

ATA AIRLINES, INC.

PRIMARY AND SECONDARY HEAT EXCHANGERS

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CHECK BEING PERFORMED: Custom

ZONES: 100
A/C NUMBER:
REV. DATE: 07/10/03
FREQUENCY: PCI

W/C NUMBER: 315Z2101 DATE:

TOOLS	DESCRIPTION	QTY
PF80-012500	Deactivator - Check Valve	1
C21003-45	Backflush Equipment, A/C Pack Heat Exchanger	1
COMMON	(Commercially Available) Water Source 0-60psi	1

PANELS

192BL	192CL	192DR
192BR	192CR	

REFERENCES

FIGURES 1 AND 2, AMM 21-00-00, 21-51-03, 24-22-00, 36-00-00

MECH INSP

CLEAN THE PRIMARY AND SECONDARY HEAT EXCHANGERS.

1. Heat Exchanger and Plenum/Diffuser Assembly Cleaning (Figures 1 and 2).

_____ XXXXX A. General Preparation

- (1) Set the L PACK and R PACK switches on the P5-10 Air Conditioning Panel to the OFF position and install DO-NOT-OPERATE tags on the switches.
- (2) Do these steps to access the left pack heat exchangers:
 - (a) Open the ECS Access Door, 192CL.
 - (b) Remove the ECS Ram Air Inlet Mixing Duct Panel - Forward, 192BL.
- (3) Do these steps to access the right pack heat exchangers:
 - (a) Open the ECS High Pressure Access Door, 192DR.
 - (b) Open the ECS Access Door, 192CR.
 - (c) Remove the ECS Ram Air Inlet Mixing Duct Panel - Forward, 192BR.
- (4) Remove the bolts and the washers that attach the

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ATA AIRLINES, INC. B737-800 FLEET

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ram air inlet duct access panels to the ram air inlet ducts.

- (5) Remove the ram air inlet duct access panels.

NOTE: You must remove the access panels so that the cleaning water will not accumulate in the ram air inlet ducts.

- (6) Remove the bolts and washers that attach the plenum/diffuser access panels to the plenum diffuser assemblies for the left and right pack primary and secondary heat exchangers.

- (7) Remove the bolts, washers, and nuts that attach the bonding jumpers to the forward access panels.

- (8) Remove the plenum/diffuser access panels and the gaskets.

_____ XXXXX B. Prepare the Left Pack Heat Exchangers for Cleaning

- (1) Do these steps to install the heat exchanger cleaning heads of the C21003-45 backflusher on the left pack primary and secondary heat exchangers:

(a) Carefully insert the supply tubes of the cleaning head into the access holes in the plenum/diffuser assembly so that the ends of the supply tubes point toward the exit of the heat exchanger.

(b) Tighten the screws on the cleaning head.

NOTE: Make sure the rubber gasket of the cleaning head makes a good seal with the plenum/diffuser.

(c) Do the above two steps again to install the cleaning head for the other heat exchanger.

- (2) Install the plug assembly into the left ram air exhaust outlet.

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(3) Connect the water line of the water source (0-60 PSIG) to the water supply valve of the backflusher, C21003-45.

(4) Do these steps to use airplane pneumatic air for the air source:

(a) Open the ECS High Pressure Access Door, 192DR.

WARNING: WEAR GLOVES THAT WILL GIVE YOU PROTECTION FROM HOT SURFACES WHEN YOU CONNECT OR DISCONNECT PNEUMATIC FITTINGS. THE GROUND AIR CONNECTOR CAN BE VERY HOT IF THE PACKS HAVE BEEN OPERATED IMMEDIATELY BEFORE THIS PROCEDURE. YOU CAN BADLY BURN YOUR HANDS IF YOU TOUCH A HOT GROUND AIR CONNECTOR.

(b) Install the deactivator, PF80-012-500 in the ground air connector.

(c) Connect an air line from the air supply valve to the ground pneumatic connector of the airplane.

(d) Do this task: Supply Pressure to the Pneumatic System with the APU (AMM TASK 36-00-00-860-803 p201).

NOTE: If ground air supply is utilized this task is not required.

(5) Do these steps to use a ground air supply for the air source:

(a) Connect the ground air supply line to the air supply valve of the backflusher, C21003-45.

(b) Start the ground air source.

NOTE: If airplane pneumatic air is utilized this task is not required.

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XXXXX C. Left Pack Heat Exchanger Cleaning

CAUTION: DO NOT USE SOAP OR A DETERGENT SOLUTION TO CLEAN THE HEAT EXCHANGERS. USE HOT WATER ONLY. IF YOU USE SOAP OR A DETERGENT SOLUTION TO CLEAN THE HEAT EXCHANGERS, DAMAGE TO THE AIR CYCLE MACHINE CAN OCCUR.

(1) Do these steps to clean the left pack heat exchangers:

NOTE: You must do these steps for each of the two heat exchangers.

- (a) Connect the air hose to the cleaning head.
- (b) Connect the water hose to the cleaning head.
- (c) Slowly open the air supply valve on the manifold of the cleaning tool.
- (d) Slowly open the water supply valve on the manifold of the cleaning tool.
- (e) Clean the heat exchanger for 5 minutes.
- (f) Close the water supply valve and continue to supply air for an additional 2 minutes.
- (g) Close the air supply valve.
- (h) Disconnect the air hose from the cleaning head.
- (i) Disconnect the water hose from the cleaning head.
- (j) Do the steps above for each of the two left pack heat exchangers.

(2) Do these steps to remove the heat exchanger cleaning heads:

- (a) Loosen the screws on the cleaning head.

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- (b) Carefully remove the cleaning head.
 - (c) Disconnect the air hose from the cleaning head.
 - (d) Disconnect the water hose from the cleaning head.
- (3) Disconnect the water line from the water source (0-60 PSIG).
- (4) Do these steps if you used a ground air supply for the air source:
- (a) Stop the ground air source.
 - (b) Disconnect the ground air supply line from the air supply valve.
- (5) Do these steps if you used airplane pneumatic air for the air source:
- (a) Disconnect the air line from the ground pneumatic connector and from the air supply valve.
 - (b) Remove the check valve deactivator from the ground air connector.
 - (c) Close the ECS High Pressure Access Door, 192DR.
- (6) Install the plenum/diffuser access panels and the gaskets with the bolts and washers.
- (7) Put the bonding jumper in its position and install the bolts, washers, and nut.
- (8) Install the left ram air inlet access panel with the bolts and washers.
- (9) Remove the plug assembly from the left ram air exhaust outlet.

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(10) Remove the DO-NOT-OPERATE tag on the L PACK switch on the P5-10 Air Conditioning Panel.

(11) Operate the left air conditioning pack for five minutes. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack (AMM TASK 21-00-00-800-803 p201).

NOTE: This will remove any remaining water in the ram air ducts and the air cycle machine bearings.

(12) Stop the left air conditioning pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack (AMM TASK 21-00-00-800-804 p201).

_____ XXXXX D. Prepare the Right Pack Heat Exchangers for Cleaning

(1) Do these steps to install the heat exchanger cleaning heads of the C21003-45 backflusher on the right pack primary and secondary heat exchangers:

(a) Carefully insert the supply tubes of the cleaning head into the access holes in the plenum/diffuser assembly so that the ends of the supply tubes point toward the exit of the heat exchanger.

(b) Tighten the screws on the cleaning head.

NOTE: Make sure the rubber gasket of the cleaning head makes a good seal with the plenum/diffuser.

(c) Do the above two steps again to install the cleaning head for the other heat exchanger.

(2) Install the plug assembly into the right ram air exhaust outlet.

(3) Connect the water line of the water source (0-60 PSIG) to the water supply valve of the

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backflusher, C21003-45.

(4) Do these steps to use airplane pneumatic air for the air source:

(a) Open the ECS High Pressure Access Door, 192DR.

WARNING: WEAR GLOVES THAT WILL GIVE YOU PROTECTION FROM HOT SURFACES WHEN YOU CONNECT OR DISCONNECT PNEUMATIC FITTINGS. THE GROUND AIR CONNECTOR CAN BE VERY HOT IF THE PACKS HAVE BEEN OPERATED IMMEDIATELY BEFORE THIS PROCEDURE. YOU CAN BADLY BURN YOUR HANDS IF YOU TOUCH A HOT GROUND AIR CONNECTOR.

(b) Install the deactivator, PF80-012-500 in the ground air connector.

(c) Connect an air line from the air supply valve to the ground pneumatic connector of the airplane.

(d) Do this task: Supply Pressure to the Pneumatic System with the APU (AMM TASK 36-00-00-860-803 p201).

NOTE: If ground air supply is utilized this task is not required.

(5) Do these steps to use a ground air supply for the air source:

(a) Connect the ground air supply line to the air supply valve of the backflusher, C21003-45.

(b) Start the ground air source.

NOTE: If airplane pneumatic air is utilized this task is not required.

XXXXX E. Right Pack Heat Exchanger Cleaning

CAUTION: DO NOT USE SOAP OR A DETERGENT SOLUTION TO CLEAN THE HEAT EXCHANGERS. USE HOT WATER ONLY.

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IF YOU USE SOAP OR A DETERGENT SOLUTION TO CLEAN THE HEAT EXCHANGERS, DAMAGE TO THE AIR CYCLE MACHINE CAN OCCUR.

(1) Do these steps to clean the right pack heat exchangers:

NOTE: You must do these steps for each of the two heat exchangers.

- (a) Connect the air hose to the cleaning head.
- (b) Connect the water hose to the cleaning head.
- (c) Slowly open the air supply valve on the manifold of the cleaning tool.
- (d) Slowly open the water supply valve on the manifold of the cleaning tool.
- (e) Clean the heat exchanger for 5 minutes.
- (f) Close the water supply valve and continue to supply air for an additional 2 minutes.
- (g) Close the air supply valve.
- (h) Disconnect the air hose from the cleaning head.
- (i) Disconnect the water hose from the cleaning head.
- (j) Do the steps above for each of the two left pack heat exchangers.

(2) Do these steps to remove the heat exchanger cleaning heads:

- (a) Loosen the screws on the cleaning head.
- (b) Carefully remove the cleaning head.
- (c) Disconnect the air hose from the cleaning

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head.

- (d) Disconnect the water hose from the cleaning head.
- (3) Disconnect the water line from the water source (0-60 PSIG).
- (4) Do these steps if you used a ground air supply for the air source:
 - (a) Stop the ground air source.
 - (b) Disconnect the ground air supply line from the air supply valve.
- (5) Do these steps if you used airplane pneumatic air for the air source:
 - (a) Disconnect the air line from the ground pneumatic connector and from the air supply valve.
 - (b) Remove the check valve deactivator from the ground air connector.
 - (c) Close the ECS High Pressure Access Door, 192DR.
- (6) Install the plenum/diffuser access panels and the gaskets with the bolts and washers.
- (7) Put the bonding jumper in its position and install the bolts, washers, and nut.
- (8) Install the right ram air inlet access panel with the bolts and washers.
- (9) Remove the plug assembly from the right ram air exhaust outlet.
- (10) Remove the DO-NOT-OPERATE tag on the R PACK switch on the P5-10 Air Conditioning Panel.

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- (11) Operate the right air conditioning pack for five minutes. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack (AMM TASK 21-00-00-800-803 p201).

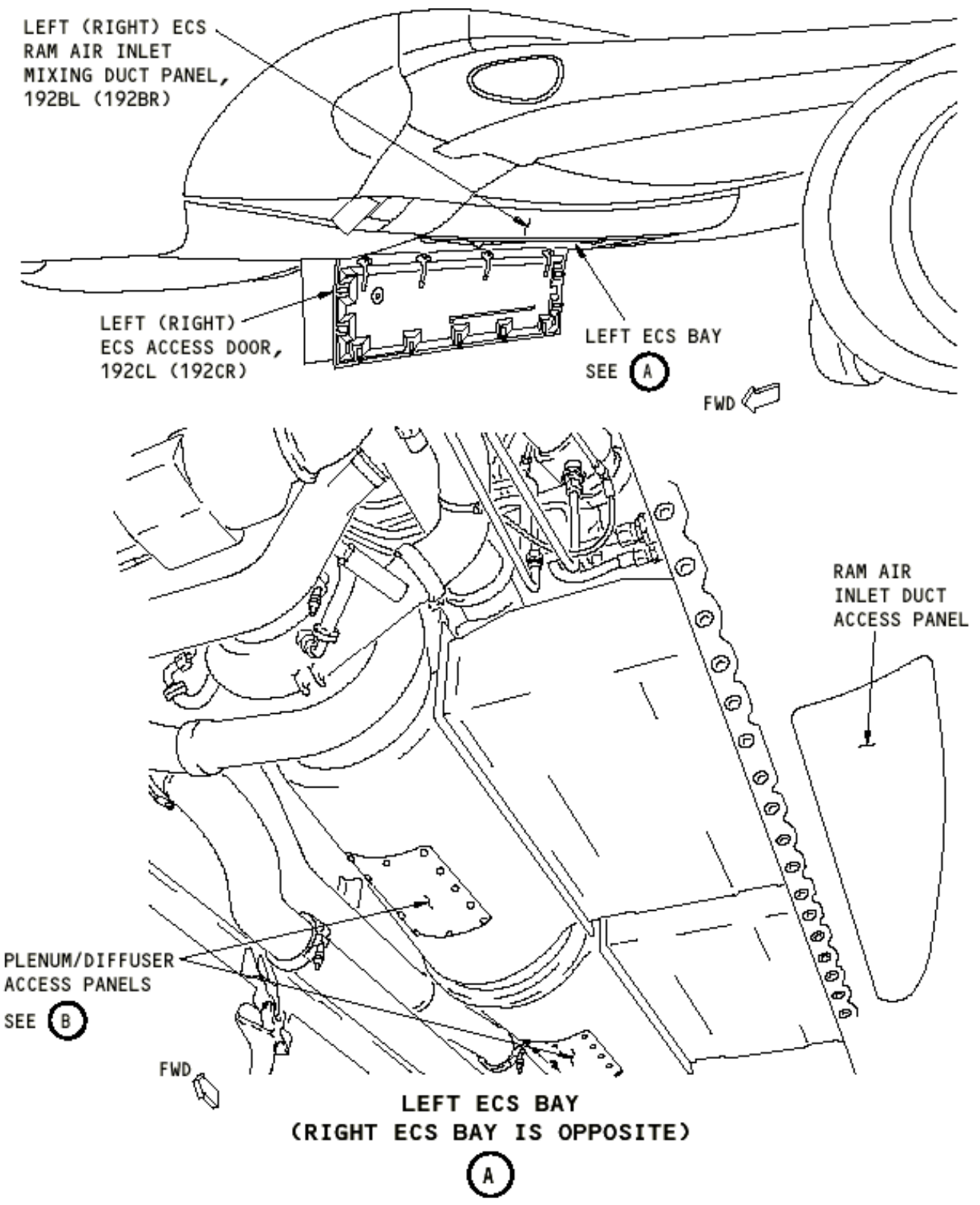
NOTE: This will remove any remaining water in the ram air ducts and the air cycle machine bearings.

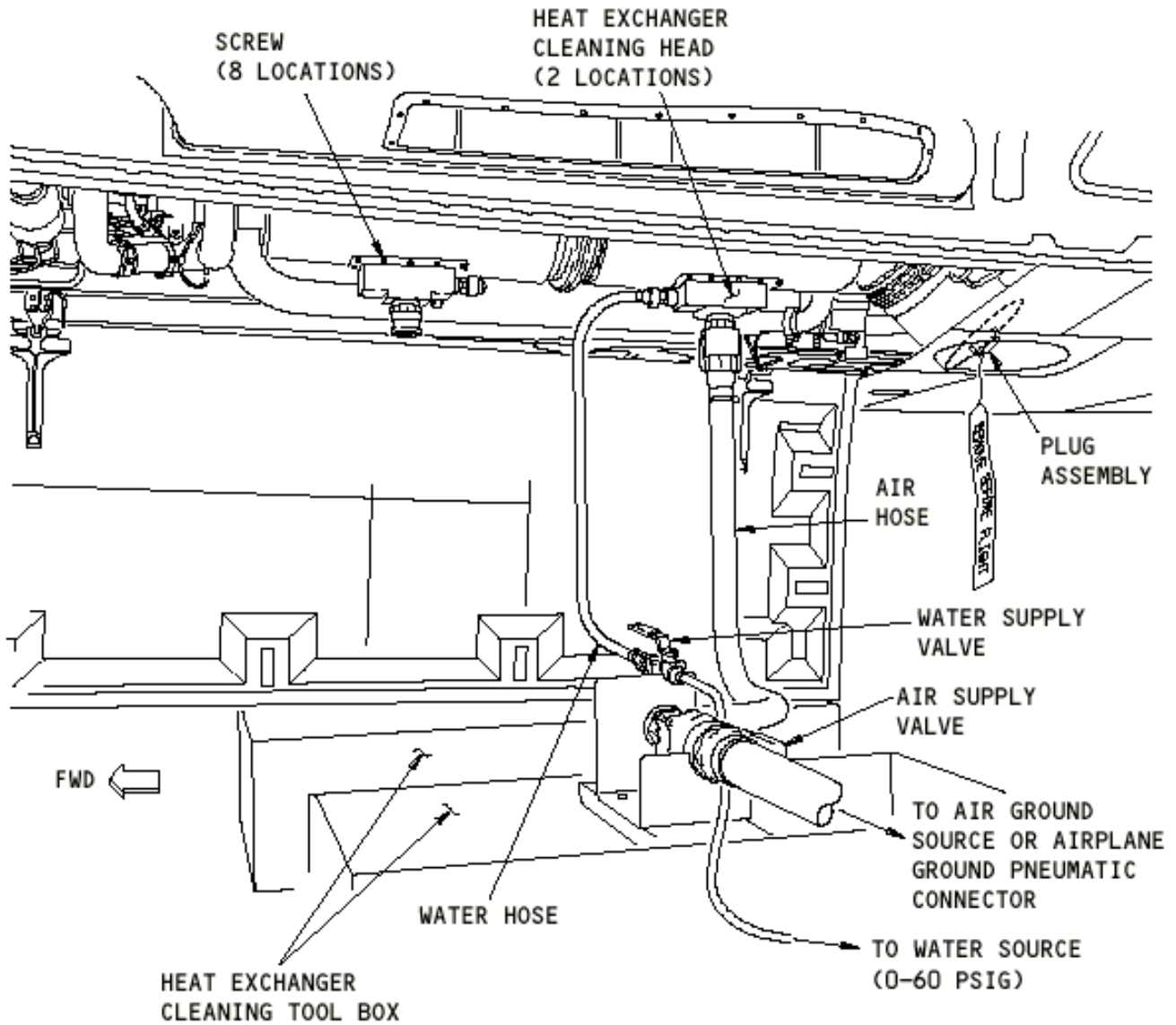
- (12) Stop the right air conditioning pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack (AMM TASK 21-00-00-800-804 p201).

_____ XXXXX F. Put the Airplane Back to its Usual Condition

- (1) Do this task: Remove Pressure from the Pneumatic System (AMM TASK 36-00-00-860-806 p201).
- (2) Do these steps to secure the left pack heat exchangers:
 - (a) Close the ECS Access Door, 192CL.
 - (b) Install the ECS Ram Air Inlet Mixing Duct Panel - Forward, 192BL.
- (3) Do these steps to secure the right pack heat exchangers:
 - (a) Close the ECS Access Door, 192CR.
 - (b) Close the ECS High Pressure Access Door, 192DR.
 - (c) Install the ECS Ram Air Inlet Mixing Duct Panel - Forward, 192BR.
- (4) Remove electrical power if it is not necessary. To remove electrical power, do this task: Remove Electrical Power (AMM TASK 24-22-00-860-812 p201).

*****END OF WORKCARD*****





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