|              | TORQUE % 59         | 62  | 61  | 59  | 55  | -   | -   | -   | -   | -   |  |
|              | F FLOW KG/H/ENG 197 | 207 | 201 | 194 | 184 | -   | -   | -   | -   | -   |  |
| 11000        | IAS KT 185          | 186 | 184 | 181 | 176 | 165 | -   | -   | -   | -   |  |
|              | TORQUE % 58         | 60  | 60  | 58  | 56  | 53  | -   | -   | -   | -   |  |
|              | F FLOW KG/H/ENG 194 | 200 | 198 | 193 | 187 | 177 | -   | -   | -   | -   |  |
| 10500        | IAS KT 184          | 186 | 184 | 180 | 177 | 173 | 163 | -   | -   | -   |  |
|              | TORQUE % 56         | 60  | 59  | 57  | 56  | 54  | 50  | -   | -   | -   |  |
|              | F FLOW KG/H/ENG 190 | 200 | 195 | 190 | 185 | 179 | 169 | -   | -   | -   |  |
| 10000        | IAS KT 184          | 184 | 185 | 181 | 177 | 172 | 170 | 160 | -   | -   |  |
|              | TORQUE % 55         | 57  | 58  | 56  | 55  | 53  | 51  | 47  | -   | -   |  |
|              | F FLOW KG/H/ENG 184 | 189 | 192 | 187 | 182 | 177 | 171 | 161 | -   | -   |  |
| 9500         | IAS KT 182          | 183 | 183 | 182 | 178 | 174 | 169 | 166 | 157 | -   |  |
|              | TORQUE % 53         | 55  | 56  | 56  | 54  | 52  | 50  | 48  | 45  | -   |  |
|              | F FLOW KG/H/ENG 176 | 183 | 185 | 185 | 179 | 175 | 169 | 162 | 154 | -   |  |
| 9000         | IAS KT 182          | 183 | 183 | 183 | 179 | 175 | 170 | 166 | 163 | 154 |  |
|              | TORQUE % 52         | 54  | 54  | 55  | 53  | 51  | 49  | 47  | 45  | 42  |  |
|              | F FLOW KG/H/ENG 172 | 178 | 180 | 182 | 177 | 172 | 166 | 161 | 155 | 146 |  |
| 8500         | IAS KT 182          | 182 | 182 | 182 | 180 | 176 | 172 | 167 | 162 | 159 |  |
|              | TORQUE % 50         | 52  | 53  | 53  | 53  | 51  | 49  | 47  | 45  | 43  |  |
|              | F FLOW KG/H/ENG 168 | 173 | 175 | 177 | 174 | 170 | 164 | 158 | 153 | 147 |  |
| 8000         | IAS KT 181          | 182 | 181 | 181 | 180 | 176 | 172 | 168 | 163 | 159 |  |
|              | TORQUE % 48         | 51  | 52  | 51  | 52  | 50  | 48  | 46  | 44  | 42  |  |
|              | F FLOW KG/H/ENG 164 | 168 | 170 | 173 | 172 | 168 | 162 | 156 | 151 | 146 |  |

17 MARCH 1999

SUPPLEMENTARY PERFORMANCE  
MANUAL

## CRUISE CONTROL

ALL ENGINES OPERATING

PW118A/B ENGINES

INTERMEDIATE CRUISE

## CRUISE CONFIGURATION

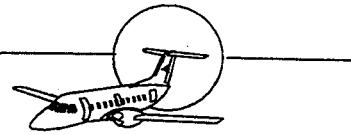
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 31000 FT

| WEIGHT<br>KG | IAS             | KT  | 184 | 178 | IOAT (° C) |     |     |     |     |     |     |     |    |
|--------------|-----------------|-----|-----|-----|------------|-----|-----|-----|-----|-----|-----|-----|----|
|              |                 |     |     |     | -50        | -40 | -35 | -30 | -25 | -20 | -15 | -10 | -5 |
| 12000        | TORQUE %        | 61  | 61  | -   | -          | -   | -   | -   | -   | -   | -   | -   | -  |
|              | F FLOW KG/H/ENG | 203 | 199 | -   | -          | -   | -   | -   | -   | -   | -   | -   | -  |
|              | IAS             | KT  | 183 | 180 | 175        | -   | -   | -   | -   | -   | -   | -   | -  |
| 11500        | TORQUE %        | 59  | 60  | 58  | -          | -   | -   | -   | -   | -   | -   | -   | -  |
|              | F FLOW KG/H/ENG | 195 | 199 | 192 | -          | -   | -   | -   | -   | -   | -   | -   | -  |
|              | IAS             | KT  | 182 | 183 | 179        | 174 | 162 | -   | -   | -   | -   | -   | -  |
| 11000        | TORQUE %        | 57  | 58  | 58  | 56         | 52  | -   | -   | -   | -   | -   | -   | -  |
|              | F FLOW KG/H/ENG | 190 | 197 | 191 | 184        | 174 | -   | -   | -   | -   | -   | -   | -  |
|              | IAS             | KT  | 182 | 182 | 181        | 177 | 171 | 161 | -   | -   | -   | -   | -  |
| 10500        | TORQUE %        | 55  | 57  | 57  | 55         | 53  | 50  | -   | -   | -   | -   | -   | -  |
|              | F FLOW KG/H/ENG | 188 | 194 | 189 | 184        | 177 | 167 | -   | -   | -   | -   | -   | -  |
|              | IAS             | KT  | 181 | 181 | 180        | 176 | 174 | 169 | 159 | -   | -   | -   | -  |
| 10000        | TORQUE %        | 52  | 56  | 56  | 55         | 53  | 51  | 48  | -   | -   | -   | -   | -  |
|              | F FLOW KG/H/ENG | 175 | 181 | 186 | 181        | 176 | 170 | 160 | -   | -   | -   | -   | -  |
|              | IAS             | KT  | 180 | 180 | 180        | 176 | 174 | 170 | 166 | 156 | -   | -   | -  |
| 9500         | TORQUE %        | 51  | 53  | 54  | 54         | 52  | 50  | 48  | 45  | -   | -   | -   | -  |
|              | F FLOW KG/H/ENG | 175 | 180 | 183 | 178        | 173 | 168 | 162 | 153 | -   | -   | -   | -  |
|              | IAS             | KT  | 178 | 179 | 179        | 177 | 174 | 170 | 167 | 162 | 154 | -   | -  |
| 9000         | TORQUE %        | 50  | 53  | 53  | 53         | 51  | 49  | 47  | 45  | 42  | -   | -   | -  |
|              | F FLOW KG/H/ENG | 168 | 174 | 176 | 175        | 171 | 165 | 160 | 154 | 146 | -   | -   | -  |
|              | IAS             | KT  | 178 | 179 | 179        | 178 | 175 | 172 | 167 | 164 | 159 | 151 | -  |
| 8500         | TORQUE %        | 48  | 50  | 51  | 52         | 51  | 48  | 47  | 45  | 43  | 40  | -   | -  |
|              | F FLOW KG/H/ENG | 164 | 169 | 171 | 172        | 168 | 163 | 158 | 152 | 147 | 139 | -   | -  |
|              | IAS             | KT  | 178 | 178 | 178        | 178 | 175 | 172 | 167 | 164 | 159 | 155 | -  |
| 8000         | TORQUE %        | 47  | 49  | 49  | 51         | 50  | 48  | 46  | 44  | 42  | 40  | -   | -  |
|              | F FLOW KG/H/ENG | 159 | 164 | 166 | 168        | 166 | 161 | 155 | 150 | 145 | 139 | -   | -  |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ALL ENGINES OPERATING**
**PW118A/B ENGINES**
**INTERMEDIATE CRUISE**
**CRUISE CONFIGURATION**

NP: 85%

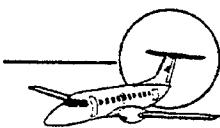
BLEED SWITCH : AUTO

PACK CONTROL SELECTOR : LOW

**ALTITUDE: 32000 FT**

| WEIGHT<br>KG | IAS<br>KT          | TORQUE<br>% | F FLOW<br>KG/H/ENG | IOAT (° C) |     |     |     |     |     |     |     |    |
|--------------|--------------------|-------------|--------------------|------------|-----|-----|-----|-----|-----|-----|-----|----|
|              |                    |             |                    | -50        | -40 | -35 | -30 | -25 | -20 | -15 | -10 | -5 |
| 12000        | IAS<br>KT          | 180         | -                  | -          | -   | -   | -   | -   | -   | -   | -   | -  |
|              | TORQUE<br>%        | 62          | -                  | -          | -   | -   | -   | -   | -   | -   | -   | -  |
|              | F FLOW<br>KG/H/ENG | 203         | -                  | -          | -   | -   | -   | -   | -   | -   | -   | -  |
| 11500        | IAS<br>KT          | 180         | 172                | -          | -   | -   | -   | -   | -   | -   | -   | -  |
|              | TORQUE<br>%        | 58          | 57                 | -          | -   | -   | -   | -   | -   | -   | -   | -  |
|              | F FLOW<br>KG/H/ENG | 196         | 188                | -          | -   | -   | -   | -   | -   | -   | -   | -  |
| 11000        | IAS<br>KT          | 179         | 177                | 171        | -   | -   | -   | -   | -   | -   | -   | -  |
|              | TORQUE<br>%        | 57          | 57                 | 55         | -   | -   | -   | -   | -   | -   | -   | -  |
|              | F FLOW<br>KG/H/ENG | 187         | 189                | 181        | -   | -   | -   | -   | -   | -   | -   | -  |
| 10500        | IAS<br>KT          | 178         | 178                | 174        | 169 | 158 | -   | -   | -   | -   | -   | -  |
|              | TORQUE<br>%        | 54          | 55                 | 55         | 53  | 50  | -   | -   | -   | -   | -   | -  |
|              | F FLOW<br>KG/H/ENG | 181         | 187                | 182        | 175 | 165 | -   | -   | -   | -   | -   | -  |
| 10000        | IAS<br>KT          | 178         | 178                | 176        | 172 | 167 | 156 | -   | -   | -   | -   | -  |
|              | TORQUE<br>%        | 53          | 53                 | 54         | 52  | 51  | 47  | -   | -   | -   | -   | -  |
|              | F FLOW<br>KG/H/ENG | 177         | 178                | 179        | 175 | 168 | 159 | -   | -   | -   | -   | -  |
| 9500         | IAS<br>KT          | 176         | 176                | 176        | 174 | 169 | 164 | 155 | -   | -   | -   | -  |
|              | TORQUE<br>%        | 50          | 51                 | 52         | 52  | 50  | 48  | 45  | -   | -   | -   | -  |
|              | F FLOW<br>KG/H/ENG | 169         | 172                | 176        | 172 | 167 | 161 | 152 | -   | -   | -   | -  |
| 9000         | IAS<br>KT          | 176         | 176                | 176        | 174 | 171 | 166 | 162 | 152 | -   | -   | -  |
|              | TORQUE<br>%        | 49          | 50                 | 50         | 51  | 49  | 48  | 46  | 43  | -   | -   | -  |
|              | F FLOW<br>KG/H/ENG | 165         | 170                | 170        | 169 | 164 | 159 | 154 | 145 | -   | -   | -  |
| 8500         | IAS<br>KT          | 174         | 174                | 174        | 173 | 169 | 166 | 164 | 158 | 150 | -   | -  |
|              | TORQUE<br>%        | 47          | 48                 | 49         | 50  | 48  | 47  | 45  | 43  | 40  | -   | -  |
|              | F FLOW<br>KG/H/ENG | 158         | 162                | 163        | 166 | 161 | 157 | 151 | 146 | 138 | -   | -  |
| 8000         | IAS<br>KT          | 173         | 173                | 173        | 173 | 170 | 166 | 163 | 159 | 156 | 148 | -  |
|              | TORQUE<br>%        | 45          | 46                 | 47         | 49  | 48  | 46  | 44  | 43  | 41  | 38  | -  |
|              | F FLOW<br>KG/H/ENG | 155         | 160                | 163        | 163 | 159 | 154 | 149 | 144 | 140 | 132 | -  |

17 MARCH 1999



SUPPLEMENTARY PERFORMANCE  
MANUAL

CRUISE CONTROL  
ONE ENGINE INOPERATIVE

PW118A ENGINES

LONG RANGE CRUISE

CRUISE CONFIGURATION

NP: 100%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 5000 FT

| WEIGHT<br>KG | IAS<br>KT<br>%<br>F FLOW KG/H/ENG | IOAT ( °C )      |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|--------------|-----------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|              |                                   | -50              | -30              | -20              | -10              | 0                | 10               | 20               | 30               | 40               | 50               |
| 12000        | IAS<br>KT<br>%<br>F FLOW KG/H/ENG | 182<br>82<br>344 | 183<br>86<br>359 | 182<br>87<br>365 | 182<br>89<br>373 | 182<br>90<br>379 | 181<br>92<br>385 | 181<br>93<br>391 | 180<br>94<br>396 | 161<br>82<br>361 | -<br>-<br>-      |
| 11500        | IAS<br>KT<br>%<br>F FLOW KG/H/ENG | 180<br>78<br>332 | 180<br>81<br>345 | 180<br>83<br>353 | 180<br>84<br>358 | 179<br>86<br>366 | 179<br>88<br>372 | 179<br>89<br>378 | 178<br>90<br>384 | 166<br>82<br>364 | -<br>-<br>-      |
| 11000        | IAS<br>KT<br>%<br>F FLOW KG/H/ENG | 178<br>74<br>321 | 177<br>78<br>333 | 178<br>79<br>341 | 178<br>81<br>346 | 177<br>82<br>354 | 177<br>84<br>360 | 177<br>85<br>365 | 177<br>86<br>371 | 171<br>84<br>366 | -<br>-<br>-      |
| 10500        | IAS<br>KT<br>%<br>F FLOW KG/H/ENG | 175<br>71<br>308 | 175<br>74<br>322 | 175<br>75<br>327 | 176<br>77<br>335 | 176<br>78<br>342 | 175<br>79<br>346 | 175<br>81<br>351 | 175<br>82<br>359 | 174<br>83<br>363 | 149<br>67<br>318 |
| 10000        | IAS<br>KT<br>%<br>F FLOW KG/H/ENG | 173<br>67<br>299 | 173<br>70<br>309 | 173<br>71<br>316 | 173<br>73<br>323 | 173<br>74<br>329 | 173<br>76<br>334 | 173<br>77<br>340 | 172<br>78<br>345 | 173<br>80<br>353 | 155<br>66<br>319 |
| 9500         | IAS<br>KT<br>%<br>F FLOW KG/H/ENG | 171<br>64<br>287 | 171<br>67<br>301 | 171<br>68<br>306 | 171<br>69<br>311 | 171<br>70<br>318 | 171<br>72<br>323 | 171<br>73<br>329 | 171<br>74<br>334 | 170<br>75<br>339 | 158<br>68<br>322 |
| 9000         | IAS<br>KT<br>%<br>F FLOW KG/H/ENG | 169<br>61<br>279 | 169<br>63<br>289 | 168<br>64<br>295 | 169<br>66<br>301 | 169<br>67<br>306 | 168<br>68<br>311 | 168<br>69<br>318 | 169<br>70<br>323 | 168<br>71<br>328 | 163<br>69<br>323 |
| 8500         | IAS<br>KT<br>%<br>F FLOW KG/H/ENG | 167<br>58<br>270 | 167<br>60<br>281 | 167<br>61<br>286 | 167<br>62<br>291 | 166<br>63<br>296 | 166<br>64<br>301 | 166<br>65<br>306 | 166<br>66<br>311 | 166<br>68<br>318 | 166<br>68<br>321 |
| 8000         | IAS<br>KT<br>%<br>F FLOW KG/H/ENG | 165<br>55<br>261 | 165<br>57<br>272 | 165<br>58<br>277 | 164<br>59<br>281 | 165<br>60<br>286 | 164<br>61<br>291 | 164<br>62<br>296 | 164<br>63<br>301 | 164<br>64<br>306 | 164<br>65<br>311 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ONE ENGINE INOPERATIVE**
**PW118A ENGINES**
**LONG RANGE CRUISE**
**CRUISE CONFIGURATION**

NP: 100%

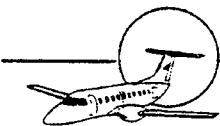
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 6000 FT**

|       | WEIGHT<br>KG                          | IOAT ( °C )      |                  |                  |                  |                  |                  |                  |                  |                  |                  |  |  |
|-------|---------------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--|--|
|       |                                       | -50              | -30              | -20              | -10              | 0                | 10               | 20               | 30               | 40               | 50               |  |  |
| 12000 | IAS KT<br>TORQUE %<br>F FLOW KG/H/ENG | 181<br>83<br>342 | 181<br>86<br>357 | 181<br>87<br>363 | 181<br>89<br>371 | 180<br>91<br>377 | 179<br>92<br>383 | 180<br>94<br>390 | 177<br>94<br>392 | -<br>-<br>-      | -<br>-<br>-      |  |  |
| 11500 | IAS KT<br>TORQUE %<br>F FLOW KG/H/ENG | 179<br>79<br>330 | 179<br>82<br>345 | 179<br>83<br>350 | 178<br>85<br>356 | 178<br>86<br>364 | 178<br>88<br>370 | 177<br>89<br>376 | 176<br>90<br>380 | 155<br>77<br>341 | -<br>-<br>-      |  |  |
| 11000 | IAS KT<br>TORQUE %<br>F FLOW KG/H/ENG | 176<br>75<br>319 | 176<br>78<br>331 | 177<br>80<br>338 | 176<br>81<br>344 | 176<br>82<br>349 | 176<br>84<br>357 | 176<br>85<br>363 | 175<br>86<br>367 | 162<br>78<br>343 | -<br>-<br>-      |  |  |
| 10500 | IAS KT<br>TORQUE %<br>F FLOW KG/H/ENG | 174<br>71<br>306 | 174<br>74<br>320 | 174<br>75<br>325 | 174<br>77<br>332 | 174<br>78<br>337 | 173<br>79<br>343 | 173<br>81<br>350 | 173<br>82<br>356 | 166<br>78<br>345 | -<br>-<br>-      |  |  |
| 10000 | IAS KT<br>TORQUE %<br>F FLOW KG/H/ENG | 171<br>67<br>295 | 171<br>70<br>307 | 171<br>72<br>314 | 172<br>73<br>321 | 172<br>74<br>326 | 171<br>76<br>331 | 171<br>77<br>337 | 171<br>78<br>342 | 170<br>79<br>346 | 147<br>64<br>305 |  |  |
| 9500  | IAS KT<br>TORQUE %<br>F FLOW KG/H/ENG | 169<br>64<br>284 | 169<br>67<br>296 | 169<br>68<br>303 | 169<br>69<br>308 | 169<br>71<br>315 | 170<br>72<br>320 | 169<br>73<br>325 | 169<br>74<br>330 | 168<br>75<br>334 | 153<br>65<br>306 |  |  |
| 9000  | IAS KT<br>TORQUE %<br>F FLOW KG/H/ENG | 167<br>61<br>275 | 167<br>63<br>286 | 167<br>64<br>291 | 167<br>66<br>297 | 167<br>67<br>302 | 167<br>68<br>307 | 167<br>69<br>313 | 167<br>70<br>319 | 166<br>71<br>323 | 156<br>65<br>308 |  |  |
| 8500  | IAS KT<br>TORQUE %<br>F FLOW KG/H/ENG | 165<br>58<br>265 | 165<br>60<br>276 | 165<br>61<br>281 | 165<br>62<br>285 | 165<br>63<br>292 | 165<br>64<br>297 | 165<br>65<br>302 | 165<br>67<br>307 | 165<br>68<br>312 | 161<br>66<br>311 |  |  |
| 8000  | IAS KT<br>TORQUE %<br>F FLOW KG/H/ENG | 163<br>55<br>257 | 163<br>57<br>267 | 163<br>58<br>271 | 163<br>59<br>276 | 163<br>60<br>281 | 163<br>61<br>287 | 162<br>62<br>290 | 162<br>63<br>295 | 162<br>64<br>302 | 162<br>65<br>305 |  |  |

20 NOVEMBER 1992



SUPPLEMENTARY PERFORMANCE  
MANUAL

CRUISE CONTROL  
ONE ENGINE INOPERATIVE

PW118A ENGINES

LONG RANGE CRUISE

CRUISE CONFIGURATION

NP: 100%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 7000 FT

| WEIGHT<br>KG | IAS<br>KT       | TORQUE<br>% | IOAT ( °C ) |     |     |     |     |     |     |     |     |     |
|--------------|-----------------|-------------|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |                 |             | -50         | -30 | -20 | -10 | 0   | 10  | 20  | 30  | 40  | 50  |
| 12000        | IAS<br>KT       | 181         | 180         | 179 | 179 | 178 | 178 | 178 | 178 | 167 | -   | -   |
|              | TORQUE<br>%     | 83          | 86          | 88  | 90  | 91  | 93  | 94  | 94  | 88  | -   | -   |
|              | F FLOW KG/H/ENG | 343         | 356         | 361 | 369 | 375 | 382 | 388 | 388 | 372 | -   | -   |
| 11500        | IAS<br>KT       | 178         | 177         | 177 | 177 | 177 | 176 | 176 | 176 | 173 | -   | -   |
|              | TORQUE<br>%     | 79          | 82          | 84  | 85  | 87  | 88  | 90  | 90  | 89  | -   | -   |
|              | F FLOW KG/H/ENG | 331         | 343         | 349 | 354 | 362 | 366 | 374 | 374 | 375 | -   | -   |
| 11000        | IAS<br>KT       | 175         | 176         | 175 | 174 | 175 | 175 | 175 | 174 | 173 | 149 | -   |
|              | TORQUE<br>%     | 75          | 79          | 80  | 81  | 83  | 84  | 85  | 86  | 86  | 72  | -   |
|              | F FLOW KG/H/ENG | 315         | 331         | 336 | 341 | 349 | 355 | 359 | 365 | 365 | 322 | -   |
| 10500        | IAS<br>KT       | 172         | 173         | 173 | 172 | 172 | 172 | 172 | 172 | 171 | 157 | -   |
|              | TORQUE<br>%     | 71          | 74          | 76  | 77  | 78  | 80  | 81  | 82  | 82  | 73  | -   |
|              | F FLOW KG/H/ENG | 304         | 317         | 324 | 329 | 335 | 340 | 348 | 352 | 352 | 325 | -   |
| 10000        | IAS<br>KT       | 170         | 170         | 170 | 171 | 170 | 170 | 170 | 170 | 170 | 161 | -   |
|              | TORQUE<br>%     | 68          | 70          | 72  | 73  | 74  | 76  | 77  | 78  | 78  | 74  | -   |
|              | F FLOW KG/H/ENG | 293         | 304         | 311 | 318 | 323 | 328 | 334 | 339 | 339 | 329 | -   |
| 9500         | IAS<br>KT       | 168         | 168         | 168 | 168 | 168 | 168 | 168 | 167 | 167 | 166 | 145 |
|              | TORQUE<br>%     | 64          | 67          | 68  | 69  | 71  | 72  | 73  | 74  | 74  | 74  | 62  |
|              | F FLOW KG/H/ENG | 282         | 294         | 298 | 305 | 312 | 317 | 320 | 327 | 327 | 329 | 292 |
| 9000         | IAS<br>KT       | 165         | 165         | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 150 |
|              | TORQUE<br>%     | 60          | 63          | 64  | 65  | 67  | 68  | 69  | 70  | 71  | 71  | 62  |
|              | F FLOW KG/H/ENG | 270         | 281         | 288 | 293 | 299 | 304 | 309 | 314 | 314 | 319 | 294 |
| 8500         | IAS<br>KT       | 163         | 163         | 163 | 163 | 163 | 163 | 163 | 163 | 163 | 163 | 155 |
|              | TORQUE<br>%     | 57          | 60          | 61  | 62  | 63  | 64  | 65  | 66  | 67  | 67  | 63  |
|              | F FLOW KG/H/ENG | 261         | 271         | 276 | 282 | 287 | 292 | 299 | 303 | 308 | 308 | 297 |
| 8000         | IAS<br>KT       | 162         | 161         | 161 | 161 | 161 | 161 | 161 | 161 | 161 | 161 | 158 |
|              | TORQUE<br>%     | 55          | 56          | 57  | 58  | 59  | 60  | 61  | 63  | 64  | 64  | 63  |
|              | F FLOW KG/H/ENG | 252         | 262         | 266 | 273 | 277 | 282 | 287 | 292 | 296 | 296 | 296 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ONE ENGINE INOPERATIVE**
**PW118A ENGINES**
**LONG RANGE CRUISE**
**CRUISE CONFIGURATION**

NP: 100%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 8000 FT**

| WEIGHT<br>KG |                         |                     | IOAT ( °C )      |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|--------------|-------------------------|---------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|              |                         |                     | -50              | -30              | -20              | -10              | 0                | 10               | 20               | 30               | 40               | 50               |
| 12000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 180<br>84<br>343 | 179<br>87<br>354 | 178<br>89<br>362 | 178<br>90<br>367 | 177<br>91<br>374 | 177<br>93<br>380 | 175<br>94<br>382 | 159<br>84<br>353 | -<br>-<br>-      | -<br>-<br>-      |
| 11500        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 177<br>80<br>329 | 176<br>83<br>341 | 176<br>84<br>347 | 175<br>86<br>354 | 175<br>87<br>360 | 175<br>89<br>366 | 175<br>90<br>372 | 164<br>84<br>357 | -<br>-<br>-      | -<br>-<br>-      |
| 11000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 174<br>76<br>315 | 174<br>79<br>329 | 174<br>80<br>334 | 173<br>81<br>340 | 173<br>83<br>347 | 172<br>84<br>351 | 172<br>86<br>358 | 170<br>86<br>359 | -<br>-<br>-      | -<br>-<br>-      |
| 10500        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 171<br>72<br>302 | 171<br>75<br>315 | 171<br>76<br>320 | 171<br>77<br>327 | 171<br>79<br>333 | 171<br>80<br>338 | 170<br>81<br>343 | 169<br>82<br>347 | 144<br>68<br>305 | -<br>-<br>-      |
| 10000        | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 169<br>68<br>291 | 169<br>71<br>302 | 169<br>72<br>309 | 169<br>73<br>314 | 168<br>75<br>319 | 169<br>76<br>326 | 169<br>77<br>331 | 168<br>79<br>337 | 152<br>68<br>307 | -<br>-<br>-      |
| 9500         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 166<br>64<br>278 | 166<br>67<br>291 | 166<br>68<br>296 | 166<br>69<br>302 | 166<br>71<br>307 | 166<br>72<br>312 | 166<br>73<br>317 | 166<br>75<br>324 | 156<br>69<br>310 | 135<br>58<br>279 |
| 9000         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 164<br>61<br>268 | 164<br>63<br>279 | 164<br>64<br>283 | 164<br>66<br>290 | 164<br>67<br>296 | 164<br>68<br>301 | 164<br>69<br>306 | 163<br>70<br>311 | 161<br>70<br>311 | 144<br>59<br>281 |
| 8500         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 162<br>57<br>256 | 161<br>59<br>267 | 162<br>61<br>273 | 162<br>62<br>278 | 161<br>63<br>284 | 162<br>64<br>289 | 162<br>65<br>294 | 161<br>66<br>298 | 161<br>67<br>303 | 149<br>59<br>282 |
| 8000         | IAS<br>TORQUE<br>F FLOW | KT<br>%<br>KG/H/ENG | 160<br>54<br>249 | 159<br>56<br>257 | 159<br>57<br>263 | 159<br>58<br>268 | 159<br>59<br>272 | 159<br>60<br>277 | 159<br>61<br>283 | 159<br>63<br>288 | 159<br>64<br>293 | 152<br>60<br>283 |

20 NOVEMBER 1992



SUPPLEMENTARY PERFORMANCE  
MANUAL

CRUISE CONTROL  
ONE ENGINE INOPERATIVE

PW118A ENGINES

LONG RANGE CRUISE

CRUISE CONFIGURATION

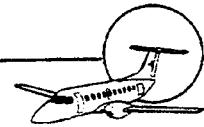
NP: 100%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 9000 FT

| WEIGHT<br>KG | IAS<br>KT<br>F FLOW KG/H/ENG     | TORQUE<br>%<br>KG/H/ENG | IOAT ( °C )      |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|--------------|----------------------------------|-------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|              |                                  |                         | -50              | -30              | -20              | -10              | 0                | 10               | 20               | 30               | 40               | 50               |
| 12000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG     | 179<br>85<br>342 | 178<br>88<br>355 | 177<br>89<br>361 | 176<br>91<br>366 | 176<br>92<br>373 | 175<br>94<br>379 | 169<br>91<br>372 | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      |
| 11500        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG     | 176<br>81<br>329 | 175<br>84<br>340 | 175<br>85<br>347 | 174<br>86<br>353 | 174<br>88<br>359 | 174<br>89<br>365 | 171<br>90<br>367 | 154<br>79<br>335 | -<br>-<br>-      | -<br>-<br>-      |
| 11000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG     | 173<br>76<br>314 | 173<br>79<br>327 | 172<br>80<br>332 | 172<br>82<br>338 | 171<br>83<br>343 | 171<br>85<br>349 | 171<br>86<br>357 | 160<br>80<br>337 | -<br>-<br>-      | -<br>-<br>-      |
| 10500        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG     | 170<br>72<br>300 | 170<br>75<br>313 | 170<br>76<br>318 | 170<br>78<br>325 | 170<br>79<br>330 | 169<br>80<br>336 | 169<br>82<br>341 | 164<br>80<br>339 | -<br>-<br>-      | -<br>-<br>-      |
| 10000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG     | 168<br>68<br>289 | 168<br>71<br>300 | 168<br>72<br>306 | 167<br>73<br>311 | 167<br>75<br>317 | 167<br>76<br>323 | 167<br>77<br>329 | 166<br>78<br>332 | 143<br>65<br>293 | -<br>-<br>-      |
| 9500         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG     | 165<br>64<br>276 | 165<br>67<br>287 | 165<br>68<br>293 | 165<br>70<br>300 | 165<br>71<br>305 | 165<br>72<br>310 | 165<br>73<br>315 | 164<br>75<br>320 | 149<br>65<br>294 | -<br>-<br>-      |
| 9000         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG     | 162<br>61<br>264 | 162<br>63<br>276 | 162<br>64<br>281 | 163<br>66<br>287 | 163<br>67<br>293 | 162<br>68<br>297 | 162<br>69<br>303 | 162<br>70<br>308 | 153<br>66<br>296 | 134<br>56<br>267 |
| 8500         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG     | 160<br>57<br>254 | 160<br>59<br>264 | 160<br>61<br>270 | 160<br>62<br>275 | 160<br>63<br>281 | 160<br>64<br>286 | 160<br>65<br>290 | 160<br>66<br>295 | 158<br>67<br>298 | 142<br>56<br>269 |
| 8000         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>KG/H/ENG     | 158<br>54<br>245 | 158<br>56<br>255 | 158<br>57<br>259 | 158<br>58<br>265 | 157<br>59<br>269 | 158<br>60<br>274 | 158<br>61<br>278 | 158<br>62<br>283 | 157<br>63<br>288 | 146<br>57<br>272 |



## CRUISE CONTROL ONE ENGINE INOPERATIVE

PW118A ENGINES

### LONG RANGE CRUISE

## CRUISE CONFIGURATION

NP: 100%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 10000 FT**

| WEIGHT<br>KG | IOAT ( °C )                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|--------------|------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|              | -50                          | -40              | -30              | -20              | -10              | 0                | 10               | 20               | 30               | 40               |                  |
| 12000        | IAS<br>KT<br>F FLOW KG/H/ENG | 178<br>85<br>341 | 177<br>87<br>349 | 177<br>89<br>354 | 176<br>90<br>360 | 175<br>91<br>366 | 174<br>92<br>372 | 172<br>93<br>374 | 160<br>86<br>353 | -<br>-<br>-      | -                |
| 11500        | IAS<br>KT<br>F FLOW KG/H/ENG | 175<br>81<br>328 | 174<br>83<br>334 | 174<br>84<br>341 | 173<br>85<br>346 | 173<br>87<br>352 | 173<br>88<br>358 | 171<br>89<br>362 | 165<br>86<br>355 | -<br>-<br>-      | -                |
| 11000        | IAS<br>KT<br>F FLOW KG/H/ENG | 172<br>77<br>314 | 172<br>78<br>319 | 172<br>80<br>326 | 171<br>81<br>331 | 171<br>82<br>336 | 170<br>84<br>342 | 170<br>85<br>350 | 168<br>86<br>352 | 148<br>74<br>316 | -                |
| 10500        | IAS<br>KT<br>F FLOW KG/H/ENG | 170<br>73<br>300 | 170<br>74<br>307 | 169<br>75<br>312 | 169<br>77<br>317 | 168<br>78<br>323 | 168<br>79<br>329 | 167<br>81<br>334 | 167<br>82<br>340 | 155<br>75<br>318 | -                |
| 10000        | IAS<br>KT<br>F FLOW KG/H/ENG | 167<br>69<br>287 | 166<br>70<br>293 | 167<br>72<br>300 | 166<br>73<br>304 | 166<br>74<br>309 | 166<br>75<br>316 | 166<br>77<br>321 | 165<br>77<br>325 | 160<br>76<br>322 | -                |
| 9500         | IAS<br>KT<br>F FLOW KG/H/ENG | 164<br>65<br>274 | 164<br>66<br>280 | 164<br>67<br>287 | 164<br>69<br>291 | 164<br>70<br>297 | 163<br>71<br>302 | 163<br>72<br>307 | 163<br>74<br>312 | 161<br>74<br>316 | 141<br>62<br>281 |
| 9000         | IAS<br>KT<br>F FLOW KG/H/ENG | 161<br>61<br>262 | 161<br>62<br>268 | 161<br>63<br>274 | 161<br>65<br>279 | 161<br>66<br>285 | 161<br>67<br>289 | 161<br>68<br>294 | 161<br>69<br>300 | 161<br>71<br>305 | 148<br>63<br>282 |
| 8500         | IAS<br>KT<br>F FLOW KG/H/ENG | 159<br>57<br>252 | 158<br>58<br>256 | 159<br>60<br>262 | 158<br>61<br>266 | 159<br>62<br>272 | 159<br>63<br>278 | 159<br>64<br>283 | 158<br>65<br>288 | 158<br>66<br>292 | 152<br>63<br>285 |
| 8000         | IAS<br>KT<br>F FLOW KG/H/ENG | 156<br>54<br>241 | 156<br>55<br>246 | 156<br>56<br>250 | 156<br>57<br>256 | 156<br>58<br>260 | 156<br>59<br>266 | 156<br>60<br>271 | 156<br>61<br>275 | 156<br>62<br>280 | 155<br>63<br>281 |

20 NOVEMBER 1992



**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CRUISE CONTROL  
ONE ENGINE INOPERATIVE**

**PW118A ENGINES**

**LONG RANGE CRUISE**

**CRUISE CONFIGURATION**

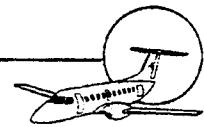
NP: 100%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 11000 FT**

| WEIGHT<br>KG | IOAT ( °C )                      |                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|--------------|----------------------------------|----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|              | -50                              | -40            | -30              | -20              | -10              | 0                | 10               | 20               | 30               | 40               |                  |                  |
| 12000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>341 | 176<br>86<br>348 | 176<br>88<br>356 | 175<br>89<br>362 | 175<br>91<br>365 | 173<br>92<br>365 | 172<br>93<br>370 | 167<br>92<br>370 | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      |
| 11500        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>328 | 174<br>82<br>335 | 174<br>83<br>340 | 173<br>85<br>345 | 172<br>86<br>351 | 172<br>88<br>357 | 171<br>89<br>357 | 168<br>89<br>359 | 157<br>89<br>339 | -<br>-<br>-      | -<br>-<br>-      |
| 11000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>313 | 171<br>78<br>320 | 171<br>79<br>325 | 170<br>80<br>325 | 170<br>82<br>332 | 169<br>83<br>335 | 169<br>85<br>343 | 168<br>86<br>347 | 162<br>83<br>340 | -<br>-<br>-      | -<br>-<br>-      |
| 10500        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>301 | 169<br>74<br>305 | 168<br>75<br>310 | 168<br>76<br>317 | 167<br>77<br>322 | 167<br>79<br>327 | 167<br>80<br>327 | 166<br>81<br>333 | 165<br>82<br>337 | 142<br>70<br>299 | -<br>-<br>-      |
| 10000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>285 | 166<br>69<br>292 | 166<br>71<br>298 | 165<br>72<br>303 | 165<br>73<br>308 | 165<br>74<br>308 | 164<br>76<br>313 | 163<br>77<br>318 | 164<br>78<br>325 | 151<br>70<br>301 | -<br>-<br>-      |
| 9500         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>273 | 162<br>65<br>279 | 163<br>67<br>285 | 163<br>68<br>289 | 162<br>69<br>295 | 162<br>70<br>295 | 162<br>71<br>300 | 162<br>73<br>305 | 161<br>73<br>308 | 155<br>71<br>304 | -<br>-<br>-      |
| 9000         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>260 | 160<br>61<br>266 | 160<br>62<br>272 | 160<br>64<br>278 | 160<br>65<br>282 | 160<br>66<br>287 | 160<br>67<br>287 | 160<br>68<br>292 | 160<br>70<br>298 | 158<br>70<br>300 | 140<br>60<br>269 |
| 8500         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>248 | 157<br>57<br>254 | 157<br>59<br>260 | 157<br>60<br>264 | 157<br>61<br>270 | 158<br>62<br>274 | 157<br>63<br>274 | 157<br>64<br>279 | 157<br>65<br>285 | 157<br>67<br>289 | 146<br>60<br>271 |
| 8000         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | KT<br>%<br>238 | 155<br>54<br>244 | 155<br>55<br>248 | 155<br>56<br>252 | 155<br>57<br>258 | 155<br>58<br>258 | 155<br>59<br>264 | 155<br>60<br>268 | 155<br>62<br>268 | 154<br>62<br>272 | 150<br>60<br>273 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ONE ENGINE INOPERATIVE**
**PW118A ENGINES**
**LONG RANGE CRUISE**

## CRUISE CONFIGURATION

NP: 100%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 12000 FT**

| WEIGHT<br>KG | IAS<br>KT       | TORQUE<br>% | IOAT ( °C ) |     |     |     |     |     |     |     |     |    |
|--------------|-----------------|-------------|-------------|-----|-----|-----|-----|-----|-----|-----|-----|----|
|              |                 |             | -50         | -40 | -30 | -20 | -10 | 0   | 10  | 20  | 30  | 40 |
| 12000        | IAS<br>KT       | 175         | 175         | 174 | 173 | 171 | 169 | 158 | -   | -   | -   | -  |
|              | TORQUE<br>%     | 87          | 88          | 90  | 91  | 92  | 93  | 87  | -   | -   | -   | -  |
|              | F FLOW KG/H/ENG | 342         | 348         | 355 | 359 | 365 | 367 | 349 | -   | -   | -   | -  |
| 11500        | IAS<br>KT       | 173         | 172         | 172 | 171 | 170 | 169 | 164 | -   | -   | -   | -  |
|              | TORQUE<br>%     | 82          | 84          | 85  | 87  | 88  | 89  | 88  | -   | -   | -   | -  |
|              | F FLOW KG/H/ENG | 327         | 334         | 339 | 347 | 350 | 354 | 354 | -   | -   | -   | -  |
| 11000        | IAS<br>KT       | 170         | 170         | 169 | 169 | 168 | 167 | 165 | 154 | -   | -   | -  |
|              | TORQUE<br>%     | 78          | 80          | 81  | 82  | 84  | 85  | 85  | 79  | -   | -   | -  |
|              | F FLOW KG/H/ENG | 314         | 319         | 326 | 331 | 336 | 342 | 344 | 325 | -   | -   | -  |
| 10500        | IAS<br>KT       | 168         | 167         | 167 | 166 | 166 | 165 | 165 | 160 | -   | -   | -  |
|              | TORQUE<br>%     | 74          | 75          | 77  | 78  | 79  | 81  | 82  | 80  | -   | -   | -  |
|              | F FLOW KG/H/ENG | 299         | 304         | 311 | 316 | 321 | 328 | 332 | 327 | -   | -   | -  |
| 10000        | IAS<br>KT       | 165         | 165         | 164 | 164 | 163 | 163 | 163 | 161 | 137 | -   | -  |
|              | TORQUE<br>%     | 70          | 71          | 72  | 74  | 75  | 76  | 77  | 78  | 65  | -   | -  |
|              | F FLOW KG/H/ENG | 286         | 290         | 297 | 301 | 308 | 311 | 318 | 322 | 282 | -   | -  |
| 9500         | IAS<br>KT       | 162         | 162         | 162 | 161 | 161 | 161 | 160 | 160 | 146 | -   | -  |
|              | TORQUE<br>%     | 65          | 67          | 68  | 69  | 70  | 72  | 73  | 74  | 66  | -   | -  |
|              | F FLOW KG/H/ENG | 271         | 279         | 283 | 288 | 292 | 299 | 302 | 308 | 285 | -   | -  |
| 9000         | IAS<br>KT       | 159         | 159         | 159 | 159 | 158 | 158 | 158 | 157 | 151 | 130 | -  |
|              | TORQUE<br>%     | 62          | 63          | 64  | 65  | 66  | 68  | 69  | 70  | 67  | 57  | -  |
|              | F FLOW KG/H/ENG | 259         | 264         | 270 | 274 | 280 | 285 | 291 | 294 | 287 | 257 | -  |
| 8500         | IAS<br>KT       | 156         | 156         | 156 | 156 | 156 | 156 | 156 | 156 | 154 | 138 | -  |
|              | TORQUE<br>%     | 57          | 59          | 60  | 61  | 62  | 63  | 65  | 66  | 66  | 57  | -  |
|              | F FLOW KG/H/ENG | 246         | 252         | 258 | 263 | 267 | 272 | 276 | 282 | 284 | 258 | -  |
| 8000         | IAS<br>KT       | 153         | 153         | 153 | 153 | 154 | 154 | 153 | 153 | 153 | 143 | -  |
|              | TORQUE<br>%     | 54          | 55          | 56  | 57  | 59  | 60  | 61  | 62  | 63  | 57  | -  |
|              | F FLOW KG/H/ENG | 235         | 240         | 246 | 250 | 255 | 261 | 265 | 269 | 274 | 260 | -  |

20 NOVEMBER 1992



**EMBRAER**  
**EMB120 Brasilia**

**CRUISE CONTROL**

**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CRUISE CONTROL  
ONE ENGINE INOPERATIVE**

**PW118A ENGINES**

**LONG RANGE CRUISE**

**CRUISE CONFIGURATION**

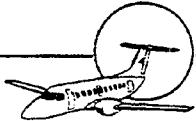
NP: 100%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 13000 FT**

| WEIGHT<br>KG | IAS<br>KT<br>%<br>F FLOW KG/H/ENG | IOAT ( °C )      |                  |                  |                  |                  |                  |                  |                  |                  |                  |             |  |
|--------------|-----------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------|--|
|              |                                   | -50              | -40              | -30              | -20              | -10              | 0                | 10               | 20               | 30               | 40               |             |  |
| 12000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG  | 174<br>87<br>342 | 173<br>89<br>348 | 172<br>90<br>355 | 171<br>91<br>360 | 169<br>92<br>362 | 165<br>92<br>364 | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>- |  |
| 11500        | IAS<br>TORQUE<br>F FLOW KG/H/ENG  | 172<br>83<br>328 | 171<br>84<br>333 | 171<br>86<br>341 | 169<br>87<br>345 | 168<br>88<br>350 | 165<br>89<br>351 | 155<br>83<br>335 | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>- |  |
| 11000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG  | 169<br>79<br>313 | 169<br>80<br>320 | 168<br>82<br>325 | 168<br>83<br>330 | 167<br>84<br>336 | 165<br>85<br>339 | 161<br>84<br>339 | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>- |  |
| 10500        | IAS<br>TORQUE<br>F FLOW KG/H/ENG  | 167<br>75<br>299 | 166<br>76<br>305 | 166<br>77<br>310 | 165<br>78<br>315 | 165<br>80<br>322 | 164<br>81<br>325 | 162<br>81<br>329 | 151<br>76<br>312 | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>- |  |
| 10000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG  | 164<br>70<br>285 | 164<br>72<br>291 | 163<br>73<br>295 | 163<br>74<br>302 | 162<br>75<br>305 | 162<br>76<br>312 | 161<br>78<br>317 | 157<br>77<br>316 | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>- |  |
| 9500         | IAS<br>TORQUE<br>F FLOW KG/H/ENG  | 161<br>66<br>271 | 161<br>67<br>277 | 160<br>69<br>281 | 160<br>70<br>288 | 160<br>71<br>292 | 159<br>72<br>297 | 159<br>73<br>302 | 158<br>74<br>307 | 134<br>62<br>267 | -<br>-<br>-      | -<br>-<br>- |  |
| 9000         | IAS<br>TORQUE<br>F FLOW KG/H/ENG  | 158<br>62<br>258 | 158<br>63<br>264 | 158<br>65<br>268 | 157<br>65<br>273 | 157<br>67<br>278 | 157<br>68<br>283 | 156<br>69<br>287 | 156<br>70<br>292 | 142<br>62<br>269 | -<br>-<br>-      | -<br>-<br>- |  |
| 8500         | IAS<br>TORQUE<br>F FLOW KG/H/ENG  | 155<br>58<br>245 | 155<br>59<br>250 | 155<br>60<br>256 | 155<br>62<br>261 | 155<br>63<br>265 | 155<br>64<br>270 | 154<br>65<br>276 | 154<br>66<br>279 | 147<br>63<br>272 | 129<br>54<br>246 | -<br>-<br>- |  |
| 8000         | IAS<br>TORQUE<br>F FLOW KG/H/ENG  | 152<br>54<br>233 | 152<br>55<br>238 | 152<br>56<br>243 | 152<br>58<br>249 | 152<br>59<br>253 | 152<br>60<br>257 | 152<br>61<br>261 | 152<br>62<br>266 | 150<br>62<br>268 | 138<br>55<br>248 | -<br>-<br>- |  |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL  
ONE ENGINE INOPERATIVE**
**PW118A ENGINES****LONG RANGE CRUISE**

## CRUISE CONFIGURATION

NP: 100%

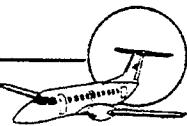
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 14000 FT**

| WEIGHT<br>KG | IAS<br>KT       | TORQUE<br>% | F FLOW KG/H/ENG | IOAT ( °C ) |     |     |     |     |     |     |     |    |    |
|--------------|-----------------|-------------|-----------------|-------------|-----|-----|-----|-----|-----|-----|-----|----|----|
|              |                 |             |                 | -50         | -40 | -30 | -20 | -10 | 0   | 10  | 20  | 30 | 40 |
| 12000        | IAS<br>KT       | 172         | 171             | 171         | 168 | 165 | 153 | -   | -   | -   | -   | -  | -  |
|              | TORQUE<br>%     | 87          | 89              | 91          | 91  | 92  | 87  | -   | -   | -   | -   | -  | -  |
|              | F FLOW KG/H/ENG | 342         | 348             | 354         | 359 | 361 | 344 | -   | -   | -   | -   | -  | -  |
| 11500        | IAS<br>KT       | 170         | 170             | 169         | 167 | 165 | 162 | -   | -   | -   | -   | -  | -  |
|              | TORQUE<br>%     | 83          | 85              | 86          | 87  | 88  | 88  | -   | -   | -   | -   | -  | -  |
|              | F FLOW KG/H/ENG | 328         | 335             | 339         | 345 | 347 | 350 | -   | -   | -   | -   | -  | -  |
| 11000        | IAS<br>KT       | 168         | 168             | 167         | 166 | 165 | 162 | 152 | -   | -   | -   | -  | -  |
|              | TORQUE<br>%     | 79          | 81              | 82          | 83  | 84  | 85  | 80  | -   | -   | -   | -  | -  |
|              | F FLOW KG/H/ENG | 313         | 319             | 325         | 330 | 334 | 336 | 321 | -   | -   | -   | -  | -  |
| 10500        | IAS<br>KT       | 166         | 165             | 164         | 164 | 163 | 162 | 158 | -   | -   | -   | -  | -  |
|              | TORQUE<br>%     | 75          | 76              | 78          | 79  | 80  | 81  | 81  | -   | -   | -   | -  | -  |
|              | F FLOW KG/H/ENG | 300         | 304             | 309         | 316 | 321 | 325 | 324 | -   | -   | -   | -  | -  |
| 10000        | IAS<br>KT       | 163         | 163             | 162         | 161 | 161 | 160 | 159 | 147 | -   | -   | -  | -  |
|              | TORQUE<br>%     | 71          | 72              | 73          | 75  | 76  | 77  | 78  | 72  | -   | -   | -  | -  |
|              | F FLOW KG/H/ENG | 285         | 290             | 296         | 301 | 305 | 311 | 314 | 295 | -   | -   | -  | -  |
| 9500         | IAS<br>KT       | 160         | 160             | 159         | 159 | 158 | 158 | 158 | 153 | -   | -   | -  | -  |
|              | TORQUE<br>%     | 67          | 68              | 69          | 70  | 71  | 72  | 74  | 72  | -   | -   | -  | -  |
|              | F FLOW KG/H/ENG | 272         | 276             | 280         | 286 | 291 | 296 | 302 | 298 | -   | -   | -  | -  |
| 9000         | IAS<br>KT       | 157         | 157             | 157         | 156 | 156 | 155 | 155 | 154 | 132 | -   | -  | -  |
|              | TORQUE<br>%     | 63          | 64              | 65          | 66  | 67  | 68  | 69  | 70  | 59  | -   | -  | -  |
|              | F FLOW KG/H/ENG | 257         | 263             | 268         | 271 | 277 | 281 | 286 | 291 | 256 | -   | -  | -  |
| 8500         | IAS<br>KT       | 154         | 154             | 154         | 154 | 153 | 153 | 153 | 152 | 140 | -   | -  | -  |
|              | TORQUE<br>%     | 58          | 60              | 61          | 62  | 63  | 64  | 65  | 66  | 59  | -   | -  | -  |
|              | F FLOW KG/H/ENG | 243         | 250             | 254         | 259 | 263 | 268 | 272 | 277 | 257 | -   | -  | -  |
| 8000         | IAS<br>KT       | 151         | 151             | 151         | 151 | 151 | 151 | 150 | 150 | 145 | 130 | -  | -  |
|              | TORQUE<br>%     | 54          | 55              | 57          | 58  | 59  | 60  | 61  | 62  | 60  | 52  | -  | -  |
|              | F FLOW KG/H/ENG | 231         | 236             | 242         | 247 | 251 | 255 | 259 | 265 | 259 | 236 | -  | -  |

20 NOVEMBER 1992



SUPPLEMENTARY PERFORMANCE  
MANUAL

CRUISE CONTROL  
ONE ENGINE INOPERATIVE

PW118A ENGINES

LONG RANGE CRUISE

CRUISE CONFIGURATION

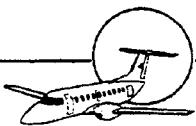
NP: 100%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 15000 FT

| WEIGHT<br>KG | IAS<br>KT       | TORQUE<br>% | IOAT ( °C ) |     |     |     |     |     |     |     |     |    |
|--------------|-----------------|-------------|-------------|-----|-----|-----|-----|-----|-----|-----|-----|----|
|              |                 |             | -50         | -40 | -30 | -20 | -10 | -5  | 0   | 10  | 20  | 30 |
| 12000        | IAS<br>KT       | 171         | 170         | 168 | 166 | 159 | -   | -   | -   | -   | -   | -  |
|              | TORQUE<br>%     | 88          | 90          | 91  | 92  | 91  | -   | -   | -   | -   | -   | -  |
|              | F FLOW KG/H/ENG | 343         | 351         | 356 | 360 | 356 | -   | -   | -   | -   | -   | -  |
| 11500        | IAS<br>KT       | 169         | 168         | 167 | 166 | 162 | 158 | 151 | -   | -   | -   | -  |
|              | TORQUE<br>%     | 84          | 85          | 87  | 88  | 88  | 87  | 84  | -   | -   | -   | -  |
|              | F FLOW KG/H/ENG | 328         | 334         | 340 | 346 | 346 | 343 | 331 | -   | -   | -   | -  |
| 11000        | IAS<br>KT       | 167         | 167         | 165 | 164 | 162 | 160 | 158 | -   | -   | -   | -  |
|              | TORQUE<br>%     | 80          | 81          | 82  | 84  | 84  | 84  | 84  | -   | -   | -   | -  |
|              | F FLOW KG/H/ENG | 314         | 319         | 325 | 330 | 333 | 333 | 335 | -   | -   | -   | -  |
| 10500        | IAS<br>KT       | 165         | 164         | 164 | 162 | 161 | 160 | 159 | 149 | -   | -   | -  |
|              | TORQUE<br>%     | 76          | 77          | 78  | 79  | 80  | 81  | 81  | 77  | -   | -   | -  |
|              | F FLOW KG/H/ENG | 299         | 304         | 310 | 316 | 319 | 321 | 321 | 308 | -   | -   | -  |
| 10000        | IAS<br>KT       | 162         | 161         | 161 | 160 | 159 | 159 | 158 | 156 | -   | -   | -  |
|              | TORQUE<br>%     | 71          | 73          | 74  | 75  | 76  | 77  | 77  | 77  | -   | -   | -  |
|              | F FLOW KG/H/ENG | 285         | 291         | 295 | 300 | 305 | 306 | 308 | 311 | -   | -   | -  |
| 9500         | IAS<br>KT       | 159         | 159         | 158 | 158 | 157 | 157 | 157 | 156 | 144 | -   | -  |
|              | TORQUE<br>%     | 67          | 68          | 70  | 71  | 72  | 72  | 73  | 74  | 67  | -   | -  |
|              | F FLOW KG/H/ENG | 271         | 276         | 281 | 285 | 290 | 293 | 296 | 299 | 279 | -   | -  |
| 9000         | IAS<br>KT       | 157         | 156         | 155 | 155 | 155 | 154 | 154 | 154 | 149 | -   | -  |
|              | TORQUE<br>%     | 63          | 64          | 65  | 66  | 67  | 68  | 68  | 70  | 68  | -   | -  |
|              | F FLOW KG/H/ENG | 257         | 261         | 267 | 271 | 275 | 277 | 280 | 286 | 282 | -   | -  |
| 8500         | IAS<br>KT       | 153         | 153         | 153 | 152 | 152 | 152 | 152 | 151 | 150 | 133 | -  |
|              | TORQUE<br>%     | 59          | 60          | 61  | 62  | 63  | 64  | 64  | 65  | 66  | 56  | -  |
|              | F FLOW KG/H/ENG | 243         | 248         | 254 | 258 | 262 | 265 | 266 | 270 | 275 | 246 | -  |
| 8000         | IAS<br>KT       | 150         | 150         | 150 | 150 | 149 | 149 | 149 | 149 | 149 | 138 | -  |
|              | TORQUE<br>%     | 55          | 56          | 57  | 58  | 59  | 60  | 60  | 61  | 62  | 57  | -  |
|              | F FLOW KG/H/ENG | 230         | 235         | 240 | 244 | 249 | 252 | 253 | 257 | 261 | 249 | -  |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL  
ONE ENGINE INOPERATIVE**
**PW118A ENGINES****LONG RANGE CRUISE**

## CRUISE CONFIGURATION

NP: 100%

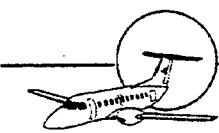
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 16000 FT**

| WEIGHT<br>KG |                         | IOAT ( °C )      |                  |                  |                  |                  |                  |                  |                  |                  |                  |  |
|--------------|-------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--|
|              |                         | -50              | -40              | -30              | -20              | -10              | -5               | 0                | 10               | 20               | 30               |  |
| 12000        | IAS<br>KT<br>F FLOW     | 169<br>89<br>344 | 168<br>90<br>351 | 166<br>92<br>357 | 162<br>92<br>358 | -                | -                | -                | -                | -                | -                |  |
| 11500        | TORQUE<br>%<br>KG/H/ENG |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |  |
| 11000        | IAS<br>KT<br>F FLOW     | 167<br>84<br>329 | 167<br>86<br>337 | 165<br>87<br>339 | 163<br>88<br>345 | 155<br>86<br>340 | -                | -                | -                | -                | -                |  |
| 10500        | TORQUE<br>%<br>KG/H/ENG |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |  |
| 10000        | IAS<br>KT<br>F FLOW     | 163<br>76<br>299 | 163<br>77<br>305 | 162<br>79<br>310 | 161<br>80<br>316 | 158<br>80<br>318 | 157<br>81<br>319 | 156<br>81<br>320 | -                | -                | -                |  |
| 9500         | TORQUE<br>%<br>KG/H/ENG |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |  |
| 9000         | IAS<br>KT<br>F FLOW     | 161<br>72<br>284 | 160<br>73<br>290 | 160<br>75<br>296 | 159<br>76<br>301 | 157<br>76<br>303 | 157<br>77<br>306 | 156<br>77<br>307 | 147<br>73<br>295 | -                | -                |  |
| 8500         | TORQUE<br>%<br>KG/H/ENG |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |  |
| 8000         | IAS<br>KT<br>F FLOW     | 158<br>68<br>270 | 158<br>69<br>276 | 157<br>70<br>280 | 157<br>71<br>286 | 156<br>72<br>291 | 155<br>73<br>292 | 155<br>73<br>294 | 152<br>73<br>296 | -                | -                |  |
| 7500         | TORQUE<br>%<br>KG/H/ENG |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |  |
| 7000         | IAS<br>KT<br>F FLOW     | 156<br>64<br>256 | 155<br>65<br>262 | 154<br>66<br>266 | 154<br>67<br>270 | 153<br>68<br>274 | 153<br>68<br>277 | 153<br>69<br>280 | 153<br>70<br>285 | 140<br>63<br>264 | -                |  |
| 6500         | TORQUE<br>%<br>KG/H/ENG |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |  |
| 6000         | IAS<br>KT<br>F FLOW     | 152<br>59<br>243 | 152<br>60<br>247 | 152<br>61<br>252 | 151<br>62<br>256 | 151<br>64<br>262 | 150<br>64<br>262 | 150<br>64<br>265 | 150<br>66<br>270 | 146<br>64<br>267 | -                |  |
| 5500         | TORQUE<br>%<br>KG/H/ENG |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |  |
| 5000         | IAS<br>KT<br>F FLOW     | 149<br>55<br>228 | 149<br>56<br>234 | 149<br>57<br>238 | 149<br>58<br>243 | 148<br>59<br>247 | 148<br>60<br>250 | 148<br>60<br>251 | 148<br>61<br>257 | 146<br>62<br>258 | 132<br>54<br>235 |  |

20 NOVEMBER 1992



**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CRUISE CONTROL  
ONE ENGINE INOPERATIVE**

**PW118A ENGINES**

**LONG RANGE CRUISE**

CRUISE CONFIGURATION  
NP: 100%  
BLEED SWITCH: AUTO  
PACK CONTROL SELECTOR: LOW

**ALTITUDE: 17000 FT**

| WEIGHT<br>KG | IOAT ( °C )                      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |  |
|--------------|----------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--|
|              | -50                              | -40              | -30              | -20              | -10              | -5               | 0                | 10               | 20               | 30               |                  |  |
| 12000        | IAS<br>KT<br>F FLOW KG/H/ENG     | 168<br>90<br>348 | 166<br>91<br>354 | 163<br>92<br>357 | 152<br>89<br>348 | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      |  |
| 11500        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | 166<br>85<br>330 | 164<br>86<br>336 | 163<br>88<br>344 | 158<br>88<br>343 | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      |  |
| 11000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | 164<br>81<br>315 | 163<br>82<br>320 | 162<br>83<br>326 | 159<br>84<br>330 | 153<br>83<br>326 | 145<br>80<br>313 | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      |  |
| 10500        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | 162<br>76<br>299 | 161<br>78<br>304 | 160<br>79<br>309 | 159<br>80<br>315 | 155<br>80<br>316 | 153<br>80<br>316 | 147<br>77<br>304 | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      |  |
| 10000        | IAS<br>TORQUE<br>F FLOW KG/H/ENG | 160<br>72<br>285 | 159<br>74<br>291 | 158<br>75<br>294 | 157<br>76<br>299 | 155<br>77<br>303 | 154<br>77<br>304 | 153<br>77<br>305 | -<br>-<br>-      | -<br>-<br>-      | -<br>-<br>-      |  |
| 9500         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | 157<br>68<br>271 | 157<br>69<br>276 | 156<br>71<br>281 | 156<br>72<br>286 | 154<br>72<br>288 | 154<br>73<br>290 | 153<br>74<br>294 | 145<br>70<br>284 | -<br>-<br>-      | -<br>-<br>-      |  |
| 9000         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | 154<br>64<br>257 | 154<br>65<br>261 | 154<br>66<br>266 | 153<br>67<br>271 | 152<br>68<br>275 | 152<br>69<br>277 | 152<br>70<br>280 | 149<br>69<br>280 | -<br>-<br>-      | -<br>-<br>-      |  |
| 8500         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | 152<br>60<br>242 | 151<br>61<br>246 | 151<br>62<br>251 | 150<br>63<br>255 | 149<br>64<br>259 | 149<br>64<br>262 | 150<br>65<br>265 | 149<br>66<br>265 | 137<br>60<br>271 | 142<br>60<br>249 |  |
| 8000         | IAS<br>TORQUE<br>F FLOW KG/H/ENG | 148<br>55<br>228 | 148<br>57<br>233 | 148<br>58<br>237 | 147<br>58<br>240 | 147<br>60<br>246 | 147<br>60<br>247 | 147<br>61<br>251 | 146<br>61<br>251 | 142<br>60<br>254 | 142<br>60<br>252 |  |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ONE ENGINE INOPERATIVE**
**PW118A ENGINES**
**LONG RANGE CRUISE**
**CRUISE CONFIGURATION**

NP: 100%

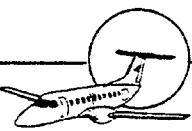
BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 18000 FT**

| WEIGHT<br>KG | IOAT ( °C )                               |                  |                  |                  |                  |                  |                  |                  |                  |                  |        |  |
|--------------|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--------|--|
|              |   | -50              | -40              | -30              | -20              | -10              | -5               | 0                | 10               | 20               | 30     |  |
| 12000        | IAS<br>KT<br>TORQUE<br>F FLOW<br>KG/H/ENG | 166<br>90<br>350 | 163<br>92<br>354 | 158<br>92<br>358 | -<br>-           | -<br>-           | -<br>-           | -<br>-           | -<br>-           | -<br>-           | -<br>- |  |
| 11500        | IAS<br>KT<br>TORQUE<br>F FLOW<br>KG/H/ENG | 165<br>86<br>332 | 163<br>87<br>339 | 159<br>88<br>342 | 149<br>85<br>332 | -<br>-           | -<br>-           | -<br>-           | -<br>-           | -<br>-           | -<br>- |  |
| 11000        | IAS<br>KT<br>TORQUE<br>F FLOW<br>KG/H/ENG | 162<br>81<br>316 | 161<br>83<br>322 | 160<br>84<br>327 | 155<br>84<br>328 | -<br>-           | -<br>-           | -<br>-           | -<br>-           | -<br>-           | -<br>- |  |
| 10500        | IAS<br>KT<br>TORQUE<br>F FLOW<br>KG/H/ENG | 160<br>77<br>299 | 160<br>78<br>306 | 158<br>80<br>310 | 156<br>80<br>313 | 150<br>79<br>311 | 143<br>76<br>300 | -<br>-           | -<br>-           | -<br>-           | -<br>- |  |
| 10000        | IAS<br>KT<br>TORQUE<br>F FLOW<br>KG/H/ENG | 158<br>73<br>285 | 157<br>74<br>290 | 156<br>75<br>295 | 156<br>76<br>300 | 152<br>77<br>301 | 151<br>77<br>303 | 144<br>73<br>291 | -<br>-           | -<br>-           | -<br>- |  |
| 9500         | IAS<br>KT<br>TORQUE<br>F FLOW<br>KG/H/ENG | 156<br>69<br>272 | 155<br>70<br>274 | 155<br>71<br>280 | 154<br>72<br>285 | 152<br>73<br>288 | 151<br>73<br>289 | 149<br>73<br>290 | 136<br>67<br>269 | -<br>-           | -<br>- |  |
| 9000         | IAS<br>KT<br>TORQUE<br>F FLOW<br>KG/H/ENG | 153<br>64<br>256 | 153<br>66<br>260 | 152<br>67<br>266 | 152<br>68<br>271 | 151<br>69<br>274 | 150<br>69<br>276 | 150<br>70<br>278 | 142<br>67<br>270 | -<br>-           | -<br>- |  |
| 8500         | IAS<br>KT<br>TORQUE<br>F FLOW<br>KG/H/ENG | 151<br>60<br>241 | 150<br>61<br>246 | 150<br>62<br>250 | 149<br>63<br>255 | 148<br>64<br>260 | 148<br>65<br>263 | 148<br>66<br>265 | 146<br>66<br>265 | -<br>-           | -<br>- |  |
| 8000         | IAS<br>KT<br>TORQUE<br>F FLOW<br>KG/H/ENG | 148<br>56<br>228 | 147<br>57<br>232 | 147<br>58<br>237 | 146<br>59<br>241 | 146<br>60<br>244 | 145<br>60<br>247 | 145<br>61<br>248 | 145<br>62<br>248 | 134<br>56<br>236 | -<br>- |  |

20 NOVEMBER 1992

SUPPLEMENTARY PERFORMANCE  
MANUALCRUISE CONTROL  
ONE ENGINE INOPERATIVE

PW118A ENGINES

## LONG RANGE CRUISE

## CRUISE CONFIGURATION

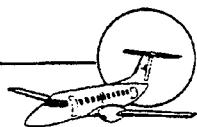
NP: 100%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 19000 FT

| WEIGHT<br>KG | IAS<br>KT       | TORQUE<br>% | F FLOW KG/H/ENG | IOAT ( °C ) |     |     |     |     |     |     |    |    |    |
|--------------|-----------------|-------------|-----------------|-------------|-----|-----|-----|-----|-----|-----|----|----|----|
|              |                 |             |                 | -50         | -40 | -30 | -20 | -10 | -5  | 0   | 10 | 20 | 30 |
| 12000        | IAS<br>KT       | 164         | 159             | -           | -   | -   | -   | -   | -   | -   | -  | -  | -  |
|              | TORQUE<br>%     | 91          | 92              | -           | -   | -   | -   | -   | -   | -   | -  | -  | -  |
|              | F FLOW KG/H/ENG | 353         | 355             | -           | -   | -   | -   | -   | -   | -   | -  | -  | -  |
| 11500        | IAS<br>KT       | 162         | 160             | 155         | -   | -   | -   | -   | -   | -   | -  | -  | -  |
|              | TORQUE<br>%     | 86          | 88              | 88          | -   | -   | -   | -   | -   | -   | -  | -  | -  |
|              | F FLOW KG/H/ENG | 335         | 339             | 342         | -   | -   | -   | -   | -   | -   | -  | -  | -  |
| 11000        | IAS<br>KT       | 161         | 159             | 156         | 146 | -   | -   | -   | -   | -   | -  | -  | -  |
|              | TORQUE<br>%     | 82          | 83              | 84          | 81  | -   | -   | -   | -   | -   | -  | -  | -  |
|              | F FLOW KG/H/ENG | 317         | 322             | 327         | 317 | -   | -   | -   | -   | -   | -  | -  | -  |
| 10500        | IAS<br>KT       | 159         | 158             | 157         | 152 | -   | -   | -   | -   | -   | -  | -  | -  |
|              | TORQUE<br>%     | 77          | 79              | 80          | 80  | -   | -   | -   | -   | -   | -  | -  | -  |
|              | F FLOW KG/H/ENG | 302         | 306             | 312         | 313 | -   | -   | -   | -   | -   | -  | -  | -  |
| 10000        | IAS<br>KT       | 157         | 156             | 155         | 153 | 148 | 141 | -   | -   | -   | -  | -  | -  |
|              | TORQUE<br>%     | 73          | 74              | 76          | 76  | 76  | 73  | -   | -   | -   | -  | -  | -  |
|              | F FLOW KG/H/ENG | 285         | 290             | 296         | 298 | 298 | 288 | -   | -   | -   | -  | -  | -  |
| 9500         | IAS<br>KT       | 155         | 154             | 153         | 152 | 150 | 148 | 142 | -   | -   | -  | -  | -  |
|              | TORQUE<br>%     | 69          | 70              | 71          | 72  | 73  | 73  | 70  | -   | -   | -  | -  | -  |
|              | F FLOW KG/H/ENG | 270         | 276             | 279         | 284 | 286 | 288 | 281 | -   | -   | -  | -  | -  |
| 9000         | IAS<br>KT       | 152         | 152             | 151         | 150 | 149 | 149 | 146 | 133 | -   | -  | -  | -  |
|              | TORQUE<br>%     | 65          | 66              | 67          | 68  | 69  | 70  | 69  | -   | -   | -  | -  | -  |
|              | F FLOW KG/H/ENG | 256         | 261             | 265         | 270 | 273 | 276 | 273 | 256 | -   | -  | -  | -  |
| 8500         | IAS<br>KT       | 150         | 149             | 148         | 148 | 147 | 147 | 146 | 141 | -   | -  | -  | -  |
|              | TORQUE<br>%     | 61          | 62              | 63          | 64  | 65  | 65  | 66  | 64  | -   | -  | -  | -  |
|              | F FLOW KG/H/ENG | 242         | 246             | 251         | 256 | 259 | 262 | 262 | 259 | -   | -  | -  | -  |
| 8000         | IAS<br>KT       | 147         | 146             | 145         | 145 | 145 | 145 | 144 | 143 | 124 | -  | -  | -  |
|              | TORQUE<br>%     | 56          | 57              | 58          | 60  | 60  | 61  | 61  | 62  | 53  | -  | -  | -  |
|              | F FLOW KG/H/ENG | 227         | 231             | 236         | 241 | 245 | 247 | 249 | 250 | 223 | -  | -  | -  |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL  
ONE ENGINE INOPERATIVE**
**PW118A ENGINES****LONG RANGE CRUISE**

## CRUISE CONFIGURATION

NP: 100%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 20000 FT**

| WEIGHT<br>KG | IAS<br>KT<br>%     | TORQUE<br>F FLOW<br>KG/H/ENG | IOAT ( °C ) |           |           |           |           |           |           |           |     |    |
|--------------|--------------------|------------------------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----|----|
|              |                    |                              | -50         | -40       | -30       | -20       | -15       | -10       | -5        | 0         | 10  | 20 |
| 12000        | IAS<br>KT<br>%     | 159<br>91                    | -           | -         | -         | -         | -         | -         | -         | -         | -   | -  |
|              | F FLOW<br>KG/H/ENG | 352                          | -           | -         | -         | -         | -         | -         | -         | -         | -   | -  |
| 11500        | IAS<br>KT<br>%     | 161<br>88                    | 156<br>88   | -         | -         | -         | -         | -         | -         | -         | -   | -  |
|              | F FLOW<br>KG/H/ENG | 338                          | 340         | -         | -         | -         | -         | -         | -         | -         | -   | -  |
| 11000        | IAS<br>KT<br>%     | 159<br>83                    | 157<br>84   | 152<br>84 | -         | -         | -         | -         | -         | -         | -   | -  |
|              | F FLOW<br>KG/H/ENG | 320                          | 324         | 327       | -         | -         | -         | -         | -         | -         | -   | -  |
| 10500        | IAS<br>KT<br>%     | 158<br>78                    | 156<br>79   | 153<br>80 | 144<br>77 | -         | -         | -         | -         | -         | -   | -  |
|              | F FLOW<br>KG/H/ENG | 303                          | 308         | 312       | 304       | -         | -         | -         | -         | -         | -   | -  |
| 10000        | IAS<br>KT<br>%     | 155<br>73                    | 154<br>75   | 153<br>76 | 149<br>76 | 146<br>76 | 138<br>72 | -         | -         | -         | -   | -  |
|              | F FLOW<br>KG/H/ENG | 286                          | 291         | 297       | 298       | 295       | 283       | -         | -         | -         | -   | -  |
| 9500         | IAS<br>KT<br>%     | 153<br>69                    | 152<br>70   | 152<br>72 | 149<br>72 | 148<br>73 | 147<br>73 | 140<br>70 | -         | -         | -   | -  |
|              | F FLOW<br>KG/H/ENG | 270                          | 275         | 281       | 284       | 284       | 287       | 275       | -         | -         | -   | -  |
| 9000         | IAS<br>KT<br>%     | 151<br>65                    | 151<br>67   | 149<br>67 | 148<br>68 | 148<br>69 | 147<br>69 | 144<br>69 | 140<br>67 | -         | -   | -  |
|              | F FLOW<br>KG/H/ENG | 257                          | 262         | 265       | 270       | 271       | 272       | 271       | 266       | -         | -   | -  |
| 8500         | IAS<br>KT<br>%     | 149<br>61                    | 148<br>62   | 147<br>63 | 146<br>64 | 146<br>65 | 146<br>65 | 145<br>65 | 143<br>65 | 131<br>60 | -   | -  |
|              | F FLOW<br>KG/H/ENG | 241                          | 246         | 250       | 254       | 256       | 259       | 259       | 259       | 259       | 242 | -  |
| 8000         | IAS<br>KT<br>%     | 145<br>57                    | 145<br>58   | 145<br>59 | 144<br>60 | 144<br>60 | 144<br>61 | 143<br>61 | 142<br>61 | 137<br>60 | -   | -  |
|              | F FLOW<br>KG/H/ENG | 226                          | 231         | 236       | 240       | 241       | 245       | 245       | 246       | 246       | 243 | -  |

20 NOVEMBER 1992



EMBRAER  
EMB120 Brasilia

CRUISE CONTROL

**SUPPLEMENTARY PERFORMANCE  
MANUAL  
CRUISE CONTROL  
ALL ENGINES OPERATING**

**PW118A ENGINES**

**LONG RANGE CRUISE**

CONFIGURATION: LANDING GEAR DOWN AND FLAPS UP

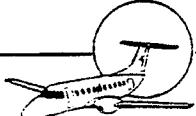
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 5000 FT**

| WEIGHT<br>KG | IAS<br>KT          | TORQUE<br>% | F FLOW<br>KG/H/ENG | IOAT ( °C ) |     |     |     |     |     |     |     |     |     |
|--------------|--------------------|-------------|--------------------|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |                    |             |                    | -50         | -30 | -20 | -10 | 0   | 10  | 20  | 30  | 40  | 50  |
| 11500        | 182                | 62          | 254                | 181         | 181 | 181 | 181 | 180 | 180 | 180 | 180 | 179 | 168 |
|              | TORQUE<br>%        | %           |                    | 64          | 65  | 67  | 68  | 69  | 70  | 72  | 72  | 72  | 65  |
|              | F FLOW<br>KG/H/ENG |             |                    | 264         | 270 | 275 | 279 | 284 | 289 | 295 | 298 | 298 | 283 |
| 11000        | 180                | 59          | 247                | 179         | 179 | 179 | 178 | 179 | 178 | 178 | 178 | 178 | 170 |
|              | TORQUE<br>%        | %           |                    | 62          | 63  | 64  | 65  | 66  | 67  | 68  | 70  | 70  | 65  |
|              | F FLOW<br>KG/H/ENG |             |                    | 259         | 263 | 268 | 272 | 279 | 283 | 288 | 293 | 293 | 284 |
| 10500        | 178                | 57          | 242                | 178         | 178 | 177 | 177 | 177 | 176 | 177 | 176 | 176 | 172 |
|              | TORQUE<br>%        | %           |                    | 59          | 60  | 62  | 63  | 63  | 65  | 66  | 67  | 67  | 65  |
|              | F FLOW<br>KG/H/ENG |             |                    | 252         | 257 | 263 | 267 | 272 | 276 | 281 | 285 | 285 | 284 |
| 10000        | 176                | 55          | 238                | 177         | 176 | 176 | 176 | 175 | 175 | 175 | 175 | 175 | 175 |
|              | TORQUE<br>%        | %           |                    | 57          | 58  | 59  | 60  | 61  | 62  | 63  | 64  | 64  | 65  |
|              | F FLOW<br>KG/H/ENG |             |                    | 248         | 252 | 258 | 262 | 265 | 269 | 274 | 279 | 279 | 285 |
| 9500         | 175                | 53          | 234                | 175         | 175 | 175 | 174 | 174 | 174 | 173 | 173 | 173 | 173 |
|              | TORQUE<br>%        | %           |                    | 55          | 56  | 57  | 58  | 59  | 60  | 61  | 62  | 62  | 62  |
|              | F FLOW<br>KG/H/ENG |             |                    | 242         | 248 | 252 | 256 | 260 | 265 | 269 | 272 | 272 | 276 |
| 9000         | 174                | 51          | 228                | 173         | 173 | 173 | 173 | 173 | 172 | 172 | 172 | 172 | 171 |
|              | TORQUE<br>%        | %           |                    | 53          | 54  | 55  | 56  | 57  | 58  | 58  | 59  | 59  | 60  |
|              | F FLOW<br>KG/H/ENG |             |                    | 236         | 242 | 247 | 252 | 256 | 259 | 263 | 267 | 267 | 271 |
| 8500         | 172                | 49          | 224                | 172         | 172 | 172 | 172 | 171 | 171 | 171 | 171 | 170 | 170 |
|              | TORQUE<br>%        | %           |                    | 51          | 52  | 53  | 54  | 55  | 56  | 56  | 57  | 57  | 58  |
|              | F FLOW<br>KG/H/ENG |             |                    | 232         | 237 | 242 | 246 | 250 | 254 | 258 | 261 | 261 | 265 |
| 8000         | 171                | 48          | 220                | 171         | 170 | 171 | 171 | 170 | 170 | 170 | 170 | 169 | 169 |
|              | TORQUE<br>%        | %           |                    | 49          | 50  | 51  | 52  | 53  | 54  | 55  | 55  | 55  | 56  |
|              | F FLOW<br>KG/H/ENG |             |                    | 228         | 232 | 238 | 242 | 246 | 250 | 254 | 257 | 257 | 261 |


**SUPPLEMENTARY PERFORMANCE  
MANUAL**
**CRUISE CONTROL**
**ALL ENGINES OPERATING**
**PW118A ENGINES**
**LONG RANGE CRUISE**

CONFIGURATION: LANDING GEAR DOWN AND FLAPS UP

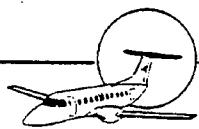
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 10000 FT**

| WEIGHT<br>KG | IOAT ( °C )                                      |                  |                  |                  |                  |                  |                  |                  |                  |                  |  |
|--------------|--|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--|
|              | -50  | -40              | -30              | -20              | -10              | 0                | 10               | 20               | 30               | 40               |  |
| 11500        | IAS KT 172<br>TORQUE % 61<br>F FLOW KG/H/ENG 236 | 173<br>62<br>241 | 172<br>64<br>245 | 172<br>65<br>249 | 172<br>66<br>255 | 171<br>67<br>259 | 170<br>68<br>263 | 170<br>69<br>267 | 169<br>70<br>271 | 153<br>60<br>248 |  |
| 11000        | IAS KT 171<br>TORQUE % 58<br>F FLOW KG/H/ENG 229 | 170<br>60<br>233 | 170<br>61<br>238 | 170<br>62<br>242 | 170<br>63<br>247 | 170<br>64<br>252 | 169<br>65<br>256 | 168<br>66<br>260 | 168<br>67<br>264 | 157<br>60<br>249 |  |
| 10500        | IAS KT 169<br>TORQUE % 56<br>F FLOW KG/H/ENG 222 | 169<br>57<br>226 | 169<br>58<br>231 | 168<br>59<br>236 | 168<br>60<br>240 | 168<br>61<br>244 | 168<br>63<br>250 | 167<br>63<br>253 | 166<br>64<br>257 | 160<br>61<br>251 |  |
| 10000        | IAS KT 167<br>TORQUE % 53<br>F FLOW KG/H/ENG 216 | 167<br>54<br>219 | 167<br>56<br>225 | 167<br>57<br>230 | 167<br>58<br>233 | 166<br>59<br>237 | 166<br>60<br>243 | 166<br>61<br>247 | 165<br>62<br>251 | 163<br>61<br>251 |  |
| 9500         | IAS KT 165<br>TORQUE % 51<br>F FLOW KG/H/ENG 209 | 165<br>52<br>214 | 165<br>53<br>218 | 165<br>54<br>223 | 165<br>55<br>227 | 164<br>56<br>231 | 164<br>57<br>235 | 164<br>58<br>240 | 164<br>59<br>244 | 163<br>60<br>247 |  |
| 9000         | IAS KT 163<br>TORQUE % 49<br>F FLOW KG/H/ENG 204 | 163<br>50<br>208 | 163<br>51<br>212 | 163<br>52<br>217 | 163<br>52<br>221 | 162<br>53<br>224 | 162<br>54<br>228 | 162<br>55<br>232 | 162<br>56<br>237 | 162<br>57<br>241 |  |
| 8500         | IAS KT 162<br>TORQUE % 46<br>F FLOW KG/H/ENG 198 | 162<br>47<br>203 | 162<br>48<br>208 | 161<br>49<br>211 | 161<br>50<br>215 | 161<br>51<br>218 | 160<br>52<br>222 | 160<br>52<br>226 | 160<br>53<br>229 | 160<br>54<br>233 |  |
| 8000         | IAS KT 160<br>TORQUE % 44<br>F FLOW KG/H/ENG 194 | 160<br>45<br>197 | 160<br>46<br>202 | 160<br>47<br>205 | 160<br>48<br>209 | 159<br>49<br>214 | 159<br>49<br>216 | 159<br>50<br>220 | 158<br>51<br>223 | 158<br>52<br>227 |  |



**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**CRUISE CONTROL  
ALL ENGINES OPERATING**

**PW118A ENGINES**

**LONG RANGE CRUISE**

CONFIGURATION: LANDING GEAR DOWN AND FLAPS UP

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

**ALTITUDE: 15000 FT**

| WEIGHT<br>KG | IOAT ( °C )        |     |     |     |     |     |     |     |     |     |     |   |
|--------------|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---|
|              | -50                | -40 | -30 | -20 | -10 | -5  | 0   | 10  | 20  | 30  |     |   |
| 11500        | IAS<br>KT          | 165 | 164 | 164 | 164 | 163 | 162 | 162 | 161 | -   | -   | - |
|              | TORQUE<br>%        | 52  | 63  | 64  | 66  | 67  | 67  | 68  | 69  | -   | -   | - |
|              | F FLOW<br>KG/H/ENG | 224 | 227 | 233 | 237 | 241 | 244 | 245 | 249 | -   | -   | - |
| 11000        | IAS<br>KT          | 163 | 163 | 162 | 161 | 161 | 161 | 160 | 159 | 153 | -   | - |
|              | TORQUE<br>%        | 59  | 60  | 61  | 62  | 64  | 64  | 64  | 65  | 63  | -   | - |
|              | F FLOW<br>KG/H/ENG | 215 | 220 | 223 | 228 | 234 | 235 | 237 | 241 | 236 | -   | - |
| 10500        | IAS<br>KT          | 161 | 160 | 161 | 160 | 159 | 159 | 159 | 158 | 158 | -   | - |
|              | TORQUE<br>%        | 56  | 57  | 58  | 59  | 60  | 61  | 62  | 62  | 64  | -   | - |
|              | F FLOW<br>KG/H/ENG | 209 | 212 | 217 | 221 | 224 | 227 | 230 | 233 | 237 | -   | - |
| 10000        | IAS<br>KT          | 159 | 159 | 158 | 158 | 158 | 157 | 157 | 157 | 156 | 147 |   |
|              | TORQUE<br>%        | 53  | 54  | 55  | 56  | 57  | 58  | 58  | 59  | 60  | 55  |   |
|              | F FLOW<br>KG/H/ENG | 202 | 205 | 209 | 213 | 217 | 219 | 221 | 225 | 229 | 217 |   |
| 9500         | IAS<br>KT          | 157 | 157 | 157 | 156 | 156 | 156 | 156 | 155 | 154 | 150 |   |
|              | TORQUE<br>%        | 51  | 51  | 53  | 54  | 55  | 55  | 56  | 56  | 57  | 55  |   |
|              | F FLOW<br>KG/H/ENG | 194 | 198 | 202 | 206 | 210 | 212 | 213 | 217 | 221 | 218 |   |
| 9000         | IAS<br>KT          | 155 | 155 | 154 | 154 | 154 | 154 | 154 | 154 | 153 | 152 |   |
|              | TORQUE<br>%        | 48  | 49  | 50  | 51  | 52  | 52  | 53  | 54  | 54  | 55  |   |
|              | F FLOW<br>KG/H/ENG | 186 | 191 | 195 | 198 | 203 | 205 | 206 | 210 | 213 | 216 |   |
| 8500         | IAS<br>KT          | 153 | 152 | 152 | 152 | 152 | 152 | 152 | 152 | 152 | 151 |   |
|              | TORQUE<br>%        | 45  | 46  | 47  | 48  | 49  | 49  | 50  | 51  | 52  | 52  |   |
|              | F FLOW<br>KG/H/ENG | 180 | 184 | 189 | 192 | 195 | 197 | 199 | 203 | 206 | 210 |   |
| 8000         | IAS<br>KT          | 151 | 151 | 150 | 150 | 150 | 150 | 150 | 150 | 149 | 149 |   |
|              | TORQUE<br>%        | 43  | 44  | 44  | 45  | 46  | 47  | 47  | 48  | 49  | 49  |   |
|              | F FLOW<br>KG/H/ENG | 174 | 177 | 182 | 185 | 189 | 191 | 192 | 196 | 200 | 203 |   |



## CRUISE CONTROL

ALL ENGINES OPERATING

PW118A ENGINES

## LONG RANGE CRUISE

CONFIGURATION: LANDING GEAR DOWN AND FLAPS UP

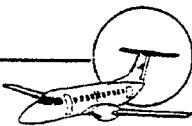
NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

ALTITUDE: 20000 FT

| WEIGHT<br>KG | IOAT ( °C )         |     |     |     |     |     |     |     |     |     |  |  |
|--------------|---------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
|              | -50                 | -40 | -30 | -20 | -15 | -10 | -5  | 0   | 10  | 20  |  |  |
| 11500        | IAS KT 158          | 157 | 157 | 157 | 156 | 154 | -   | -   | -   | -   |  |  |
|              | TORQUE % 64         | 65  | 67  | 69  | 69  | 70  | -   | -   | -   | -   |  |  |
|              | F FLOW KG/H/ENG 220 | 223 | 230 | 236 | 238 | 239 | -   | -   | -   | -   |  |  |
| 11000        | IAS KT 156          | 155 | 154 | 154 | 154 | 154 | 153 | 146 | -   | -   |  |  |
|              | TORQUE % 60         | 62  | 63  | 65  | 65  | 66  | 67  | 63  | -   | -   |  |  |
|              | F FLOW KG/H/ENG 210 | 213 | 217 | 225 | 226 | 229 | 231 | 222 | -   | -   |  |  |
| 10500        | IAS KT 154          | 153 | 152 | 151 | 151 | 152 | 151 | 150 | -   | -   |  |  |
|              | TORQUE % 57         | 58  | 59  | 60  | 61  | 62  | 63  | 63  | -   | -   |  |  |
|              | F FLOW KG/H/ENG 200 | 205 | 208 | 211 | 215 | 218 | 220 | 223 | -   | -   |  |  |
| 10000        | IAS KT 151          | 151 | 151 | 150 | 149 | 149 | 148 | 148 | 140 | -   |  |  |
|              | TORQUE % 54         | 55  | 56  | 57  | 58  | 58  | 59  | 59  | 56  | -   |  |  |
|              | F FLOW KG/H/ENG 191 | 195 | 200 | 203 | 205 | 206 | 209 | 212 | 205 | -   |  |  |
| 9500         | IAS KT 149          | 149 | 149 | 148 | 148 | 147 | 147 | 147 | 146 | -   |  |  |
|              | TORQUE % 51         | 52  | 53  | 54  | 55  | 55  | 56  | 56  | 57  | -   |  |  |
|              | F FLOW KG/H/ENG 182 | 187 | 191 | 195 | 197 | 198 | 200 | 201 | 205 | -   |  |  |
| 9000         | IAS KT 148          | 147 | 146 | 146 | 146 | 146 | 145 | 145 | 144 | 136 |  |  |
|              | TORQUE % 48         | 49  | 50  | 51  | 51  | 52  | 52  | 53  | 54  | 50  |  |  |
|              | F FLOW KG/H/ENG 176 | 179 | 182 | 185 | 189 | 191 | 191 | 193 | 197 | 188 |  |  |
| 8500         | IAS KT 145          | 145 | 145 | 145 | 143 | 144 | 144 | 143 | 143 | 141 |  |  |
|              | TORQUE % 45         | 46  | 47  | 48  | 48  | 49  | 49  | 50  | 50  | 50  |  |  |
|              | F FLOW KG/H/ENG 168 | 171 | 176 | 179 | 179 | 181 | 184 | 185 | 189 | 189 |  |  |
| 8000         | IAS KT 143          | 143 | 142 | 142 | 143 | 142 | 141 | 142 | 141 | 140 |  |  |
|              | TORQUE % 43         | 43  | 44  | 45  | 46  | 46  | 46  | 47  | 47  | 48  |  |  |
|              | F FLOW KG/H/ENG 161 | 165 | 167 | 171 | 173 | 174 | 175 | 177 | 180 | 183 |  |  |



EMBRAER  
EMB120 Brasilia

DESCENT

## SUPPLEMENTARY PERFORMANCE MANUAL

### DESCENT

ALL ENGINES OPERATING

PW118A ENGINES

RATE OF DESCENT : 3000 FT/MIN

CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

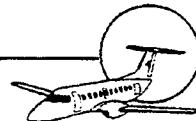
AIRSPEED: VMO OR 250 KIAS,  
WHICHEVER IS LOWER

| CRUISE<br>ALTITUDE<br>(FT) | FUEL<br>CONSUMPTION<br>(KG) | DISTANCE<br>(NM) | TIME<br>(MINUTES) |
|----------------------------|-----------------------------|------------------|-------------------|
| 5000                       | 10                          | 7                | 2                 |
| 10000                      | 20                          | 15               | 3                 |
| 15000                      | 30                          | 23               | 5                 |
| 20000                      | 38                          | 32               | 7                 |
| 25000                      | 44                          | 41               | 8                 |
| 30000                      | 47                          | 49               | 10                |
| 32000                      | 48                          | 53               | 11                |

NOTE: Distance and time values remain constant with weight change.

DESCENT

EMBRAER  
EMB120 Brasilia



SUPPLEMENTARY PERFORMANCE  
MANUAL

**DESCENT**

ALL ENGINES OPERATING

PW118A ENGINES

RATE OF DESCENT : 2000 FT/MIN (AP DESCENT MODE)

CRUISE CONFIGURATION

NP: 85%

BLEED SWITCH: AUTO

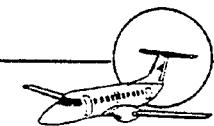
PACK CONTROL SELECTOR: LOW

AIRSPEED: VMO OR 250 KIAS,  
WHICHEVER IS LOWER

| CRUISE ALTITUDE<br>(FT) | FUEL CONSUMPTION<br>(KG) | DISTANCE<br>(NM) | TIME<br>(MINUTES) |
|-------------------------|--------------------------|------------------|-------------------|
| 5000                    | 19                       | 11               | 3                 |
| 10000                   | 37                       | 22               | 5                 |
| 15000                   | 54                       | 35               | 8                 |
| 20000                   | 71                       | 48               | 10                |
| 25000                   | 83                       | 61               | 13                |
| 30000                   | 92                       | 74               | 15                |
| 32000                   | 94                       | 79               | 16                |

NOTE: Distance and time values remain constant with weight change.

20 NOVEMBER 1992



**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**HOLDING**

**ALL ENGINES OPERATING**

**PW118A ENGINES**

**CRUISE CONFIGURATION**

NP: 85%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

LANDING GEAR: UP

FLAPS: UP

STANDARD ATMOSPHERE

AIRSPEED: 1.3 STALL SPEED

**WEIGHT KIAS  
KG**

**ALTITUDE - FT**

|       |     |   |                       |                  | 0                | 5000             | 10000            | 15000            | 20000            | 25000            | 30000            | 32000 |
|-------|-----|---|-----------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------|
| 12000 | 156 | TORQUE<br>FUEL FLOW<br>FUEL CONSUMPTION | %<br>kg/h/eng<br>kg/h | 33<br>226<br>452 | 35<br>204<br>407 | 38<br>187<br>373 | 40<br>175<br>349 | 44<br>169<br>337 | 48<br>168<br>337 | 53<br>176<br>352 | -<br>-<br>-      |       |
| 11500 | 152 | TORQUE<br>FUEL FLOW<br>FUEL CONSUMPTION | %<br>kg/h/eng<br>kg/h | 31<br>222<br>443 | 33<br>199<br>398 | 35<br>181<br>362 | 38<br>169<br>337 | 41<br>162<br>323 | 45<br>160<br>320 | 49<br>166<br>331 | -<br>-<br>-      |       |
| 11000 | 149 | TORQUE<br>FUEL FLOW<br>FUEL CONSUMPTION | %<br>kg/h/eng<br>kg/h | 29<br>217<br>435 | 31<br>194<br>388 | 33<br>176<br>352 | 36<br>163<br>326 | 39<br>155<br>310 | 42<br>152<br>304 | 46<br>156<br>312 | 48<br>160<br>319 |       |
| 10500 | 146 | TORQUE<br>FUEL FLOW<br>FUEL CONSUMPTION | %<br>kg/h/eng<br>kg/h | 27<br>213<br>427 | 29<br>190<br>379 | 31<br>171<br>342 | 33<br>157<br>315 | 36<br>148<br>297 | 39<br>145<br>289 | 43<br>147<br>294 | 45<br>150<br>299 |       |
| 10000 | 143 | TORQUE<br>FUEL FLOW<br>FUEL CONSUMPTION | %<br>kg/h/eng<br>kg/h | 25<br>210<br>419 | 27<br>185<br>371 | 29<br>166<br>333 | 31<br>152<br>304 | 34<br>142<br>285 | 37<br>138<br>275 | 40<br>138<br>277 | 41<br>140<br>281 |       |
| 9500  | 140 | TORQUE<br>FUEL FLOW<br>FUEL CONSUMPTION | %<br>kg/h/eng<br>kg/h | 23<br>206<br>412 | 25<br>181<br>362 | 27<br>162<br>323 | 29<br>147<br>294 | 31<br>137<br>273 | 34<br>131<br>262 | 37<br>131<br>260 | 38<br>130<br>263 |       |
| 9000  | 137 | TORQUE<br>FUEL FLOW<br>FUEL CONSUMPTION | %<br>kg/h/eng<br>kg/h | 22<br>202<br>404 | 23<br>177<br>354 | 25<br>157<br>315 | 27<br>142<br>284 | 29<br>131<br>262 | 31<br>124<br>249 | 34<br>122<br>245 | 35<br>123<br>246 |       |
| 8500  | 134 | TORQUE<br>FUEL FLOW<br>FUEL CONSUMPTION | %<br>kg/h/eng<br>kg/h | 20<br>199<br>397 | 21<br>173<br>347 | 23<br>153<br>306 | 25<br>137<br>274 | 27<br>126<br>251 | 29<br>118<br>236 | 31<br>115<br>230 | 33<br>115<br>231 |       |
| 8000  | 130 | TORQUE<br>FUEL FLOW<br>FUEL CONSUMPTION | %<br>kg/h/eng<br>kg/h | 19<br>195<br>391 | 20<br>170<br>339 | 21<br>149<br>298 | 23<br>133<br>265 | 24<br>120<br>241 | 26<br>112<br>225 | 29<br>108<br>217 | 30<br>108<br>216 |       |

**NOTE:**

- Increase fuel flow 4 kg/h/engine for each 10°C above standard temperature.
- Decrease fuel flow 4 kg/h/engine for each 10°C below standard temperature.
- Torque value remains constant, regardless of the temperature change.

**20 NOVEMBER 1992**

**SUPPLEMENTARY PERFORMANCE  
MANUAL**

**HOLDING**
**ONE ENGINE INOPERATIVE**
**PW118A ENGINES**

## CRUISE CONFIGURATION

AIRSPEED: 1.3 STALL SPEED

NP: 100%

BLEED SWITCH: AUTO

PACK CONTROL SELECTOR: LOW

LANDING GEAR: UP

FLAPS: UP

STANDARD ATMOSPHERE

**WEIGHT KIAS  
KG**
**ALTITUDE - FT**

|       |     |                            |           | 0         | 5000      | 10000     | 15000     | 20000     |
|-------|-----|----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| 12000 | 156 | TORQUE<br>FUEL CONSUMPTION | %<br>kg/h | 69<br>340 | 74<br>331 | 80<br>331 | -         | -         |
| 11500 | 152 | TORQUE<br>FUEL CONSUMPTION | %<br>kg/h | 65<br>328 | 70<br>317 | 75<br>315 | 81<br>323 | -         |
| 11000 | 149 | TORQUE<br>FUEL CONSUMPTION | %<br>kg/h | 61<br>316 | 65<br>304 | 70<br>299 | 76<br>304 | -         |
| 10500 | 146 | TORQUE<br>FUEL CONSUMPTION | %<br>kg/h | 57<br>305 | 61<br>291 | 66<br>285 | 71<br>287 | -         |
| 10000 | 143 | TORQUE<br>FUEL CONSUMPTION | %<br>kg/h | 53<br>294 | 57<br>280 | 61<br>272 | 66<br>272 | -         |
| 9500  | 140 | TORQUE<br>FUEL CONSUMPTION | %<br>kg/h | 49<br>284 | 53<br>268 | 57<br>259 | 62<br>257 | 67<br>264 |
| 9000  | 137 | TORQUE<br>FUEL CONSUMPTION | %<br>kg/h | 46<br>274 | 49<br>257 | 53<br>246 | 57<br>243 | 62<br>246 |
| 8500  | 134 | TORQUE<br>FUEL CONSUMPTION | %<br>kg/h | 42<br>265 | 45<br>246 | 49<br>234 | 53<br>229 | 57<br>231 |
| 8000  | 130 | TORQUE<br>FUEL CONSUMPTION | %<br>kg/h | 39<br>255 | 42<br>236 | 45<br>223 | 48<br>216 | 52<br>215 |

**NOTE:** - Increase fuel flow 5 kg/h/engine for each 10°C above standard temperature.  
 - Decrease fuel flow 5 kg/h/engine for each 10°C below standard temperature.  
 - Torque value remains constant, regardless of the temperature change.

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