CHAPTER

36

PNEUMATIC

CHAPTER 36
PNEUMATIC

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A = Added, R = Revised, D = Deleted, O = Overflow, C = Customer Originated Change

36-EFFECTIVE PAGES

AIRLINE CARD NO		TITLE			BOEING CARD NO.
		PRECOOLER CONTROL VALVE AND WING TAI SOLENOID - LEFT			**36-020-01-01**
DATE	TASK **FUNCTIONAL**				RELATED CARD
TAIL NUMBER	WORK AREA **ENG/STRUT**	VERSION **1.1**	THRESHOLD **16000 FH**	REPEAT **16000 FH**	APPLICABILITY AIRPLANE: **ALL** ENGINE: **ALL**
STATION	SKILL **AIRPL**				
		ACCESS **415 416**			ZONE **411**

Functionally check the left precooler control valve and wing TAI solenoid.

A. References

Reference	Title
AMM 30-11-12-000-801	Ground Wing Thermal Anti-Icing Solenoid Valve Removal (P/B 401)
AMM 30-11-12-400-801	Ground Wing Thermal Anti-Icing Solenoid Valve Installation (P/B 401)
AMM 36-00-00-860-806	Remove Pressure from the Pneumatic System (P/B 201)
AMM 78-31-00-010-801-F00	Open the Thrust Reverser (Selection) (P/B 201)
AMM 78-31-00-010-804-F00	Close the Thrust Reverser (Selection) (P/B 201)

B. Consumable Materials

Reference	Description	Specification
D00006	Compound - Antiseize Pure Nickel Special - Never-Seez NSBT	BAC5008
D00010	Compound - Thread Antiseize, High Temperature	MIL-PRF-907
G50135	Leak Detector - Liquid, Non-Corrosive Soap Compound	MIL-PRF-25567

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-13770	737 Pneumatic Test Kit Part #: 1945-04-08 Supplier: 6Q1D1 Part #: 1945-04-09 Supplier: 6Q1D1
SPL-4350	Test Equipment - Engine Bleed Air Systems Part #: C36001-64 Supplier: 81205
STD-1453	Gauge - Pressure, 0-250 PSIG (0-1724 KPa)
STD-1454	Regulator - Pressure, 0 to 250 PSI with Pressure Gauge, 3/8 Inch ID Connections
STD-1455	Source - Nitrogen, 0-250 PSIG
STD-3907	Mirror - Dental
STD-3942	Hose - Air, Flexible, 3/8 inch (.9525 cm) ID, Length as Needed

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 36-020-01-01

TASK 36-12-00-710-802

MECH | INSP

1. Precooler Control Valve Functional Test

Figure 1

A. General

(1) This procedure uses a nitrogen supply source and pneumatic test equipment to perform an operational test of the precooler control valve.

B. Preparation for the Test

SUBTASK 36-12-00-860-010

(1) Make sure the engine start lever is in the CUTOFF position:

(a) Install a DO-NOT-OPERATE tag on the applicable start lever.

SUBTASK 36-12-00-860-011

WARNING: REMOVE THE PRESSURE FROM THE PNEUMATIC DUCTS BEFORE YOU REMOVE A PNEUMATIC SYSTEM COMPONENT. HOT HIGH PRESSURE AIR CAN CAUSE INJURIES TO PERSONNEL OR DAMAGE TO EQUIPMENT.

(2) Remove pressure from the pneumatic system. Do this task: Remove Pressure from the Pneumatic System, AMM TASK 36-00-00-860-806.

SUBTASK 36-12-00-860-013

(3) Make sure that the WING ANTI-ICE switch on the engine and wing anti-ice control panel P5-11 is in the OFF position.

SUBTASK 36-12-00-860-012

(4) Do this task: Open the Thrust Reverser (Selection), AMM TASK 78-31-00-010-801-F00.

C. Precooler Control Valve Functional Test

NOTE: If you have a test kit, COM-13770, it is not necessary to obtain the individual COM and STD test equipment shown in the tool list as they are contained in the test kit. The engine bleed air system test equipment, SPL-4350, contains all of the individual COM and STD test equipment shown in the tool list.

SUBTASK 36-12-00-480-015

(1) Connect a nitrogen source to the supply pressure sense line [2] to the precooler control valve [7] as follows:

(a) Disconnect the bleed air supply line [4] at the inlet tee to the supply pressure sense line [2].

1) Loosen the other end of the bleed air supply line [4] and move it out of the way.

(b) Connect a nitrogen source, STD-1455, pressure regulator, STD-1454, pressure gauge, STD-1453 (Ps), 3/8 inch (.9525 cm) ID flexible air hose, length as needed, STD-3942 at the tee to the supply pressure sense line [2].

SUBTASK 36-12-00-710-011

(2) Do a check of the minimum closing pressure of the precooler control valve as follows:

(a) Adjust the regulator on the nitrogen pressure source, STD-1455 to provide 130 - 250 psi (9- 17 Bar or 900-1700 kPa) to the pressure regulator, STD-1454.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 36-020-01-01

MECH	INSP

(b) Slowly open the regulator, STD-1454 to increase the supply pressure (Ps) to 14.0 - 15.0 psig.

(c) Examine the position indicator [1] on the precooler control valve [7]:

1) Use a dental mirror, STD-3907, if necessary.

(d) Did the position indicator [1] on the precooler control valve [7] show that the valve moved to fully closed or within 30 degrees of fully closed? If yes, this task is complete. If no, then do these steps:

1) Put a cap [9] on the sense line to the precooler control valve 390° sensor in the engine compartment as shown in Figure 1, View C.

2) Increase supply pressure (Ps) to 14 - 15 psig.

3) Did the precooler control valve move to fully closed or to within 30 degrees of fully closed?

a) If yes, there is a leak in the sense lines to the 390° sensor or in the 390° sensor. Do a check of the sense lines and 390° sensor for leaks.

<1> If leaks are found, repair or replace as necessary.

b) If no, continue.

4) Increase supply pressure (Ps) to 70 - 75 psig.

NOTE: Supply pressure (Ps) is increased to 70 - 75 psig so that leaks in the sense lines and fittings will be easier to detect.

5) Use leak detector, G50135, to examine these areas for nitrogen leakage:

a) The supply pressure (Ps) sense line [2] and fitting to the precooler control valve [7]

b) The test line and fittings from the nitrogen source to the supply pressure sense line [2]

c) The sense line and fittings between the precooler control valve [7] and the control pressure (Pc) sense line where it connects to the bottom of the pylon

d) The sense line and fittings between the precooler control [7] and the wing TAI solenoid valve

e) Wing TAI solenoid valve.

6) Decrease Ps to 0 psig and repair all leakage found.

a) If leakage is found at the wing TAI solenoid, do these tasks to replace the wing thermal anti-icing solenoid valve:

<1> Do this task: Ground Wing Thermal Anti-Icing Solenoid Valve Removal, AMM TASK 30-11-12-000-801

<2> Do this task: Ground Wing Thermal Anti-Icing Solenoid Valve Installation, AMM TASK 30-11-12-400-801.

b) Use compound, D00010, or Never-Seez NSBT compound, D00006, on the threads of all fittings when connecting the sense lines.

7) Increase supply pressure (Ps) to 14 - 15 psig.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 36-020-01-01

MECH	INSP

a) If the precooler control valve does not move to fully closed or to within 30 degrees of fully closed, replace the precooler control valve as follows:

<1> Precooler Control Valve Removal, TASK 36-12-02-000-801

<2> Precooler Control Valve Installation, TASK 36-12-02-400-801.

<a> Use compound, D00010, or Never-Seez NSBT compound, D00006, on the threads of all fittings when connecting the sense lines.

D. Return the Airplane Back to Its Usual Condition

SUBTASK 36-12-00-080-006

(1) Do the following to remove the supply pressure (Ps) test equipment and reinstall the bleed air supply line to the supply pressure (Ps) sense line inlet tee.

(a) Remove the nitrogen source, STD-1455, pressure regulator, STD-1454, supply pressure gauge, STD-1453, and test line from the supply pressure (Ps) sense line [2].

(b) Connect the bleed air supply line [4] to the supply pressure sense line [2] (Figure 1, View B).

1) Tighten all sense line tube nuts to 133.0 pound-inches — 147.0 pound-inches (15.0 Newton-meters — 16.6 Newton-meters).

NOTE: Use compound, D00010, or Never-Seez NSBT compound, D00006, on the threads of all fittings when connecting the sense lines.

SUBTASK 36-12-00-860-009

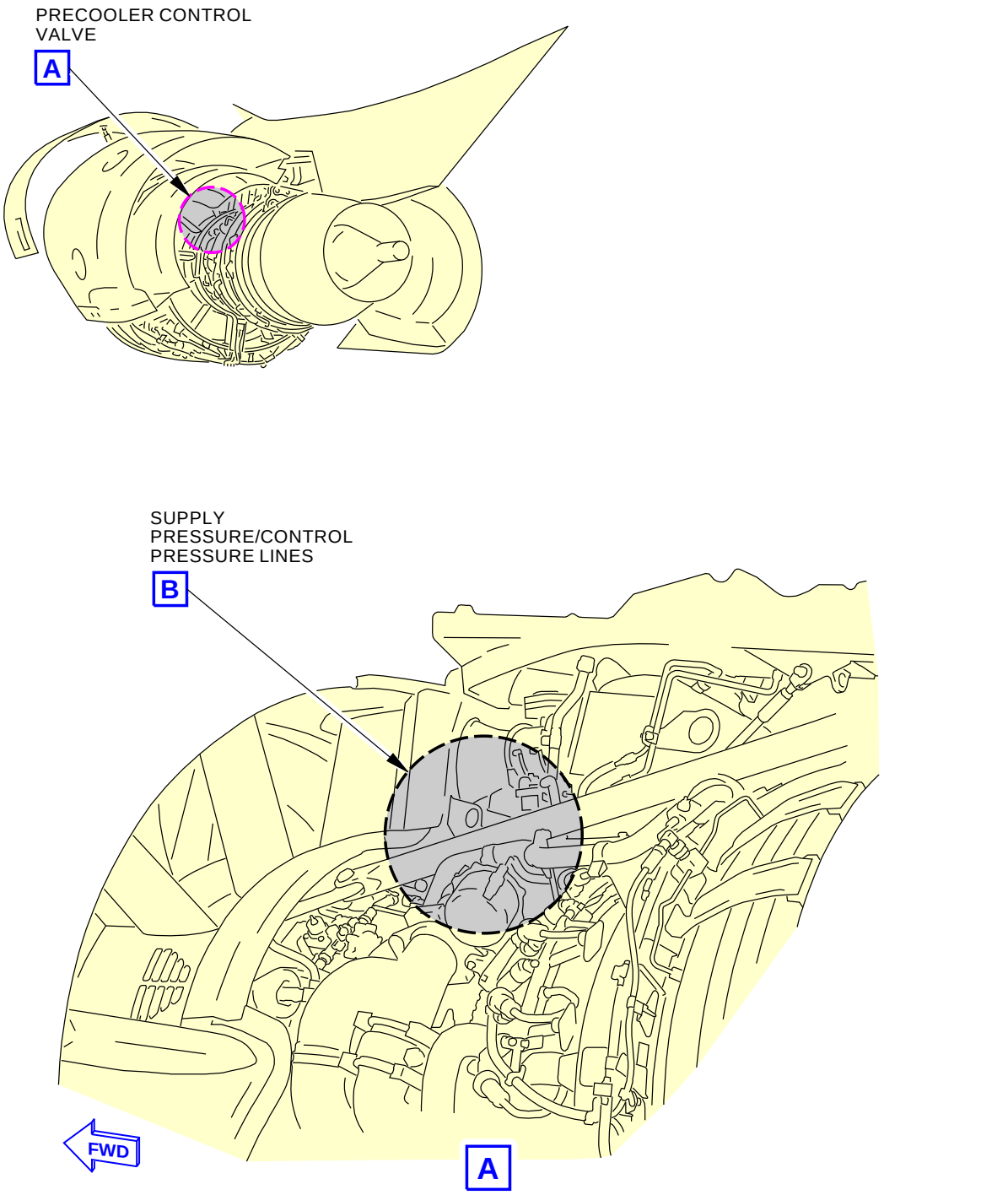
(2) Close the thrust reverser. Do this task: Close the Thrust Reverser (Selection), AMM TASK 78-31-00-010-804-F00.

SUBTASK 36-12-00-440-002

(3) Remove the DO-NOT-OPERATE tag from the applicable engine start lever.

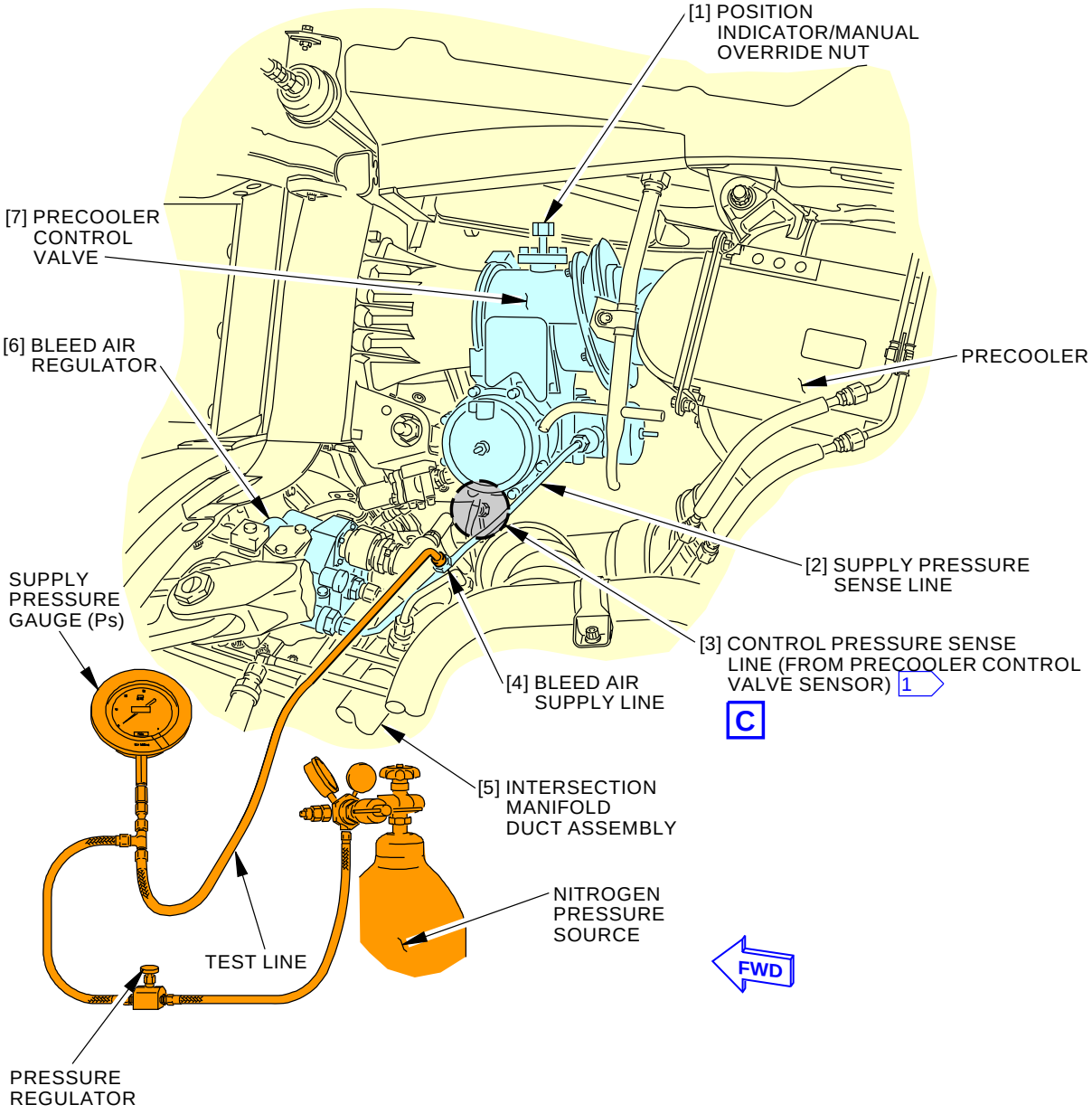
——— END OF TASK ———

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				36-020-01-01



Precooler Control Valve Functional Test
Figure 1 (Sheet 1 of 3)

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				36-020-01-01



SUPPLY PRESSURE/CONTROL PRESSURE LINES

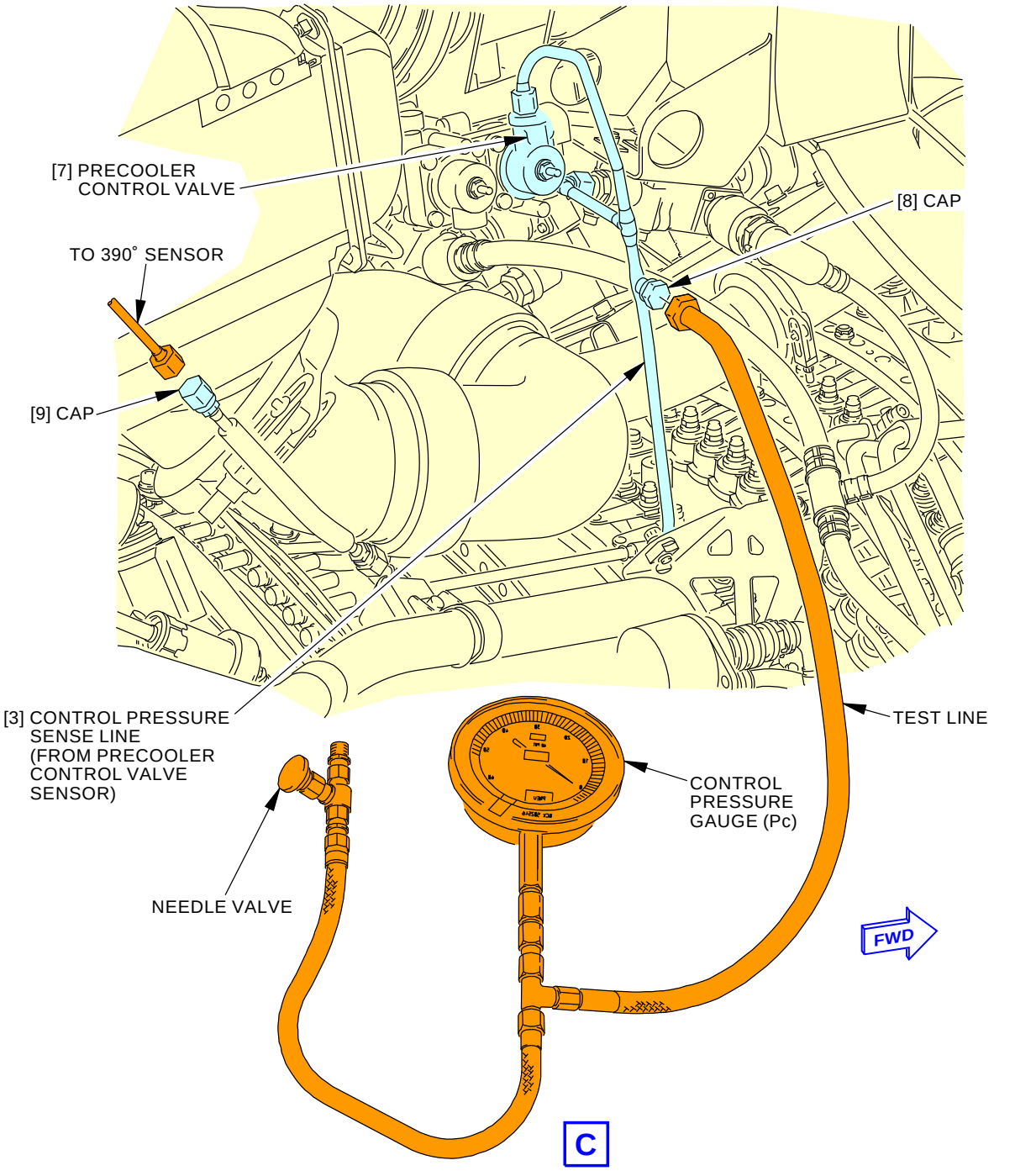
B

1 ACCESS FROM RIGHT SIDE OF ENGINE

2326508 S0000528557_V2

Precooler Control Valve Functional Test
Figure 1 (Sheet 2 of 3)

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				36-020-01-01



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Precooler Control Valve Functional Test
Figure 1 (Sheet 3 of 3)

AIRLINE CARD NO		TITLE			BOEING CARD NO.
		PRECOOLER CONTROL VALVE AND WING TAI SOLENOID - RIGHT			**36-020-02-01**
DATE	TASK **FUNCTIONAL**				RELATED CARD
TAIL NUMBER	WORK AREA **ENG/STRUT**	VERSION **1.1**	THRESHOLD **16000 FH**	REPEAT **16000 FH**	APPLICABILITY AIRPLANE: **ALL** ENGINE: **ALL**
STATION	SKILL **AIRPL**				
		ACCESS **425 426**			ZONE **421**

Functionally check the right precooler control valve and wing TAI solenoid.

A. References

Reference	Title
AMM 30-11-12-000-801	Ground Wing Thermal Anti-Icing Solenoid Valve Removal (P/B 401)
AMM 30-11-12-400-801	Ground Wing Thermal Anti-Icing Solenoid Valve Installation (P/B 401)
AMM 36-00-00-860-806	Remove Pressure from the Pneumatic System (P/B 201)
AMM 78-31-00-010-801-F00	Open the Thrust Reverser (Selection) (P/B 201)
AMM 78-31-00-010-804-F00	Close the Thrust Reverser (Selection) (P/B 201)

B. Consumable Materials

Reference	Description	Specification
D00006	Compound - Antiseize Pure Nickel Special - Never-Seez NSBT	BAC5008
D00010	Compound - Thread Antiseize, High Temperature	MIL-PRF-907
G50135	Leak Detector - Liquid, Non-Corrosive Soap Compound	MIL-PRF-25567

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-13770	737 Pneumatic Test Kit Part #: 1945-04-08 Supplier: 6Q1D1 Part #: 1945-04-09 Supplier: 6Q1D1
SPL-4350	Test Equipment - Engine Bleed Air Systems Part #: C36001-64 Supplier: 81205
STD-1453	Gauge - Pressure, 0-250 PSIG (0-1724 KPa)
STD-1454	Regulator - Pressure, 0 to 250 PSI with Pressure Gauge, 3/8 Inch ID Connections
STD-1455	Source - Nitrogen, 0-250 PSIG
STD-3907	Mirror - Dental
STD-3942	Hose - Air, Flexible, 3/8 inch (.9525 cm) ID, Length as Needed

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 36-020-02-01

MECH | INSP

TASK 36-12-00-710-802

1. Precooler Control Valve Functional Test

Figure 1

A. General

(1) This procedure uses a nitrogen supply source and pneumatic test equipment to perform an operational test of the precooler control valve.

B. Preparation for the Test

SUBTASK 36-12-00-860-010

(1) Make sure the engine start lever is in the CUTOFF position:

(a) Install a DO-NOT-OPERATE tag on the applicable start lever.

SUBTASK 36-12-00-860-011

WARNING: REMOVE THE PRESSURE FROM THE PNEUMATIC DUCTS BEFORE YOU REMOVE A PNEUMATIC SYSTEM COMPONENT. HOT HIGH PRESSURE AIR CAN CAUSE INJURIES TO PERSONNEL OR DAMAGE TO EQUIPMENT.

(2) Remove pressure from the pneumatic system. Do this task: Remove Pressure from the Pneumatic System, AMM TASK 36-00-00-860-806.

SUBTASK 36-12-00-860-013

(3) Make sure that the WING ANTI-ICE switch on the engine and wing anti-ice control panel P5-11 is in the OFF position.

SUBTASK 36-12-00-860-012

(4) Do this task: Open the Thrust Reverser (Selection), AMM TASK 78-31-00-010-801-F00.

C. Precooler Control Valve Functional Test

NOTE: If you have a test kit, COM-13770, it is not necessary to obtain the individual COM and STD test equipment shown in the tool list as they are contained in the test kit. The engine bleed air system test equipment, SPL-4350, contains all of the individual COM and STD test equipment shown in the tool list.

SUBTASK 36-12-00-480-015

(1) Connect a nitrogen source to the supply pressure sense line [2] to the precooler control valve [7] as follows:

(a) Disconnect the bleed air supply line [4] at the inlet tee to the supply pressure sense line [2].

1) Loosen the other end of the bleed air supply line [4] and move it out of the way.

(b) Connect a nitrogen source, STD-1455, pressure regulator, STD-1454, pressure gauge, STD-1453 (Ps), 3/8 inch (.9525 cm) ID flexible air hose, length as needed, STD-3942 at the tee to the supply pressure sense line [2].

SUBTASK 36-12-00-710-011

(2) Do a check of the minimum closing pressure of the precooler control valve as follows:

(a) Adjust the regulator on the nitrogen pressure source, STD-1455 to provide 130 - 250 psi (9- 17 Bar or 900-1700 kPa) to the pressure regulator, STD-1454.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 36-020-02-01

MECH	INSP

(b) Slowly open the regulator, STD-1454 to increase the supply pressure (Ps) to 14.0 - 15.0 psig.

(c) Examine the position indicator [1] on the precooler control valve [7]:

1) Use a dental mirror, STD-3907, if necessary.

(d) Did the position indicator [1] on the precooler control valve [7] show that the valve moved to fully closed or within 30 degrees of fully closed? If yes, this task is complete. If no, then do these steps:

1) Put a cap [9] on the sense line to the precooler control valve 390° sensor in the engine compartment as shown in Figure 1, View C.

2) Increase supply pressure (Ps) to 14 - 15 psig.

3) Did the precooler control valve move to fully closed or to within 30 degrees of fully closed?

a) If yes, there is a leak in the sense lines to the 390° sensor or in the 390° sensor. Do a check of the sense lines and 390° sensor for leaks.

<1> If leaks are found, repair or replace as necessary.

b) If no, continue.

4) Increase supply pressure (Ps) to 70 - 75 psig.

NOTE: Supply pressure (Ps) is increased to 70 - 75 psig so that leaks in the sense lines and fittings will be easier to detect.

5) Use leak detector, G50135, to examine these areas for nitrogen leakage:

a) The supply pressure (Ps) sense line [2] and fitting to the precooler control valve [7]

b) The test line and fittings from the nitrogen source to the supply pressure sense line [2]

c) The sense line and fittings between the precooler control valve [7] and the control pressure (Pc) sense line where it connects to the bottom of the pylon

d) The sense line and fittings between the precooler control [7] and the wing TAI solenoid valve

e) Wing TAI solenoid valve.

6) Decrease Ps to 0 psig and repair all leakage found.

a) If leakage is found at the wing TAI solenoid, do these tasks to replace the wing thermal anti-icing solenoid valve:

<1> Do this task: Ground Wing Thermal Anti-Icing Solenoid Valve Removal, AMM TASK 30-11-12-000-801

<2> Do this task: Ground Wing Thermal Anti-Icing Solenoid Valve Installation, AMM TASK 30-11-12-400-801.

b) Use compound, D00010, or Never-Seez NSBT compound, D00006, on the threads of all fittings when connecting the sense lines.

7) Increase supply pressure (Ps) to 14 - 15 psig.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 36-020-02-01

MECH	INSP

a) If the precooler control valve does not move to fully closed or to within 30 degrees of fully closed, replace the precooler control valve as follows:

<1> Precooler Control Valve Removal, TASK 36-12-02-000-801

<2> Precooler Control Valve Installation, TASK 36-12-02-400-801.

<a> Use compound, D00010, or Never-Seez NSBT compound, D00006, on the threads of all fittings when connecting the sense lines.

D. Return the Airplane Back to Its Usual Condition

SUBTASK 36-12-00-080-006

(1) Do the following to remove the supply pressure (Ps) test equipment and reinstall the bleed air supply line to the supply pressure (Ps) sense line inlet tee.

(a) Remove the nitrogen source, STD-1455, pressure regulator, STD-1454, supply pressure gauge, STD-1453, and test line from the supply pressure (Ps) sense line [2].

(b) Connect the bleed air supply line [4] to the supply pressure sense line [2] (Figure 1, View B).

1) Tighten all sense line tube nuts to 133.0 pound-inches — 147.0 pound-inches (15.0 Newton-meters — 16.6 Newton-meters).

NOTE: Use compound, D00010, or Never-Seez NSBT compound, D00006, on the threads of all fittings when connecting the sense lines.

SUBTASK 36-12-00-860-009

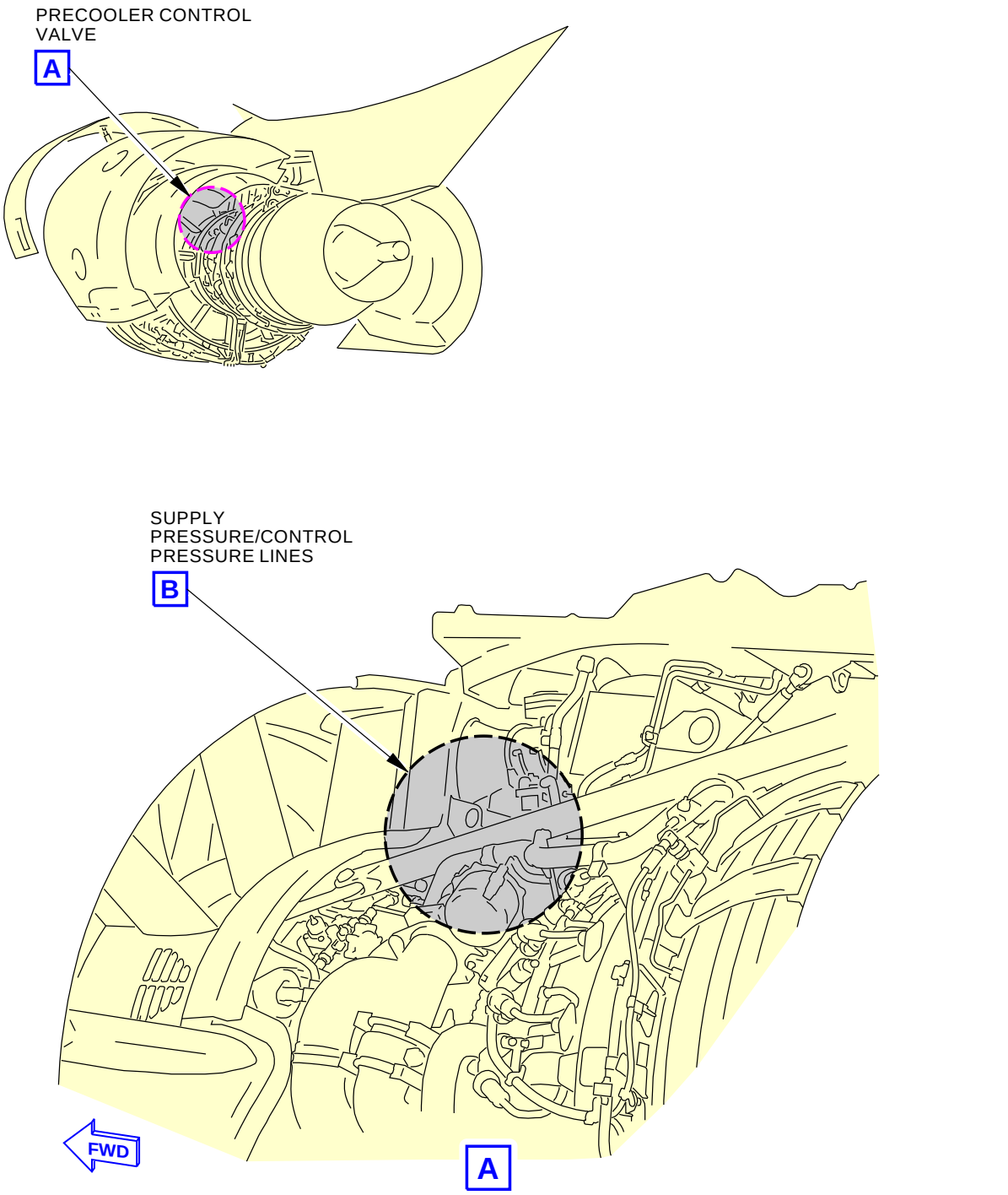
(2) Close the thrust reverser. Do this task: Close the Thrust Reverser (Selection), AMM TASK 78-31-00-010-804-F00.

SUBTASK 36-12-00-440-002

(3) Remove the DO-NOT-OPERATE tag from the applicable engine start lever.

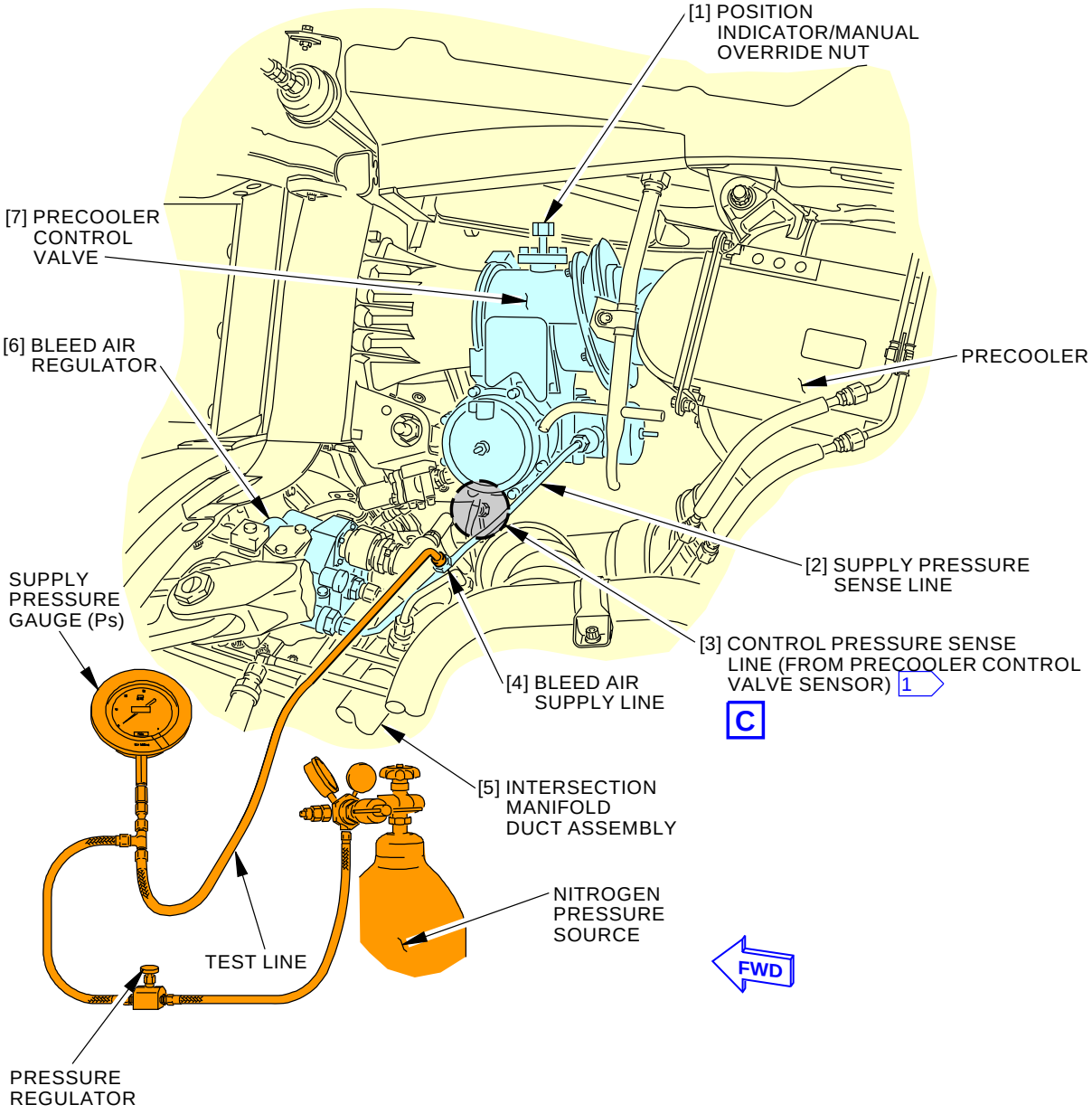
——— END OF TASK ———

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				36-020-02-01



Precooler Control Valve Functional Test
Figure 1 (Sheet 1 of 3)

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				36-020-02-01

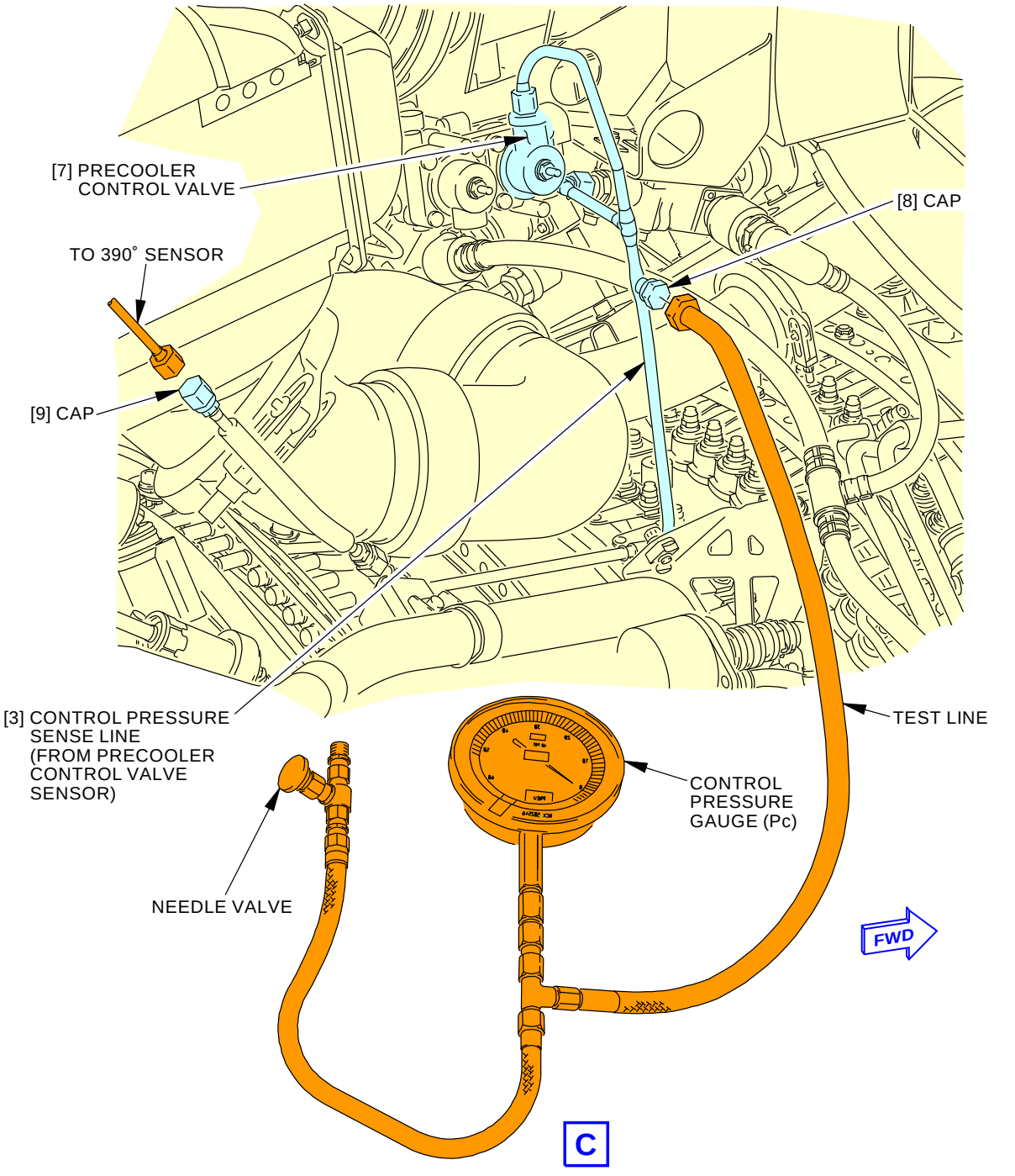


1 ACCESS FROM RIGHT SIDE OF ENGINE

2326508 S0000528557_V2

Precooler Control Valve Functional Test
Figure 1 (Sheet 2 of 3)

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				36-020-02-01



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Precooler Control Valve Functional Test
Figure 1 (Sheet 3 of 3)

AIRLINE CARD NO		TITLE			BOEING CARD NO.
		PRECOOLER CONTROL VALVE SENSOR - LEFT			**36-030-01-01**
DATE	TASK **FUNCTIONAL**				RELATED CARD
TAIL NUMBER	WORK AREA **ENG/STRUT**	VERSION **1.1**	THRESHOLD **16000 FH**	REPEAT **16000 FH**	APPLICABILITY AIRPLANE: **ALL** ENGINE: **ALL**
STATION	SKILL **AIRPL**				
		ACCESS **431BL**			ZONE **433**

Functionally check (off-airplane) the left precooler control valve sensor per vendor's overhaul manual. Task card procedures apply to on-airplane portion only (removal/installation).

A. References

Reference	Title
AMM 36-00-00-860-805	Supply Pressure Upstream of the PRSOV (P/B 201)
AMM 36-00-00-860-806	Remove Pressure from the Pneumatic System (P/B 201)

B. Consumable Materials

Reference	Description	Specification
D00006	Compound - Antiseize Pure Nickel Special - Never-Seez NSBT	BAC5008
D00010	Compound - Thread Antiseize, High Temperature	MIL-PRF-907
G00091	Compound - Oxygen System Leak Detection - Snoop Leak Detector	MIL-PRF-25567

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				36-030-01-01

MECH | INSP

TASK 36-12-03-000-801

1. Precooler Control Valve Sensor Removal

(Figure 1)

A. Prepare to Remove the Valve Sensor

SUBTASK 36-12-03-860-001

WARNING: YOU MUST RELEASE THE PRESSURE IN THE PNEUMATIC DUCT BEFORE YOU REMOVE A PNEUMATIC SYSTEM COMPONENT. THE HOT HIGH PRESSURE AIR IN THE PNEUMATIC DUCTS CAN CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Do this task: Remove Pressure from the Pneumatic System, AMM TASK 36-00-00-860-806.

SUBTASK 36-12-03-860-002

(2) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	5	C00259	AIR CONDITIONING BLEED AIR VALVE ISLN
A	7	C00796	AIR CONDITIONING BLEED AIR VALVES L
B	7	C00797	AIR CONDITIONING BLEED AIR VALVES R

SUBTASK 36-12-03-860-003

(3) Attach a DO-NOT-OPERATE tag to the switches that follow on the P5-10 panel:

(a) BLEED 1

(b) BLEED 2

(c) APU BLEED

SUBTASK 36-12-03-010-001

(4) Remove the applicable access panel, do this step:

(a) Open these access panels:

Number	Name/Location
431BL	Forward Strut Fairing, Left Mid Strut Fairing, Strut 1
441BL	Forward Strut Fairing, Left Mid Strut Fairing, Strut 2

B. Remove the Valve Sensor

SUBTASK 36-12-03-020-001

(1) Disconnect the sense line [6].

SUBTASK 36-12-03-020-002

(2) Loosen the union [5].

SUBTASK 36-12-03-020-003

(3) Remove the four screws [3].

(a) Keep the screws [3] for installation.

SUBTASK 36-12-03-020-004

(4) Remove the valve sensor [1].

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 36-030-01-01

MECH	INSP

SUBTASK 36-12-03-020-005

(5) Remove the union [5].

(a) Keep the union [5] for installation.

SUBTASK 36-12-03-020-006

(6) Remove the packing [2] and packing [4].

(a) Discard the packings if they are cracked, deformed or brittle.

SUBTASK 36-12-03-020-007

(7) Put a cap on the sense line [6] to keep out unwanted material.

SUBTASK 36-12-03-020-008

(8) Put a cover on the boss [7] to keep out unwanted material.

——— END OF TASK ———

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				36-030-01-01

MECH | INSP

TASK 36-12-03-400-801

2. Precooler Control Valve Sensor Installation

(Figure 1)

A. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Valve sensor	36-12-03-01-013	AKS ALL
2	Packing	36-12-03-01-020	AKS ALL
4	Packing	54-51-51-03-050	AKS ALL

B. Install the Valve Sensor

SUBTASK 36-12-03-420-001

(1) Remove the cap from the sense line [6].

SUBTASK 36-12-03-420-002

(2) Remove the cover from the boss [7].

SUBTASK 36-12-03-160-001

(3) Make sure that the mating surfaces of the boss [7] and the valve sensor [1] are clean.

SUBTASK 36-12-03-640-001

(4) Apply a thin layer of Never-Seez NSBT compound, D00006 (alternate compound, D00010) on the external threads of the union [5].

SUBTASK 36-12-03-860-004

(5) Install the union [5] and the packing [4] on the valve sensor [1] by hand at this time.

SUBTASK 36-12-03-420-003

(6) Install the packing [2] on the valve sensor [1].

SUBTASK 36-12-03-640-002

(7) Apply a thin layer of Never-Seez NSBT compound, D00006 (alternate compound, D00010) to the external threads of the screws [3].

SUBTASK 36-12-03-860-005

CAUTION: THE VALVE SENSOR CAN BE DAMAGED IF DROPPED OR MISHANDLED. IF THE VALVE SENSOR IS DROPPED, RETURN IT TO THE SHOP OR SUPPLIER FOR CALIBRATION.

(8) Install the valve sensor [1] on the boss [7].

(a) Install the four screws [3] and then tighten to 22.5-27.5 pound-inches (2.5-3.1 Newton-meters).

(b) Tighten the union [5] to 155 in-lb (17.5 N·m) - 165 in-lb (18.6 N·m).

SUBTASK 36-12-03-420-004

(9) Install the sense line [6].

(a) Tighten the B-nut on the sense line [6] to 135 in-lb (15.3 N·m) - 145 in-lb (16.4 N·m).

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 36-030-01-01

MECH | INSP

C. Precooler Control Valve Sensor Installation Test

SUBTASK 36-12-03-860-009

(1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	5	C00259	AIR CONDITIONING BLEED AIR VALVE ISLN
A	7	C00796	AIR CONDITIONING BLEED AIR VALVES L
B	7	C00797	AIR CONDITIONING BLEED AIR VALVES R

SUBTASK 36-12-03-860-010

(2) Do this task: Supply Pressure Upstream of the PRSOV, AMM TASK 36-00-00-860-805.

SUBTASK 36-12-03-790-001

(3) Do these steps to look for leaks at the precooler control valve sensor sense line connections.

(a) Apply leak detector Snoop Leak Detector compound, G00091 at the sense line connections.

(b) Look to see if the sense line connections have leaks.

1) No leakage is permitted at the sense line connections.

NOTE: You must repair all leakage at the sense line connections.

SUBTASK 36-12-03-860-011

(4) Do this task: Remove Pressure from the Pneumatic System, AMM TASK 36-00-00-860-806.

D. Put the Airplane to Its Usual Condition

SUBTASK 36-12-03-860-006

(1) Install the applicable access panel, do this step:

(a) Close these access panels:

Number	Name/Location
431BL	Forward Strut Fairing, Left Mid Strut Fairing, Strut 1
441BL	Forward Strut Fairing, Left Mid Strut Fairing, Strut 2

SUBTASK 36-12-03-860-007

(2) Remove the DO-NOT-OPERATE tag from the switches that follow on the P5-10 panel:

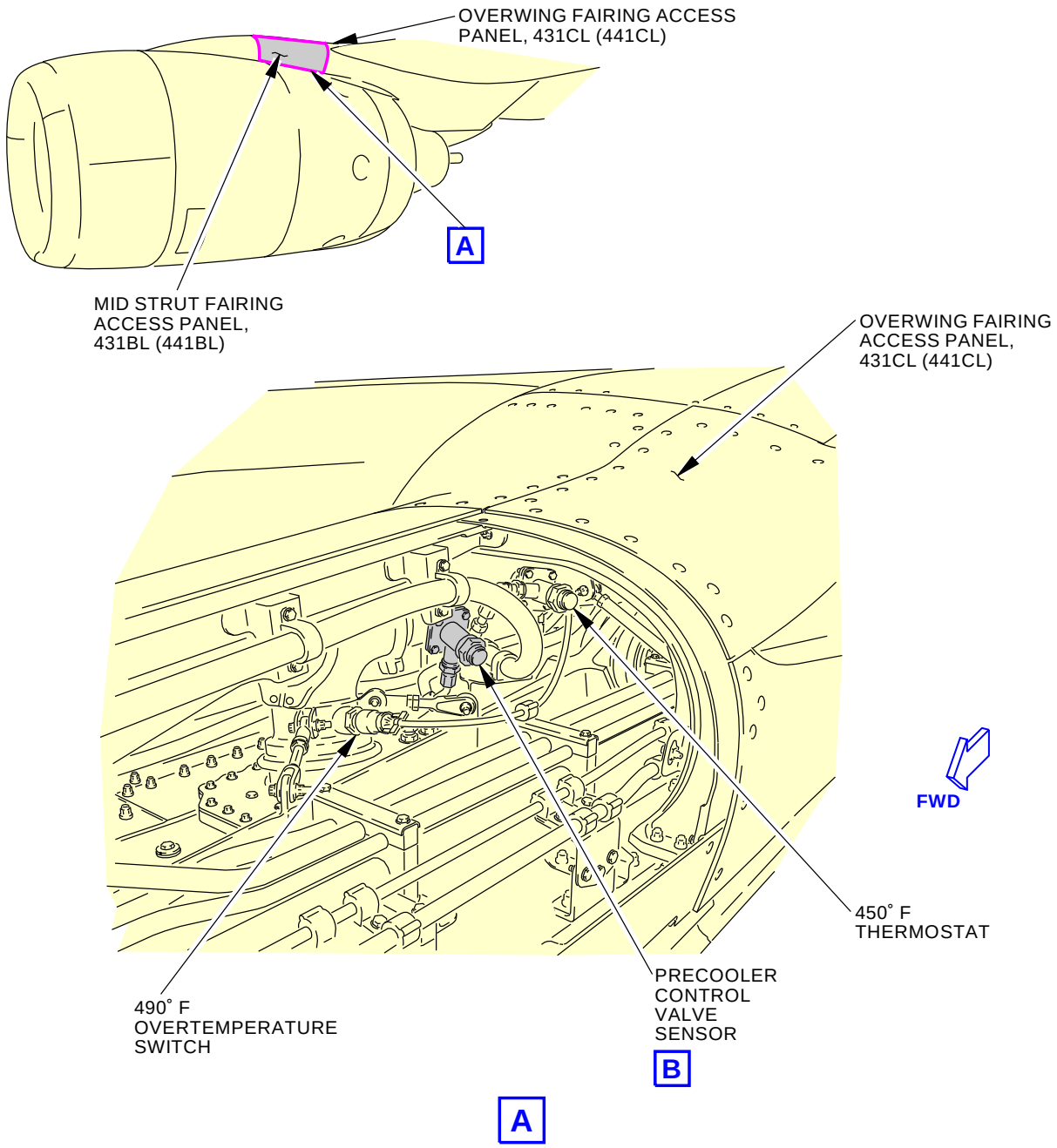
(a) BLEED 1

(b) BLEED 2

(c) APU BLEED

——— END OF TASK ———

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				36-030-01-01



NOTE:

MID STRUT FAIRING ACCESS PANEL, 431BL IS NOT SHOWN FOR CLARITY IN THIS VIEW.

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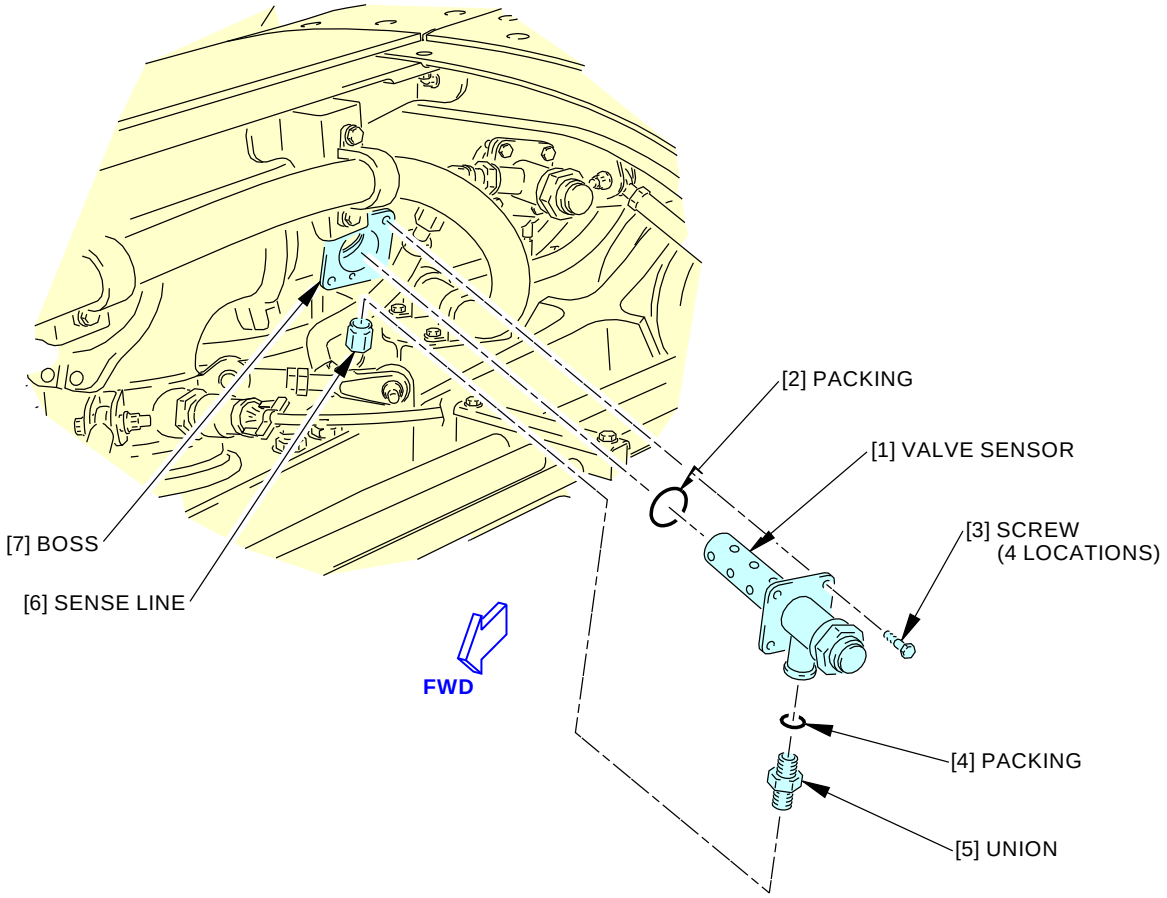
Precooler Control Valve Sensor Installation
Figure 1 (Sheet 1 of 2)

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				36-030-01-01



PRECOOLER CONTROL VALVE SENSOR

B

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Precooler Control Valve Sensor Installation
Figure 1 (Sheet 2 of 2)

AIRLINE CARD NO		TITLE			BOEING CARD NO.
		PRECOOLER CONTROL VALVE SENSOR - RIGHT			**36-030-02-01**
DATE	TASK **FUNCTIONAL**				RELATED CARD
TAIL NUMBER	WORK AREA **ENG/STRUT**	VERSION **1.1**	THRESHOLD **16000 FH**	REPEAT **16000 FH**	APPLICABILITY AIRPLANE: **ALL** ENGINE: **ALL**
STATION	SKILL **AIRPL**				
		ACCESS **441BL**			ZONE **443**

Functionally check (off-airplane) the right precooler control valve sensor per vendor's overhaul manual. Task card procedures apply to on-airplane portion only (removal/installation).

A. References

Reference	Title
AMM 36-00-00-860-805	Supply Pressure Upstream of the PRSOV (P/B 201)
AMM 36-00-00-860-806	Remove Pressure from the Pneumatic System (P/B 201)

B. Consumable Materials

Reference	Description	Specification
D00006	Compound - Antiseize Pure Nickel Special - Never-Seez NSBT	BAC5008
D00010	Compound - Thread Antiseize, High Temperature	MIL-PRF-907
G00091	Compound - Oxygen System Leak Detection - Snoop Leak Detector	MIL-PRF-25567

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				36-030-02-01

MECH | INSP

TASK 36-12-03-000-801

1. Precooler Control Valve Sensor Removal

(Figure 1)

A. Prepare to Remove the Valve Sensor

SUBTASK 36-12-03-860-001

WARNING: YOU MUST RELEASE THE PRESSURE IN THE PNEUMATIC DUCT BEFORE YOU REMOVE A PNEUMATIC SYSTEM COMPONENT. THE HOT HIGH PRESSURE AIR IN THE PNEUMATIC DUCTS CAN CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Do this task: Remove Pressure from the Pneumatic System, AMM TASK 36-00-00-860-806.

SUBTASK 36-12-03-860-002

(2) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	5	C00259	AIR CONDITIONING BLEED AIR VALVE ISLN
A	7	C00796	AIR CONDITIONING BLEED AIR VALVES L
B	7	C00797	AIR CONDITIONING BLEED AIR VALVES R

SUBTASK 36-12-03-860-003

(3) Attach a DO-NOT-OPERATE tag to the switches that follow on the P5-10 panel:

(a) BLEED 1

(b) BLEED 2

(c) APU BLEED

SUBTASK 36-12-03-010-001

(4) Remove the applicable access panel, do this step:

(a) Open these access panels:

Number	Name/Location
431BL	Forward Strut Fairing, Left Mid Strut Fairing, Strut 1
441BL	Forward Strut Fairing, Left Mid Strut Fairing, Strut 2

B. Remove the Valve Sensor

SUBTASK 36-12-03-020-001

(1) Disconnect the sense line [6].

SUBTASK 36-12-03-020-002

(2) Loosen the union [5].

SUBTASK 36-12-03-020-003

(3) Remove the four screws [3].

(a) Keep the screws [3] for installation.

SUBTASK 36-12-03-020-004

(4) Remove the valve sensor [1].

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 36-030-02-01

MECH	INSP

SUBTASK 36-12-03-020-005

(5) Remove the union [5].

(a) Keep the union [5] for installation.

SUBTASK 36-12-03-020-006

(6) Remove the packing [2] and packing [4].

(a) Discard the packings if they are cracked, deformed or brittle.

SUBTASK 36-12-03-020-007

(7) Put a cap on the sense line [6] to keep out unwanted material.

SUBTASK 36-12-03-020-008

(8) Put a cover on the boss [7] to keep out unwanted material.

——— END OF TASK ———

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				36-030-02-01

MECH | INSP

TASK 36-12-03-400-801

2. Precooler Control Valve Sensor Installation

(Figure 1)

A. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Valve sensor	36-12-03-01-013	AKS ALL
2	Packing	36-12-03-01-020	AKS ALL
4	Packing	54-51-51-03-050	AKS ALL

B. Install the Valve Sensor

SUBTASK 36-12-03-420-001

(1) Remove the cap from the sense line [6].

SUBTASK 36-12-03-420-002

(2) Remove the cover from the boss [7].

SUBTASK 36-12-03-160-001

(3) Make sure that the mating surfaces of the boss [7] and the valve sensor [1] are clean.

SUBTASK 36-12-03-640-001

(4) Apply a thin layer of Never-Seez NSBT compound, D00006 (alternate compound, D00010) on the external threads of the union [5].

SUBTASK 36-12-03-860-004

(5) Install the union [5] and the packing [4] on the valve sensor [1] by hand at this time.

SUBTASK 36-12-03-420-003

(6) Install the packing [2] on the valve sensor [1].

SUBTASK 36-12-03-640-002

(7) Apply a thin layer of Never-Seez NSBT compound, D00006 (alternate compound, D00010) to the external threads of the screws [3].

SUBTASK 36-12-03-860-005

CAUTION: THE VALVE SENSOR CAN BE DAMAGED IF DROPPED OR MISHANDLED. IF THE VALVE SENSOR IS DROPPED, RETURN IT TO THE SHOP OR SUPPLIER FOR CALIBRATION.

(8) Install the valve sensor [1] on the boss [7].

(a) Install the four screws [3] and then tighten to 22.5-27.5 pound-inches (2.5-3.1 Newton-meters).

(b) Tighten the union [5] to 155 in-lb (17.5 N·m) - 165 in-lb (18.6 N·m).

SUBTASK 36-12-03-420-004

(9) Install the sense line [6].

(a) Tighten the B-nut on the sense line [6] to 135 in-lb (15.3 N·m) - 145 in-lb (16.4 N·m).

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 36-030-02-01

MECH | INSP

C. Precooler Control Valve Sensor Installation Test

SUBTASK 36-12-03-860-009

(1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	5	C00259	AIR CONDITIONING BLEED AIR VALVE ISLN
A	7	C00796	AIR CONDITIONING BLEED AIR VALVES L
B	7	C00797	AIR CONDITIONING BLEED AIR VALVES R

SUBTASK 36-12-03-860-010

(2) Do this task: Supply Pressure Upstream of the PRSOV, AMM TASK 36-00-00-860-805.

SUBTASK 36-12-03-790-001

(3) Do these steps to look for leaks at the precooler control valve sensor sense line connections.

(a) Apply leak detector Snoop Leak Detector compound, G00091 at the sense line connections.

(b) Look to see if the sense line connections have leaks.

1) No leakage is permitted at the sense line connections.

NOTE: You must repair all leakage at the sense line connections.

SUBTASK 36-12-03-860-011

(4) Do this task: Remove Pressure from the Pneumatic System, AMM TASK 36-00-00-860-806.

D. Put the Airplane to Its Usual Condition

SUBTASK 36-12-03-860-006

(1) Install the applicable access panel, do this step:

(a) Close these access panels:

Number	Name/Location
431BL	Forward Strut Fairing, Left Mid Strut Fairing, Strut 1
441BL	Forward Strut Fairing, Left Mid Strut Fairing, Strut 2

SUBTASK 36-12-03-860-007

(2) Remove the DO-NOT-OPERATE tag from the switches that follow on the P5-10 panel:

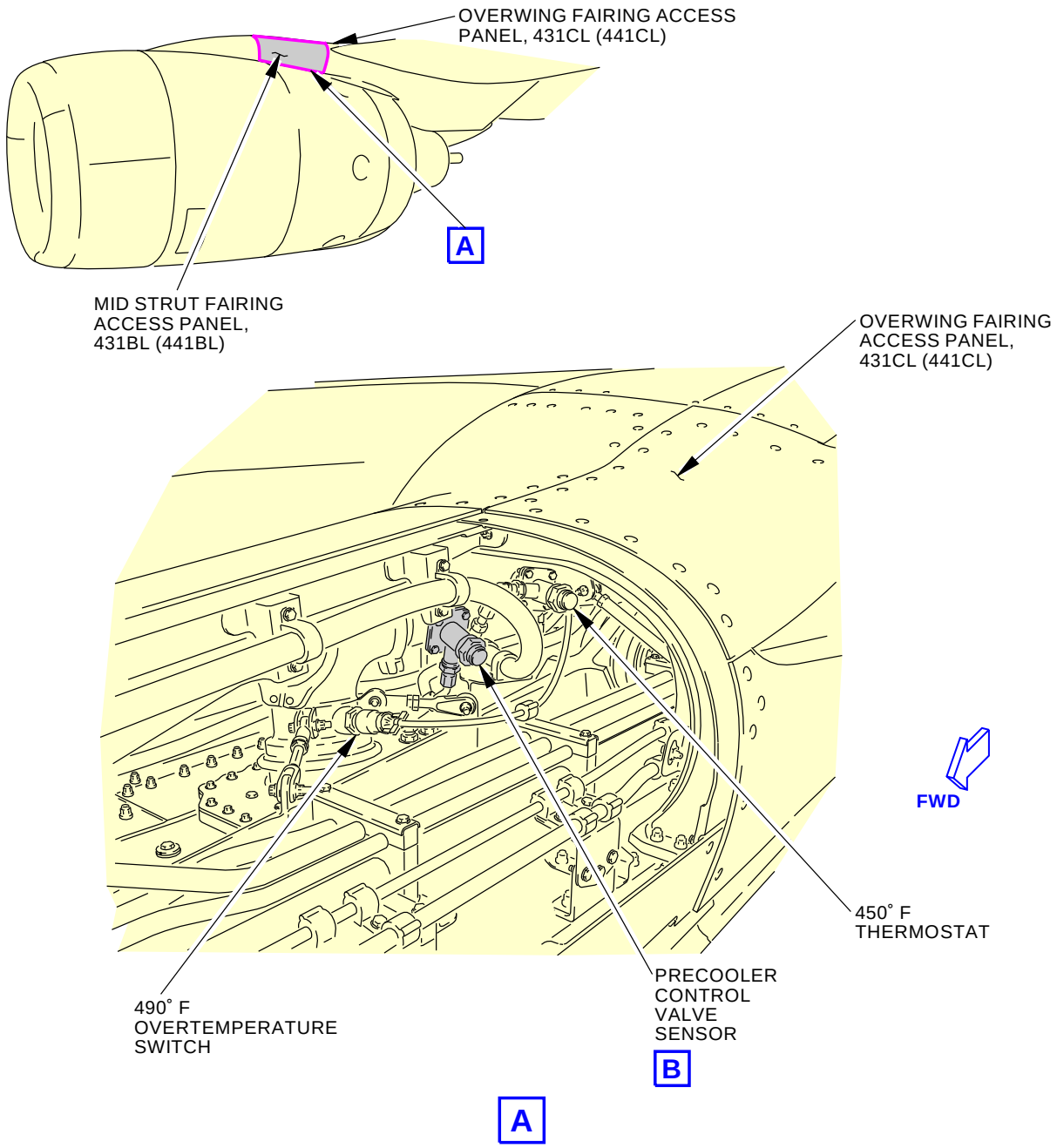
(a) BLEED 1

(b) BLEED 2

(c) APU BLEED

——— END OF TASK ———

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				36-030-02-01



NOTE:

MID STRUT FAIRING ACCESS PANEL, 431BL IS NOT SHOWN FOR CLARITY IN THIS VIEW.

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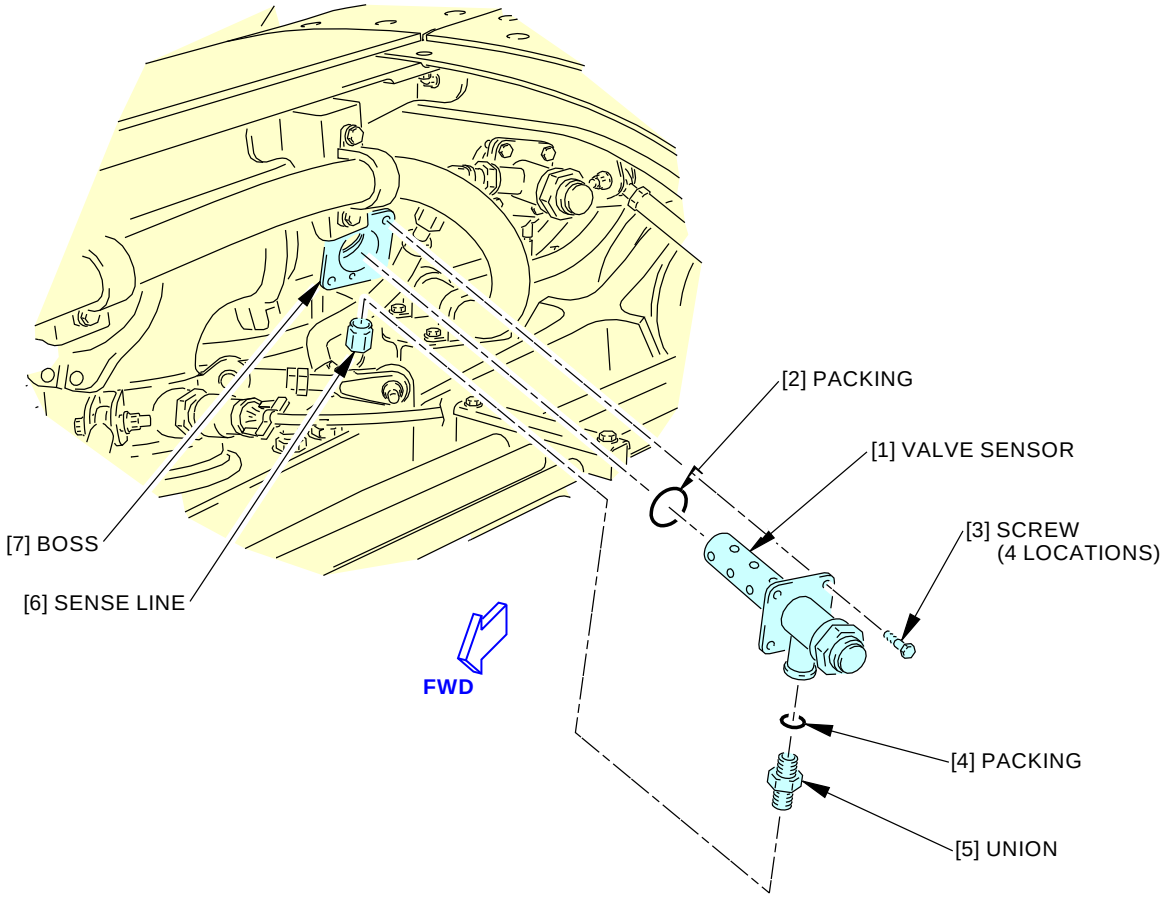
Precooler Control Valve Sensor Installation
Figure 1 (Sheet 1 of 2)

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				36-030-02-01



PRECOOLER CONTROL VALVE SENSOR

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Precooler Control Valve Sensor Installation
Figure 1 (Sheet 2 of 2)