HEAD-UP GUIDANCE SYSTEM (HGS) - ADJUSTMENT/TEST

EFFECTIVITY: AIRCRAFT WITH HEAD-UP GUIDANCE SYSTEM

1. General

A. This section gives the procedures to do the operational test of the Head-up Guidance System (HGS).

B. The procedures in this section are given in the sequence below. The tasks identified with (♦) are part of the Scheduled Maintenance Requirements Document (SMRD).

TASK NUMBER	*DESCRIPTION*	*EFFECTIVITY*
34-23-00-700-801-A	HEAD-UP GUIDANCE SYSTEM (HGS) - OPERATIONAL TEST	AIRCRAFT WITH HEAD-UP GUIDANCE SYSTEM

TASK 34-23-00-700-801-A
EFFECTIVITY: AIRCRAFT WITH HEAD-UP GUIDANCE SYSTEM

2. HEAD-UP GUIDANCE SYSTEM (HGS) - OPERATIONAL TEST

A. General

This task gives the procedures to do an operational test of the Head-up Guidance System (HGS).

B. References

REFERENCE	*DESIGNATION*
AMM SDS 27-36-00/1	
AMM SDS 31-42-00/1	
AMM SDS 34-15-00/1	
AMM SDS 34-21-00/1	
AMM SDS 34-22-00/1	
AMM SDS 34-26-00/1	
AMM SDS 34-27-00/1	
AMM SDS 34-31-00/1	
AMM SDS 34-32-00/1	
AMM SDS 34-41-00/1	
AMM SDS 34-43-00/1	
AMM SDS 34-61-00/1	
AMM SDS 34-62-00/1	
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE

C. Zones and Accesses

Not Applicable

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

Not Applicable

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	*FUNCTION*	*PLACE*
1	Does the task	Cockpit

I. Preparation

SUBTASK 841-002-A

(1) Energize the aircraft with the external DC power supply (AMM TASK 20-40-01-860-801-A/200).

(2) (Aircraft with Single Inertial Reference System) Make sure that these systems are operational and on:

- ADC System (AMM SDS 34-15-00/1).
- AHRS (AMM SDS 34-21-00/1).
- Electronic Flight Instrument System (EFIS) (AMM SDS 34-22-00/1).
- Single IRS (AMM SDS 34-26-00/1).
- Radio Altimeter System (AMM SDS 34-31-00/1).
- VOR/ILS 1/2 System (AMM SDS 34-32-00/1).
- VOR/ILS 3 System (AMM SDS 34-32-00/1).
- GPWS or EGPWS (AMM SDS 34-41-00/1).
- TCAS (AMM SDS 34-43-00/1).
- Stall Protection System (SPS) (AMM SDS 27-36-00/1).
- (Aircraft with FMS Universal) FMS (AMM SDS 34-62-00/1).
- (Aircraft with Single FMS Honeywell) FMS1 and GPS1 (AMM SDS 34-61-00/1).
- (Aircraft with Dual FMS Honeywell) FMS1, FMS2, GPS1, and GPS2 (AMM SDS 34-61-00/1).
- Integrated Computer System (AMM SDS 31-42-00/1).

(3) (Aircraft with Dual Inertial Reference System) Make sure that these systems are operational and on:

- ADC System (AMM SDS 34-15-00/1).
- Dual IRS (AMM SDS 34-27-00/1).
- Electronic Flight Instrument System (EFIS) (AMM SDS 34-22-00/1).
- Radio Altimeter System (AMM SDS 34-31-00/1).
- VOR/ILS 1/2 System (AMM SDS 34-32-00/1).
- VOR/ILS 3 System (AMM SDS 34-32-00/1).
- GPWS or EGPWS (AMM SDS 34-41-00/1).
- TCAS (AMM SDS 34-43-00/1).
- Stall Protection System (SPS) (AMM SDS 27-36-00/1).

- FMS (Honeywell) (AMM SDS 34-61-00/1) or FMS (Universal) (AMM SDS 34-62-00/1).
- Integrated Computer System (AMM SDS 31-42-00/1).

(4) Make sure that the aircraft is in the ground configuration.

(5) Make sure that the Single IRS or the Dual IRS works in the NAV mode.

(6) Make sure that the three NAV receivers are tuned in the same VOR/ILS frequency.

NOTE:
- NAV1 and NAV2 are tuned through RMU1 and RMU2 (AMM SDS 34-32-00/1).
- NAV3 is tuned through the VOR/NAV3 Control Panel (AMM SDS 34-32-00/1).

J. Head-up Guidance System - Test Procedures

SUBTASK 710-002-A

(1) Do the test of the Head-up Guidance System as follows:

(a) On the circuit breaker panel, open the HGC circuit breaker (Location tip: DC BUS 1/CAT III/HGC).

Result:

1 The EICAS display will show the HGS FAIL message.

(b) On the circuit breaker panel, close the HGC circuit breaker.

Result:

1 The HGS FAIL message goes out of view from the EICAS display.

(c) On the circuit breaker panel, open the OHU circuit breaker (Location tip: DC BUS 1/CAT III/OHU).

Result:

1 The EICAS display will show the HGS FAIL message.

(d) On the circuit breaker panel, close the OHU circuit breaker.

Result:

1 The HGS FAIL message goes out of view from the EICAS display.

(e) On the circuit breaker panel, open the HCP circuit breaker (Location tip: DC BUS 1/CAT III/HCP).

Result:

1 The EICAS display will show the HGS FAIL message.

(f) On the circuit breaker panel, close the HCP circuit breaker.

Result:

1 The HGS FAIL message goes out of view from the EICAS display.

(g) On the Head-up Control Panel (HCP), push the TEST key.

Result:

1 The Combiner display will be blanked and the fault annunciator on the HCP will illuminate until all tests are completed (approximately 2 seconds if no fault is detected).

2 The TEST information is shown on the HCP display.

3 The HGS Test Menu is shown on the Combiner display.

(h) On the HGS Test Menu, select the HGS CAPABILITY option. To do this, use the BRT+ or DIM− keys, on the Head-up Control Panel, to put the cursor in the related line and then push the ENTER key.

NOTE: The BRT+ key is used to scroll up the cursor on the HGS Test Menu and the DIM− key is used to scroll down the cursor on the HGS Test Menu.

Result:

1 The Combiner display shows the HGS CAPABILITY page with the information "AIII" in the capability column and "NO CAPABILITY FAULTS DETECTED".

(i) On the circuit breaker panel, open the ADC1 circuit breaker.

Result:

1 The HGS CAPABILITY page shows "AIII INCAP" in the capability column and "ADC1 INVALID" in the fault column.

2 The EICAS display shows the message "AIII NOT AVAIL".

(j) On the circuit breaker panel, close the ADC1 circuit breaker.

Result:

1 The HGS CAPABILITY page shows the information "AIII" in the capability column and "NO CAPABILITY FAULTS DETECTED".

2 The message "AIII NOT AVAIL" goes out of view from the EICAS display.

(k) On the HCP, push the CLR key to go back to the HGS Test Menu.

Result:

1 The HGS Test Menu is shown on the Combiner display.

(l) On the HGS Test Menu, select the HGS TEST DISPLAY option. To do this, use the BRT+ and DIM− keys, on the Head-up Control Panel, to put the cursor in the related line and then push the ENTER key.

NOTE: The BRT+ key is used to scroll up the cursor on the HGS Test Menu and the DIM− key is used to scroll down the cursor on the HGS Test Menu.

Result:

1 The Combiner display shows a test display that includes all symbology that can be shown in the Primary Mode in the air.

(m) On the HCP, push the TEST key.

Result:

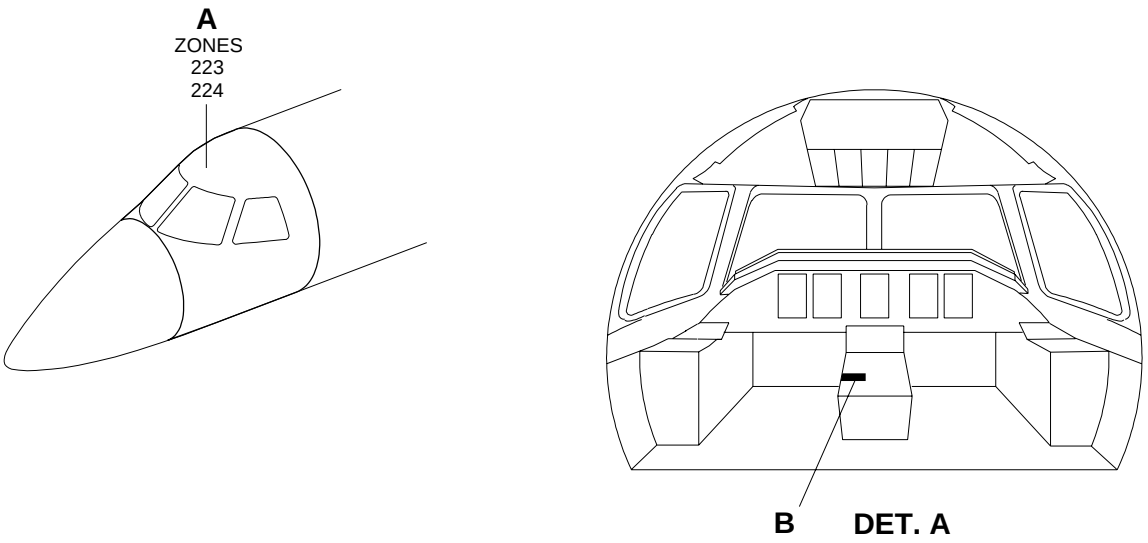
1 The Head-up Guidance System goes out of the test mode.

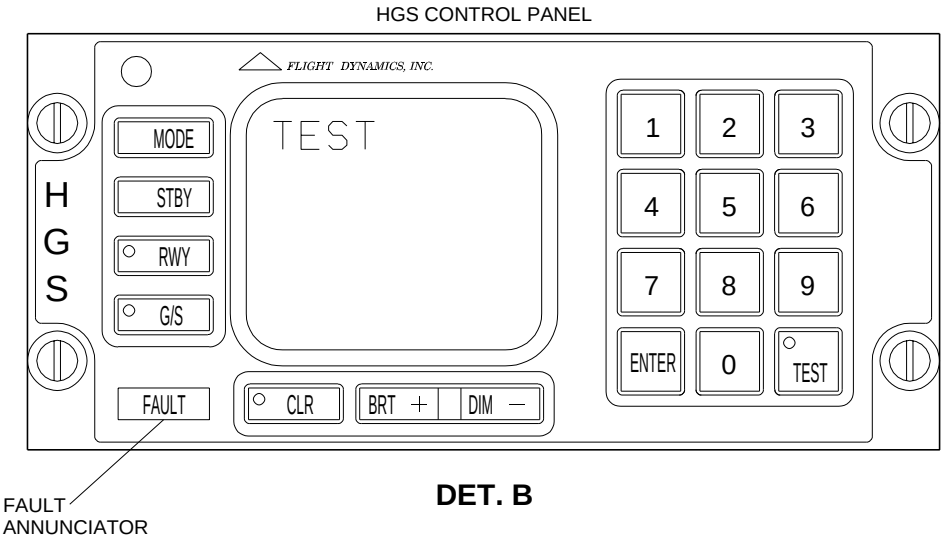
K. Follow-on

SUBTASK 842-002-A

(1) Deenergize the aircraft with the external DC power supply (AMM TASK 20-40-01-860-801-A/200).

EFFECTIVITY: AIRCRAFT WITH HEAD-UP GUIDANCE SYSTEM
HCP - Head-up Control Panel
Figure 501





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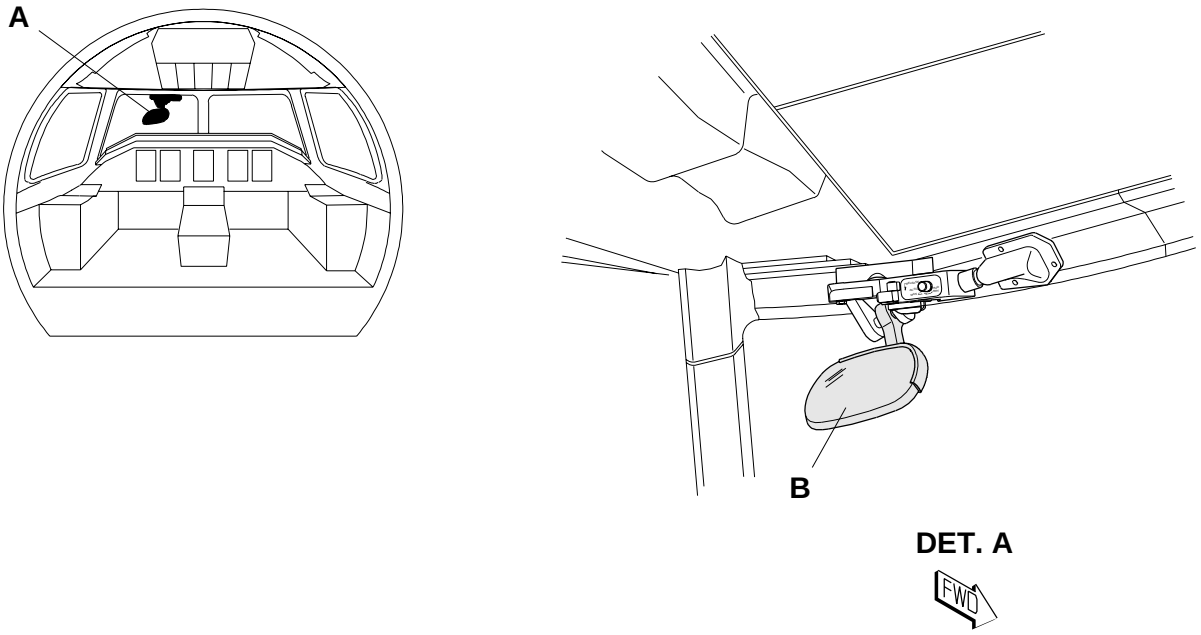
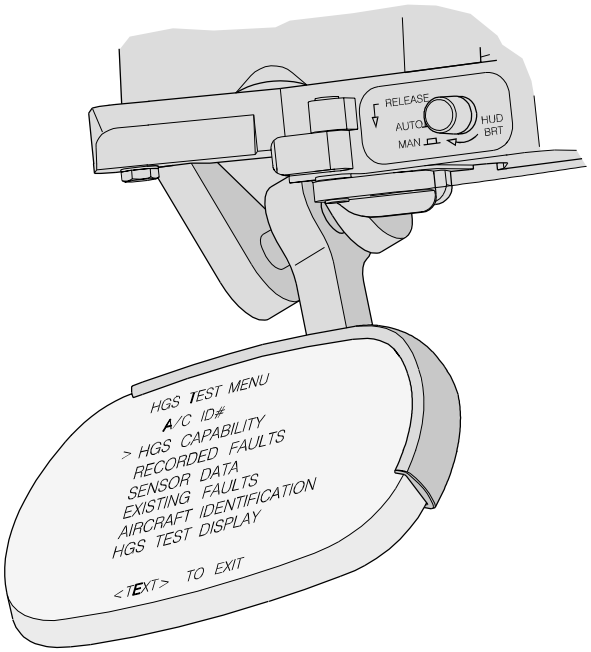
EFFECTIVITY: AIRCRAFT WITH HEAD-UP GUIDANCE SYSTEM
HGS - Test Menu
Figure 502





DET. B

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