

3. System Description

The avionics equipment is cooled as listed below:

A. Rack equipment

Equipment installed in the racks is cooled with air blown into the base of the racks through a sealed inlet (Ref. ARINC 600). This air then flows through the equipment to the top of the racks and is then removed through an unsealed outlet. Other equipment installed on the racks is cooled with air blown into the base and then out at the top.

B. Cathode Ray Tubes (CRTs)

The CRTs located on the pilot's panel are cooled with air blown through a sealed inlet/outlet on the panel.

C. Pedestal Instruments

The pedestal instruments are cooled with air blown through the instruments on the upper panel and around the instruments on the lower panel. The air then goes into the avionics compartment through vents in the cockpit floor.

D. Cockpit Panels

The overhead circuit breaker and system control panels are cooled with cockpit air. This air is drawn around the back of the panels and into the avionics ventilation system.

E. Transformer Rectifiers (TR)

The transformer rectifiers are cooled with avionics compartment air. This air is drawn through the equipment into the avionics ventilation system.

F. Window Heat Controllers (WHC)

The WHCs are cooled with air blown through the equipment into the avionics compartment.

G. Radar

The radar is cooled by air blown into the equipment through a sealed inlet and blown out through an unsealed outlet (Ref. ARINC 600).

H. Batteries (Independent Circuit)

The batteries are cooled with avionics compartment air drawn through an inlet, around the batteries and overboard through a venturi. The ventilation is only effective with cabin differential pressure.

4. Power Supply

Described in the figures mentioned below.

5. Interfaces

R (Ref. Fig. 004, 005, 006)

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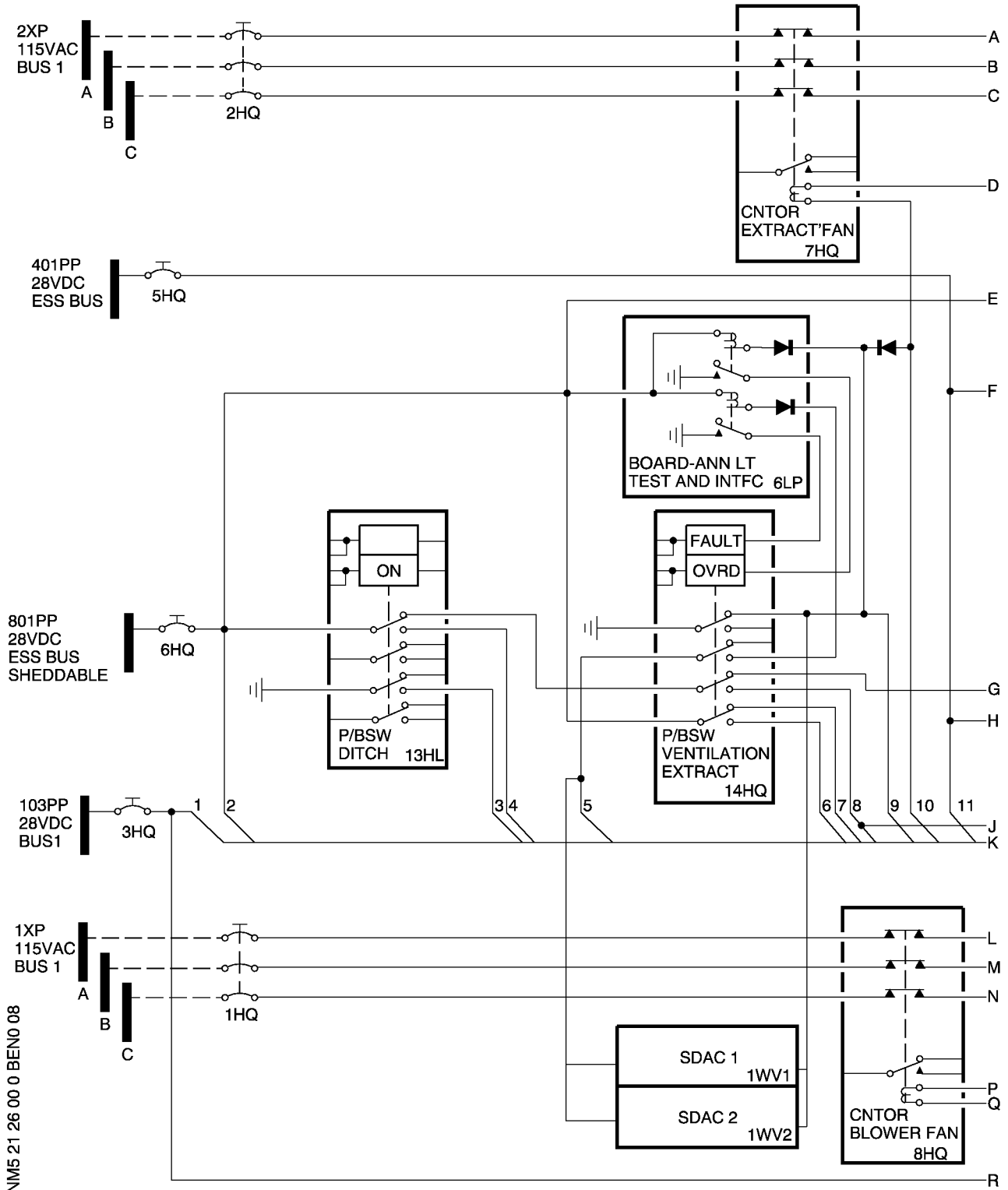
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21-26-00

Page 14
May 01/11

A319/A320/A321

AIRCRAFT MAINTENANCE MANUAL



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Avionics Equipment Ventilation Schematic (Sheet 1/3)
Figure 004

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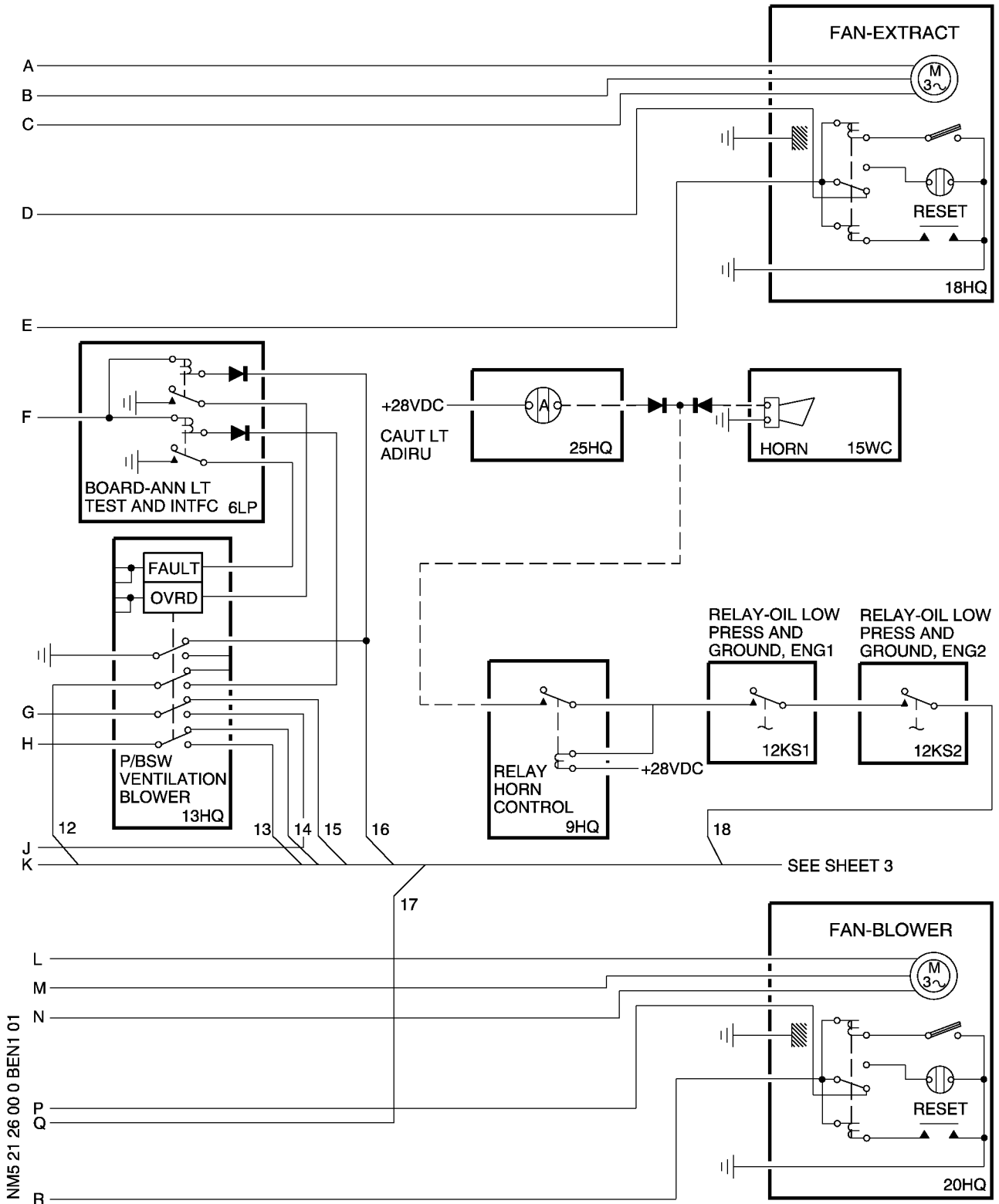
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21-26-00

Page 15
May 01/11

A319/A320/A321

AIRCRAFT MAINTENANCE MANUAL



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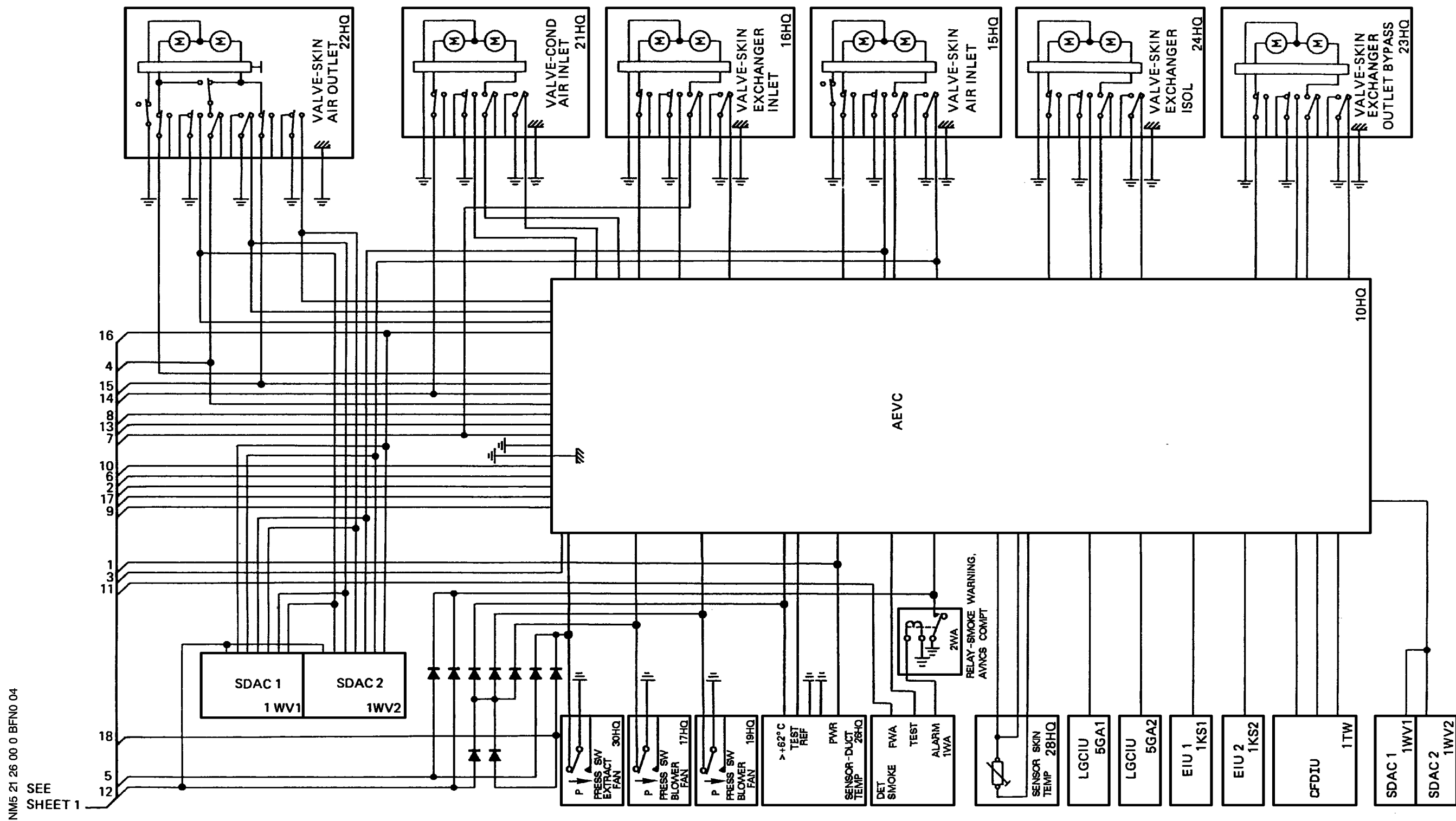
Avionics Equipment Ventilation Schematic (Sheet 2/3)
Figure 005

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21-26-00

Page 16
May 01/11



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SEE SHEET 1

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Avionics Equipment Ventilation Schematic (Sheet 3/3)
Figure 006

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21-26-00

Page 17/18
May 01/11

6. Component Description

****ON A/C 001-002, 051-060, 101-102, 201-250,**

R A. Avionics Equipment Ventilation Computer (AEVC)
(Ref. Fig. 007)

The AEVC 10HQ is a 2MCU (Ref. ARINC 600) electronic assembly mounted on a chassis encased in a metal cover. The AEVC is located on shelf 88VU in the aft electronics rack 80VU. The AEVC controls the valves and fans in the avionics ventilation system.

Pressure switches and temperature sensors in the system send information related to the system status to the AEVC. The cabin pressure controller and the Landing Gear Control and Interface Unit (LGCIU) send additional information to the AEVC. The AEVC does a power-up test when electrical power is supplied and continuously monitors the system components.

****ON A/C 003-049, 151-199, 251-299, 301-399,**

R A. Avionics Equipment Ventilation Computer (AEVC)
(Ref. Fig. 007A)

The AEVC 10HQ is a 2MCU (Ref. ARINC 600) electronic assembly mounted on a chassis encased in a metal cover. The AEVC is located on shelf 87VU in the aft electronics rack 80VU. The AEVC controls the valves and fans in the avionics ventilation system.

Pressure switches and temperature sensors in the system send information related to the system status to the AEVC. The cabin pressure controller and the Landing Gear Control and Interface Unit (LGCIU) send additional information to the AEVC. The AEVC does a power-up test when electrical power is supplied and continuously monitors the system components.

****ON A/C 061-099, 103-149,**

R A. Avionics Equipment Ventilation Computer (AEVC)
(Ref. Fig. 007B)

The AEVC 10HQ is a 2MCU (Ref. ARINC 600) electronic assembly mounted on a chassis encased in a metal cover. The AEVC is located on shelf 86VU in the aft electronics rack 80VU. The AEVC controls the valves and fans in the avionics ventilation system.

Pressure switches and temperature sensors in the system send information related to the system status to the AEVC. The cabin pressure controller and the Landing Gear Control and Interface Unit (LGCIU) send additional information to the AEVC. The AEVC does a power-up test when electrical power is supplied and continuously monitors the system components.

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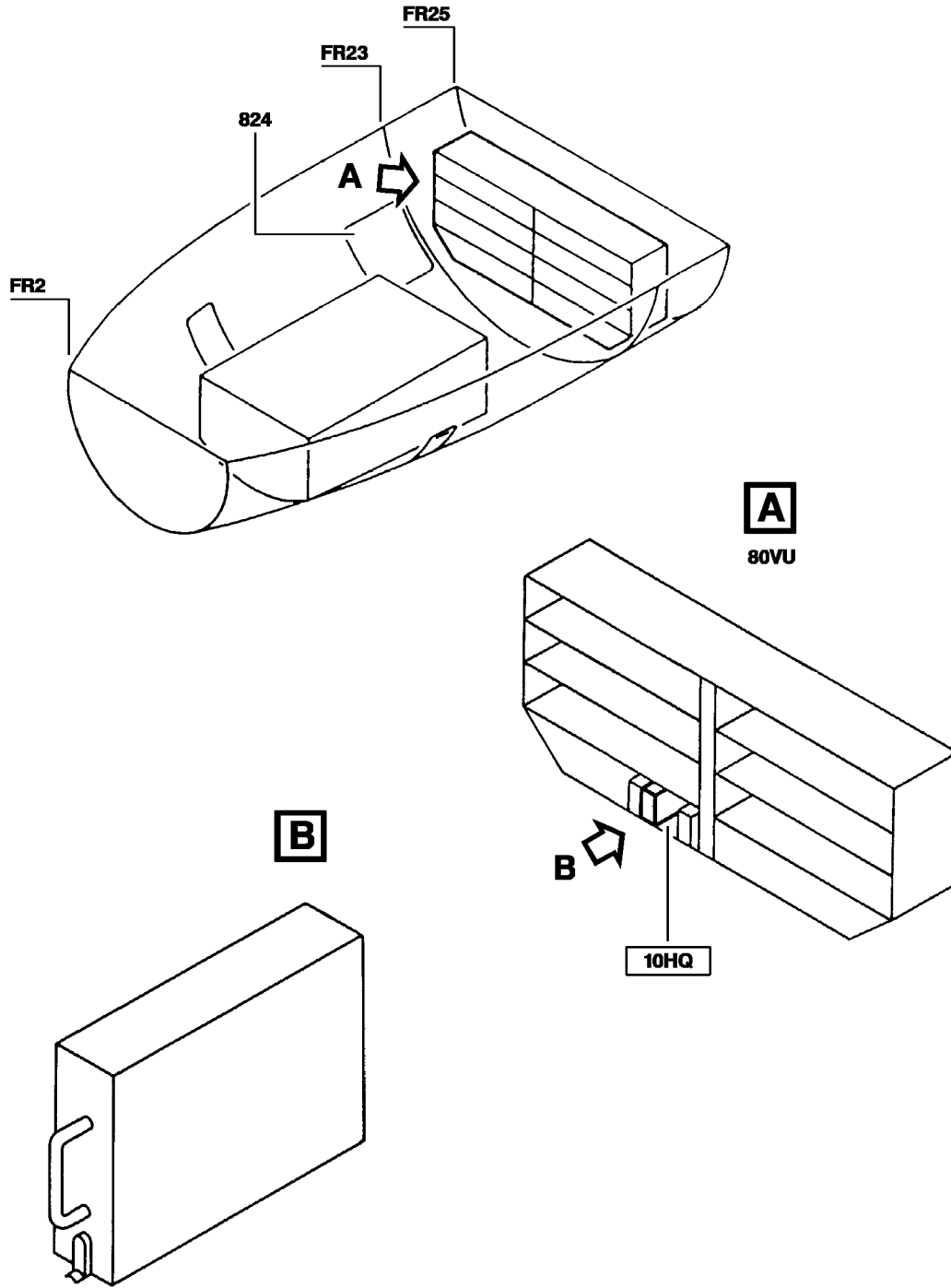
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21-26-00

Page 19
May 01/11

A319/A320/A321

AIRCRAFT MAINTENANCE MANUAL



NIM5 21 26 00 0 AEMD 04

Avionics Equipment Ventilation Computer (AEVC) - Location
Figure 007

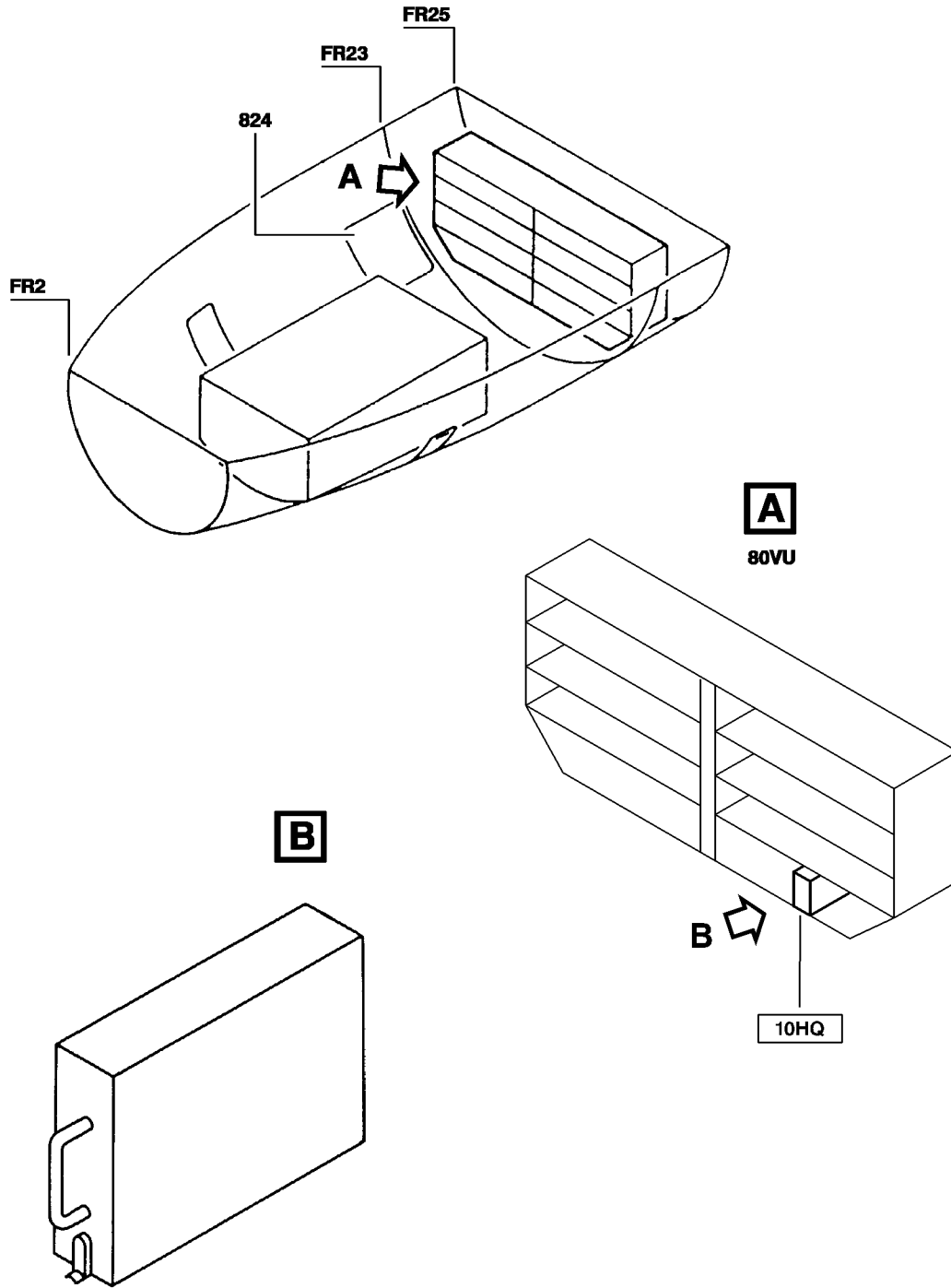
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EFF : 001-002, 051-060, 101-102, 201-250,
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21-26-00

Page 20
May 01/11

A319/A320/A321
AIRCRAFT MAINTENANCE MANUAL



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Avionics Equipment Ventilation Computer (AEVC) - Location
 Figure 007A

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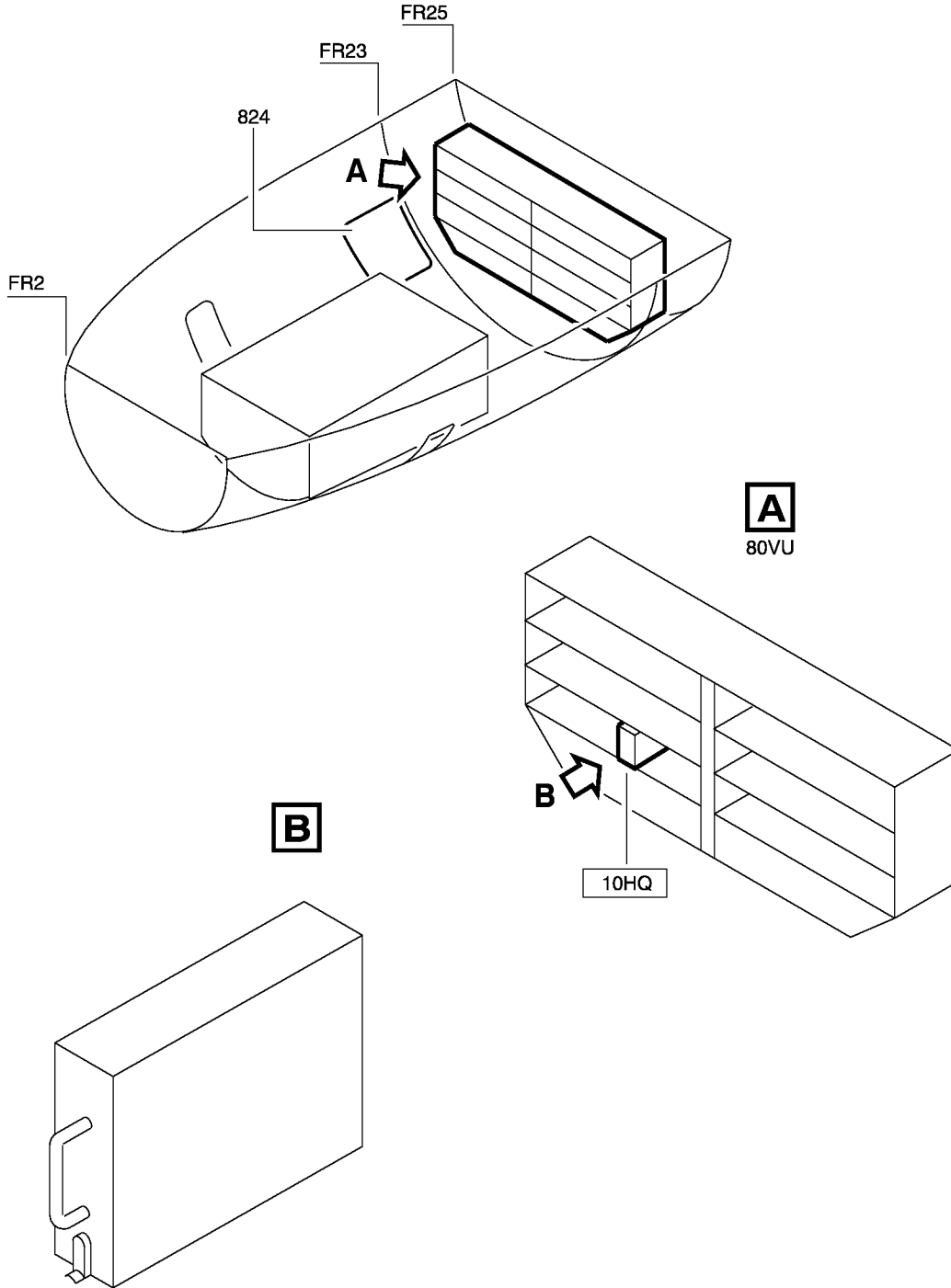
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21-26-00

Page 21
 May 01/11

A319/A320/A321

AIRCRAFT MAINTENANCE MANUAL



NM5 21 26 00 0 AFM0 00

Avionics Equipment Ventilation Computer (AEVC) - Location
Figure 007B

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21-26-00

Page 22
May 01/11

****ON A/C ALL**

B. Blower Fan
R (Ref. Fig. 008)
The blower fan 20HQ is powered with a three phase, four-pole single induction motor. The motor drives a fan-wheel which has high efficiency blades and operates continuously at about 11,600 rpm. A thermo switch and relay are installed on the stator of the blower fan. If the temperature of the stator gets to + 140 deg. C (+ 284 deg.F), the thermo switch isolates the electrical supply to the fan. A fault indication light and reset button are installed on the fan body. The blower fan is secured with clamps to brackets on the aircraft structure in the avionics compartment. Arrows on the fan casing show the direction of airflow through the fan and direction of the impeller rotation. If the impeller breaks up, the casing is strong enough to contain debris.

C. Extract Fan
R (Ref. Fig. 008)
The extract fan 18HQ is identical to the blower fan 20HQ.

D. Skin Air Inlet Valve
R ****ON A/C 001-001, 051-055, 057-060, 101-102, 201-250,**

R (Ref. Fig. 009)

R ****ON A/C 002-049, 056-056, 061-099, 103-149, 151-199, 251-299, 301-399,**

R (Ref. Fig. 009A)

****ON A/C ALL**

The skin air inlet valve 15HQ is installed in the fuselage skin at the forward-lower left-hand side. This valve is an electrically-operated single-flap valve which can be manually overridden. When the aircraft is on the ground the valve is fully open. In flight, the valve is fully closed. On ground, if, after the take off sequence signal, the valve does not close, the ground crew can manually close it. Before the valve is closed manually, it first must be electrically isolated with a toggle switch located inside the valve.

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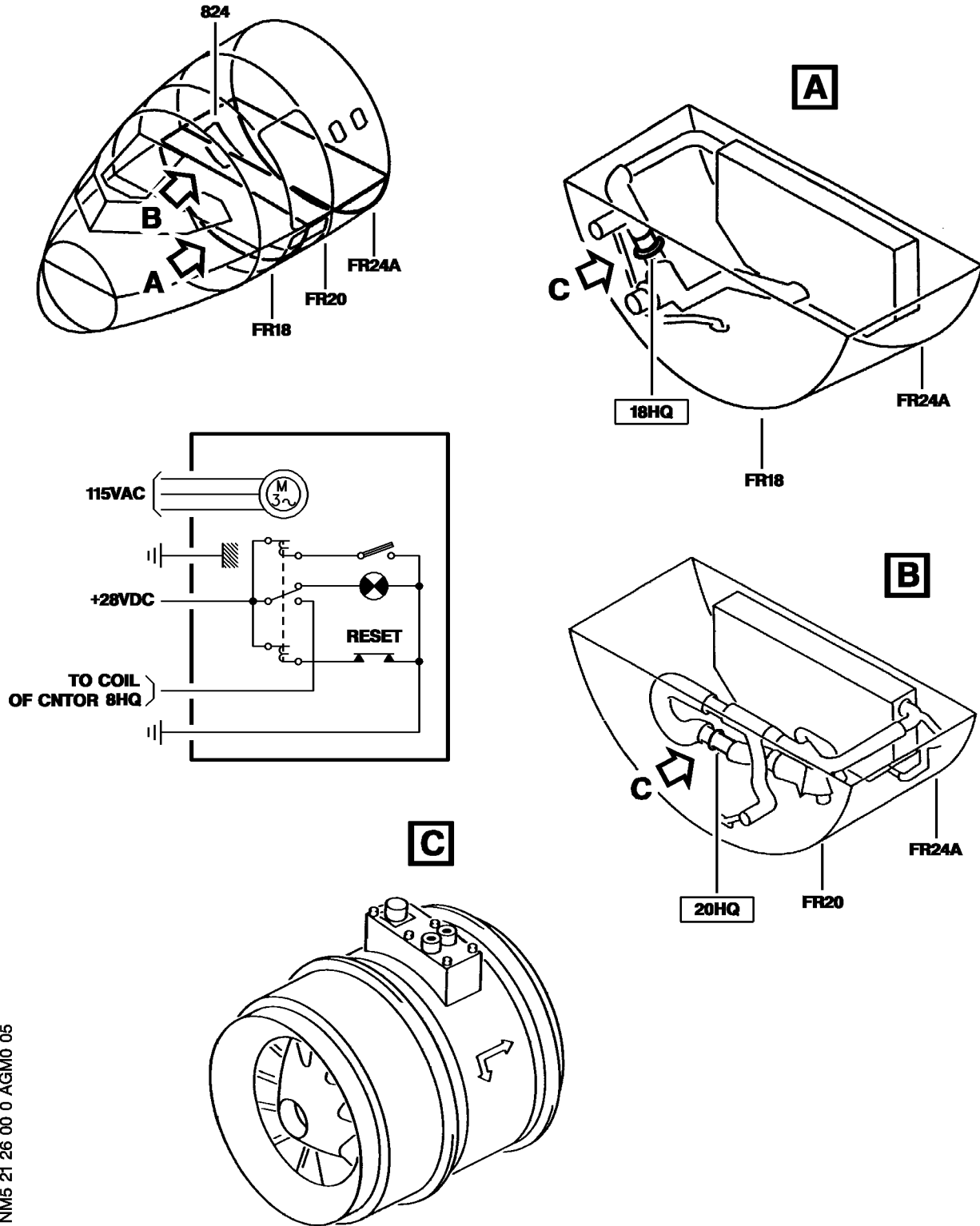
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21-26-00

Page 23
May 01/11

A319/A320/A321

AIRCRAFT MAINTENANCE MANUAL



NIM5 21 26 00 0 AGM0 05

Blower/Extract Fans
Figure 008

R

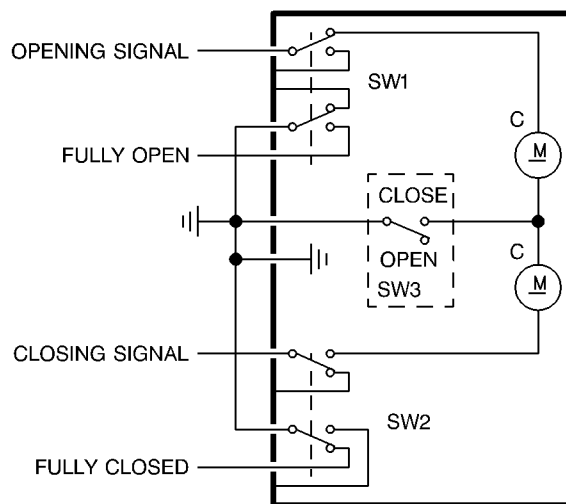
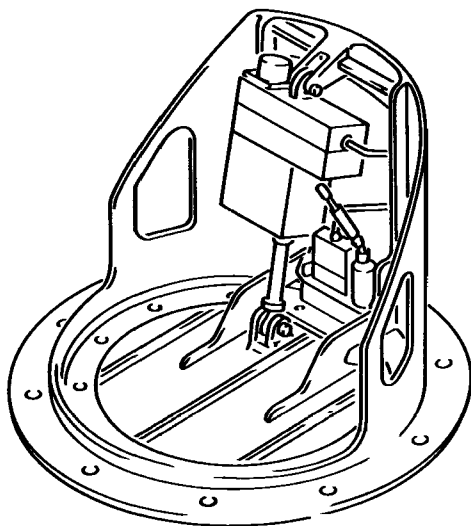
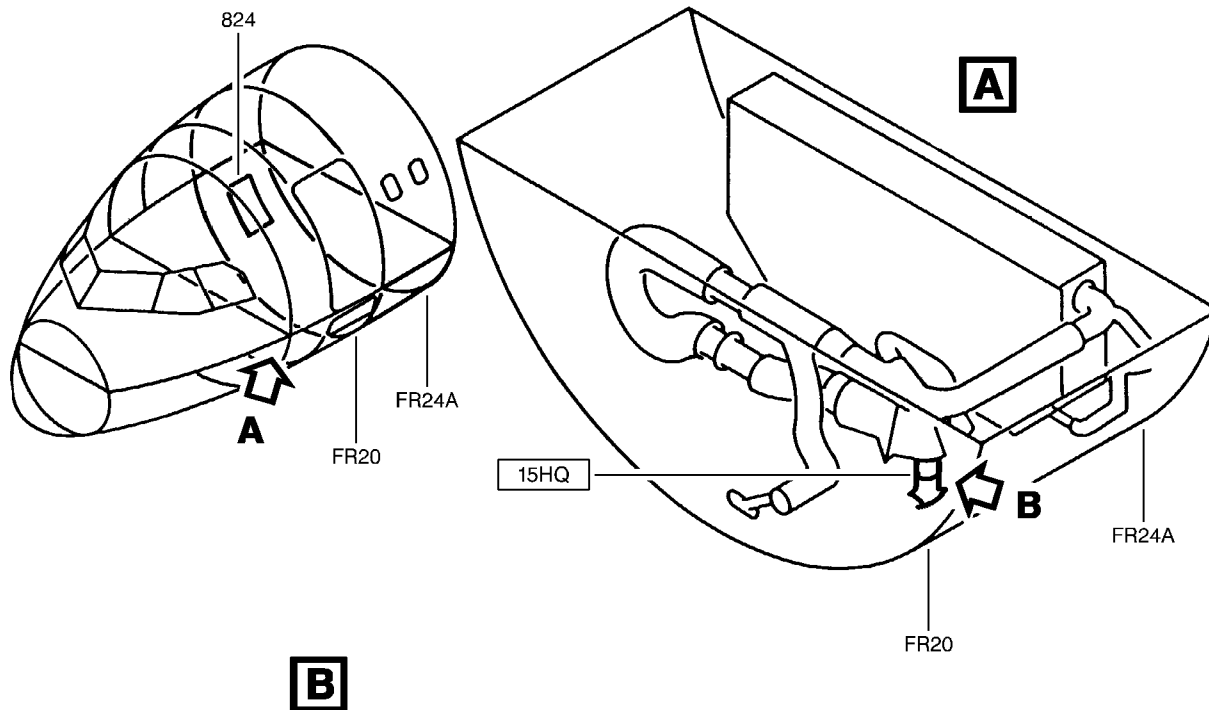
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21-26-00

Page 24
May 01/11

A319/A320/A321

AIRCRAFT MAINTENANCE MANUAL



NIM5 21 26 00 0 AJND 01

Skin Air Inlet Valve
Figure 009

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201-250,

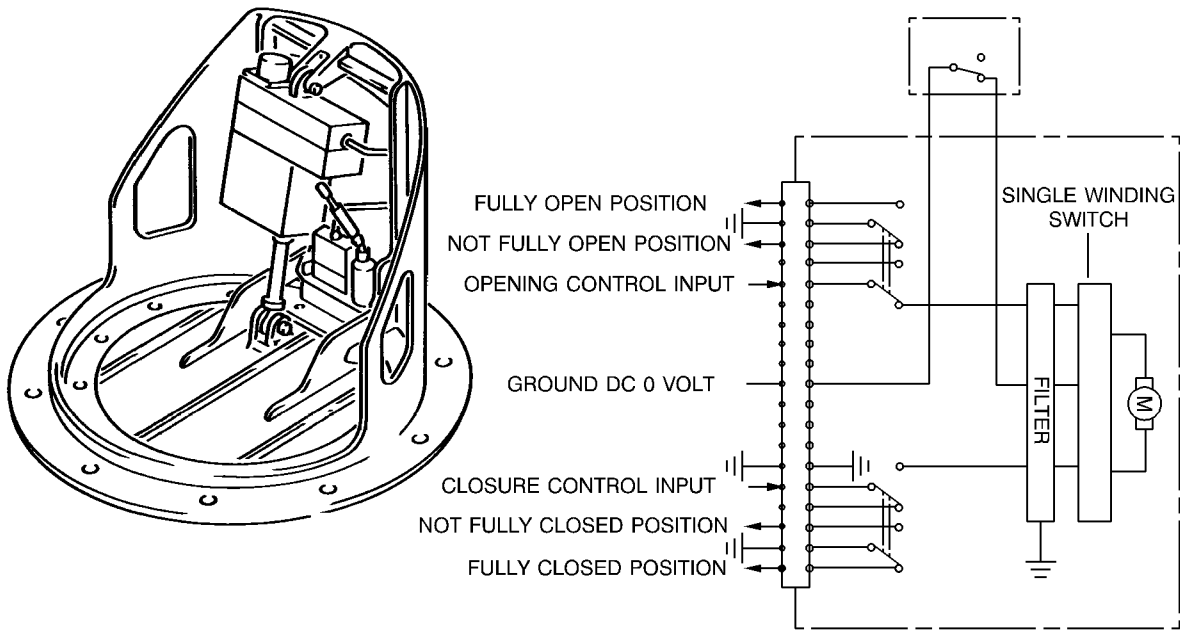
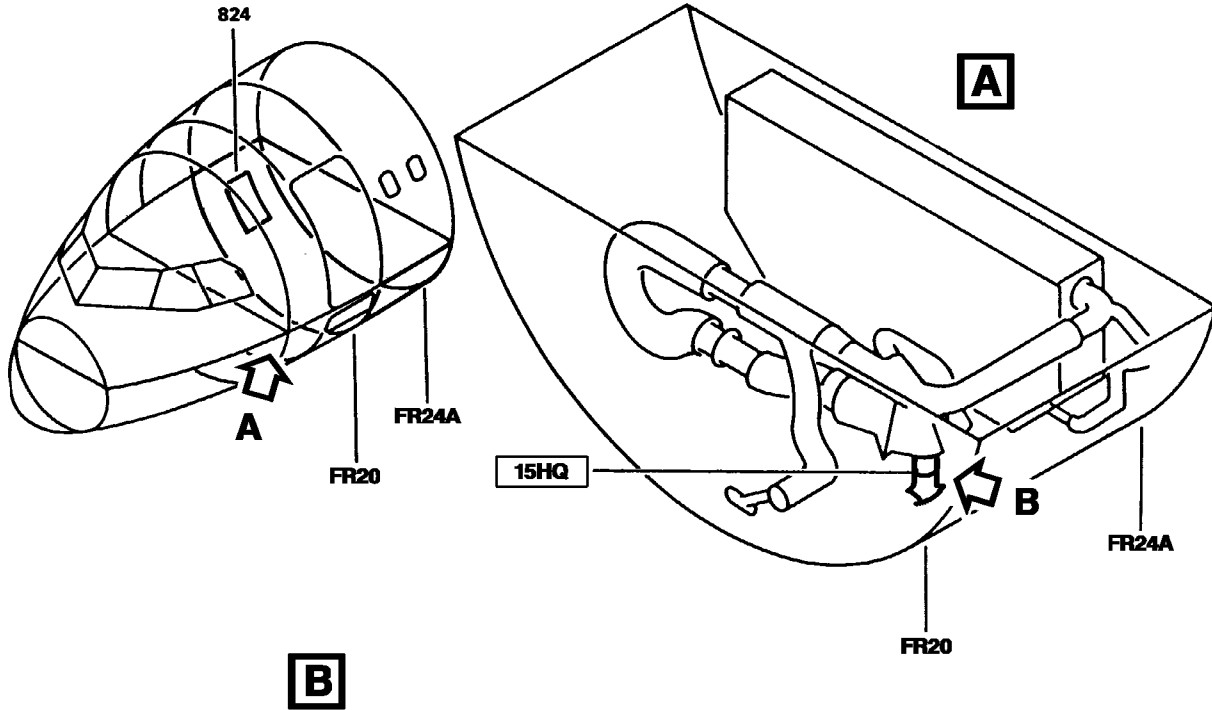
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21-26-00

Page 25
May 01/11

A319/A320/A321

AIRCRAFT MAINTENANCE MANUAL



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Skin Air Inlet Valve
Figure 009A

EFF : 002-049, 056-056, 061-099, 103-149,
151-199, 251-299, 301-399,

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21-26-00

Page 26
May 01/11

E. Skin Air Outlet Valve

R **ON A/C 001-001, 051-055, 057-060, 101-102, 201-250,

R (Ref. Fig. 010)

R **ON A/C 002-049, 056-056, 061-099, 103-149, 151-199, 251-299, 301-399,

R (Ref. Fig. 010A)

**ON A/C ALL

The skin air outlet valve 22HQ is installed in the fuselage skin at the forward-lower right-hand side. This valve is an electrically-operated single-flap valve incorporating a second smaller flap. When the aircraft is on the ground, the valve is fully open. In flight, the valve is fully closed.

The smaller flap opens during flight when the following happens:

- when the skin temperature is above + 34 deg.C (+ 93.2 deg.F) (partially open circuit),
- if smoke is detected in the avionics ventilation system,
- if the AEVC 10HQ does not operate correctly.

On the ground, if after the take off sequence signal, the valve does not close, the ground crew can manually close it. Before the valve is closed manually, it first must be electrically isolated with a toggle switch inside the valve.

F. Skin Exchanger Inlet Bypass Valve

R (Ref. Fig. 011)

The skin exchanger inlet bypass valve 16HQ is installed downstream of the extract fan 18HQ in the tapping to the FWD underfloor area. This valve is of the butterfly type, with an actuator which moves the butterfly to the open or closed position. Two microswitches signal the valve position to the AEVC 10HQ. A visual position indicator is located on the top of the actuator unit.

The function of the valve is to discharge the excess ventilation air to the underfloor area.

G. Skin Exchanger Isolation Valve

R (Ref. Fig. 011)

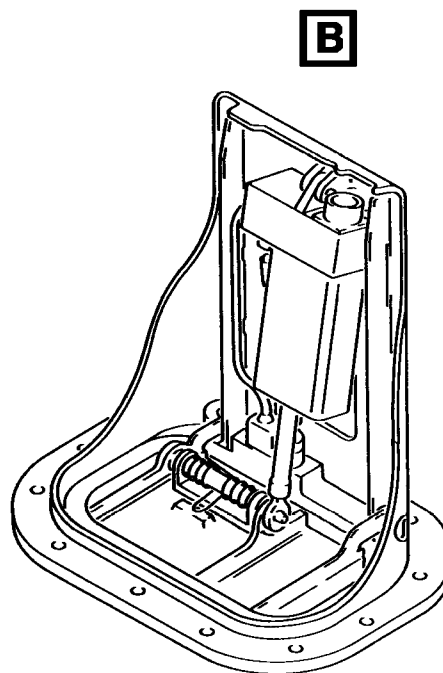
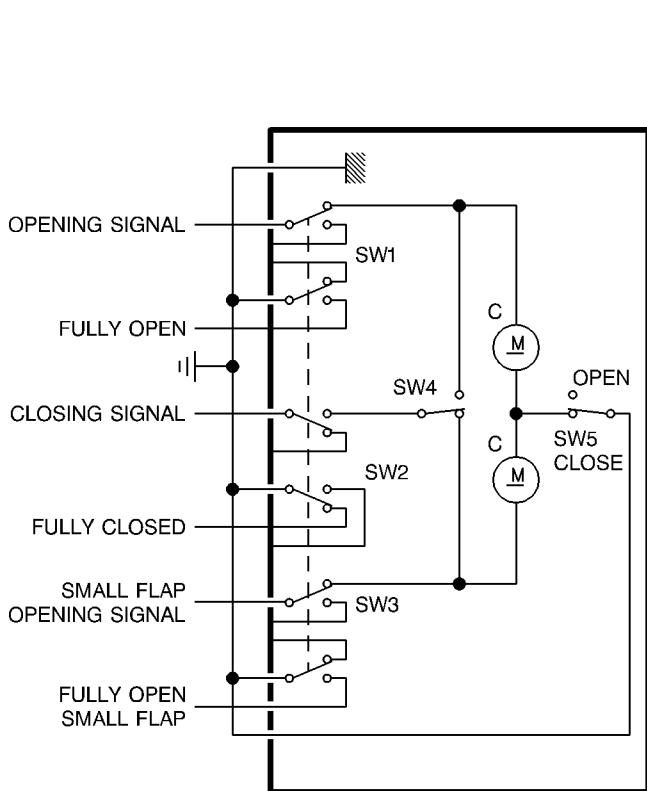
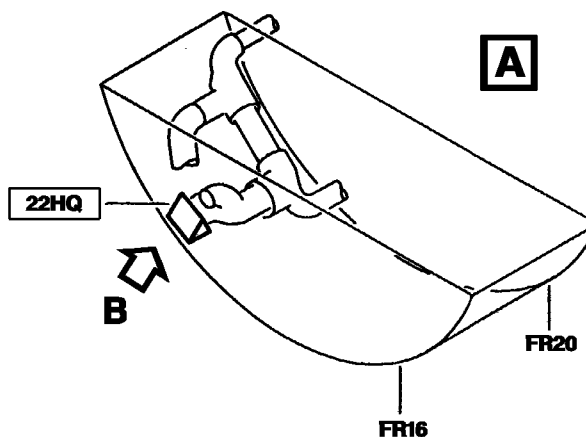
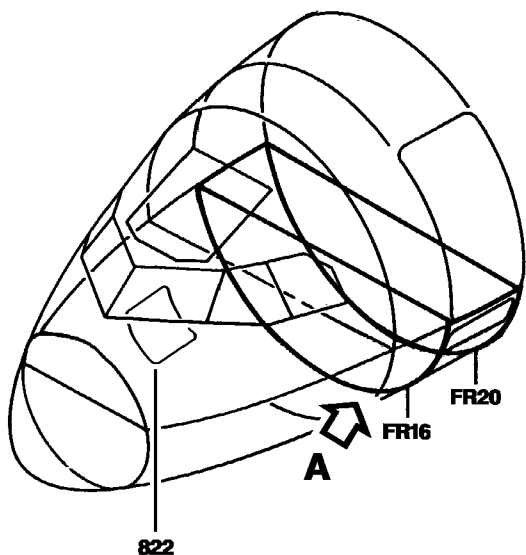
The skin exchanger isolation valve 24HQ is installed upstream of the skin heat exchanger. This valve is identical to the skin exchanger inlet bypass valve 16HQ.

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21-26-00

Page 27
May 01/11



NIM5 21 26 00 0 ALND 00

Skin Air Outlet Valve
 Figure 010

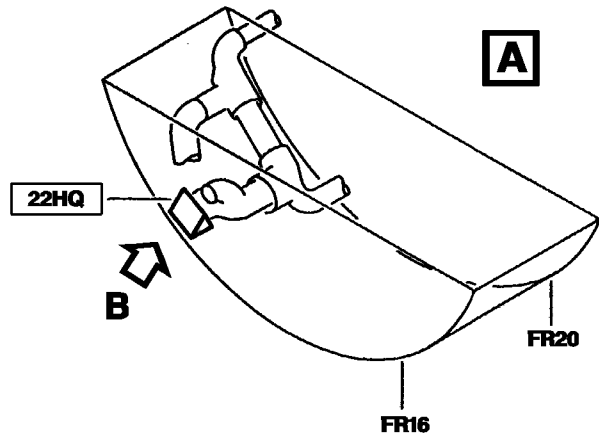
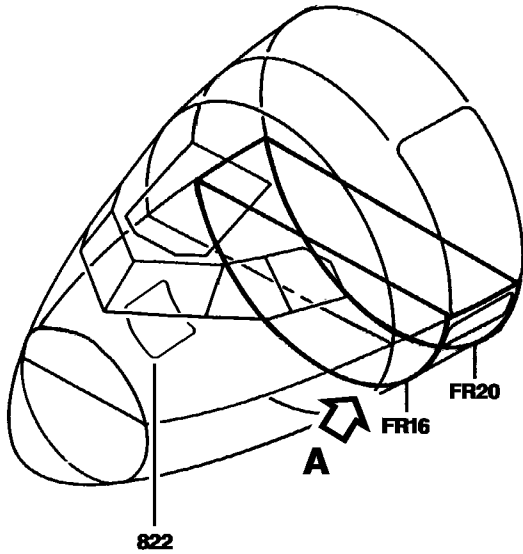
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 201-250,

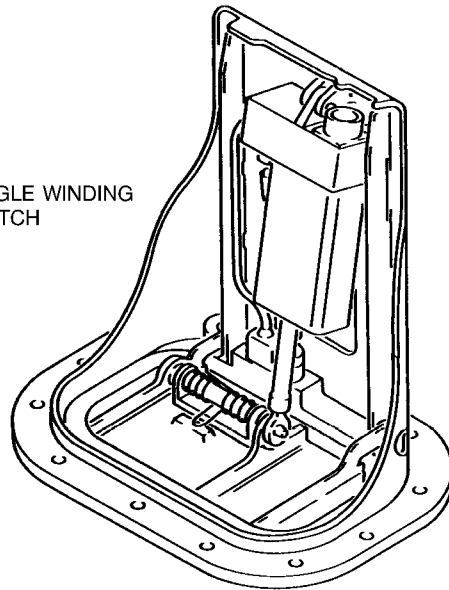
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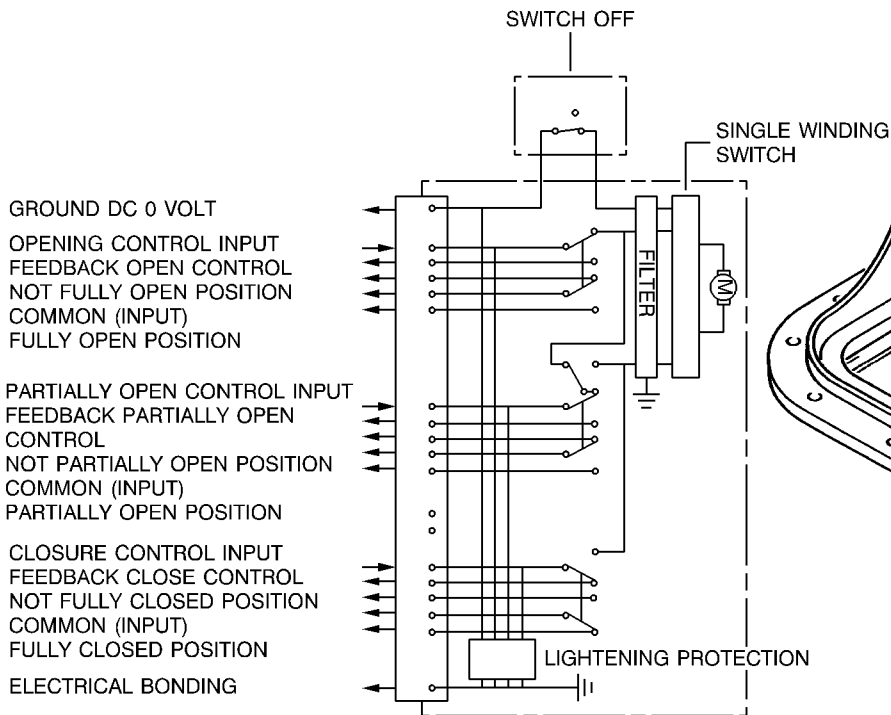
Page 28
 May 01/11



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Skin Air Outlet Valve
 Figure 010A

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 151-199, 251-299, 301-399,

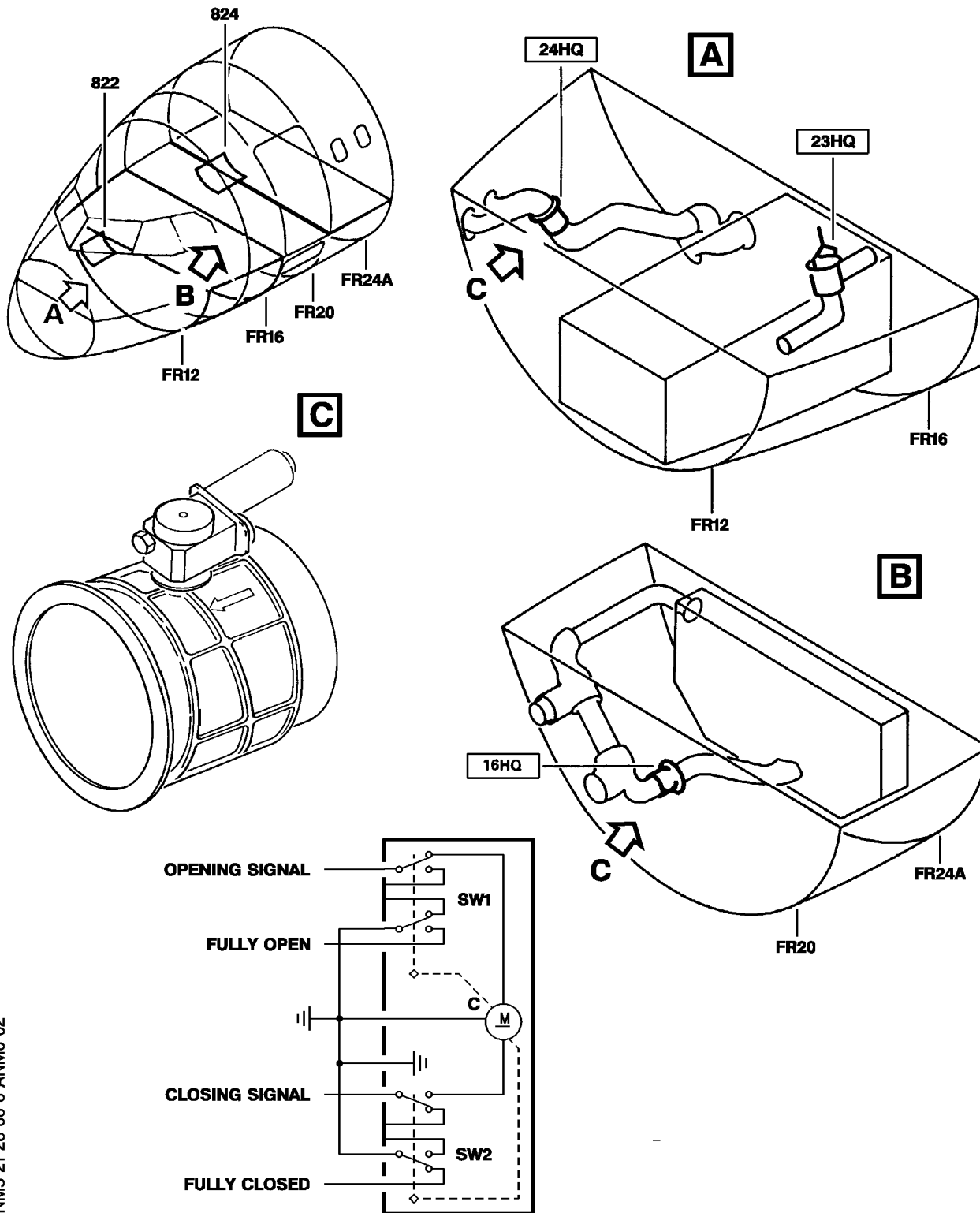
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21-26-00

Page 29
 May 01/11

A319/A320/A321

AIRCRAFT MAINTENANCE MANUAL



NIM5 21 26 00 0 ANIMO 02

Skin Exchanger Inlet Bypass Valve/Skin Exchanger Isolation Valve/
Skin Exchanger Outlet Bypass Valve
Figure 011

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21-26-00

Page 30
May 01/11

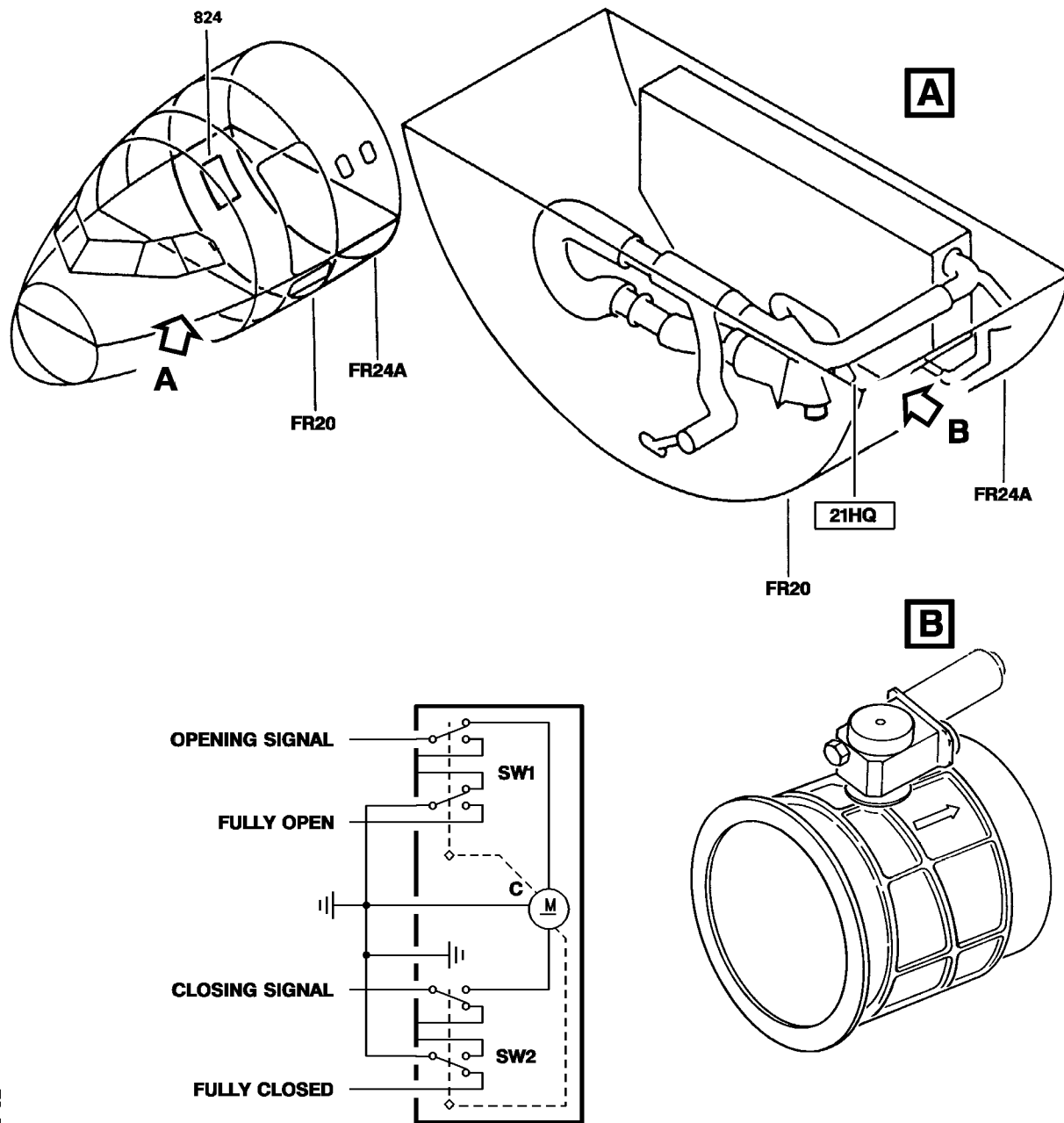
- H. Skin Exchanger Outlet Bypass Valve**
(Ref. Fig. 011)
The skin exchanger outlet bypass valve 23HQ is installed downstream of the skin heat exchanger. This valve is identical to the skin exchanger inlet bypass valve 16HQ.
The function is to admit avionics compartment air into the system when the skin heat exchanger efficiency is degraded.
- J. Conditioned Air Inlet Valve**
(Ref. Fig. 012)
The conditioned air inlet valve 21HQ is installed in a duct which is connected to the cockpit main supply duct. This valve is similar to the skin exchanger inlet bypass valve 16HQ.
The function is to admit cockpit supply air into the system to ensure the cooling function in case of failure.
- K. Check Valve**
(Ref. Fig. 013)
The check valve 2140HM is installed downstream of the blower fan 20HQ. The check valve is installed in line between the ducts. Two semi-circular flaps are installed on a hinge-bar, a spring holds these semi-circular flaps in the closed position. Airflow from the blower fan 20HQ lifts the semi-circular flaps from their seats. This allows air to flow through the check valve to the avionics ventilation system. Airflow in the opposite direction through the check valve pushes the semi-circular flaps back onto their seats to stop the airflow. An arrow on the check valve casing shows the direction of the airflow through the check valve.
- L. Check Valve**
(Ref. Fig. 014)
The check valve 2150HM is installed aft of the skin air inlet valve 15HQ. The purpose of the check valve is to protect the system at the air inlet against possible adverse effect caused by cabin differential pressure.
- **ON A/C 001-002, 051-053, 057-058, 060-060, 101-149,**
- M. Filter Assembly**
(Ref. Fig. 015)
The two-stage filter assembly 2081HM, 2082HM, 2083HM, 2095HM is installed upstream of the blower fan 20HQ. The first-stage is a cleanable plate type filter 2081HM which removes dust particles above 1000 microns and a multi-layer filter which removes water particles. The second stage is a cleanable, corrugated-cartridge-barrier filter 2082HM which removes any dust particles above 400 microns (Ref. ARINC 600).

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21-26-00

Page 31
May 01/11



NIM5 21 26 00 0 APMD 02

Conditioned Air Inlet Valve
 Figure 012

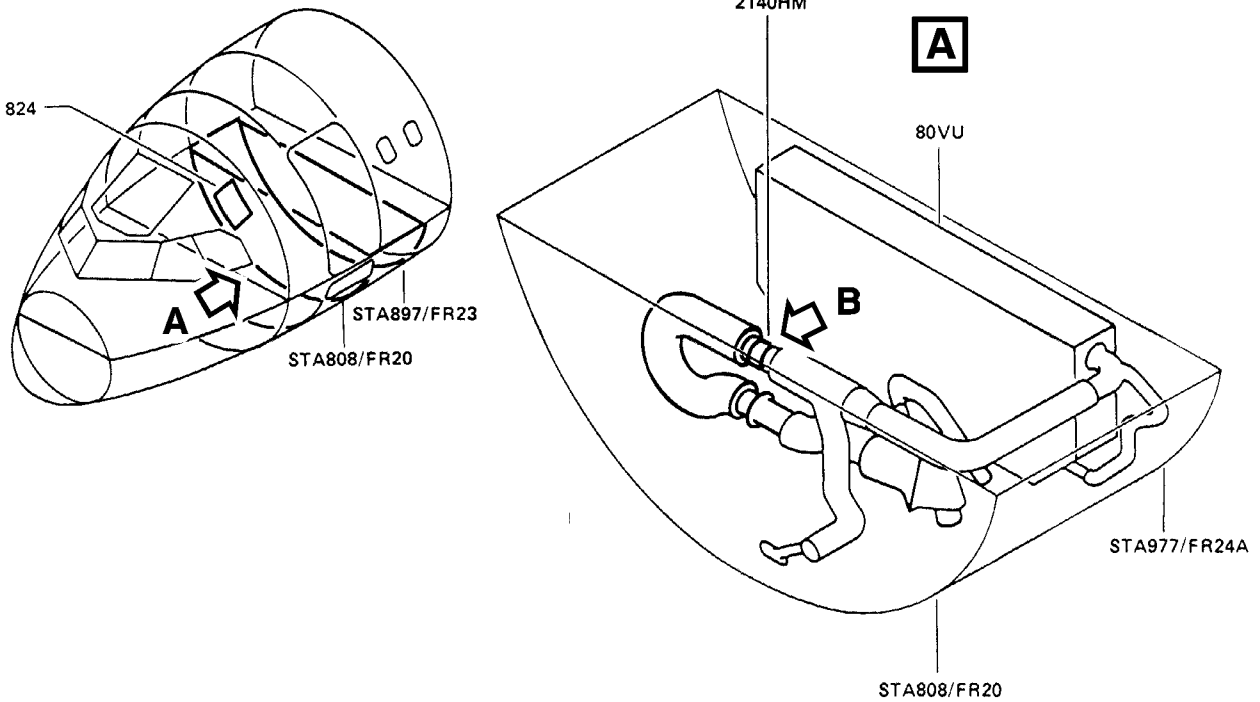
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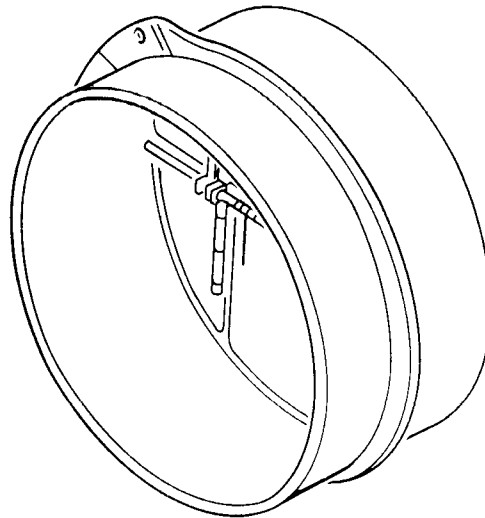
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Check Valve
Figure 013

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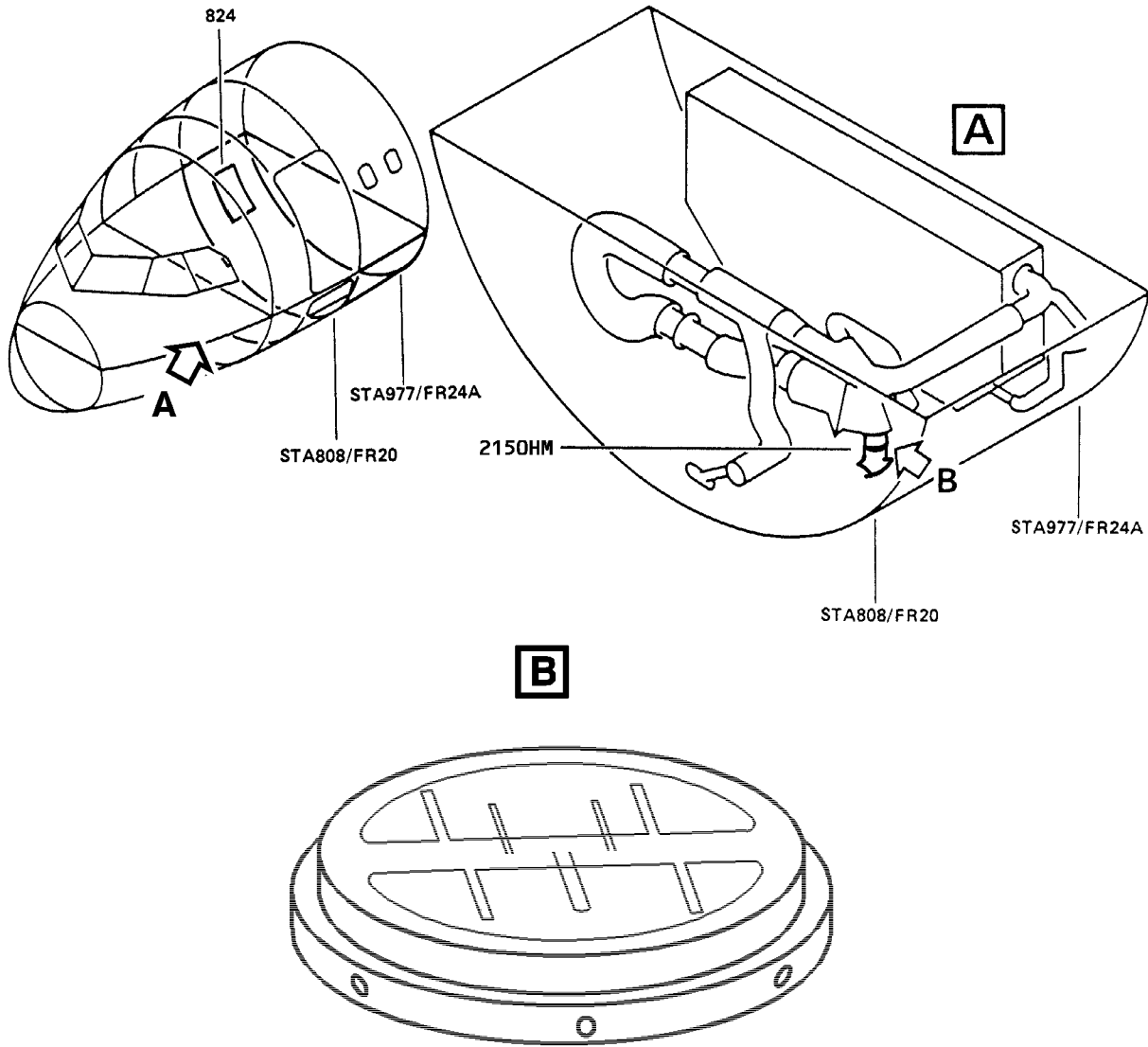
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21-26-00

Page 33
May 01/11

A319/A320/A321

AIRCRAFT MAINTENANCE MANUAL



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Check Valve
Figure 014

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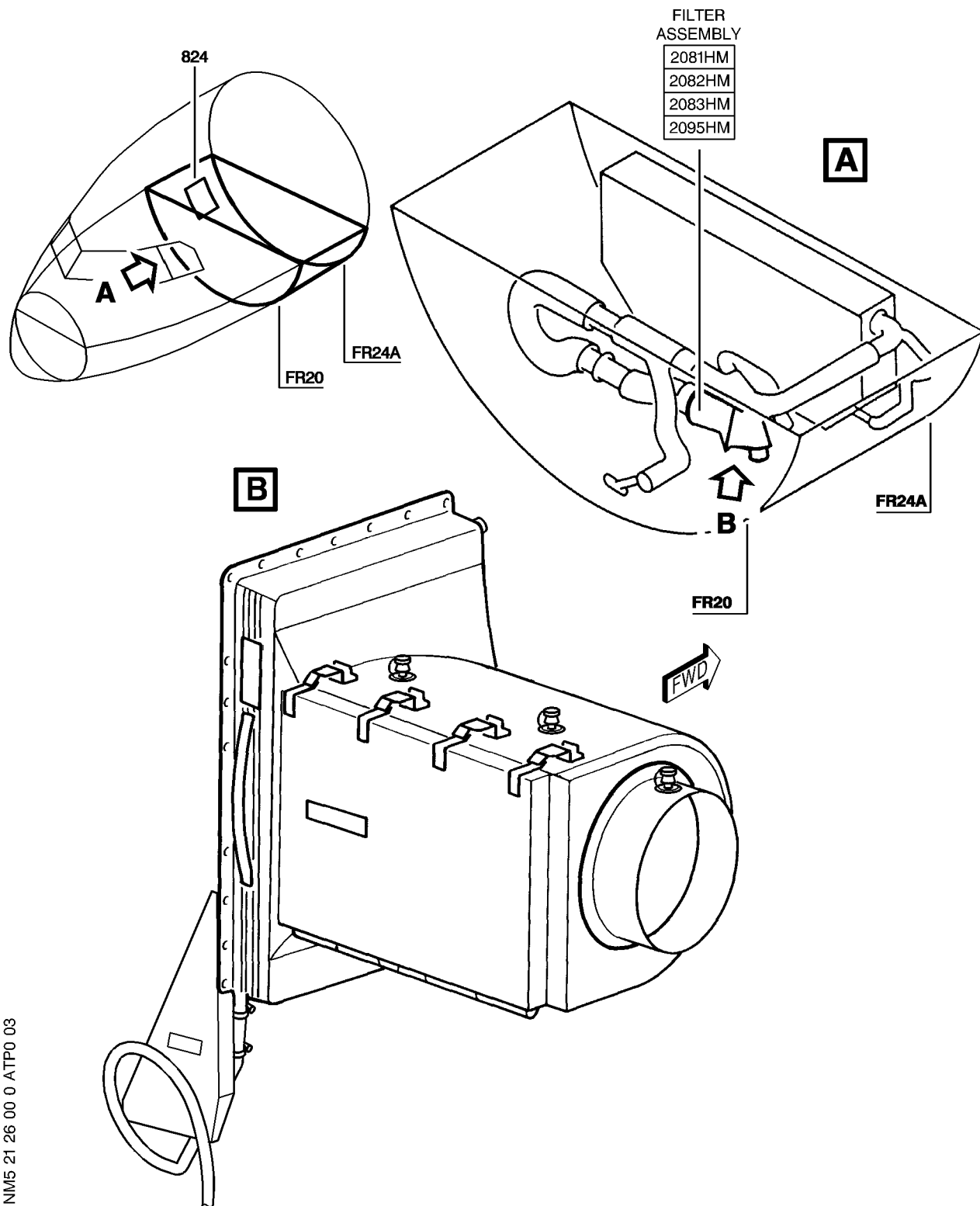
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21-26-00

Page 34
May 01/11

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AIRCRAFT MAINTENANCE MANUAL



NM5 21 26 00 0 ATP0 03

Filter Assembly
Figure 015

R

EFF : 001-002, 051-053, 057-058, 060-060,
101-149,

CSC

21-26-00

Page 35
May 01/11

The filter housing is fitted with pressure test ports to check for clogging of both the demister filter and the dust filter cartridge. This can be achieved by means of a portable manometer.

The dust filter cartridge is made of two parts which can be cleaned independently:

- the body,
- the filter element.

The body can only be cleaned.

The filter element can be cleaned (twice maximum), reconditioned or replaced.

The filter assembly is designed to allow easy access for cleaning.

****ON A/C 051-053, 201-201,**

M. Filter Assembly

R (Ref. Fig. 015A)

The two-stage filter assembly 2081HM, 2082HM, 2083HM, 2095HM is installed upstream of the blower fan 20HQ. The first-stage is a cleanable plate type filter 2081HM which removes dust particles above 1000 microns and a multi-layer filter which removes water particles. The second stage is a cleanable, corrugated-cartridge-barrier filter 2082HM which removes any dust particles above 400 microns (Ref. ARINC 600).

The filter assembly is designed to allow easy access for cleaning.

****ON A/C 301-309,**

M. Filter Assembly

R (Ref. Fig. 015B)

The two-stage filter assembly 2081HM, 2082HM, 2083HM, 2095HM is installed upstream of the blower fan 20HQ. The first stage is a demister filter 2081HM which removes dust particles above 1000 microns and water particles. The second stage is a corrugated-cartridge-barrier filter 2082HM which removes any dust particles above 75 microns (Ref. ARINC 600).

The filter housing 2083HM is fitted with pressure test ports to check for clogging of both the demister filter and the dust filter cartridge. This can be achieved by means of a portable manometer.

The syphon assembly 2095HM is attached to the filter housing. Its function is to drain the water, filtered by the demister filter.

EFF : 001-002, 051-053, 057-058, 060-060,
101-149, 201-201, 301-309,

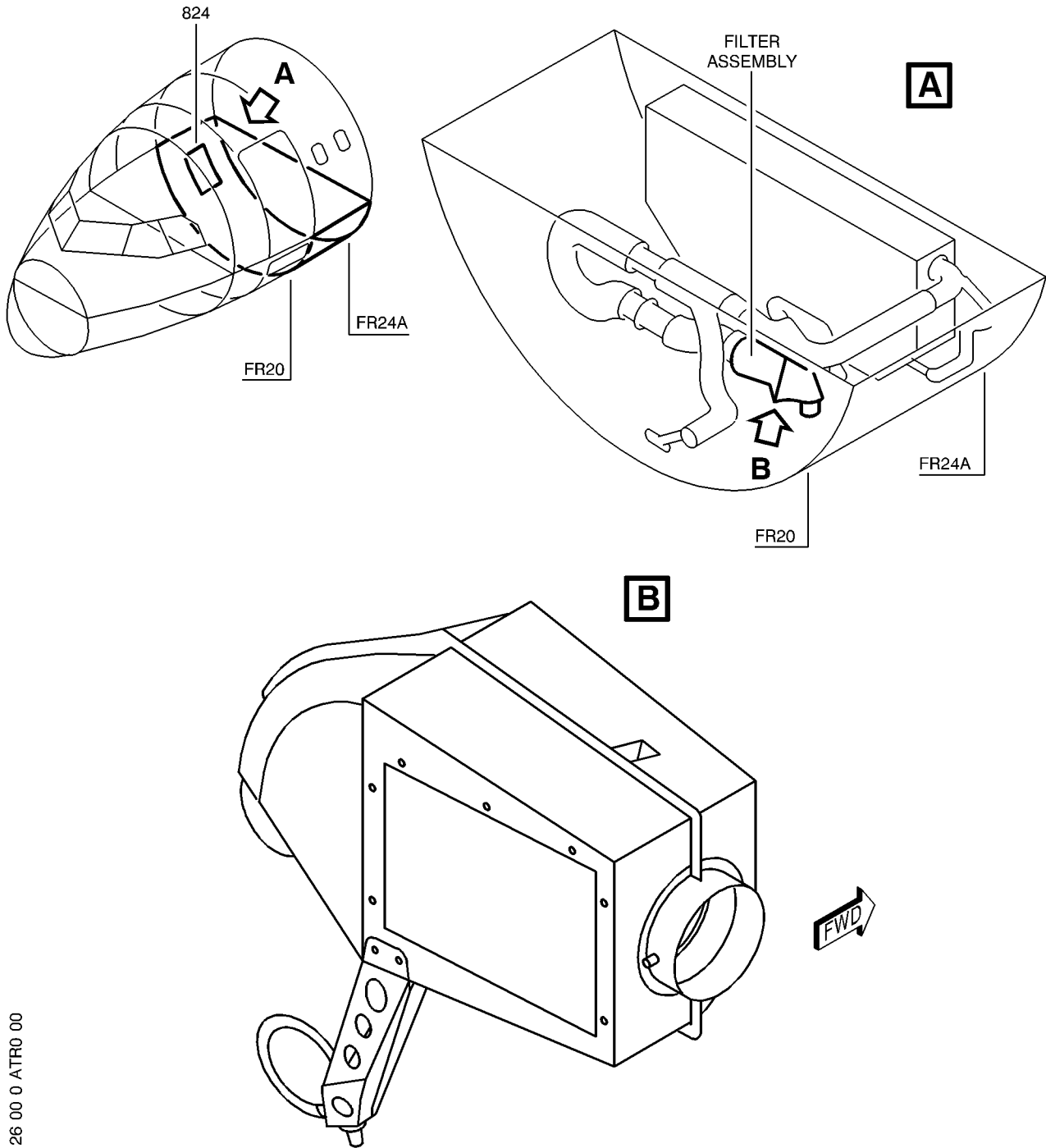
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21-26-00

Page 36
May 01/11

A319/A320/A321

AIRCRAFT MAINTENANCE MANUAL



NIM5 21 26 00 0 ATR0 00

R

Filter Assembly
Figure 015B

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CSC

21-26-00

Page 38
May 01/11

****ON A/C 003-049, 054-056, 059-059, 061-099, 151-199, 201-299, 310-399,**

Post SB 21-1169 For A/C 201-201,

- R** **M. Filter Assembly**
(Ref. Fig. 015C)
The two-stage filter assembly 2082HM, 2083HM is installed upstream of the blower fan 20HQ.
The filter features a centrifugal machine which removes water particules and a 5 micron disposable filter which removes any particule.
The filter assembly is designed to allow easy access for cleaning.

****ON A/C ALL**

- R** **N. Duct Temperature Sensor**
(Ref. Fig. 016)
The duct temperature sensor 26HQ is installed upstream of the aft electronics rack 80VU. It consists of a thermistor mounted in a stainless-steel tube with an electrical connector at the top.
If an overheat condition is detected, the indications and actions are the same for the blowing low flow as described in Para. 7.A.(4)(b).
The set temperature values are:
- increasing temperatures 62 deg.C (143.6 deg.F) +1 deg.C (+33.8 deg.F),
- decreasing temperatures 60 deg.C (140 deg.F) +1 deg.C (+33.8 deg.F).

P. Pressure Switch

R ****ON A/C 001-013, 051-099, 101-149, 151-154, 201-250, 301-312,**

R (Ref. Fig. 017)

R ****ON A/C 014-049, 155-199, 251-299, 313-399,**

R (Ref. Fig. 017A)

****ON A/C ALL**

Three pressure switches 17HQ, 19HQ and 30HQ are installed in the avionics ventilation system, two in the blowing system and one in the extraction system. The switches are of the capsule/microswitch type with an electrical connector at the top. A low flow indication is given at a differential pressure of 1.7 mbar plus 1.3 or minus 0.5 mbar.

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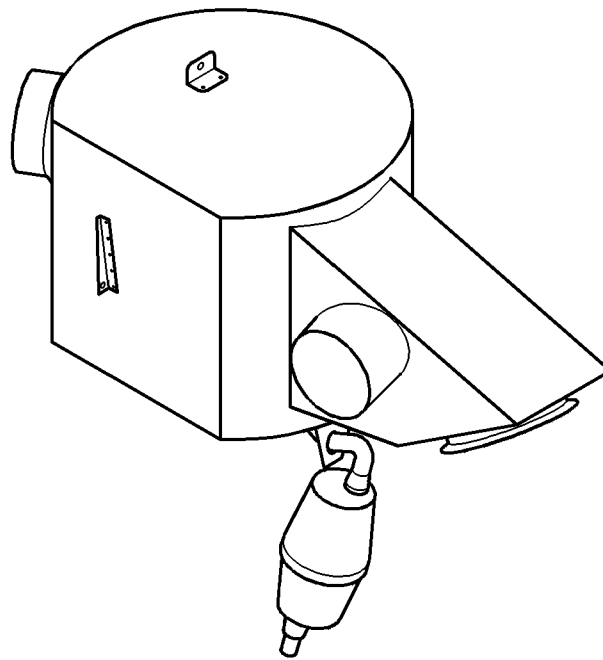
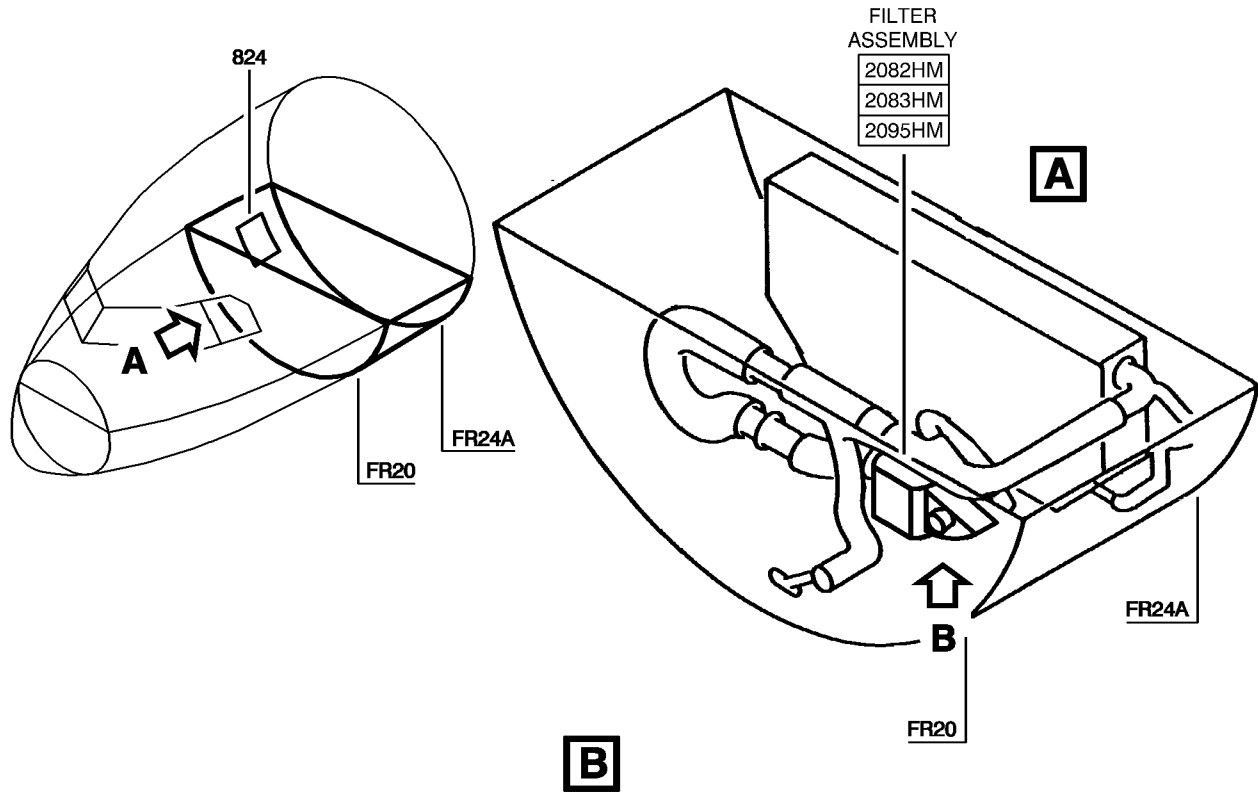
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21-26-00

Page 39
May 01/11

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AIRCRAFT MAINTENANCE MANUAL



Filter Assembly
Figure 015C

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151-199, 201-299, 310-399,

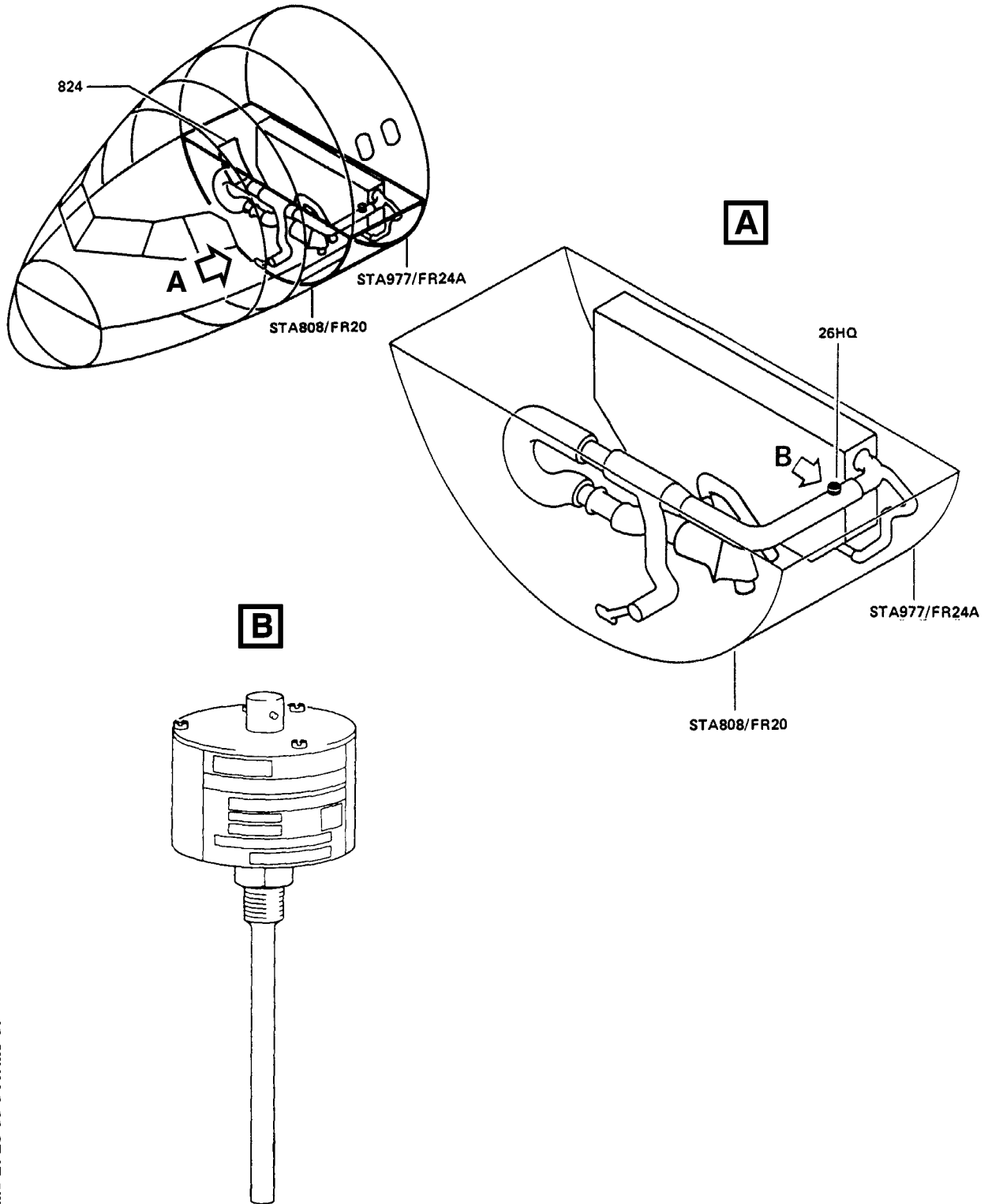
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21-26-00

Page 40
May 01/11

A319/A320/A321

AIRCRAFT MAINTENANCE MANUAL



Duct Temperature Sensor
Figure 016

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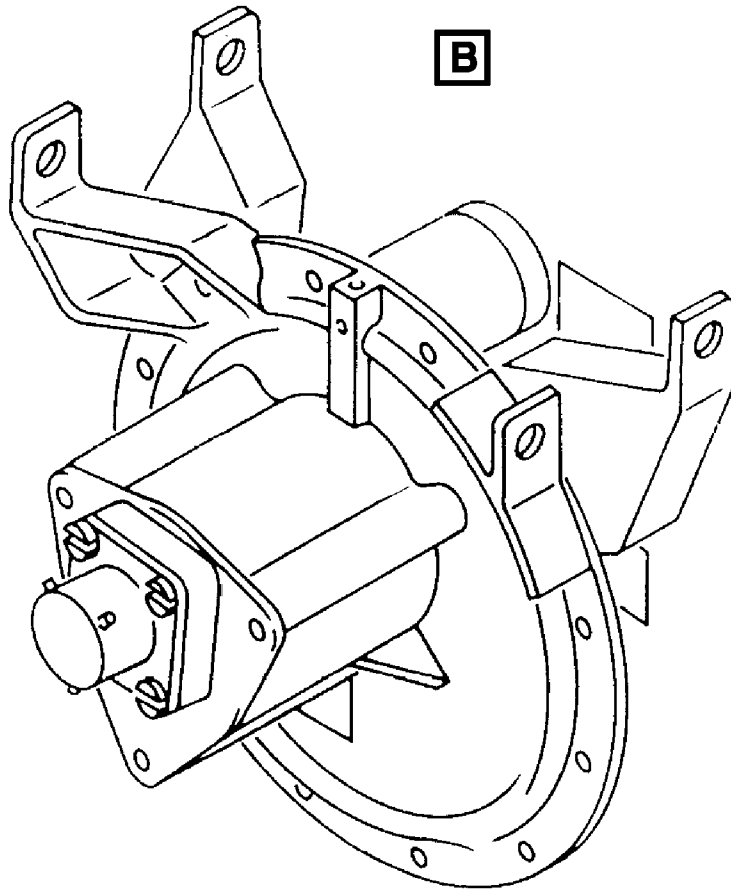
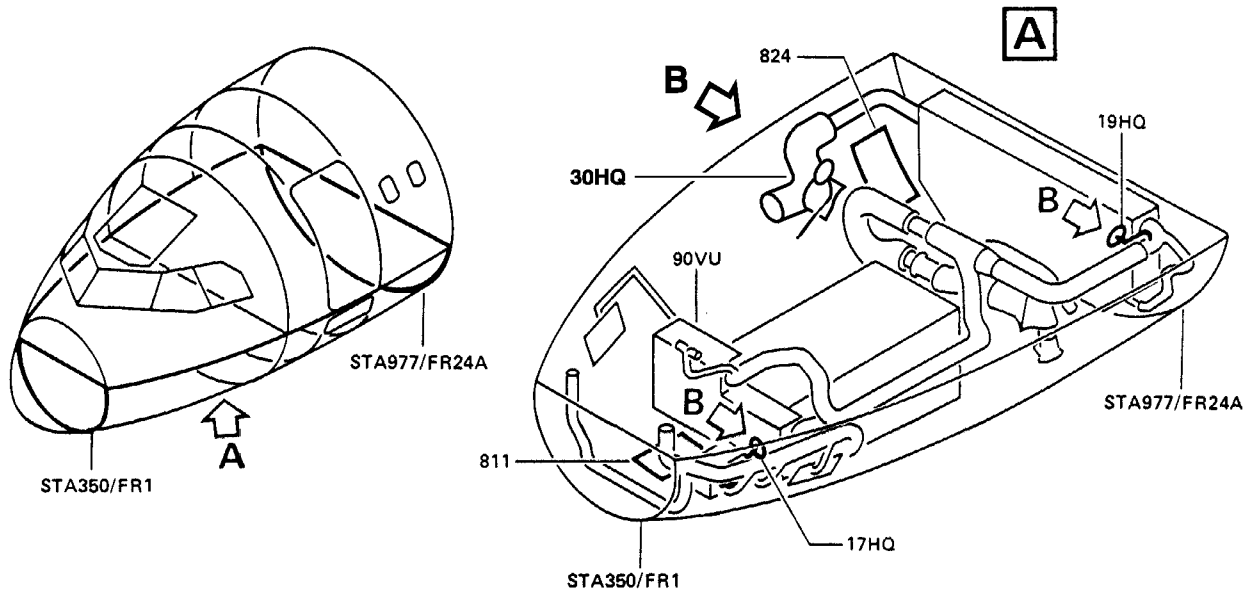
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21-26-00

Page 41
May 01/11

A319/A320/A321

AIRCRAFT MAINTENANCE MANUAL



Pressure Switches 17HQ/19HQ/30HQ
Figure 017

NMS 21 26 00 0 BAM0 01

R

EFF : 001-013, 051-099, 101-149, 151-154,
201-250, 301-312,

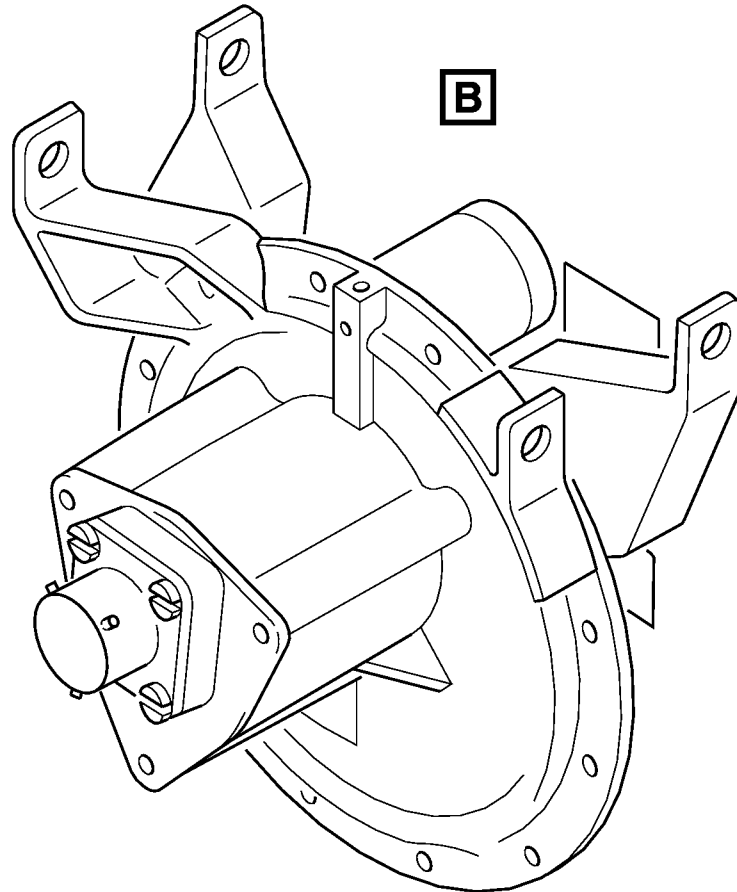
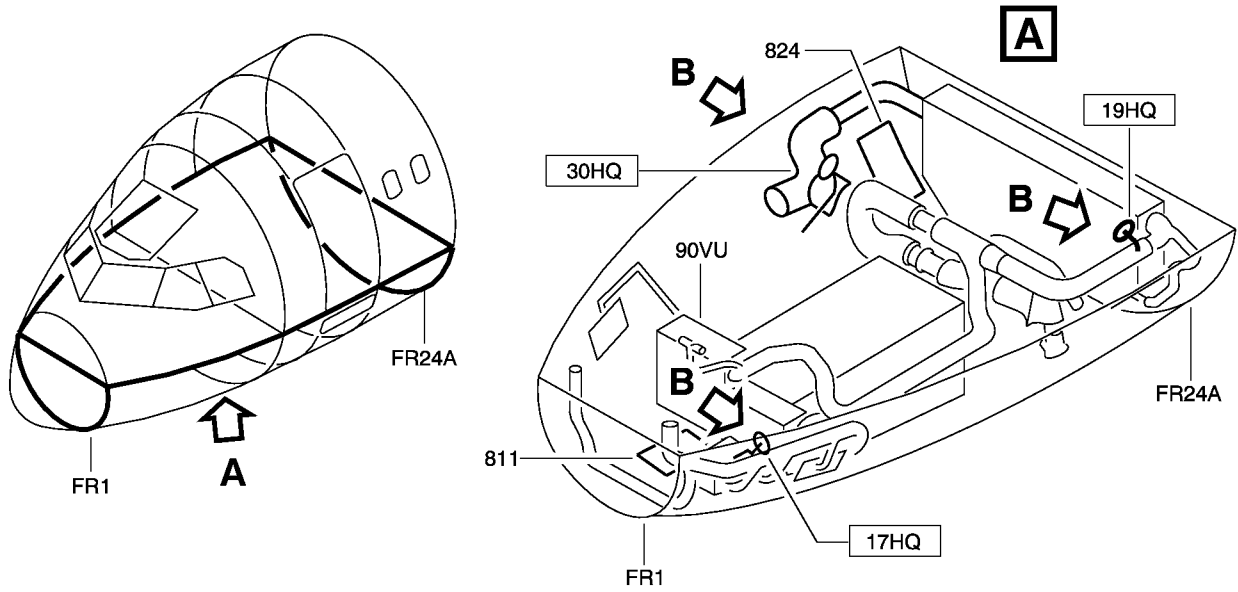
CSC

21-26-00

Page 42
May 01/11

A319/A320/A321

AIRCRAFT MAINTENANCE MANUAL



Pressure Switches 17HQ/19HQ/30HQ
Figure 017A

NM5 21 26 00 0 BANO 00

R

EFF : 014-049, 155-199, 251-299, 313-399,

CSC

21-26-00

Page 43
May 01/11

Q. Skin Heat Exchanger

A skin heat exchanger is located in the upper fuselage between frames 12 and 14 and is used to cool the avionics ventilation air in normal flight operations. A thermally insulated internal wall is bolted to these frames to form two rectangular ducts. This internal wall is easily removed for structural inspection. A drainage system is included to remove any condensation when the heat exchanger is in operation.

****ON A/C 001-049, 051-053, 101-102, 151-199, 251-299, 301-399,**

R. Smoke Detector

The smoke detector 1WA is installed upstream of the extract fan 18HQ. It is of the duct optical type used in stand alone mode with an electrical connector for connection to the warning circuits and the AEVC 10HQ (Ref. 26-00-00).

****ON A/C 054-099, 103-149, 201-250,**

R. Smoke Detector

The smoke detector 1WA is installed upstream of the extract fan 18HQ. It is of the duct photo-electrical type used in stand alone mode with an electrical connector for connection to the warning circuits and the AEVC 10HQ (Ref. 26-00-00).

****ON A/C ALL**

S. Skin Temperature Sensor

R **ON A/C 001-049, 054-099, 101-149, 151-199, 202-299, 301-399,

R (Ref. Fig. 018)

R **ON A/C 051-053, 201-201,

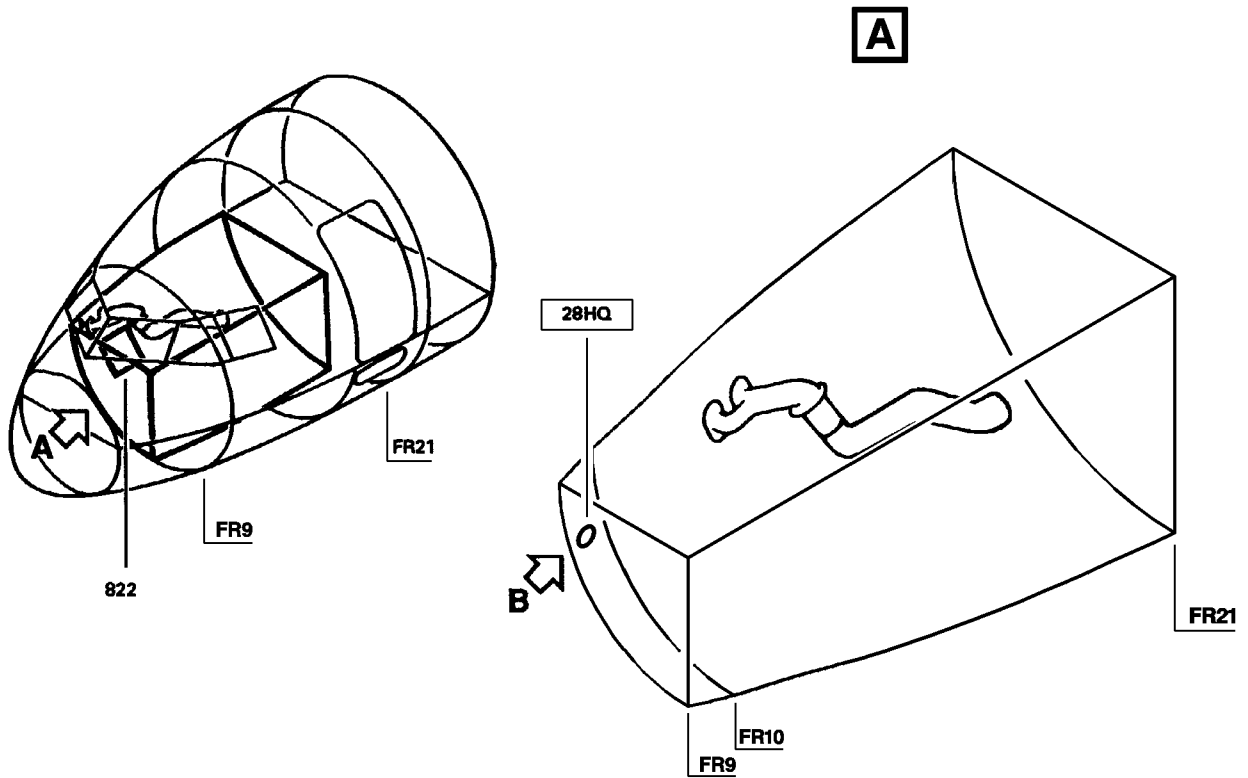
R (Ref. Fig. 018A)

EFF : ALL

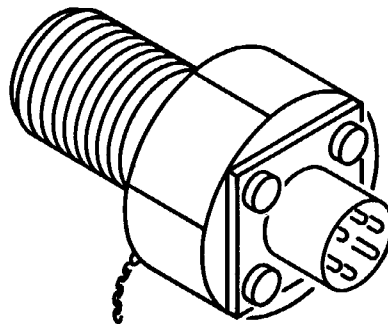
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21-26-00

Page 44
May 01/11



B



Skin Temperature Sensor
 Figure 018

NIM5 21 26 00 0 DDIM0 00

R

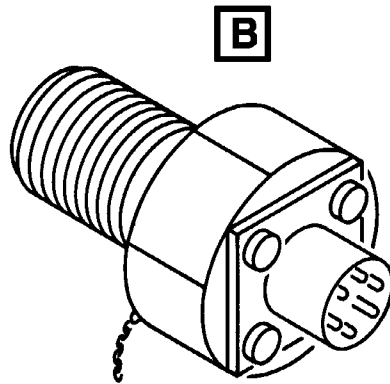
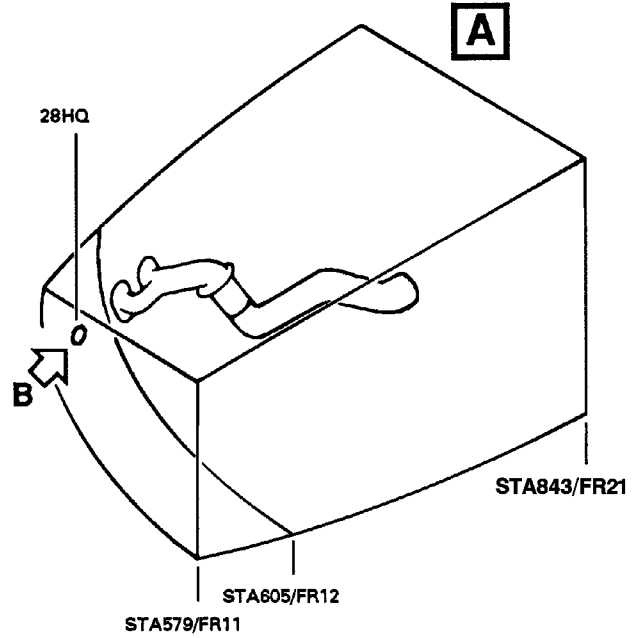
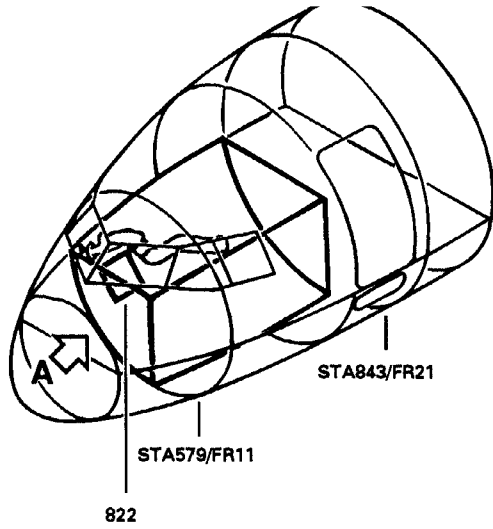
EFF : 001-049, 054-099, 101-149, 151-199,
 202-299, 301-399,

CSC

21-26-00

Page 45
 May 01/11

A319/A320/A321
AIRCRAFT MAINTENANCE MANUAL



NIM5 21 26 00 0 AXIM0 01

Skin Temperature Sensor
 Figure 018A

R

EFF : 051-053, 201-201,

CSC

21-26-00

Page 46
 May 01/11

****ON A/C ALL**

The skin temperature sensor 28HQ is installed on the inside of the fuselage skin. It consists of a sensor element through which an electrical current passes to measure the potential difference proportional to the temperature.

NOTE : On the ground, the closed or open indication of the skin air valves can become amber on the ECAM, when the temperature is near to the opening or closing threshold.
This is because of the precision of the temperature sensors.

The set temperature values are as follows:

- on ground, increasing values +12 deg.C (+53.60 deg.F), decreasing values +9 deg.C (+48.20 deg.F),
- after takeoff increasing values +35 deg.C (+95.00 deg.F), decreasing values +32 deg.C (+89.60 deg.F).

7. Operation/Control and Indicating

A. Operation

R (Ref. Fig. 004, 006, 019)

The avionics equipment is cooled with air supplied in different ways depending on temperature conditions:

- open circuit,
- closed circuit,
- partially open circuit,
- cockpit supply air (in failure cases).

(1) Open circuit

The avionics equipment is cooled with ambient air when the aircraft is on the ground and the skin temperature is above +12 deg.C (+53.60 deg.F). Ambient air, drawn through the skin air inlet valve 15HQ is blown through the check valve 2150HM and filter assembly 2081HM, 2082HM, 2083HM. The air drawn by the blower fan 20HQ is blown through the check valve 2140HM into the system. The air, after cooling the equipment, is drawn by the extract fan 18HQ directly overboard through the skin air outlet valve 22HQ. The skin heat exchanger is by-passed because the skin exchanger isolation valve 24HQ is closed.

(2) Closed Circuit

Normally the avionics equipment is cooled with air in a closed circuit when:

- The aircraft is on the ground and the skin temperature is below +9 deg.C (+48.20 deg.F),

EFF : ALL

CSC

21-26-00

Page 47
May 01/11

A319/A320/A321

AIRCRAFT MAINTENANCE MANUAL

CONFIGURATION	GROUND			FLIGHT		GROUND	EXTRACT OVRD POSITION	BLOWER OVRD POS.	DITCHING POSITION	EXTRACT AND BLOWER OVRD POSITION	
	ABOVE +12	BELOW +9	BELOW +31		ABOVE +35					CONTROLLER	
	BELOW T/O		ABOVE T/O	INDIFFERENT	ABOVE T/O					ON (SMOKE)	OFF
SKIN EXCHANGER INLET BY PASS VALVE	C	O		O		(1) C	C	X	(1) C	(1) C	
SKIN AIR OUTLET VALVE	O	C		PO		C	C	(1) C	(1) PO	(1) PO	
SKIN AIR INLET VALVE	O	C		C		C	C	C	C	X	
SKIN EXCHANGER ISOL VALVE	C	O		O		O	O	O	C	X	
SKIN EXCHANGER OUTLET BY PASS VALVE	C	O		O		C	C	X	C	X	
COND AIR INLET VALVE	C	C		C		O	O (1)	X	O (1)	O (1)	
BLOWER FAN	ON	ON		ON		ON	OFF	ON	OFF	OFF	
EXTRACT FAN	ON	ON		ON		ON (2)	ON	ON	ON (2)	ON (1)	

- ON : CONTROL ON
- OFF : CONTROL OFF
- X : CONTROL OFF—LAST POSITION
- C : CONTROL FOR CLOSING
- O : CONTROL FOR OPENING
- PO : CONTROL FOR PARTIAL OPENING
- (1) : CONTROL BY EXTERNAL CIRCUIT
- (2) : CONTROL BY EXTERNAL CIRCUIT AND AEVC

Avionics Equipment Ventilation - Operation Table
Figure 019

NM5 21 26 00 0 ACQ0 03

R

EFF : ALL

CSC

21-26-00

Page 48
May 01/11

- or when the aircraft is in flight and the skin temperature is below +32 deg.C (+89.60 deg.F).

In these conditions, the skin air inlet valve 15HQ, the skin air outlet valve 22HQ close. The skin exchanger outlet bypass valve 23HQ opens. In addition, the skin exchanger isolation valve 24HQ opens and the skin heat exchanger operates. Three pressure switches 17HQ, 19HQ and 30HQ at different places in the system, send a signal to the AEVC 10HQ when a decreasing pressure/airflow is detected.

When this signal is received by the AEVC 10HQ, a warning message shows:

- "VENT BLOWER FAULT" when a decreasing pressure/airflow is detected by the pressure switches 17HQ and 19HQ
- "VENT EXTRACT FAULT" when a decreasing pressure/airflow is detected by pressure switch 30HQ.

At this time and according to the existing configuration, the pilot pushes in:

- The OVRD Blower pushbutton or
 - The OVRD Extract pushbutton or
 - The OVRD Blower and OVRD Extract pushbuttons
- and the skin exchanger inlet bypass valve 16HQ closes.

The skin exchanger inlet bypass valve 16HQ opens when the pressure switches detect a correct pressure/airflow in the system.

(3) Partially Open Circuit

The avionics equipment is cooled with air in a partially open circuit when the skin temperature is above or equal to +35 deg.C (+95.00 deg.F) and:

- When the aircraft is on the ground (TLA above T/O),
- When the aircraft is in flight.

When the AEVC 10HQ receives a signal greater than +35 deg.C (+95.00 deg.F) from the skin temperature sensor 28HQ, this causes:

- The skin exchanger outlet bypass valve 23HQ to open,
- The skin air outlet valve 22HQ to partially open,
- The skin exchanger inlet bypass valve 16HQ to open.

The avionics equipment is then cooled with air conditioning system and avionics compartment air coming into the system through the skin exchanger outlet bypass valve 23HQ.

The air after cooling the equipment is directed overboard through the skin air outlet valve 22HQ and to the forward underfloor area through the skin exchanger inlet bypass valve 16HQ. When the skin temperature drops below +32 deg.C (+89.60 deg.F), the system goes back to a closed circuit configuration.

NOTE : If the skin temperature is below -50 deg.C (-58.00 deg.F) during more than 5 seconds and if the pushbuttons EXTRACT, BLOWER and DITCHING are pushed (normal operation), the system

EFF : ALL

CSC

21-26-00

Page 49
Nov 01/10

is in a partially open circuit configuration. A reset of the AEVC sets the system to a closed circuit configuration.

(4) Cockpit Supply Air

The avionics equipment is cooled with air tapped from the cockpit supply duct when one of the following failure cases occurs:

(a) Extraction Low Flow

The AEVC 10HQ illuminates the FAULT legend on the EXTRACT pushbutton switch 14HQ if the pressure switch 30HQ detects low flow. On the ground, the ADIRU & AVNCS VENT caution light 25HQ comes on amber on the external power panel 108VU and the horn sounds. When this happens, the pushbutton switch must be released and the OVRD legend comes on. This causes the conditioned air inlet valve 21HQ and skin exchanger isolation valve 24HQ to open. All the other valves close.

(b) Blowing Low Flow/High Duct Temperature

The AEVC 10HQ illuminates the FAULT legend on the BLOWER pushbutton switch 13HQ when one or both of the following occurs:

- if the pressure switch 17HQ (19HQ) detects low flow,
- if the temperature sensor 26HQ senses high duct temperature.

On the ground, the ADIRU & AVNCS VENT caution light 25HQ comes on amber on the external power panel 108VU and the horn sounds. When this happens, the pushbutton switch must be released and the OVRD legend comes on. This causes the blower fan 20HQ to stop, the conditioned air inlet valve 21HQ to open and the skin exchanger isolation valve 24HQ to open. All the other valves close.

(c) Smoke (Ref. 26-15-00)

If the smoke detector 1WA detects smoke, the AEVC 10HQ triggers illumination of:

- the SMOKE legend of the GEN 1 LINE pushbutton switch on the panel 21VU,
- the FAULT legends of the BLOWER and EXTRACT pushbutton switches on the panel 22VU.

When this happens, the BLOWER pushbutton switch 13HQ and the EXTRACT pushbutton switch 14HQ must be released. and the OVRD legends come on. This causes the blower fan 20HQ to stop, the conditioned air inlet valve 21HQ to open and the skin air outlet valve 22HQ to partially open. All the other valves close and the air is directed overboard through the skin air outlet valve 22HQ.

EFF : ALL

CSC

21-26-00

Page 50
Nov 01/10

(d) AEVC Power Supply Cutoff

If the AEVC 10HQ stops operating, the FAULT legends on the EXTRACT pushbutton switch 14HQ and the BLOWER pushbutton switch 13HQ come on amber. When this happens, both pushbutton switches must be released and the OVRD legends come on. This causes the blower fan 20HQ to stop, the conditioned air inlet valve 21HQ to open and the skin air outlet valve 22HQ to partially open. **ALL the other valves remain in their last controlled position.**

****ON A/C 001-002, 051-099, 101-149, 201-250,**

B. Control and Indicating

R (Ref. Fig. 020)

(1) EXTRACT Pushbutton Switch

AUTO - (pushbutton switch pressed): normal operation. In case of failure, the FAULT legend comes on amber.

OVRD - (pushbutton switch released): the FAULT legend goes off, the OVRD legend comes on white.

The conditioned air inlet valve 21HQ and skin exchanger isolation valve 24HQ open, all the other valves close.

(2) BLOWER Pushbutton Switch

AUTO - (pushbutton switch pressed): normal operation. In case of failure, the FAULT legend comes on amber.

OVRD - (pushbutton switch released): the FAULT legend goes off, the OVRD legend comes on white. The blower fan 20HQ stops, the conditioned air inlet valve 21HQ and the skin exchanger isolation valve 24HQ open. All the other valves close, and the extract fan 18HQ continues to operate.

If smoke is detected, both pushbutton switches are released. The conditioned air inlet valve 21HQ opens, the skin air outlet valve 22HQ partially opens. All the other valves close and the extract fan 18HQ continues to operate.

The horn sounds to alert the ground crew in the event of low flow or overheat when the avionics ventilation system is in operation.

NOTE : If the ventilation system is defective or when the **BLOWER** and **EXTRACT** pushbutton switches are released (**OVRD** legends on):

- there are no more colored backgrounds on the EFIS displays.

EFF : ALL

CSC

21-26-00

Page 51
May 01/11