CHAPTER

28

FUEL

CHAPTER 28
FUEL

A = Added, R = Revised, D = Deleted, O = Overflow

28-EFFECTIVE PAGES

CHAPTER 28
FUEL

28-CONTENTS

PART NUMBER: G28005-35

NAME: CHECK FIXTURE EQUIPMENT - PRESSURE RELIEF VALVE

AIRPLANE MAINTENANCE: YES

AMM 28-13-41

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The G28005-35 check fixture equipment is used on all 737 airplanes except 737-100 thru -500 airplanes.

G28005 is used to perform an operational check for the surge tank pressure relief valve. Four G28005-39 pan head screws are used to fasten G28005 to the wing surge tank access door for testing. G28005 also includes four G28005-50 (MS16998-48) socket head cap screws, which are used for different airplanes and not on 737 airplanes.

Refer to AMM 28-13-41 and the current G28005 drawing for complete usage instructions.

G28005-35 consists of:

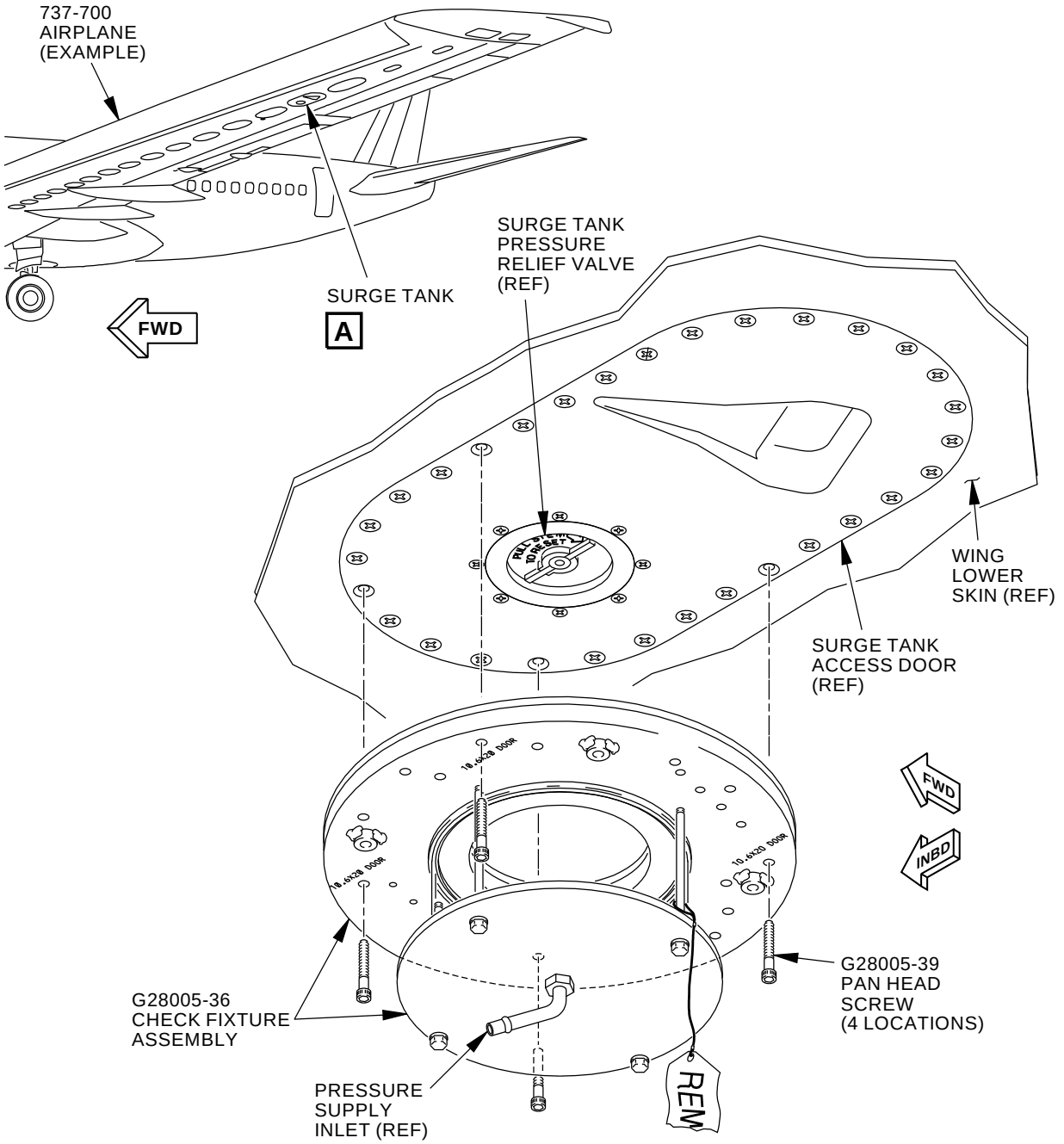
G28005-35		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	CHECK FIXTURE ASSEMBLY	G28005-36
4	PAN HEAD SCREW	G28005-39
4	SOCKET HEAD CAP SCREW (MS16998-48)	G28005-50*[1]
1	STORAGE BOX	

*[1] G25005-50 IS NOT USED ON 737 AIRPLANES.

WEIGHT: 10 lbs (4.5 kg)

DIMENSIONS: 13 x 13 x 5 inches (330 x 330 x 127 mm)

NOTE: G28005-35 supersedes G28005-29 for 737-600 thru -900, 737-7, -8, -8200 and -9 airplanes.



Surge Tank Pressure Relief Valve Check Fixture
Figure 1

PART NUMBER: B28001-11, -13, -18

NAME: ADAPTER - SUMP DRAIN VALVE, REMOVAL/INSTALLATION

AIRPLANE MAINTENANCE: YES

AMM 28-11-21, AMM 28-11-41, AMM 28-11-61

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The B28001-11 sump drain valve adapter is used on 737-100 thru -200 airplanes.

The B28001-13 adapter is used on 737-300 thru -900 airplanes.

The B28001-18 (preferred) sump drain valve adapter is used on all 737 airplanes.

B28001 is used to remove and install the surge tank fuel sump drain valves.

B28001 consists of a steel adapter with external 5/8 inch hexagonal segments on either end; there is a neoprene gasket attached to the end of the tool that is inserted into the valve. One end of B28001 fits into the corresponding recess on the drain valve; the other end accommodates a customer-furnished 5/8-inch socket and torque wrench that are used to loosen or tighten the valve in the wing skin fitting.

The B28001-18 adapter is used Boeing 727 thru 777 airplanes. B28001-18 includes a B28001-5 adapter that is not used on 737 airplanes.

Refer to AMM 28-11-21, AMM 28-11-41, AMM 28-11-61 and the current B28001 tool drawing for complete usage instructions and torque wrench values.

B28001-11, -13 and -18 consist of:

B28001-11		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	ADAPTER ASSEMBLY	B28001-2
1	STORAGE BOX	

B28001-13		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	ADAPTER ASSEMBLY	B28001-2
1	STORAGE BOX	

B28001-18		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	ADAPTER ASSEMBLY	B28001-2
1	ADAPTER	B28001-5*[1]

(Continued)

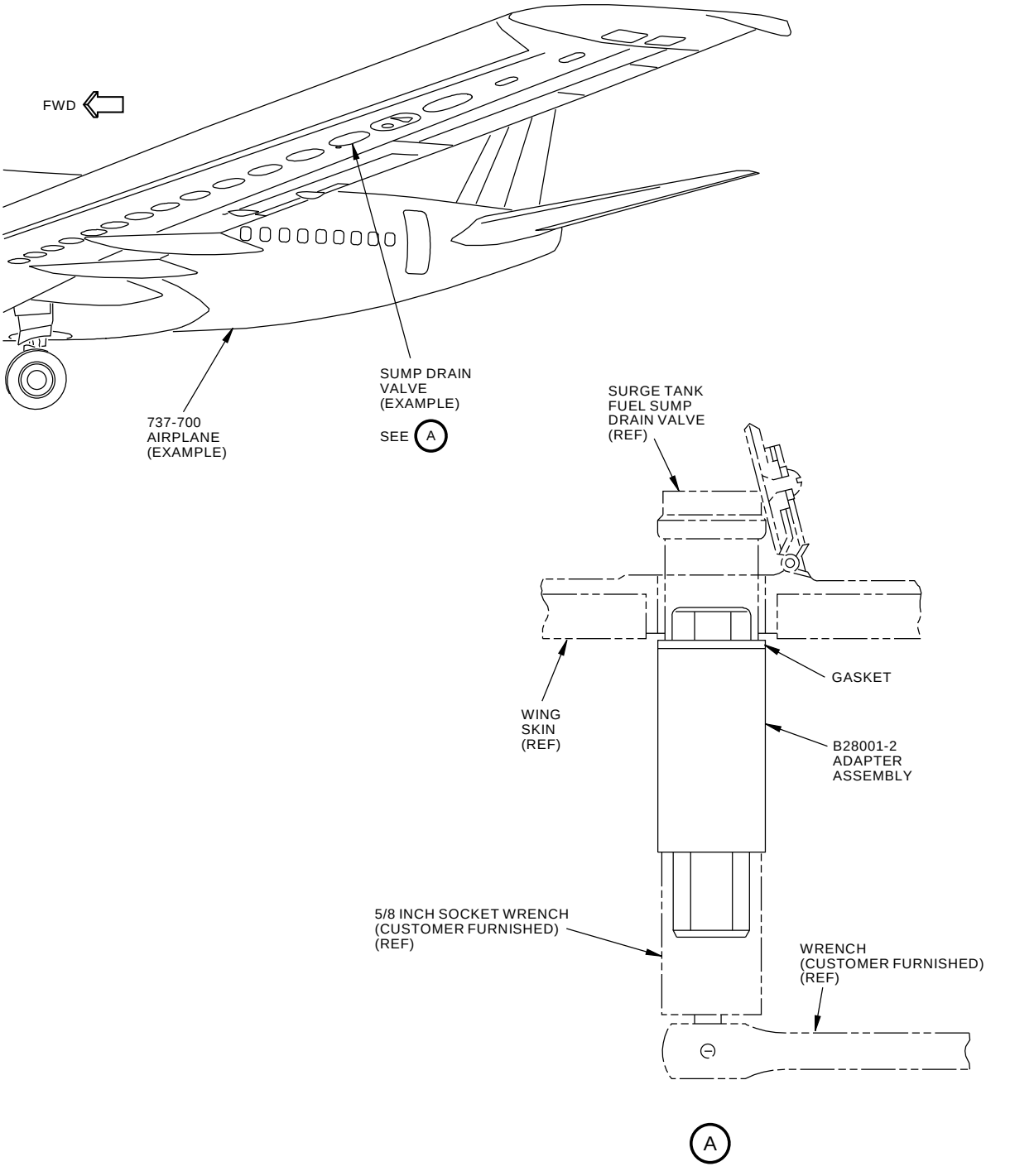
B28001-18		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	STORAGE BOX	

*[1] B28001-5 IS NOT USED ON 737 AIRPLANES.

WEIGHT: 1.5 lbs (0.7 kg)

DIMENSIONS: 12 x 9 x 2 inches (305 x 229 x 51 mm)

NOTE: B28001 replaces SE28-1103 for future procurement.



Sump Drain Valve Removal/Installation Adapter
Figure 1

PART NUMBER: F70230-1

NAME: TEMPORARY REPAIR TOOL - SELF-SEALING RIVETS, FUEL SYSTEM

AIRPLANE MAINTENANCE: YES

AMM 28-11-00

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The F70230-1 temporary repair tool is used on 737-100 thru -900 airplanes.

F70230 is used in conjunction with a customer-furnished rivet gun. F70230 is used for injecting fuel tank sealant when making temporary repairs to integral fuel tank fasteners. F70230 includes a hollow tube containing a piston. Sealant is injected into the hollow tube, the rivet gun drives the piston and sealant flows around the fastener.

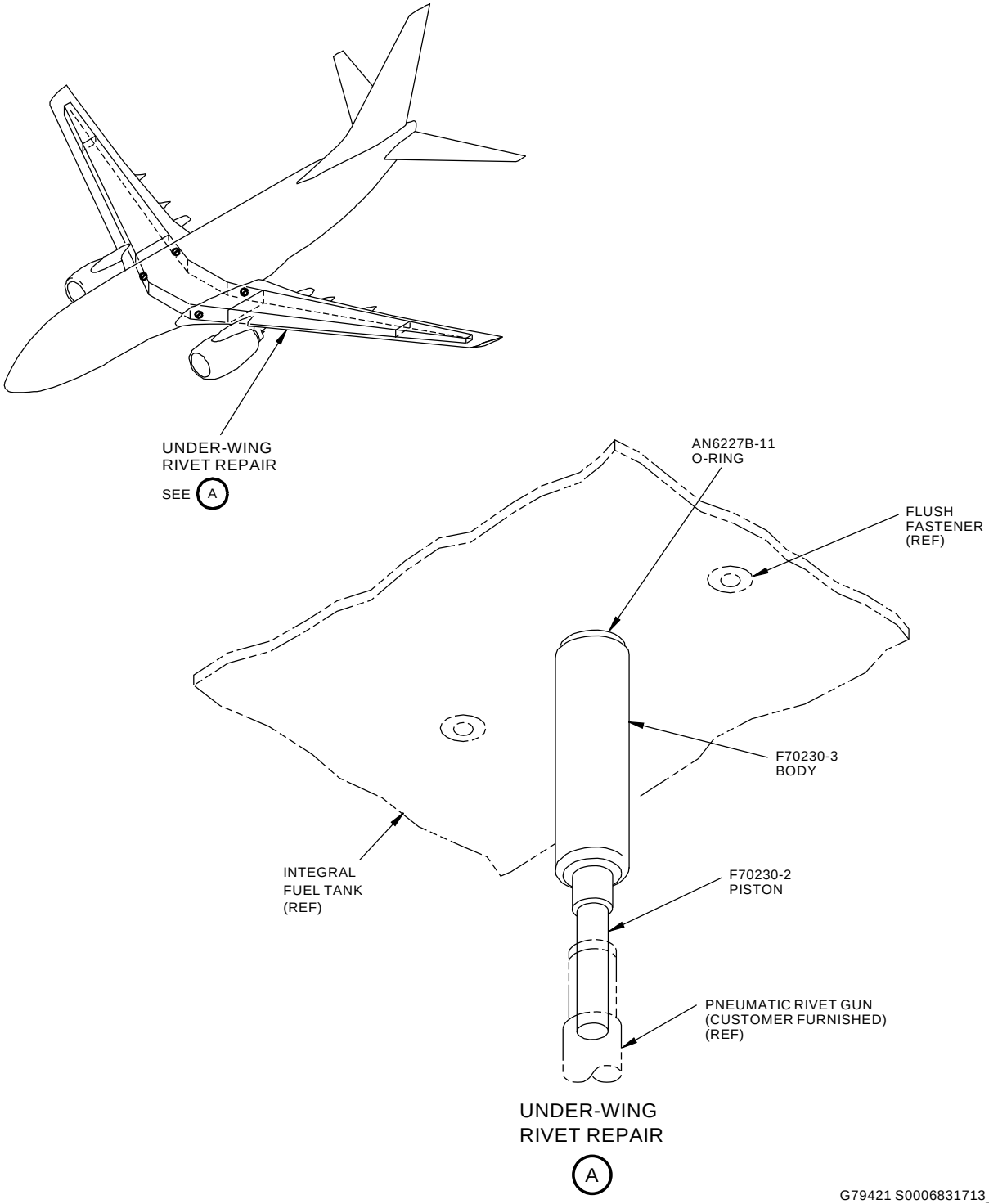
Refer to AMM 28-11-00 and the current F70230 drawing for complete usage instructions.

F70230-1 consists of:

F70230-1		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	PISTON	F70230-2
1	BODY	F70230-3
1	O-RING	AN6227B-11
1	STORAGE BAG	

WEIGHT: 1 lb (0.45 kg)

DIMENSIONS: 1.5 x 1.5 x 5 inches (38 x 38 x 127 mm)



Self-Sealing Rivets Temporary Repair Tool
Figure 1

PART NUMBER: F72951-1

NAME: WATER MANOMETER - TEST EQUIPMENT

AIRPLANE MAINTENANCE: YES

AMM 28-11-00, AMM 28-13-41, AMM 57-21-23

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The F72951-1 water manometer is used on all 737 airplanes.

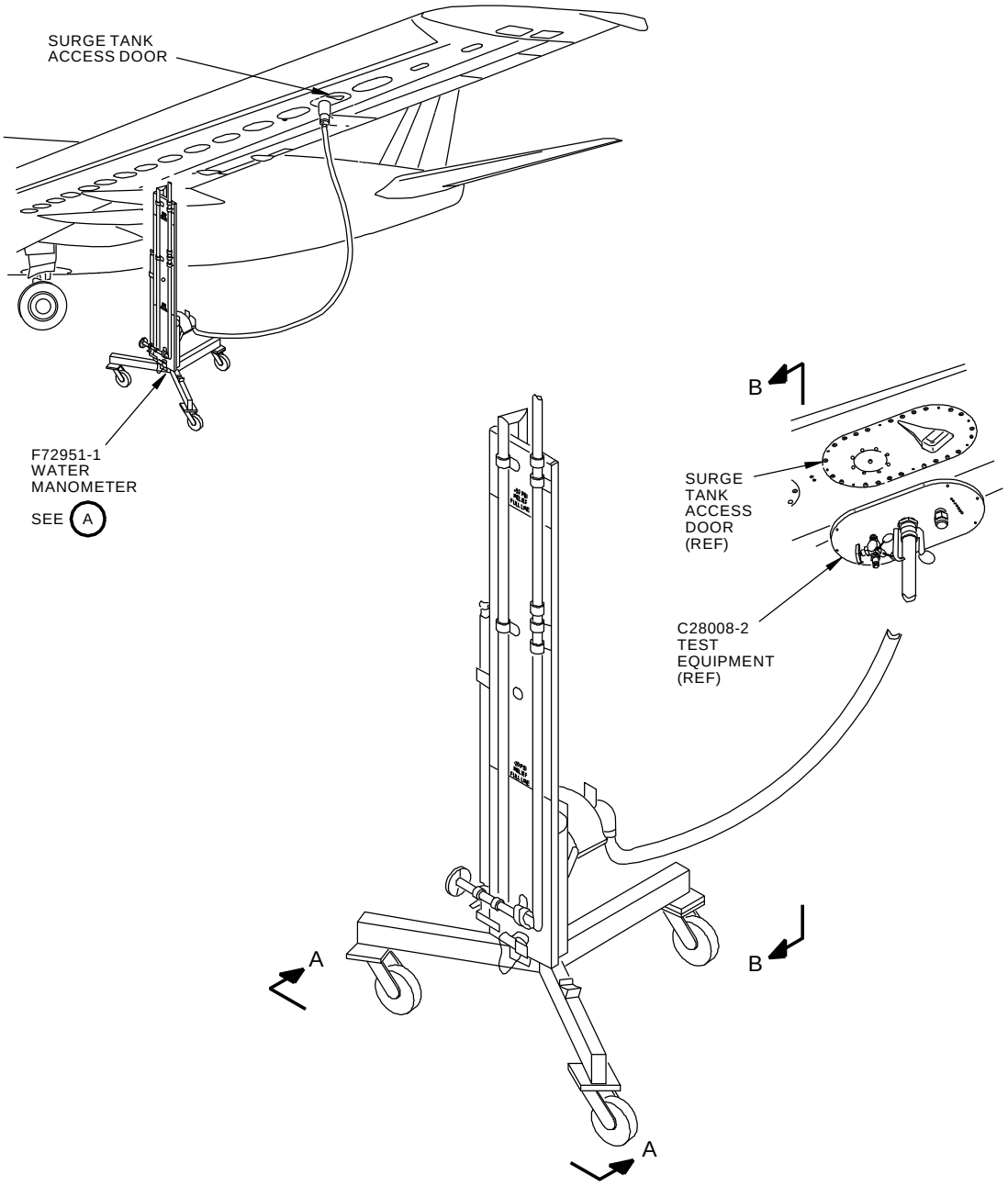
F72951 is used to provide pressure and vacuum relief protection during pressure and pressure relief checks of the fuel system wing tanks. Figure 1 illustrates the manometer usage with a customer furnished C28008 test equipment. The manometer can also be used with customer-furnished F71329 leak testing equipment, F80173 pressure test door assembly, F80080 testing kit, F80166 test fixture or the F80175 pressure test door assembly (all not illustrated).

F72951-1 consists of a manometer mounted on a caster equipped base. The removable tube assembly can be removed and mounted low on the rear of the wooden back for compactness. The 180 inch high manometer can then be pivoted 90 degrees (and secured with a steel rod) to a 104 inch height for ease in transportability.

WEIGHT: 150 lbs (68 kg)

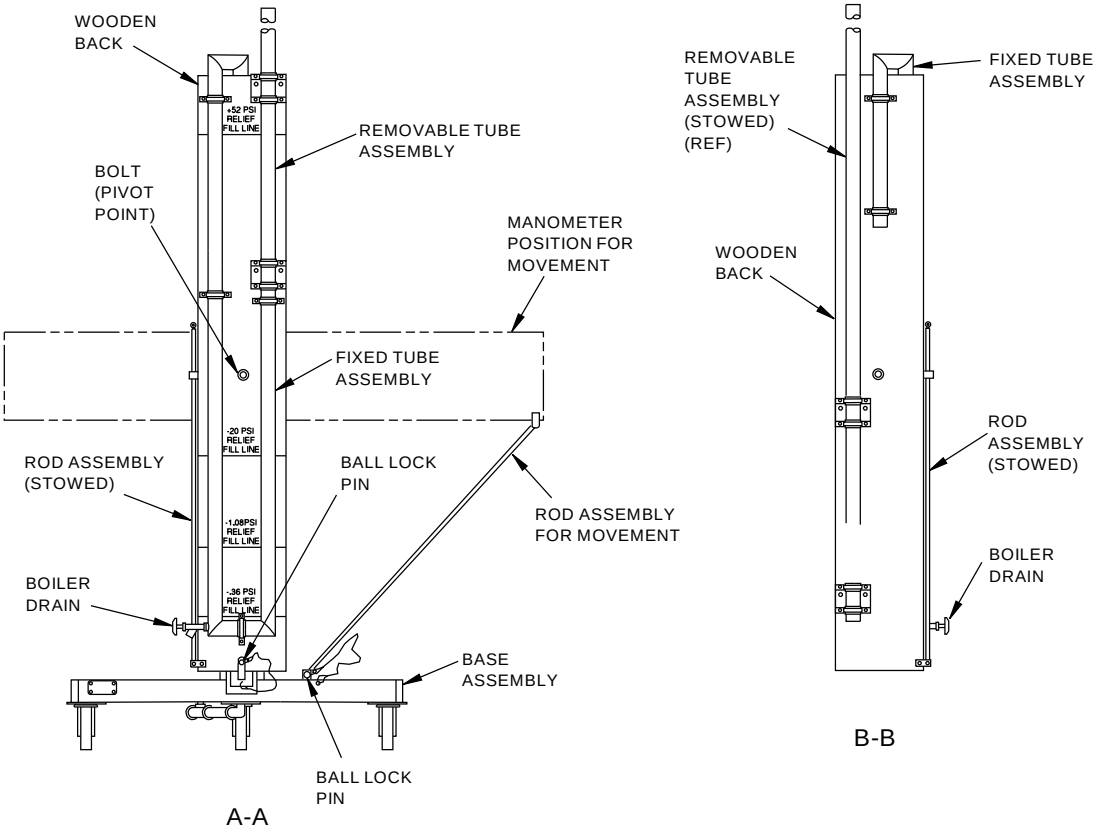
DIMENSIONS: 180 x 47 x 47 inches (4572 x 1194 x 1194 mm)

NOTE: F72951 supersedes F70208.



H52796 S0006831715_V3

Manometer Usage
Figure 1



H52835 S0006831716_V2

Manometer Components
Figure 2

PART NUMBER: C28008-1

NAME: TEST EQUIPMENT - FUEL TANK AND VENT SYSTEM

AIRPLANE MAINTENANCE: YES

AMM 28-11-00

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The C28008-1 test equipment is used on all 737 airplanes except 737-100 thru -500 airplanes..

C28008 is used in conjunction with a customer-furnished F72951 water manometer and shop air. C28008 is used to test the fuel tank and vent system for leakage. C28008 mounts over the surge tank vent scoops and pressurizes the fuel tanks with shop air. A C28008-2 test door assembly has connections for the water manometer, the shop air connection and a pressure gauge assembly. A C28008-3 blank door assembly seals the opposite wing surge tank vent scoop.

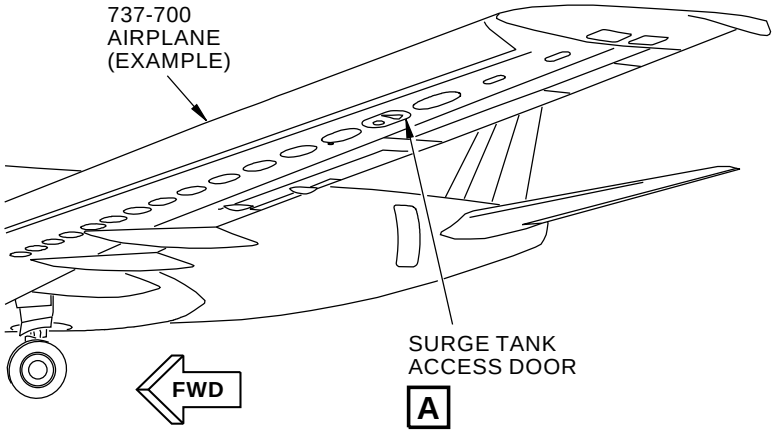
Refer to AMM 28-11-00 and the current C28008 drawing for complete usage instructions.

C28008-1 consists of:

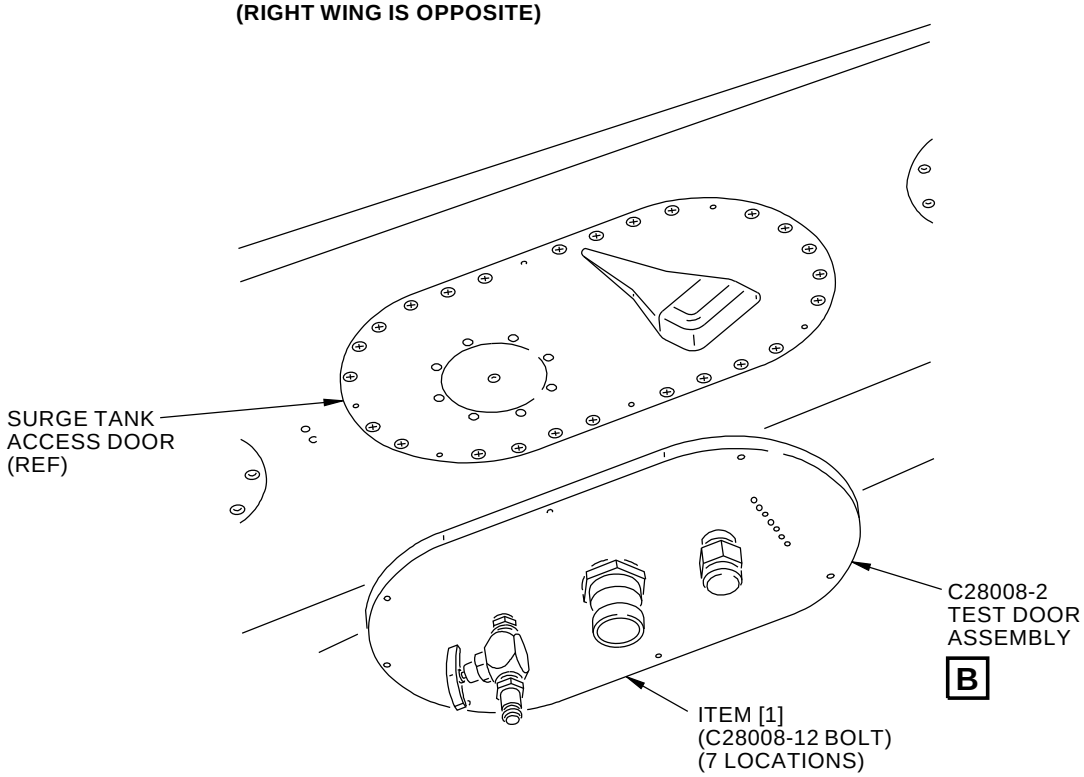
C28008-1		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	TEST DOOR ASSEMBLY	C28008-2
1	BLANK DOOR ASSEMBLY	C28008-3
1	GAUGE ASSEMBLY	C28008-9
14	BOLT (NAS6603-22)	C28008-12
1	STORAGE BOX	

WEIGHT: 28 lbs (12.7 kg)

DIMENSIONS: 8 x 11 x 21 inches (203 x 280 x 533 mm)



LEFT WING
(RIGHT WING IS OPOSITE)

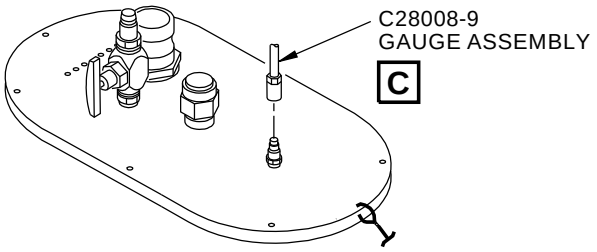


LEFT WING SURGE TANK ACCESS DOOR
(EXAMPLE)

A

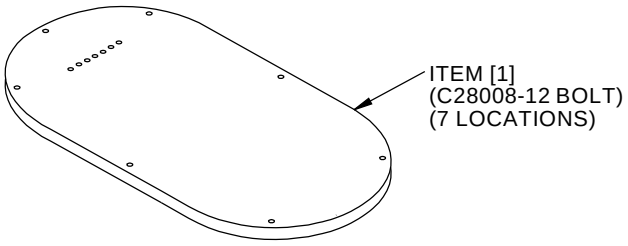
H55343 S0006831718_V4

Fuel Tank and Vent System Test Equipment
Figure 1



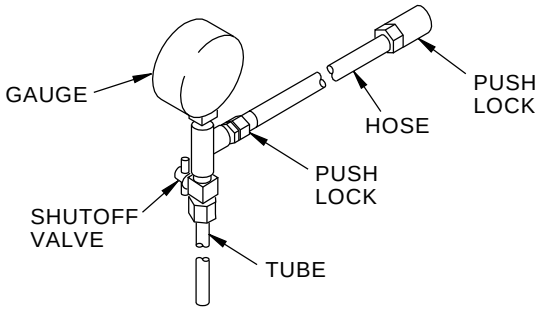
C28008-2
SURGE TANK COVER
(LEFT WING EXAMPLE)

B



C28008-3
BLANK DOOR ASSEMBLY
(RIGHT WING EXAMPLE)

B



C28008-9
GAUGE ASSEMBLY

C

H55375 S0006831719_V4

Fuel Tank and Vent System Test Equipment
Figure 2

REPAIRABLE/REPLACEABLE PARTS			
ITEM NUMBER	**PART NUMBER**	**NOMENCLATURE**	**VENDOR CODE**
[1]	C28008-12 (NAS6603-22)	BOLT	- - -

PART NUMBER: A28003-88, -89, -90, -91

NAME: VENTILATION EQUIPMENT - FUEL TANK

AIRPLANE MAINTENANCE: YES

AMM 28-10-00, AMM 28-11-00

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The A28003-89 (option) or A28003-91 (preferred) ventilation equipment is used on all 737 airplanes, except 737-100 thru -500 airplanes.

The A28003-88 (option) or A28003-90 (preferred) ventilation equipment is used on 737-300 thru -500 airplanes.

A28003 is used in conjunction with a customer-furnished shop air source to power the venturi-type air mover. A28003 is used to ventilate the main, center and surge fuel tanks prior to and during maintenance.

On all 737 airplanes except the 737-100 and -200, the A28003-8 or -34 tank adapter assembly can be placed in any of the 12 x 20 inch (305 x 508 mm) main or center access openings beneath the wing. The A28003-8 or -34 tank adapter assembly is used in conjunction with the A28003-92 or 94 air mover assembly for ventilation.

On 737-300 thru -500 airplanes, the A28003-46 or -93 air mover assemblies are installed in the airplane's wing tank filler opening to ventilate the tank.

Refer to AMM 28-10-00, AMM 28-11-00 and the current A28003 drawing for complete usage instructions.

A28003-88, -89, -90 and -91 consist of:

A28003-88 (USED ON 737-300 THRU -500)		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	AIR MOVER ASSEMBLY	A28003-92
1	AIR MOVER ASSEMBLY	A28003-93
1	TANK ADAPTER ASSEMBLY	A28003-8
1	STORAGE BOX	

A28003-89 (USED ON ALL 737 AIRPLANES, EXCEPT 737-100 THRU -500 AIRPLANES)		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	AIR MOVER ASSEMBLY	A28003-92
1	TANK ADAPTER ASSEMBLY	A28003-34
1	STORAGE BOX	

A28003-90 (USED ON 737-300 THRU -500)		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	AIR MOVER ASSEMBLY	A28003-46

(Continued)

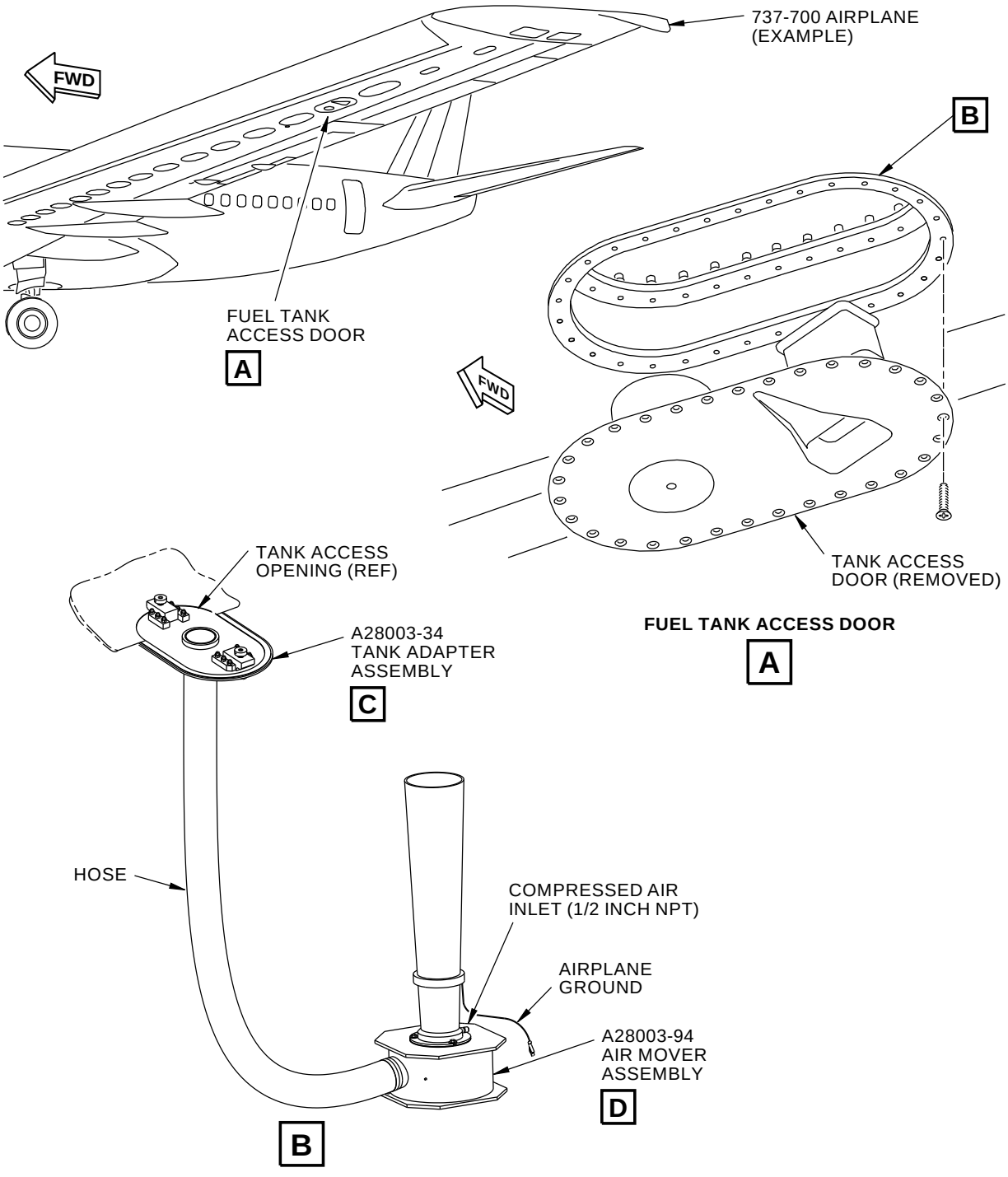
A28003-90 (USED ON 737-300 THRU -500)		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	AIR MOVER ASSEMBLY	A28003-94
1	TANK ADAPTER ASSEMBLY	A28003-8
1	STORAGE BOX	

A28003-91 (USED ON ALL 737 AIRPLANES, EXCEPT 737-100 THRU -500 AIRPLANES)		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	AIR MOVER ASSEMBLY	A28003-94
1	TANK ADAPTER ASSEMBLY	A28003-34
1	STORAGE BOX	

WEIGHT: A28003-92 - 40 lbs (18 kg)
A28003-94 - 40 lbs (18 kg)
A28003-93 and -8 - 20 lbs (9 kg)
A28003-46 and -8 - 20 lbs (9 kg)
A28003-34 - 10 lbs (5 kg)

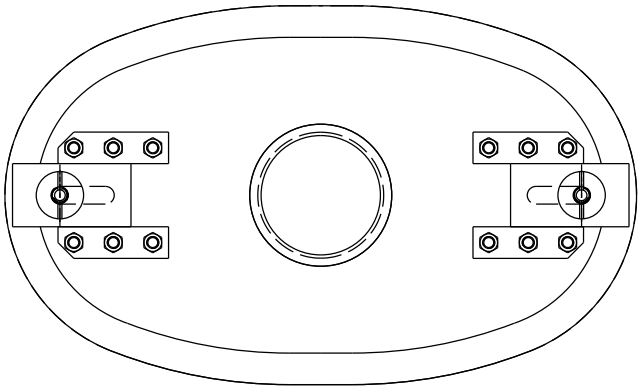
DIMENSIONS: A28003-92 - 40 x 40 x 40 inches (1016 x 1016 x 1016 mm)
A28003-94 - 40 x 40 x 40 inches (1016 x 1016 x 1016 mm)
A28003-93 and -8 - 8 x 13 x 36 inches (203 x 330 x 914 mm)
A28003-46 and -8 - 8 x 13 x 36 inches (203 x 330 x 914 mm)
A28003-34 - 5 x 12 x 20 inches (127 x 305 x 508 mm)

NOTE: A28003-88, -89, -90 and -91 supersede A28003-1, -33, -77 and -78 respectively.
A28003-91 replaces A28003-89 for future procurement.
A28003-90 replaces A28003-88 for future procurement.



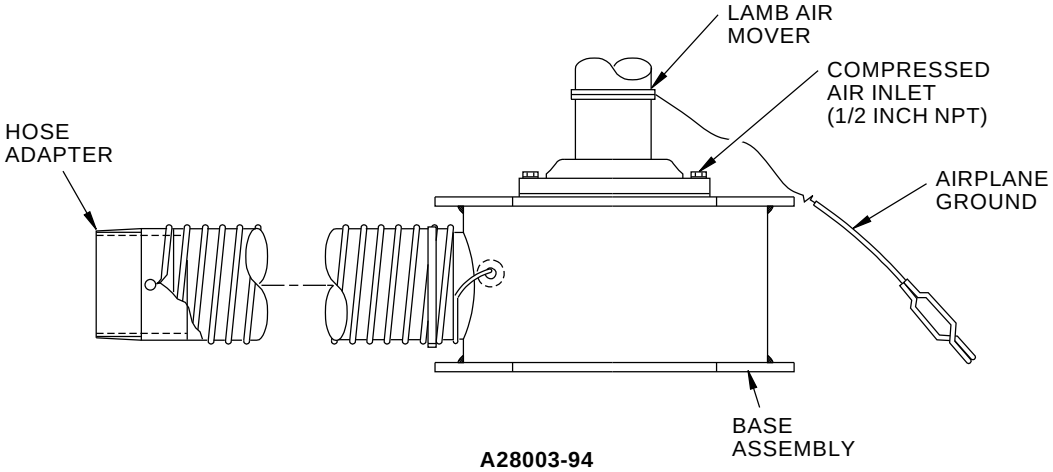
H60762 S0006831721_V5

Ventilation Equipment Usage
Figure 1



A28003-34
TANK ADAPTER ASSEMBLY SHOWN
A28003-8 SIMILAR

C

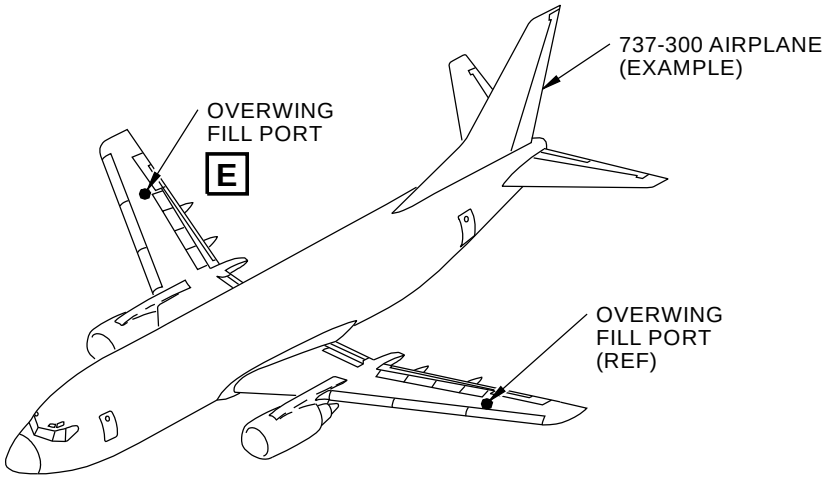


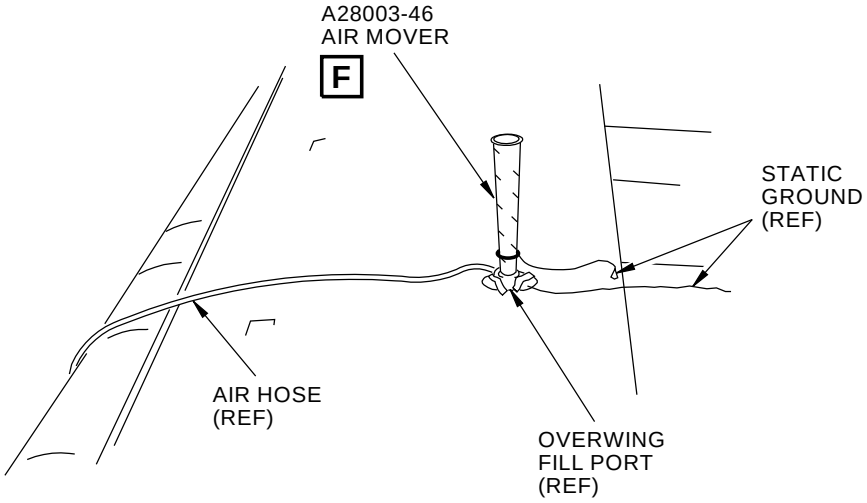
A28003-94
AIR MOVER ASSEMBLY SHOWN
A28003-92 SIMILAR

D

H60766 S0006831722_V5

Ventilation Equipment Components
Figure 2



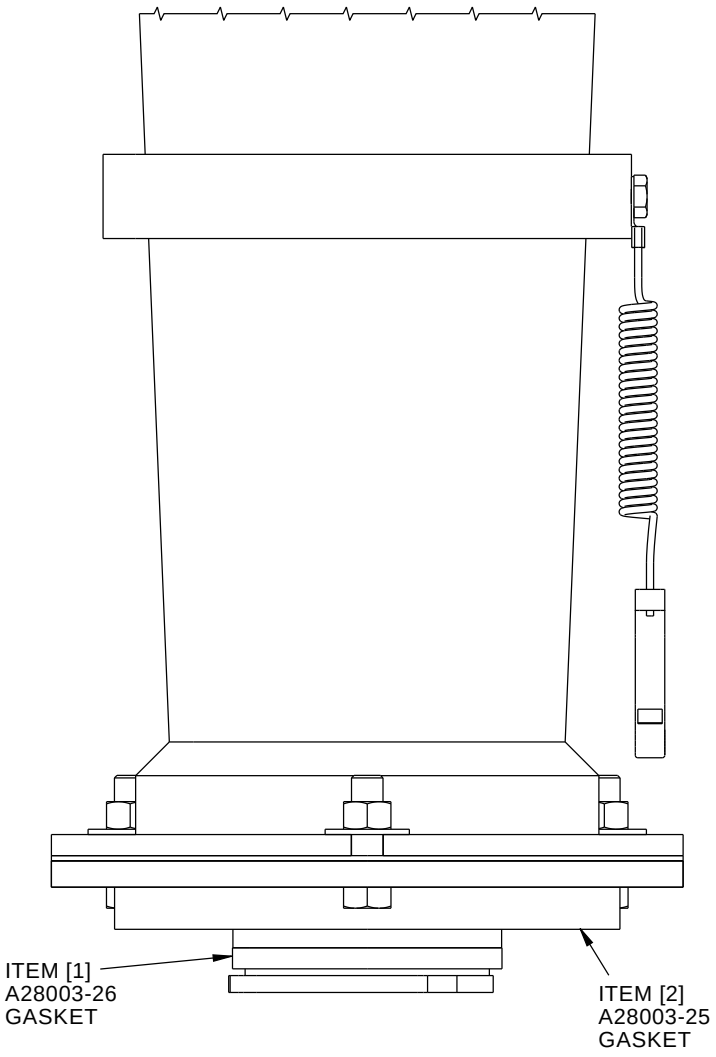


OVERWING FILL PORT

E

2122239 S0000456293_V2

Over The Wing Ventilation Equipment Usage
Figure 3



A28003-46
AIR MOVER ASSEMBLY SHOWN
A28003-93 SIMILAR

F

2122246 S0000456294_V2

Over The Wing Ventilation Equipment Components
Figure 4

REPAIRABLE/REPLACEABLE PARTS			
ITEM NUMBER	**PART NUMBER**	**NOMENCLATURE**	**VENDOR CODE**
[1]	A28003-26	GASKET	- - -
[2]	A28003-25	GASKET	- - -

PART NUMBER: F80166-1

NAME: TEST FIXTURE - PRESSURE RELIEF VALVE, FLAME ARRESTOR SURGE TANK

AIRPLANE MAINTENANCE: YES

AMM 28-13-41

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The F80166-1 test fixture is used all 737 airplanes except 737-100 thru -500 airplanes not equipped with optional flame arrestors.

F80166 is used with customer-furnished air supply, the F72951 manometer and the F71329 pressure/vacuum test box. F80166 is used to provide a means of applying pressure and vacuum to the external surface of the surge tank pressure relief valve. F80166 allows functional test relief action with the relief valve installed on the aircraft.

Refer to AMM 28-13-41 and the current F80166 drawing for complete usage instructions.

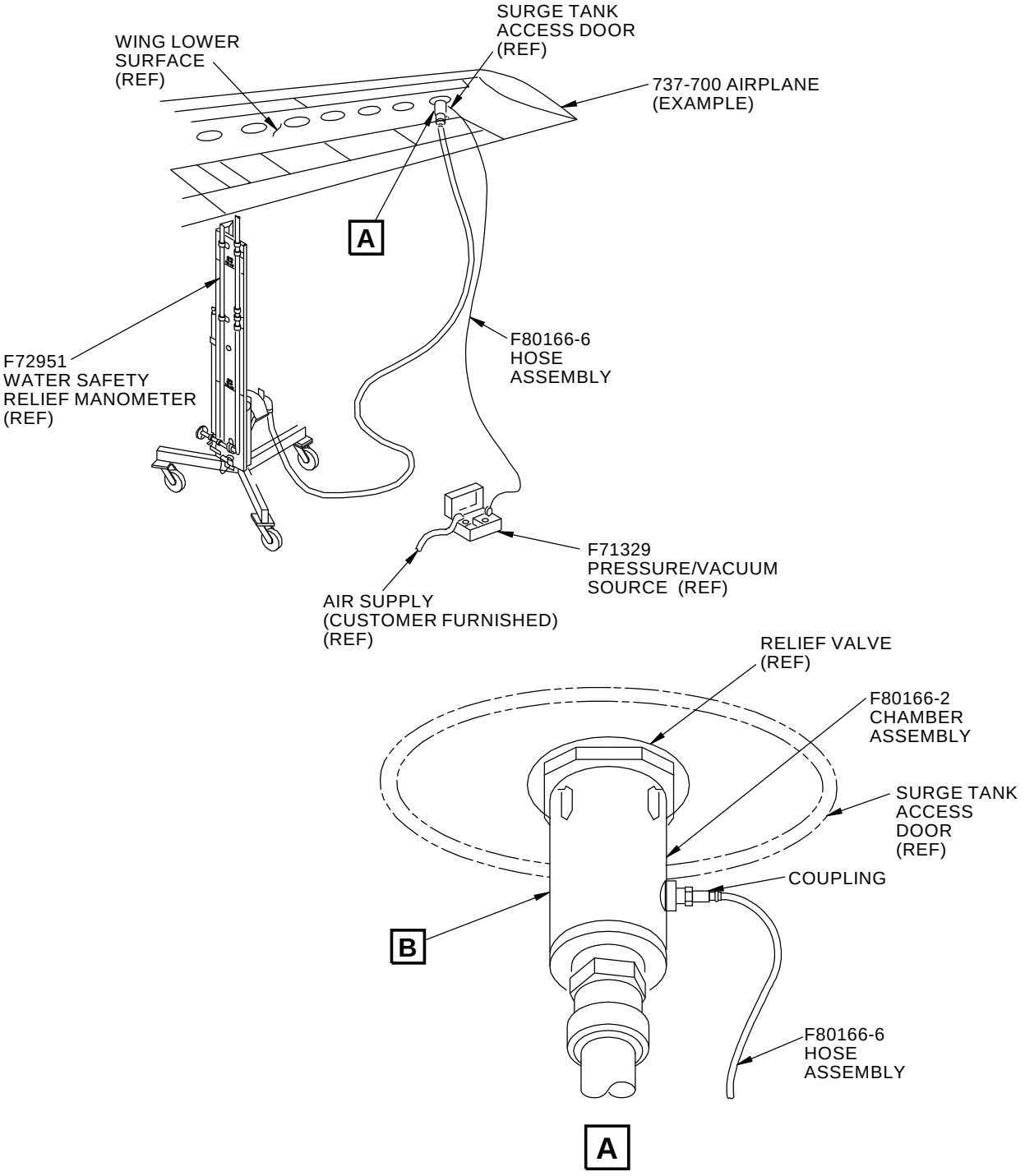
F80166-1 consists of:

F80166-1		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	CHAMBER ASSEMBLY	F80166-2
1	HOSE ASSEMBLY	F80166-6
1	ADAPTER	F80166-7
8	RETAINER	F80166-8
1	PLUG	B-10
1	O-RING	MS29513-154
4	SCREW	MS16998-31
8	SCREW	NAS600-3
1	STREAMER	BACS39A-24
1	CABLE	CL-22-KA-12.0-LR
1	STORAGE BOX	

WEIGHT: 7 lbs (3 kg)

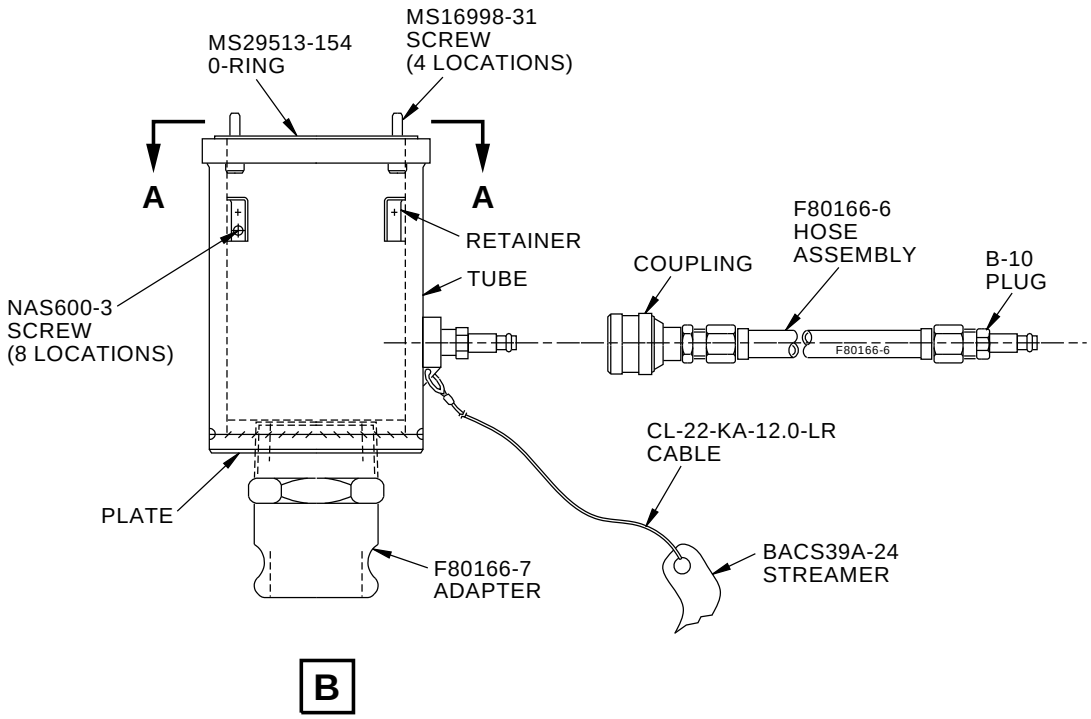
DIMENSIONS: 7 x 11 x 11 inches (178 x 280 x 280 mm)

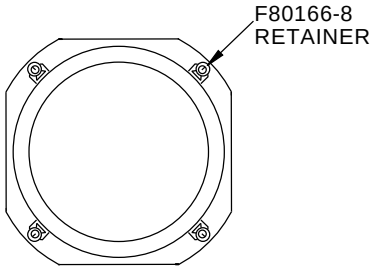
NOTE: G28005-35, -42 or -48 may be used as an alternate to F80166-1



H68454 S0006831724_V4

Test Fixture Usage
Figure 1





A-A

H68946 S0006831725_V4

Test Fixture Components
Figure 2

PART NUMBER: F80145-1, -4

NAME: DOOR ASSEMBLY - PURGING, CENTER INTEGRAL WING FUEL TANK

AIRPLANE MAINTENANCE: YES

AMM 28-10-00, AMM 28-11-00

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The F80145-1 (option) door assembly is used on all 737-200 thru -500 airplanes.

The F80145-4 (preferred) door assembly is used on all 737-100 thru -900 airplanes.

F80145 is used to close the center wing integral tank access door while purging the tank cavity. F80145 incorporates a 5.25 inch diameter opening for the installation of an air hose to provide a heated or cooled air supply for personnel working inside the tank.

Refer to AMM 28-10-00 (737-200 thru -500 airplanes), AMM 28-11-00 (737-600 thru -900 airplanes) and the current F80145 drawing for complete usage instructions.

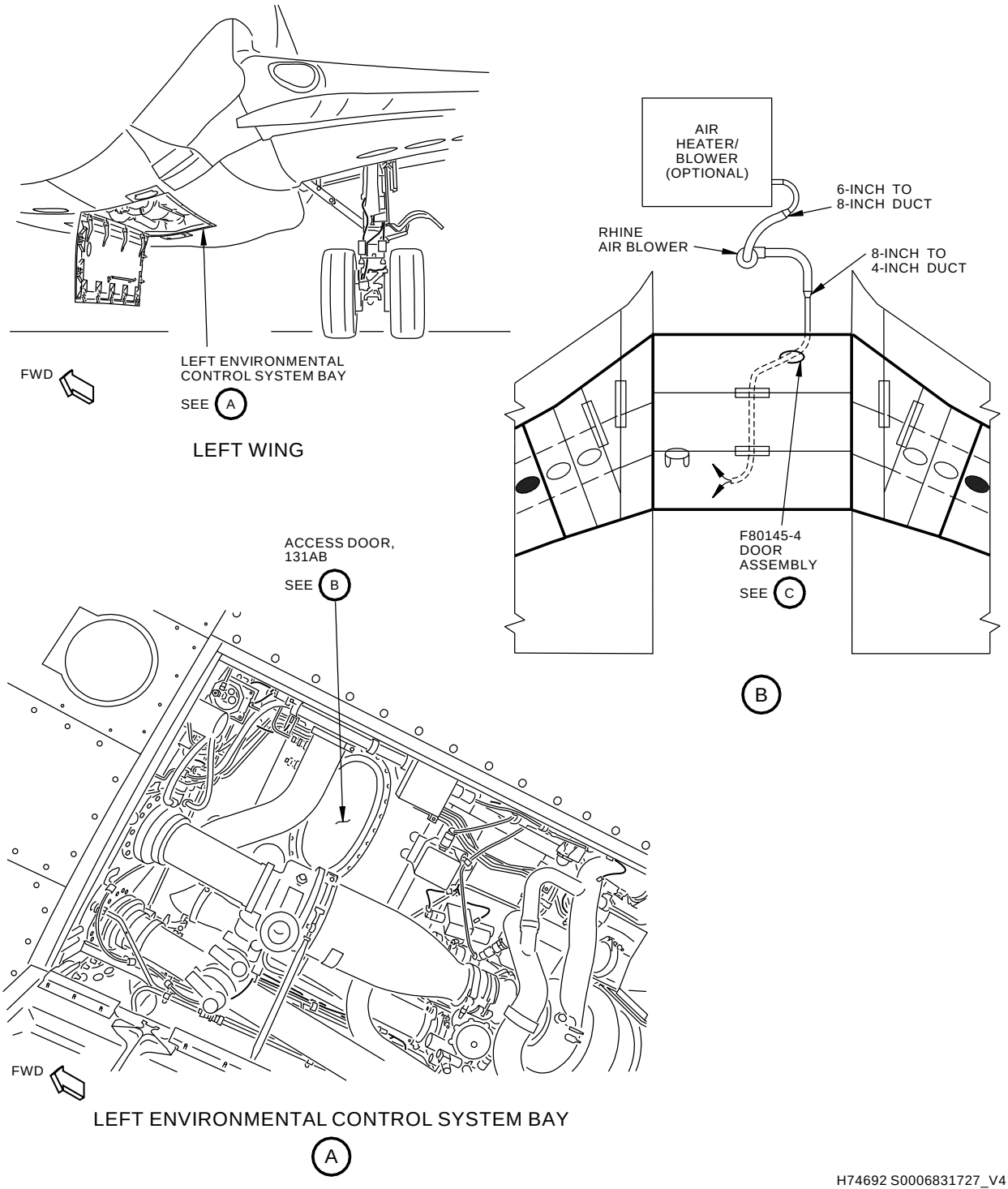
F80145-1 is a modified center wing entry door incorporating a 5.25 diameter opening for the installation of an air hose.

F80145-4 is physically interchangeable with F80145-1 except F80145-4 is fabricated from 0.080 aluminum plate and is installed using overcenter toggle clamps.

WEIGHT: 0.5 lbs (0.2 kg)

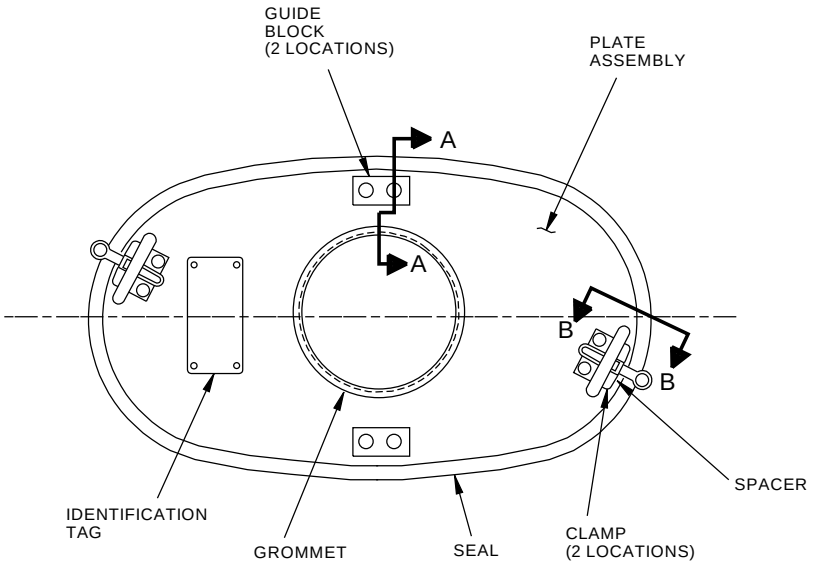
DIMENSIONS: 1 x 12 x 20 inches (25 x 305 x 508 mm)

NOTE: F80145-4 replaces F80145-1 for future procurement for 737-200 thru -500 airplanes.



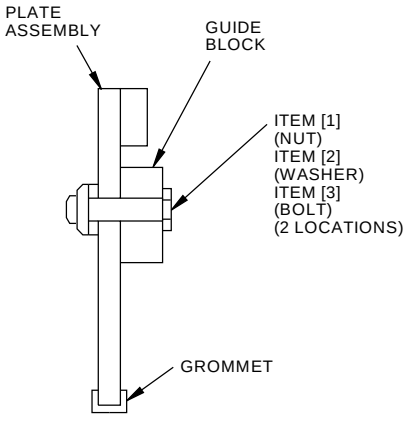
H74692 S0006831727_V4

Door Assembly Location
Figure 1

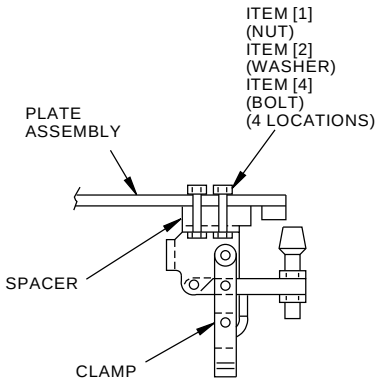


F80145-4
DOOR ASSEMBLY SHOWN
F80145-1 SIMILAR

C



A-A



B-B

H74908 S0006831728_V3

Door Assembly Components
Figure 2

REPAIRABLE/REPLACEABLE PARTS			
ITEM NO.	**PART NO.**	**NOMENCLATURE**	**VENDOR CODE**
[1]	AS679A3	NUT	- - -
[2]	AN960-10	WASHER	- - -
[3]	AN3-7	BOLT	- - -
[4]	AN3-10	BOLT	- - -

PART NUMBER: F71329

NAME: LEAKAGE TRACING DEVICE - INTEGRAL TANK LEAKAGE TEST

AIRPLANE MAINTENANCE: YES

AMM 28-11-00

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The F71329 leakage tracing device is used on all 737 airplanes.

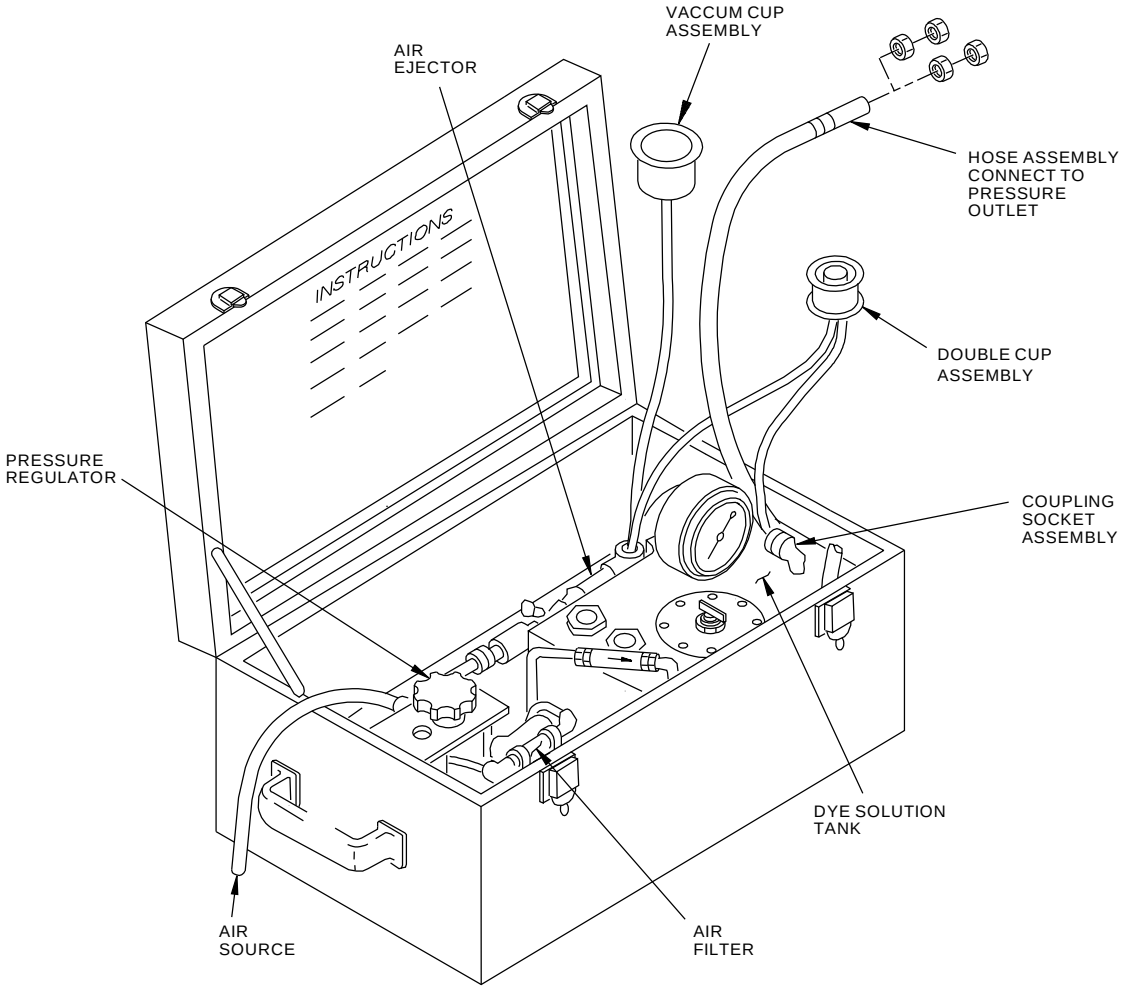
F71329 is used to apply a pressurized tracing medium to the exterior surface of the integral tank at the leak. Leak detection is then accomplished on the inside of the tank and closing the tank is not necessary.

Refer to the current F71329 drawing and AMM 28-11-00 for complete usage instructions.

F71329 consists of an air filter, pressure regulator, dye solution tank, air ejector, hose assembly, vacuum cup, double cup devices, plumbing and connecting hardware.

WEIGHT: 40 lbs (18 kg)

DIMENSIONS: 10 x 14 x 18 inches (254 x 356 x 457 mm)



F71329
INTEGRAL TANK LEAKAGE TEST LEAKAGE TRACING DEVICE

L71803 S0006831730_V3

Leakage Tracing Device
Figure 1

PART NUMBER: J28006-1

NAME: SEALING TOOL - RIVET, FUEL TANK

AIRPLANE MAINTENANCE: YES

AMM 28-11-00

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The J28006-1 sealing tool is used on all 737 airplanes.

J28006 is used to apply sealant when making a temporary repair to fuel tank rivets.

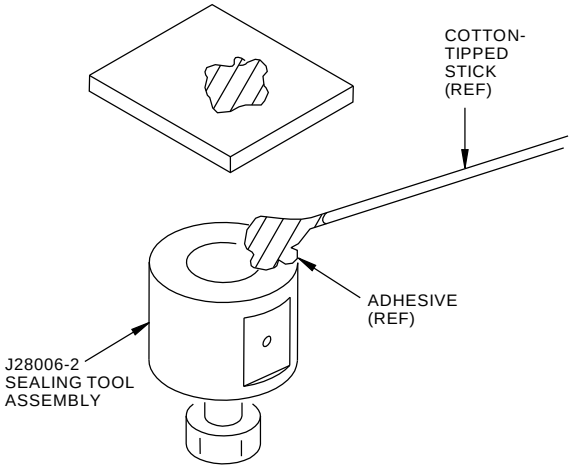
Refer to AMM 28-11-00 and the current J28006 drawing for complete usage instructions.

J28006-1 consists of:

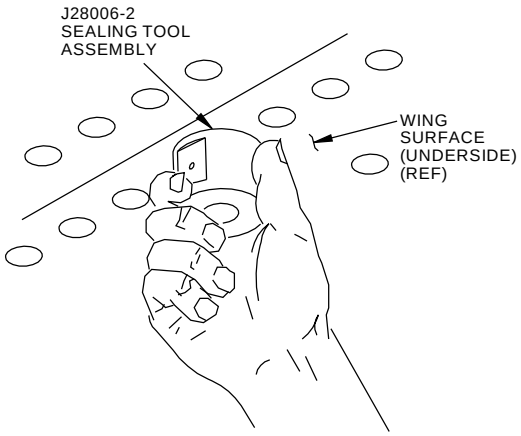
J28006-1		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	SEALING TOOL ASSEMBLY	J28006-2
1	STORAGE BOX	

WEIGHT: 1 lb (0.45 kg)

DIMENSIONS: 1 x 1.5 x 1.5 inches (25 x 38 x 38 mm)



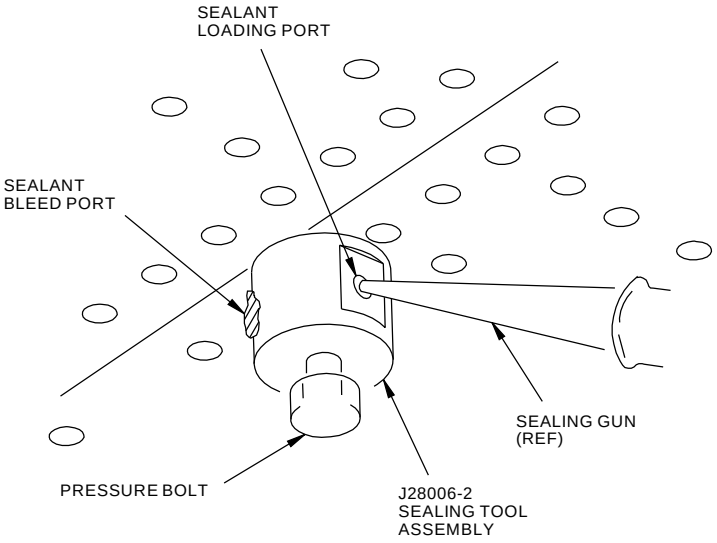
STEP 1



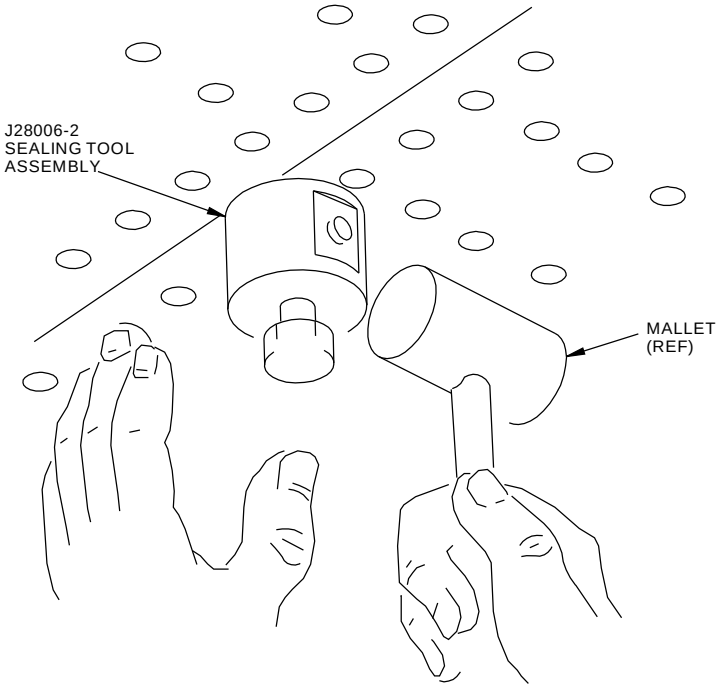
STEP 2

M27230 S0006831732_V3

Fuel Tank Rivet Sealing Tool Usage
Figure 1



STEP 3



STEP 4

M27231 S0006831733_V2

Fuel Tank Rivet Sealing Tool Usage
Figure 2

PART NUMBER: F70206-1

NAME: ADAPTER ASSEMBLY - HOLLOW BOLT, FUEL LEAK TRACING

AIRPLANE MAINTENANCE: YES

AMM 28-11-00

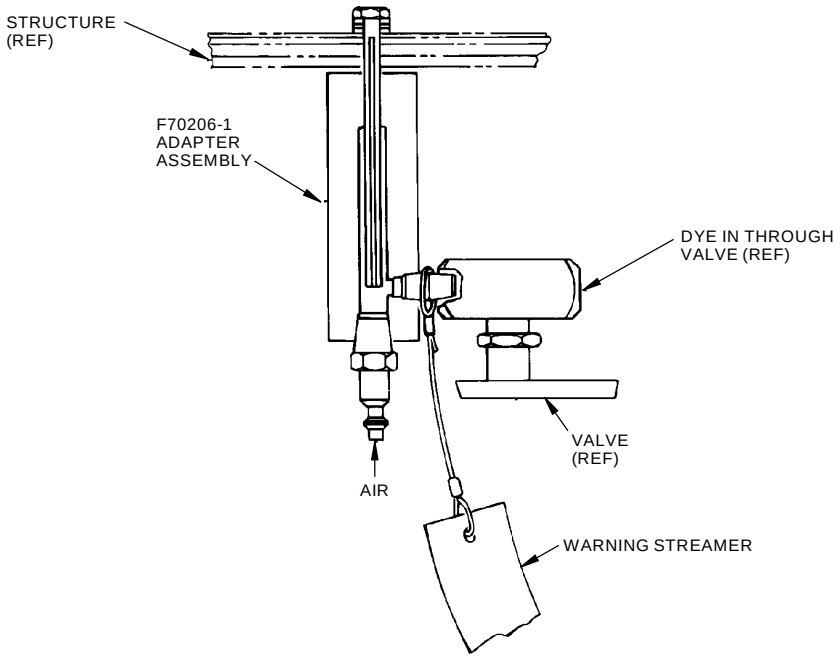
COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The F70206-1 adapter assembly is used on all 737 airplanes.

F70206 is used to apply air and dye into a fuel tank defective area for fuel leak tracing. F70206 uses an existing airplane fastener location near the suspected fuel leak. F70206 is inserted through the fastener hole in the skin and tightened. Air and dye, injected through F70206, will flow through any leakage paths which may exist.

Refer to the current F70206 drawing and AMM 28-11-00 for complete usage instructions.

F70206-1 is a steel body drilled and tapped to receive a clamping bolt, an air inlet connection and a valve for applying dye.



1571775 S0000293248_V1

Fuel Leak Tracing Hollow Bolt Adapter Assembly
Figure 1

PART NUMBER: SE28-1103

NAME: ADAPTER ASSEMBLY - SUMP DRAIN VALVE REMOVAL

AIRPLANE MAINTENANCE: YES

AMM 28-11-21

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The SE28-1103 adapter assembly may be used on 737-100 thru -900 airplanes to remove or install the primary sump drain valves from the wing fuel tanks.

The SE28-1103 adapter assembly is used on 737-300 thru -500 airplanes to remove or install the surge tank drain valves.

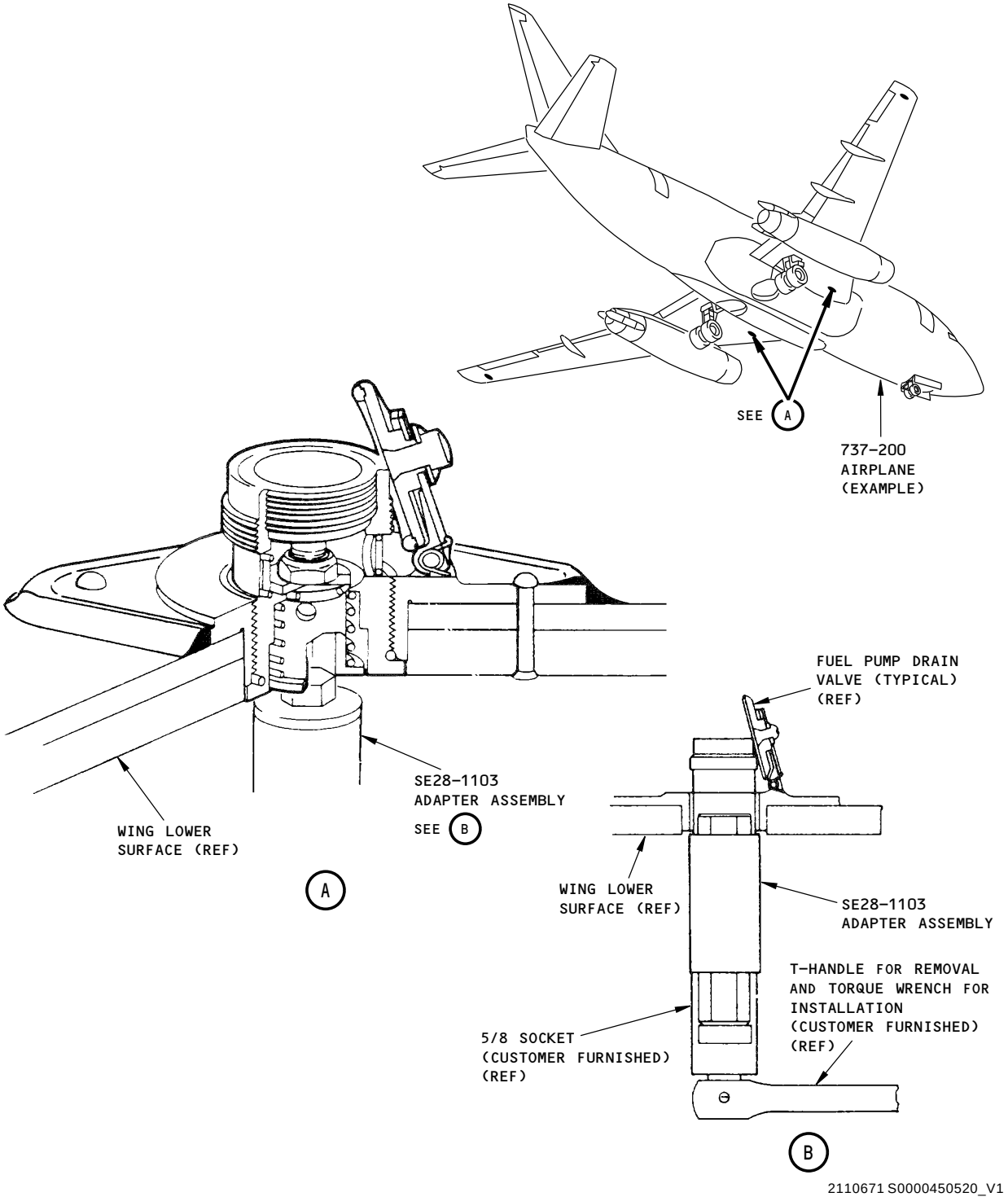
Refer to AMM 28-11-21 and the current SE28-1103 drawing for complete usage instructions.

SE28-1103 adapter is a 1.0-inch diameter steel bar with a 5/8-inch hex machined on each end and the valve includes a gasket.

WEIGHT: 2 lbs (1 kg)

DIMENSIONS: 2 x 9 x 12 inches (51 x 229 x 305 mm)

NOTE: B28001 replaces SE28-1103 for future procurement.



Sump Drain Valve Removal Adapter Assembly
Figure 1

PART NUMBER: B28003-1

NAME: PULLER - MAIN TANK FUEL BOOST PUMP ASSEMBLY

AIRPLANE MAINTENANCE: YES

AMM 28-22-41, AMM 28-22-51

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The B28003-1 puller is used on 737-600 thru -900 airplanes.

B28003 is used to aid in the removal of the main tank boost pump impeller from the pump housings.

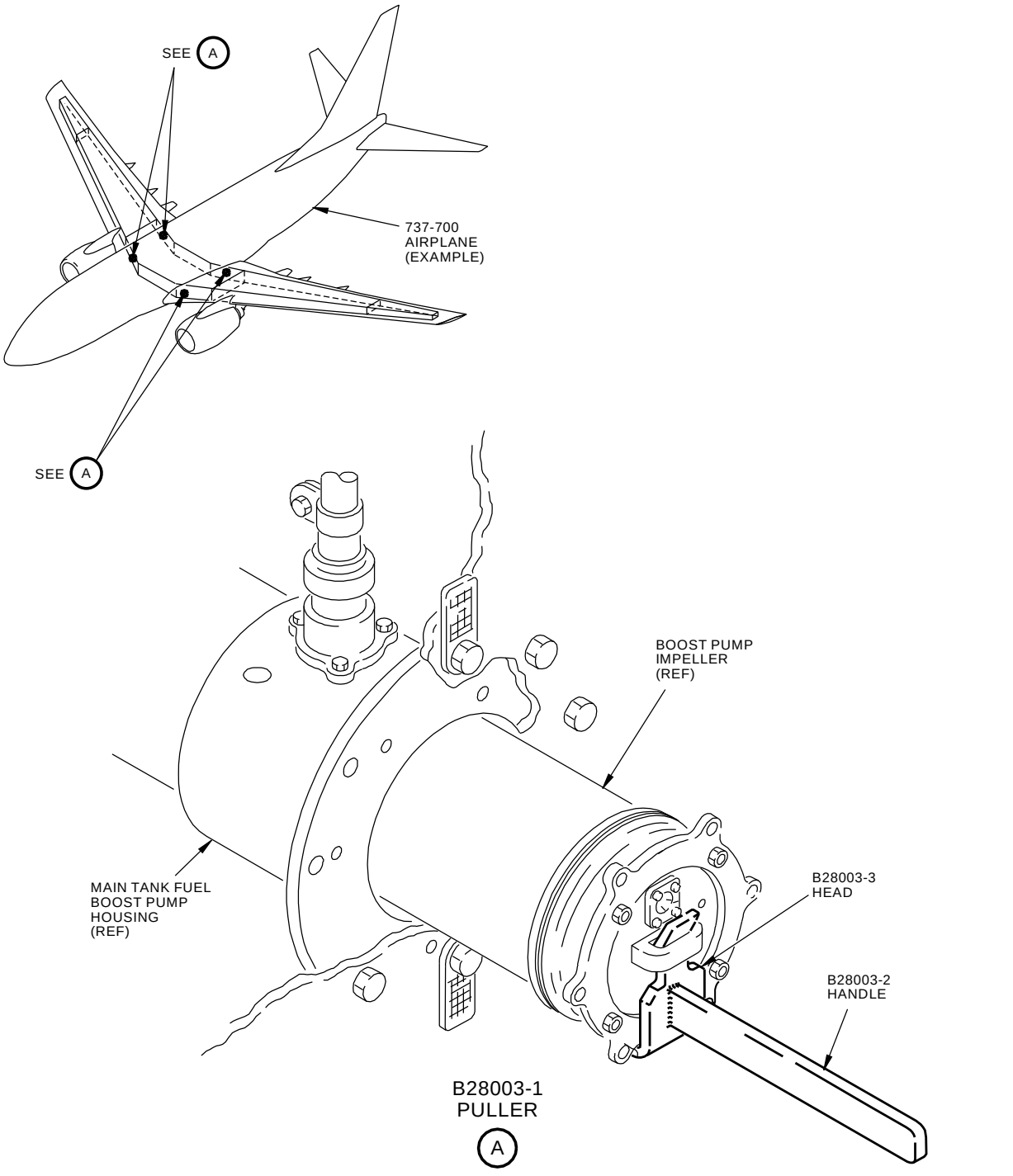
Refer to AMM 28-22-41, AMM 28-22-51 and the current B28003 drawing for complete usage instructions.

B28003-1 consists of:

B28003-1		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	HANDLE	B28003-2
1	HEAD	B28003-3

WEIGHT: 1 lb (0.45 kg)

DIMENSIONS: 3 x 3 x 11 inches (76 x 76 x 279 mm)



Main Tank Fuel Boost Pump Assembly Puller
Figure 1

PART NUMBER: B28009-1

NAME: ALIGNMENT EQUIPMENT - FUEL SHUTOFF VALVE

AIRPLANE MAINTENANCE: YES

AMM 28-22-11, AMM 28-22-21, AMM 28-26-11

COMPONENT MAINTENANCE: NO

OTHER MANUALS: YES

FIM 28-41-00

USAGE & DESCRIPTION: The B28009-1 alignment equipment is used on all 737 airplanes except 737-100 thru -500 airplanes.

B28009 is used to align the defueling valve (S343T003) actuator with the valve body and adapter shaft without entering the fuel tank. Access to the defueling valve control adapter is on the forward underside of the right wing.

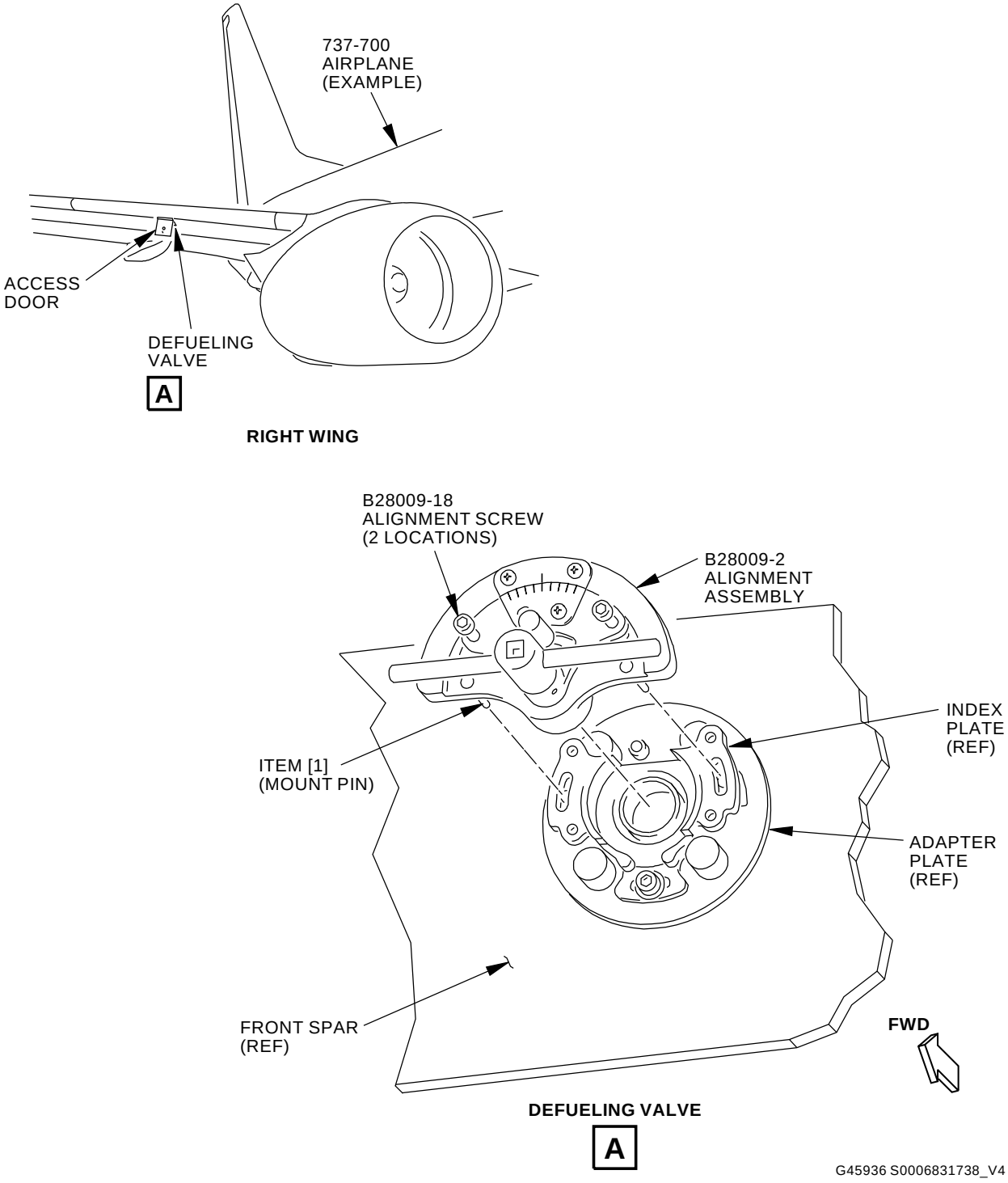
Refer to AMM 28-22-11, AMM 28-22-21, AMM 28-26-11 the Fault Isolation Manual (FIM) 28-41-00 and the current B28009 drawing for complete usage instructions.

B28009-1 consists of:

B28009-1		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	ALIGNMENT ASSEMBLY	B28009-2
2	ALIGNMENT SCREW	B28009-18
1	STORAGE BOX	

WEIGHT: 0.5 lbs (0.23 kg)

DIMENSIONS: 3 x 3 x 4 inches (76 x 76 x 101 mm)



Fuel Shutoff Valve Alignment Equipment
Figure 1

REPAIRABLE/REPLACEABLE PARTS			
ITEM NUMBER	**PART NUMBER**	**NOMENCLATURE**	**VENDOR CODE**
[1]	B28009-13	MOUNT PIN	- - -

PART NUMBER: A28005-42, -48, -50, -82

NAME: TEST EQUIPMENT - LEAK AND PRESSURE, APU FUEL LINE SHROUD

AIRPLANE MAINTENANCE: YES

AMM 28-25-05

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The A28005-42 (option) or A28005-50 (option) or A28005-82 (preferred) test hose and the A28005-48 737 adapter assembly are used on all 737 airplanes except -100 thru -500.

A28005 is in conjunction with a customer-furnished, pressurized air source to check the pressure leakage of the APU fuel line shroud. The A28005-48 adapter assembly and A28005-42 or -50 ot -83 test hose are installed onto the APU fuel line shroud at the APU fuel drain mast. The APU fuel line shroud is pressurized and monitored for leaks.

Refer to AMM 28-25-05 and the current A28005 drawing for complete usage instructions.

A28005-42, -48 , -50 and -82 consist of:

A28005-42 TEST HOSE		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	HOSE ASSEMBLY	A28005-38
1	STORAGE BOX	

A28005-48 737 ADAPTER ASSEMBLY		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	FILLING CONNECTOR	H2075-57-M5-V28
1	QUICK DISCONNECT COUPLER	B22

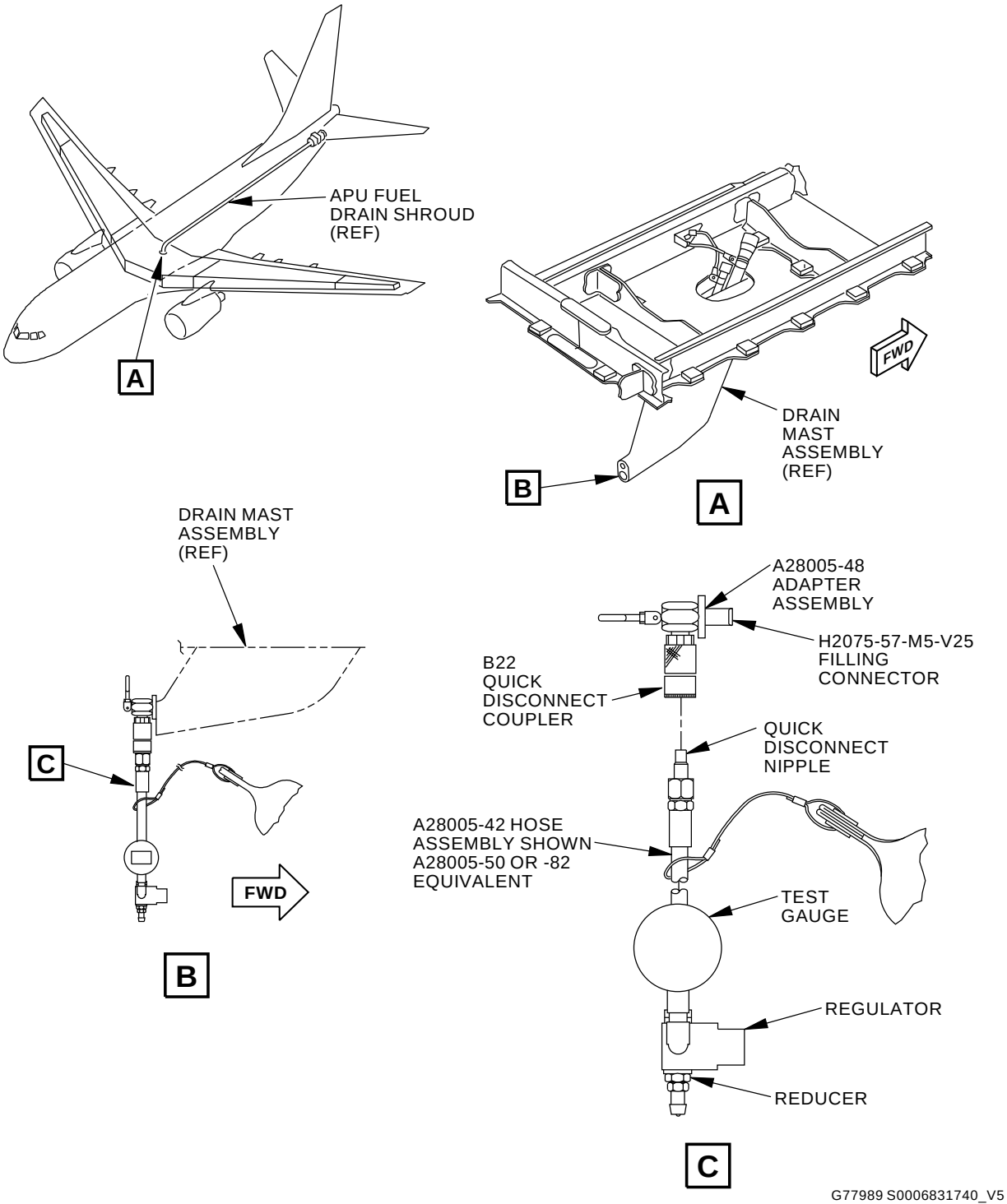
A28005-50 TEST HOSE		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	HOSE ASSEMBLY	A28005-51
1	STORAGE BOX	

A28005-82 TEST HOSE		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	HOSE ASSEMBLY	A28005-84
1	STORAGE BOX	

WEIGHT: A28005-42, -50, -82 - 4 lbs (1.8 kg)
A28005-48 - 1 lb (0.45 kg)

DIMENSIONS: A28005-42, -50, -82 - 6 x 6 x 14 inches (152 x 152 x 356 mm)
A28005-48 - 1 x 3 x 4 inches (25 x 76 x 102 mm)

NOTE: A28005-82 replaces A28005-50 and -42 for future procurement.
A28005-50 replaces A28005-42 for future procurement.



APU Fuel Line Shroud Leak and Pressure Equipment
Figure 1

PART NUMBER: C28011

NAME: TEST BOX - P5-2, FUEL CONTROL MODULE ASSEMBLY

AIRPLANE MAINTENANCE: NO

COMPONENT MAINTENANCE: YES

CMM 28-09-31

USAGE & DESCRIPTION: C28011 drawing has been transferred to BAE Systems and will no longer be revised by Boeing. C28011 inclusion in the 737 ITEM is for information and historical purposes only.

See CMM 28-09-31.

PART NUMBER: ST8709H-1, -2, -3, -4, -5, -6, -7

NAME: STANDARD TOOL - GO/NO-GO GAUGE, FOR ASSEMBLY OF WIGGINS BACC42R COUPLING

AIRPLANE MAINTENANCE: YES

AMM 21-51-02, AMM 28-22-15, AMM 28-22-141

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The ST8709H standard tool is used on all 737 airplanes.

The ST8709H tool is used to check closure of the Wiggins coupling installations to assure proper closure against the seals per BAC5001. The complete tool number is designated by ST8709H-X, where “ST8709H” is the basic tool number. “X” is the gauge number. Each ST8709H gauge is fabricated from steel.

Refer to AMM 21-51-02, AMM 28-22-15, AMM 28-22-141 and the current tool drawing for complete usage instructions.

The dimension requirements for assembling flexible full couplings are:

ST8709H-X USAGE				
TUBE DIAMETER (INCHES)	BACC42R SIZE	MAXIMUM GAUGE (INCHES)	MINIMUM GAUGE (INCHES)	ST8709H-X GAUGE NUMBER
1/2	08	0.590	0470	-1
5/8	10	0.590	0.470	-1
3/4	12	0.690	0.550	-2
1	16	0.750	0.600	-3
1 1/4	20	0.750	0.600	-3
1 1/2	24	0.930	0.760	-4
1 3/4	28	0.930	0.760	-4
2	32	0.930	0.760	-4
2 1/4	36	0.930	0.760	-4
2 1/2	40	0.930	0.760	-4
3	48	0.930	0.760	-4
3 1/2	56	1.030	0.880	-5
4	64	1.030	0.880	-5
4 1/2	72	1.160	0.990	-6
5	80	1.390	1.220	-7
5 1/2	88	1.390	1.220	-7

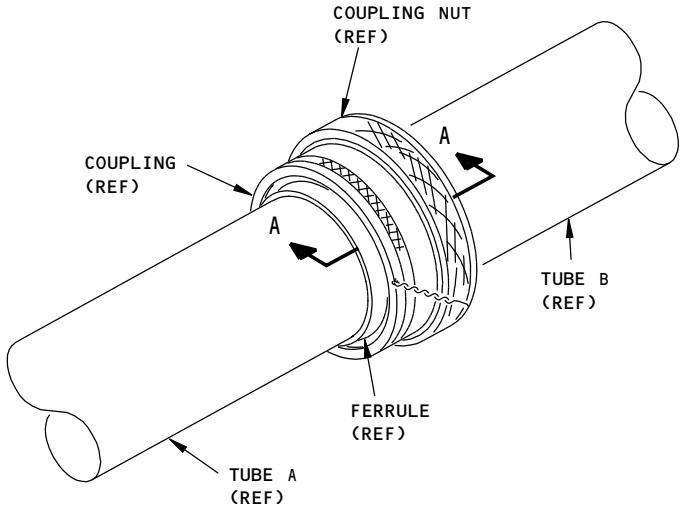
Refer to AMM 21-51-02, AMM 28-22-15, AMM 28-22-141 and the current ST8709H drawing for complete usage instructions.

ST8709H consists of:

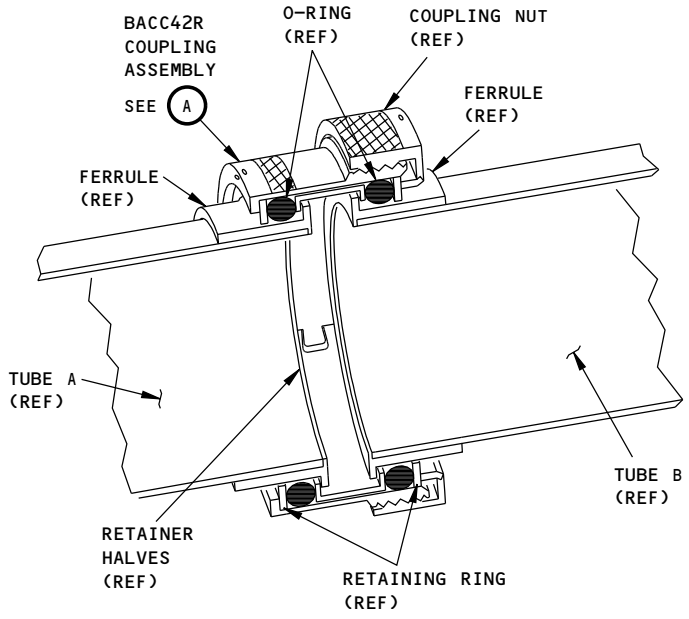
ST8709H		
QUANTITY	**NOMENCLATURE**	**GAUGE NUMBER**
1	GO/NO-GO GAUGE	1
1	GO/NO-GO GAUGE	2
1	GO/NO-GO GAUGE	3
1	GO/NO-GO GAUGE	4
1	GO/NO-GO GAUGE	5
1	GO/NO-GO GAUGE	6
1	GO/NO-GO GAUGE	7

WEIGHT: 1 lb (0.45 kg)

DIMENSIONS: 0.04 x 2.1 x 2.6 inches (1 x 53 x 66 mm)



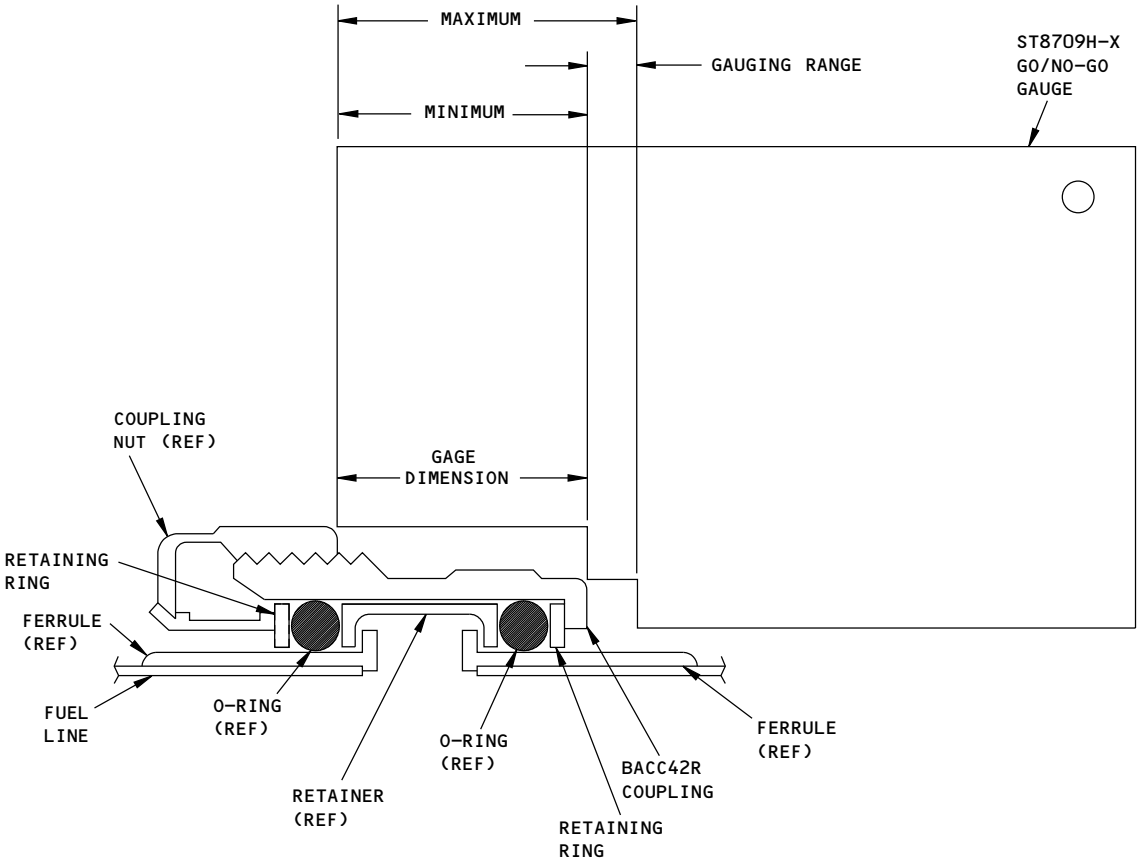
ASSEMBLED VIEW



A-A

2117372 S0000454281_V1

For Assembly of Wiggins BACC42R Coupling Go/No-Go Gage Standard Tool
Figure 1 (Sheet 1 of 2)



BACC42R COUPLING ASSEMBLY WITH ST8709H-X GO/NO-GO GAUGE

A

2110657 S0000450295_V1

For Assembly of Wiggins BACC42R Coupling Go/No-Go Gage Standard Tool
Figure 1 (Sheet 2 of 2)

PART NUMBER: C28012-1, -8

NAME: TEST ASSEMBLY - FLOAT SWITCH CONDUIT

AIRPLANE MAINTENANCE: YES

AMM 28-21-71

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The C28012-1 test assembly is used on all 737-100 thru -900 airplanes equipped with a type II float switches in the center fuel tank.

The C28012-8 test assembly is used on 737-200 thru -400 airplanes that are equipped with Boeing designed, auxiliary fuel tanks with Type II float switches. This does not include Rogerson auxiliary fuel tanks.

C28012 is used in conjunction with a customer-furnished, controlled 0 - 6 psig shop air source to pressure test the float switch conduit. The fuel float switches monitor fuel level during refueling and stop refueling when the tank is full. Type II float switches do not have an elbow below the float switch, type I switches have an elbow.

The fuel float switch pressure test is done by installing the connecting hardware included in the C28012-1 or -8 into the fuel conduits, pressurizing the conduits and then checking the ability of the conduits to hold the pressure over a period of time.

Refer to AMM 28-21-71 and the current C28012 drawing for complete usage instructions.

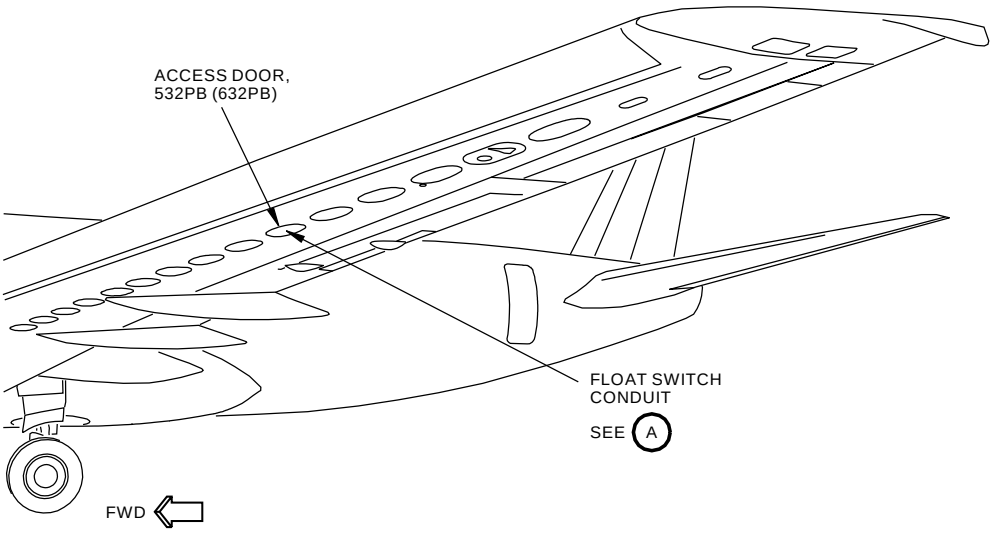
C28012-1 and -8 consist of:

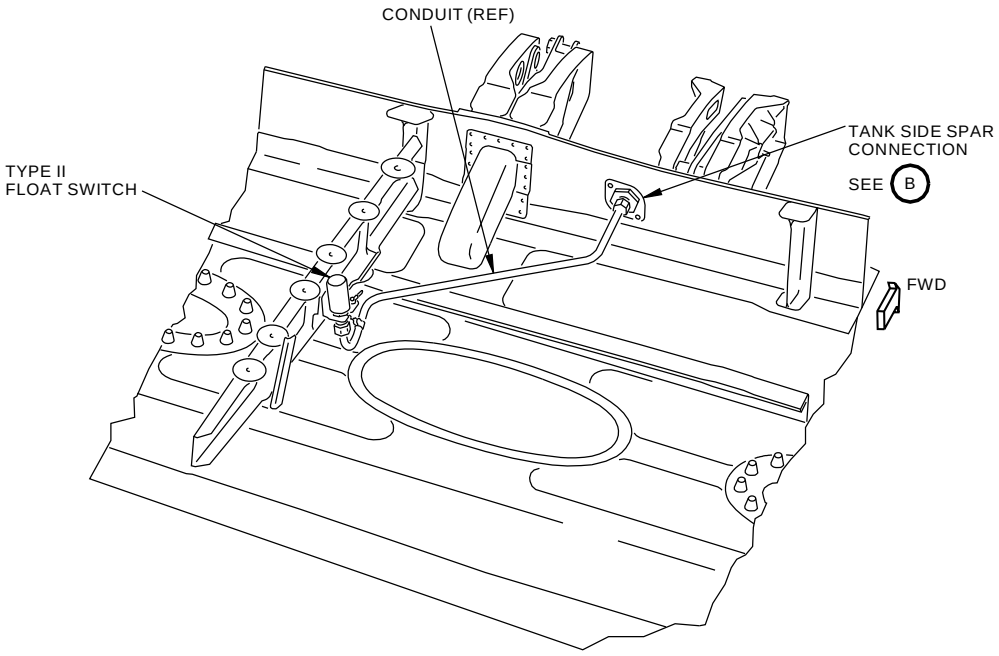
C28012-1		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	TEST ASSEMBLY	C28012-2
1	STORAGE BOX	

C28012-8		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
1	TEST ASSEMBLY	C28012-2
1	HOSE ASSEMBLY	C28012-9
1	STORAGE BOX	

WEIGHT: C28012-1 - 3 lbs (1.4 kg)
C28012-8 - 5 lbs (2.3 kg)

DIMENSIONS: C28012-1 or -8 - 10 x 10 x 20 inches (254 x 254 x 508 mm)

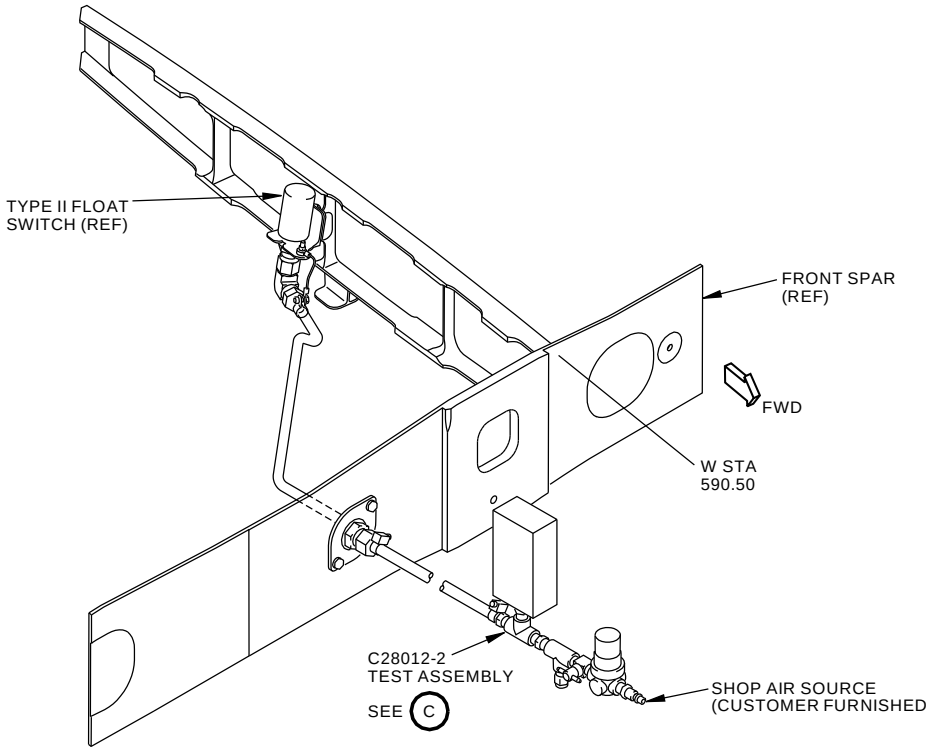




FLOAT SWITCH CONDUIT
A

1566481 S0000290743_V1

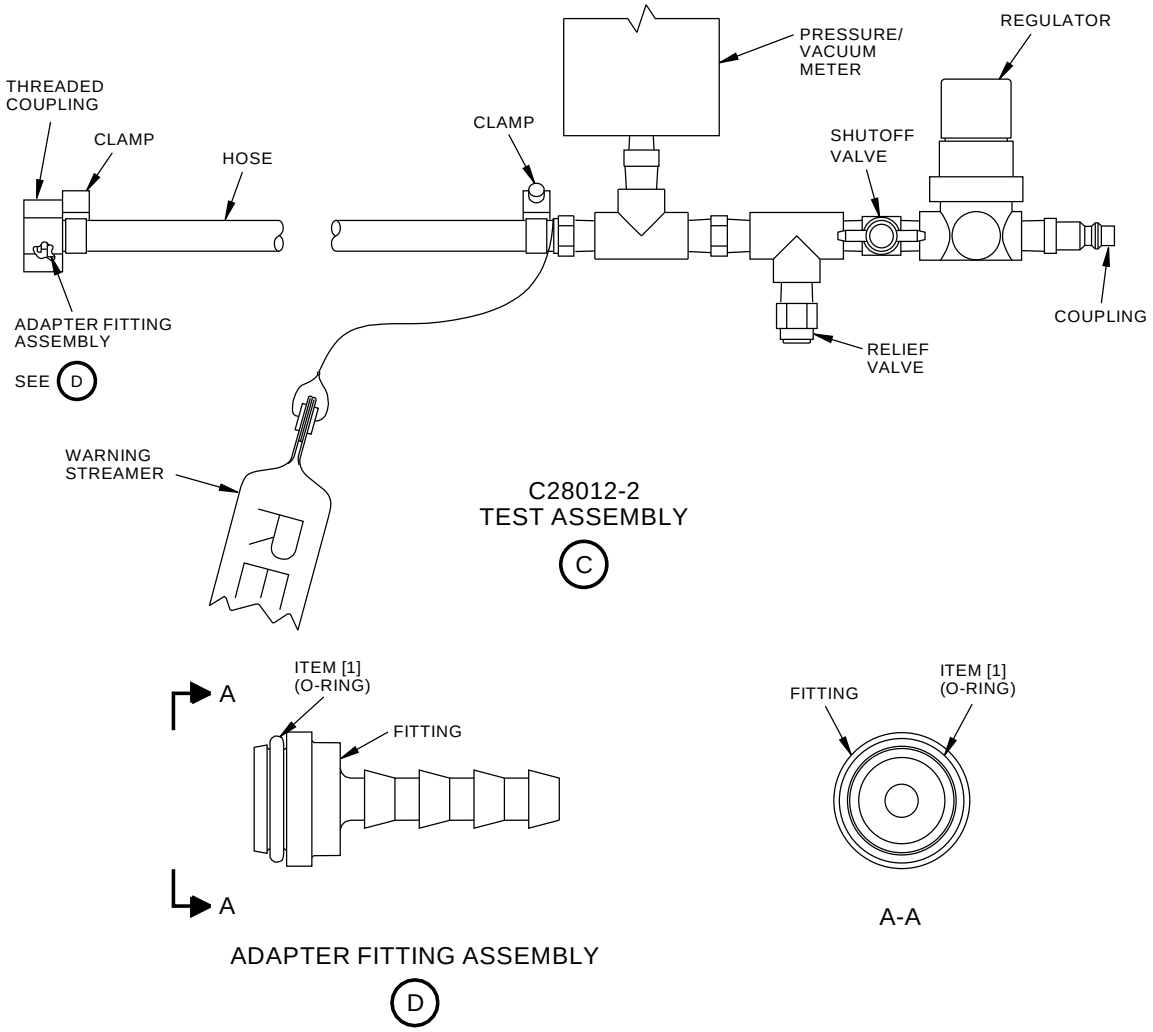
Float Switch Conduit Test Assembly
Figure 1 (Sheet 1 of 2)



SPAR CONNECTION
B

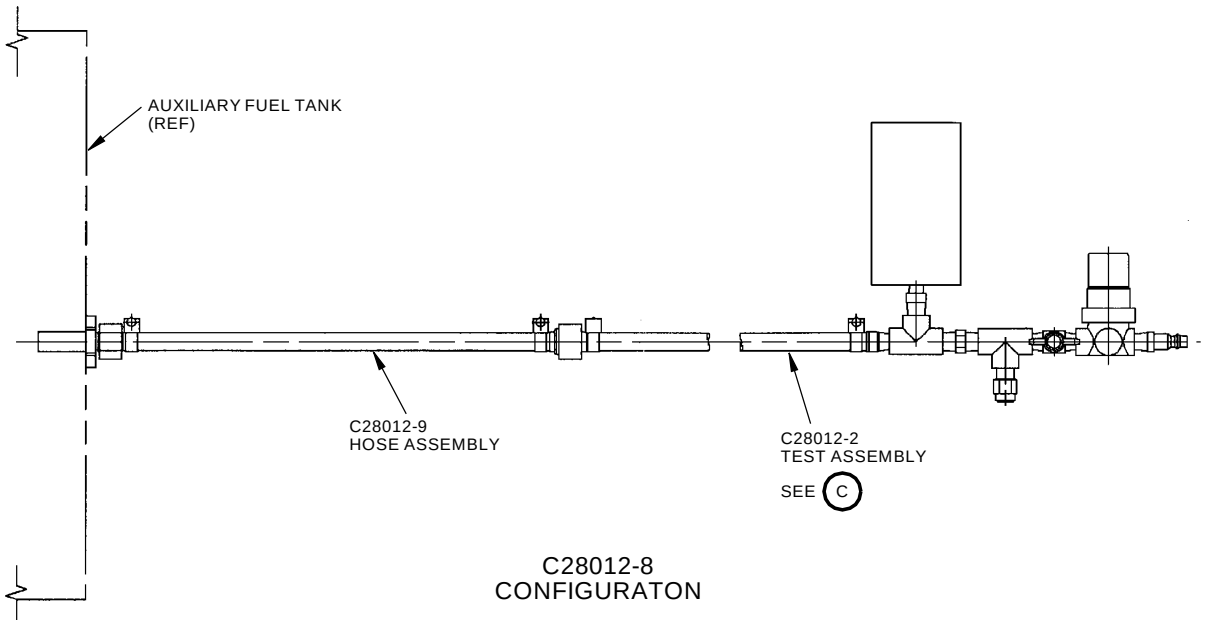
N86408 S0006831748_V4

Float Switch Conduit Test Assembly
Figure 1 (Sheet 2 of 2)



N86430 S0006831749_V4

Float Switch Conduit Test Assembly Components
Figure 2 (Sheet 1 of 2)



C28012-8
CONFIGURATON

2118381 S0000454588_V1

Float Switch Conduit Test Assembly Components
Figure 2 (Sheet 2 of 2)

REPAIRABLE/REPLACEABLE PARTS			
ITEM NO.	**PART NO.**	**NOMENCLATURE**	**VENDOR CODE**
[1]	MS28775-014	O-RING	- - -

PART NUMBER: C28014-1

NAME: TEST EQUIPMENT - ENGINE FUEL FEED MANIFOLD

AIRPLANE MAINTENANCE: YES

AMM 28-22-15

COMPONENT MAINTENANCE: NO

USAGE & DESCRIPTION: The C28014-1 test equipment is used on 737-600 thru -900 airplanes.

C28014 test equipment is used in a leak check to ensure the fuel line in the strut area is installed correctly. The leak check requires a clean, dry air supply regulated to 40 psi to the fuel supply line for a prescribed period of time.

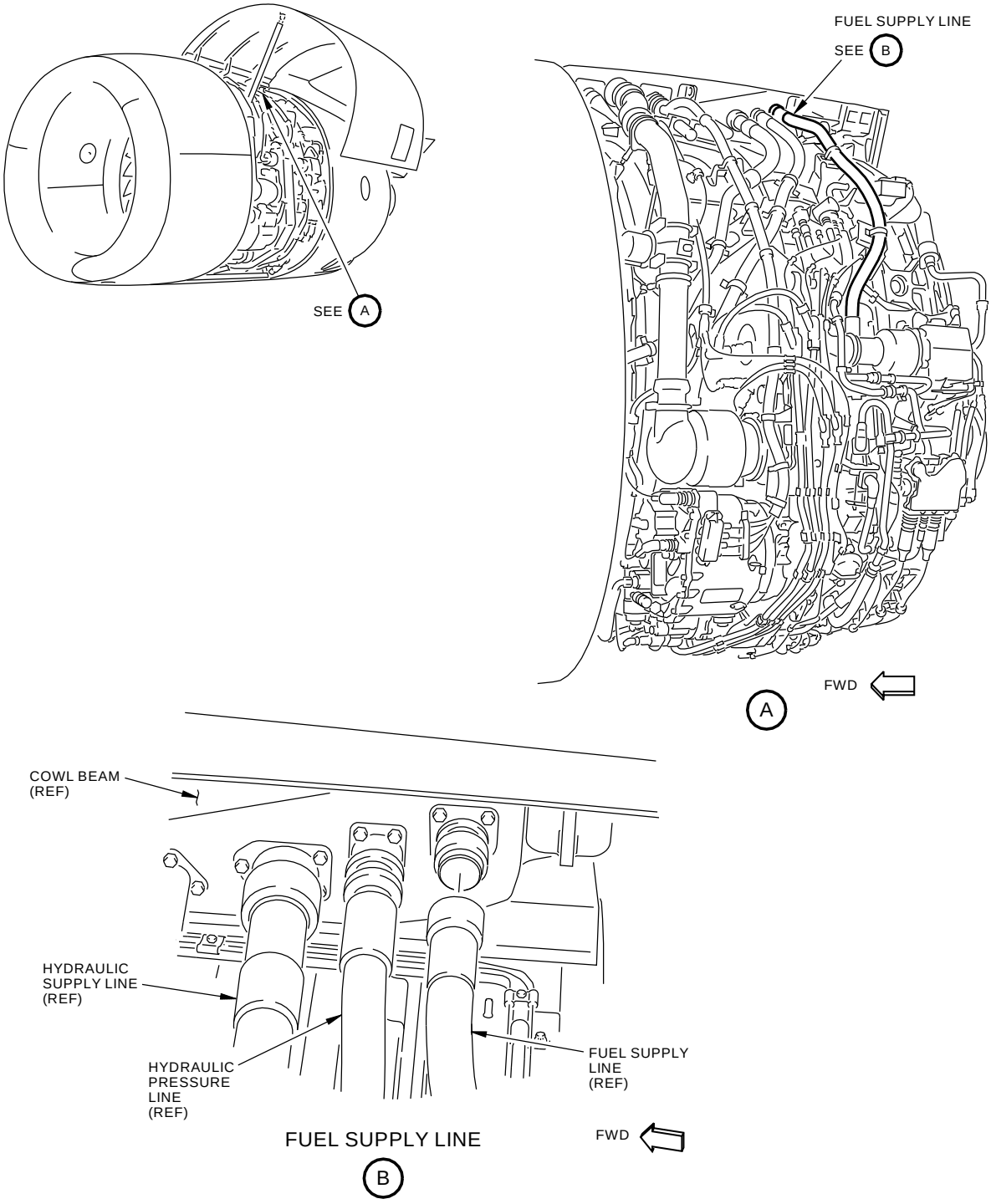
Refer to the current C28014 drawing and AMM 28-22-15 for complete usage instructions.

C28014-1 consists of:

C28014-1		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
2	FITTING ASSEMBLY	C28014-2
1	PRESSURE HOSE ASSEMBLY	C28014-3
1	OUTLET HOSE ASSEMBLY	C28014-4
1	STORAGE BOX	

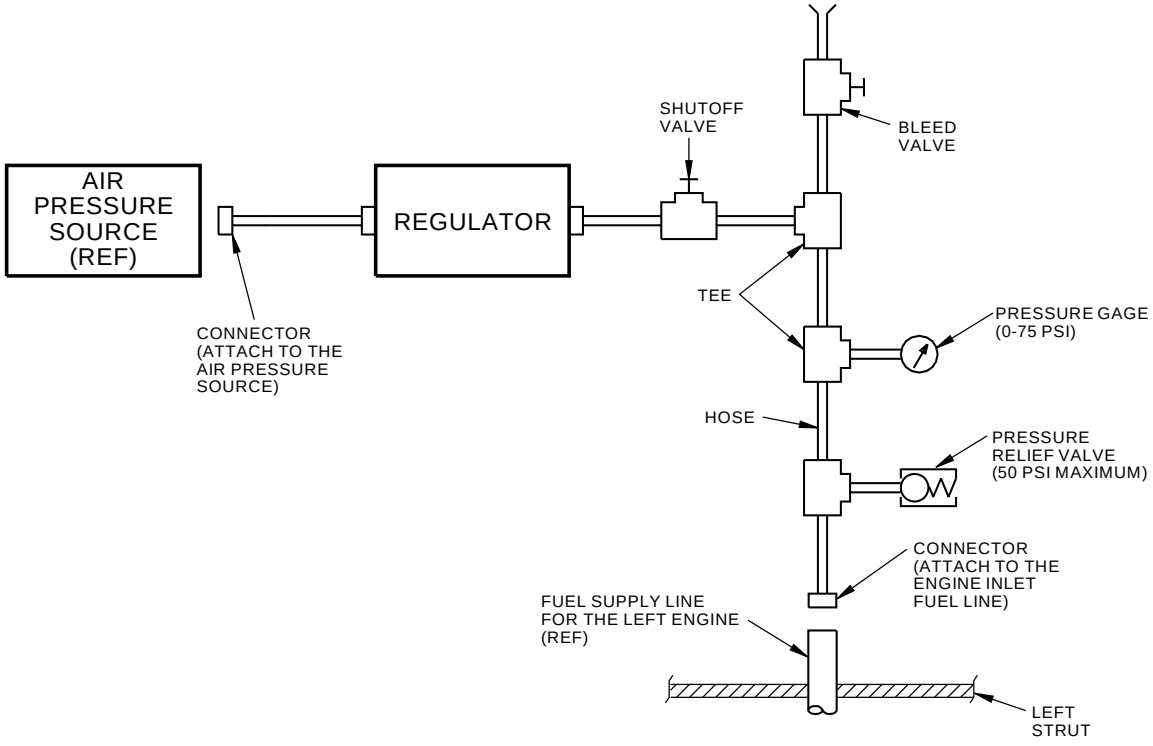
WEIGHT: 14 lbs (6 kg)

DIMENSIONS: 10 x 20 x 20 inches (254 x 508 x 508 mm)

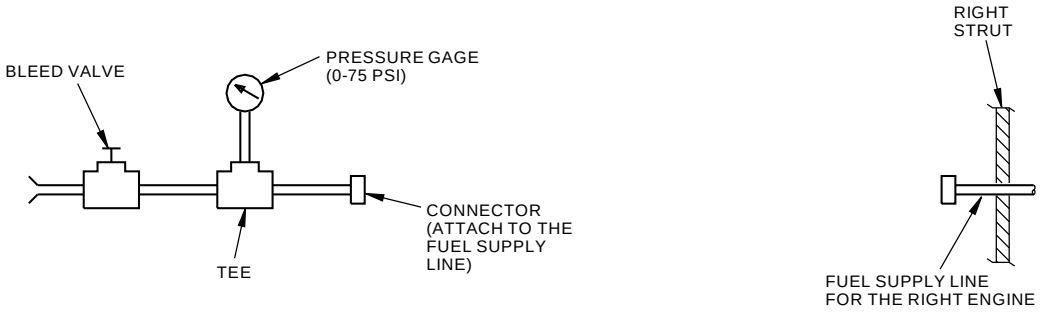


1848009 S0000327995_V1

Test Equipment - Engine Fuel Feed Manifold
Figure 1 (Sheet 1 of 3)



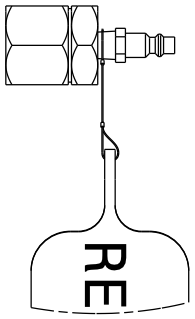
PRESSURE CHECK EQUIPMENT - LEFT FUEL SUPPLY LINE



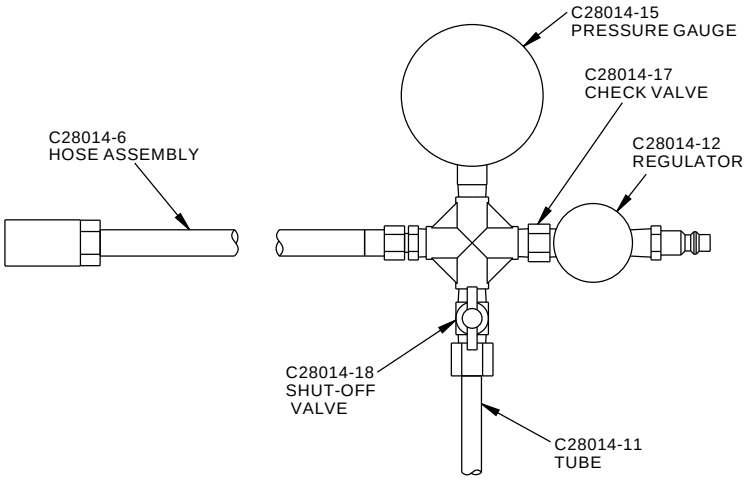
PRESSURE CHECK EQUIPMENT - RIGHT FUEL SUPPLY LINE

1848010 S0000327997_V1

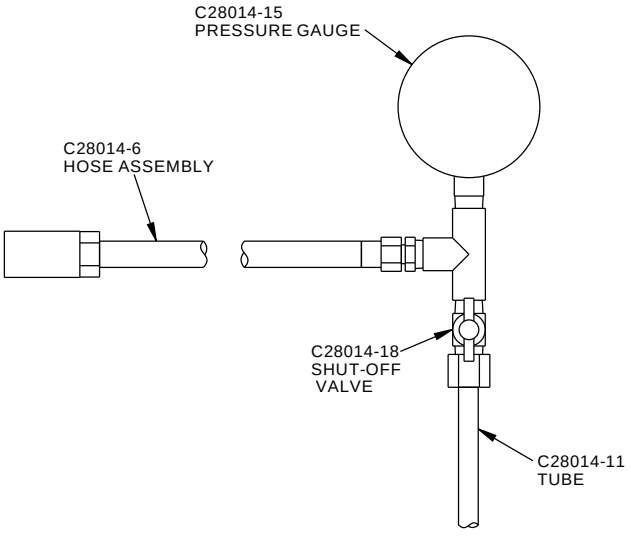
Test Equipment - Engine Fuel Feed Manifold
Figure 1 (Sheet 2 of 3)



C28014-2
FITTING ASSEMBLY



C28014-3
PRESSURE HOSE ASSEMBLY



C28014-4
OUTLET HOSE ASSEMBLY

1848012 S0000328000_V1

Test Equipment - Engine Fuel Feed Manifold
Figure 1 (Sheet 3 of 3)

PART NUMBER: J28011-1, -5, -6, -205

NAME: AUXILIARY DEFUELING EQUIPMENT - EXTERNAL POWER CONTROL UNIT

AIRPLANE MAINTENANCE: NO

COMPONENT MAINTENANCE: NO

OTHER MANUALS: YES

ARD 2-50-3

USAGE & DESCRIPTION: The J28011-1 (option) or J28011-205 (preferred) power control unit and the J28011-5, 737 cable kit are used on 737-100 thru -500 airplanes.

The J28011-1 (option) or J28011-205 (preferred) power control unit and the J28011-6, 737NG cable kit are used on 737-600 thru -900 airplanes.

During airplane recovery operations, airplane onboard power can not be used to operate the airplane fuel pumps. The J28011 auxiliary defueling equipment furnishes the correct power and cables for defueling the airplane.

J28011-1 or -205 (preferred) power control unit is used to externally power the airplane fuel pumps to perform airplane defueling. Refer to the 737 Airplane Recovery Document (ARD) 2-50-3 and the current J28011 drawing for complete usage instructions.

For 737-100 thru -500 airplanes, the J28011 auxiliary defueling equipment consists of the J28011-1 or -205 (preferred) power control unit and J28011-5, 737 cable kit.

The J28011-5, 737 cable kit consists of:

J28011-5 737 CABLE KIT		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
2	737CL ADAPTER CABLE ASSEMBLY	J28011-32
2	737CL ADAPTER CABLE ASSEMBLY	J28011-33
2	737CL ADAPTER CABLE ASSEMBLY	J28011-35
2	737CL ADAPTER CABLE ASSEMBLY	J28011-36
2	737CL ADAPTER CABLE ASSEMBLY	J28011-37
2	737CL ADAPTER CABLE ASSEMBLY	J28011-46
1	CABLE SCHEMATIC PLACARD	J28011-64
1	HOOK-UP CHART PLACARD	J28011-73
1	STORAGE CASE	

For 737-600 thru -900 airplanes, the J28011 auxiliary defueling equipment consists of the J28011-1 or -205 (preferred) power control unit and J28011-6, 737NG cable kit.

The J28011-6, 737NG cable kit consists of:

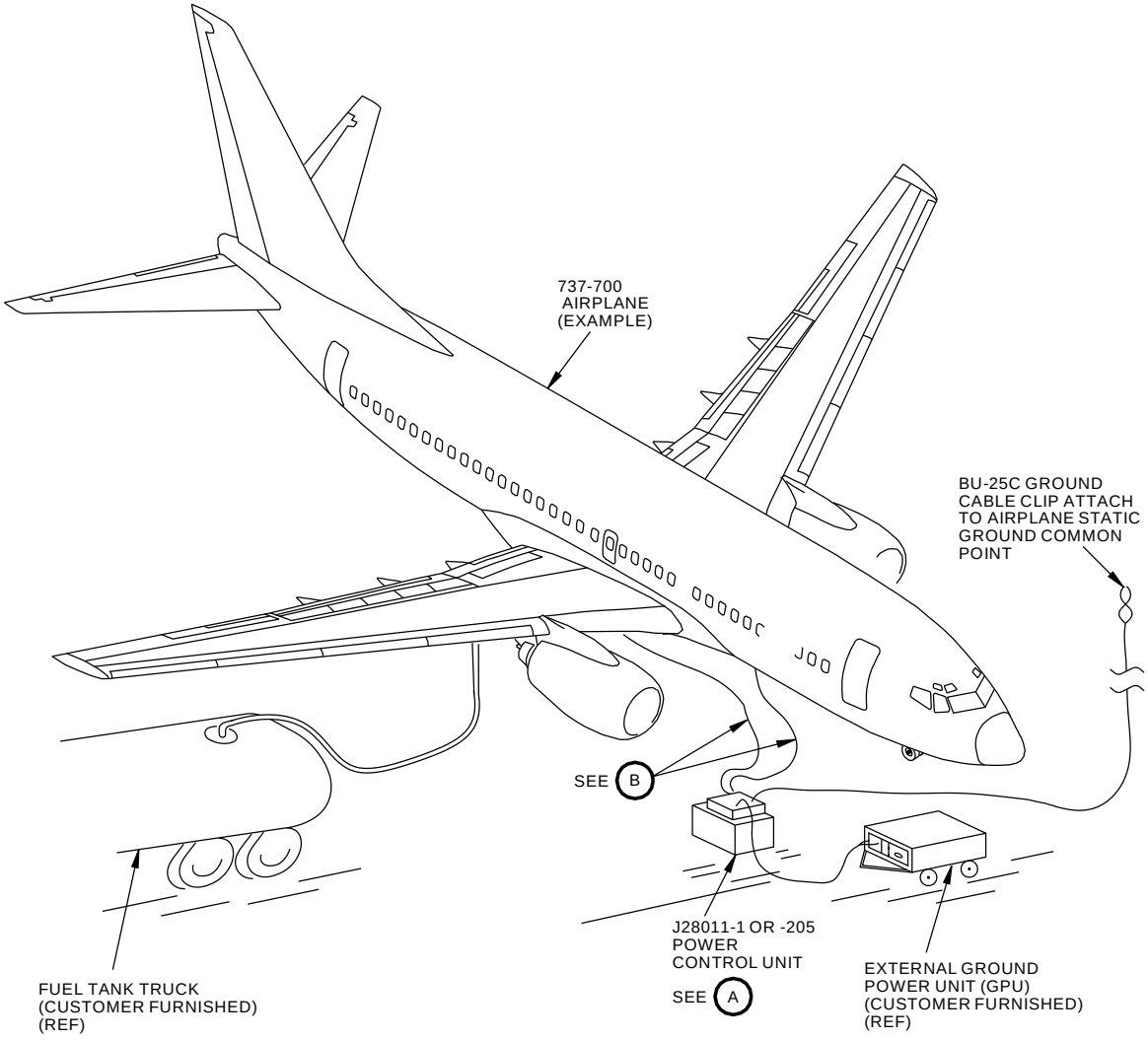
J28011-6 737NG CABLE KIT		
QUANTITY	**NOMENCLATURE**	**PART NUMBER**
2	737NG CENTER BOOST PUMP CABLE ASSEMBLY	J28011-21
2	737NG BOOST PUMP CABLE ASSEMBLY	J28011-22
1	CABLE SCHEMATIC PLACARD	J28011-65
1	HOOK-UP CHART PLACARD	J28011-74
1	STORAGE CASE	

WEIGHT: J28011-1 or -205 - 150 lbs (68 kg)
J28011-5 or -6 - 100 lbs (45 kg)

DIMENSIONS: J28011-1 or -205 - 35 x 30 x 20 inches (889 x 762 x 508 mm)
J28011-5 or -6 - 30 x 30 x 18 inches (762 x 762 x 457 mm)

NOTE: J28011-205 replaces J28011-1 for future procurement.

J28011-23 and J28011-37 737CL adapter cable assemblies replace J28011-33 and J28011-36 737CL adapter cable assemblies for all 737-200 and -300 airplanes PP001 (line number 1001), PP002 (line number 1007), PM 063 (line number 1014) and on.



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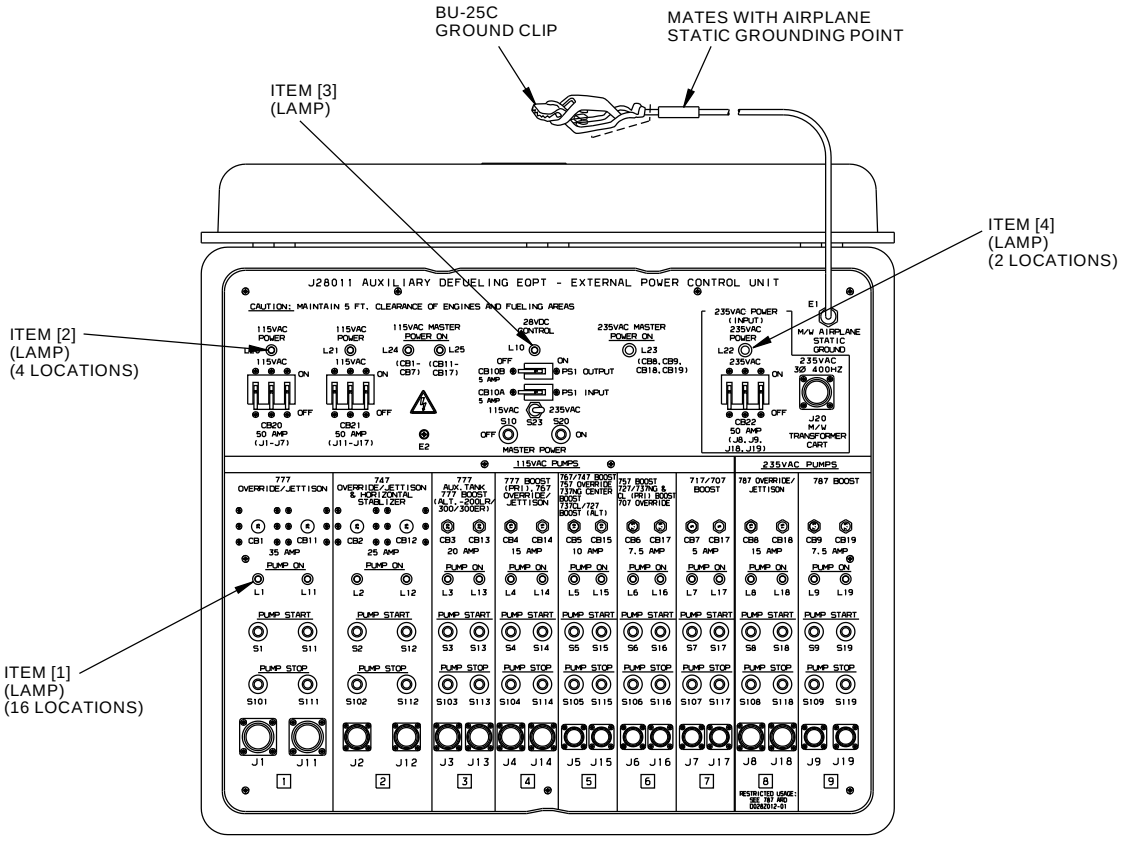
External Power Control Unit Auxiliary Defueling Equipment
Figure 1 (Sheet 1 of 3)



J28011-1 OR -205
POWER CONTROL UNIT

A

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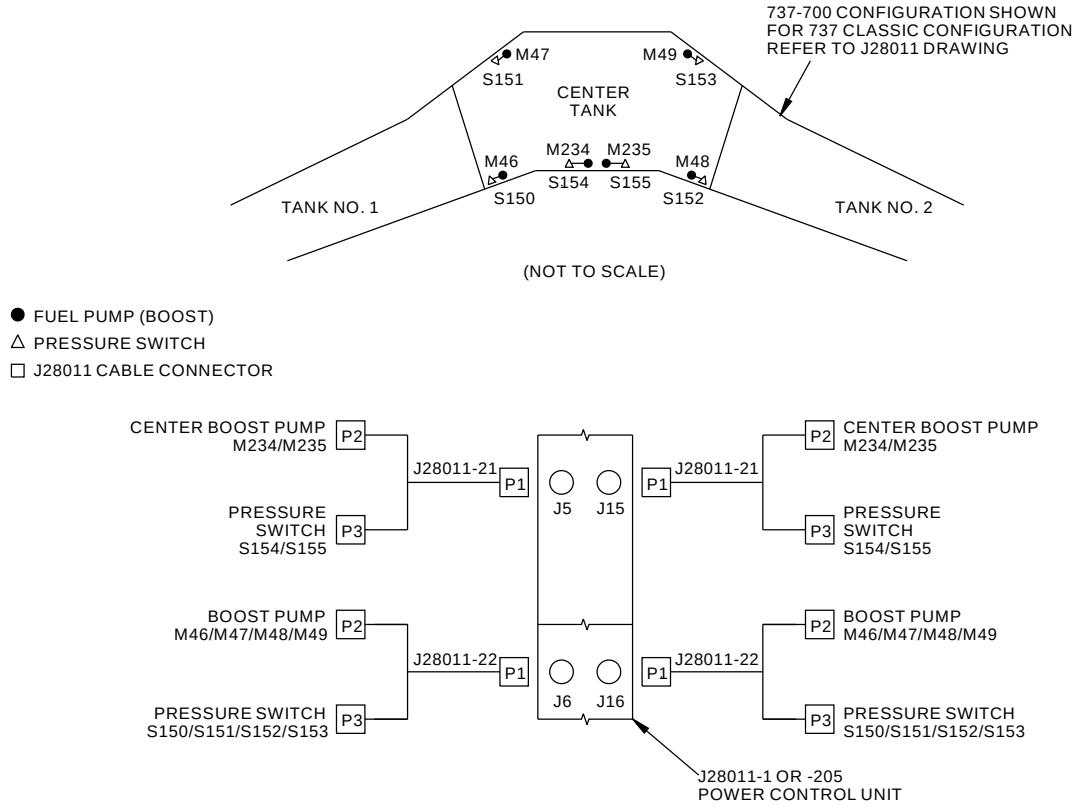
External Power Control Unit Auxiliary Defueling Equipment
Figure 1 (Sheet 2 of 3)



737-700 DEFUELING CONFIGURATION
(EXAMPLE)

B

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External Power Control Unit Auxiliary Defueling Equipment
Figure 1 (Sheet 3 of 3)

REPAIRABLE/REPLACEABLE PARTS			
ITEM NO.	**PART NO.**	**NOMENCLATURE**	**VENDOR CODE**
[1]	507-3917-1472-600	INCANDESCENT LAMP	83330
[2]	507-4538-1431-630	NEON LAMP	83330
[3]	507-3917-1471-600	INCANDESCENT LAMP	83330
[4]	6011M1	NEON LAMP	8A8E6