BOMBARDIER
Toronto (de Havilland)
PROPRIETARY INFORMATION

PPS 4.17

PRODUCTION PROCESS STANDARD

Pressure Testing the DASH 8 Series 100 & 300 APU Fuel Feed System

Issue 11
- This standard supersedes PPS 4.17, Issue 10.
- Vertical lines in the left hand margin indicate technical changes over the previous issue.
- Direct PPS related questions to PPS.Group@aero.bombardier.com or (416) 375-4365.
- This PPS is effective as of the distribution date.

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	Quality	

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1 Scope

1.1 This Production Process Standard (PPS) specifies the procedure and requirements for pressure testing the airframe APU fuel feed system on DASH 8 Series 100, standard and extended range aircraft, and DASH 8 Series 300 aircraft.

1.1.1 This PPS complements the engineering drawings that specify its use as an authorized instruction. The procedure specified in this PPS must be followed to ensure compliance with all applicable specifications. In general, if this PPS conflicts with the engineering drawing, follow the engineering drawing. The requirements specified in this PPS are necessary to fulfil the engineering design and reliability objectives.

1.1.2 Refer to PPS 13.26 for the subcontractor provisions applicable to this PPS.

1.1.3 Procedure or requirements specified in a Bombardier BAPS, MPS, LES or P. Spec. **do not** supersede the procedure or requirements specified in this PPS.

2 Hazardous Materials

2.1 Before receipt at Bombardier Toronto (de Havilland), all materials must be approved and assigned Material Safety Data Sheet (MSDS) numbers by the Bombardier Toronto (de Havilland) Environment, Health and Safety Department. Refer to the manufacturer's MSDS for specific safety data on any of the materials specified in this PPS. If the MSDS is not available, contact the Bombardier Toronto (de Havilland) Environment, Health and Safety Department.

3 References

3.1 PPS 6.03 - Installation of Aircraft Fluid Lines and Fittings.

3.2 PPS 13.26 - General Subcontractor Provisions.

4 Materials and Equipment

4.1 Material

4.1.1 Leak detector solution (e.g., Turco Leak Detector, Sigma-Aldrich Leak-Tec, MIL-L-25567, etc.). When using Turco Leak Detector solution, mix 5 oz. with water to make up 1 imp. gallon of solution. Use Leak-Tec leak detector solution as received (i.e., do not thin with water).

4.2 Equipment

4.2.1 Pressure test rig (e.g., 85000001.001.141/1). Calibrate pressure test rig gauges at least once every 4 months.

4.2.2 Fuel function test kit (e.g., 82820005-001-141B).

4.2.3 Coveralls, lint-free cotton or 65/35 polyester/cotton blend. Use of 100% cotton coveralls which are not qualified as lint-free is **not** acceptable.

4.2.4 Plastic dust covers (e.g., SD6201 for standard aircraft; SD6202 for extra range aircraft).

4.2.5 DSC 378-3 lint free wiping cloths.

5 Procedure

5.1 Before pressure testing, ensure pressure test rig gauge and relief valve calibration stickers are valid and have not expired. Do not use a pressure test rig if the gauge and/or relief valve calibration stickers are not valid or have expired.

5.2 All personnel working within the fuel tank must wear clean coveralls (see Equipment section, paragraph 4.2.3).

5.3 Keep fuel tank access openings covered at all times with dust covers when no work or testing is being carried out.

5.4 Carry out pressure testing on the APU feed line as follows.

- Install all fluid system components according to PPS 6.03 and the engineering drawing. Blank off all fuel lines, valves, etc., using the appropriate blanks and adaptors from the blanking kit as listed in Figure 1 and Figure 2.
- The test procedure consists of pressurizing the system lines to 30 psi, isolating the system for a period of 15 minutes and checking for a pressure drop. If the pressure drops, re-pressurize the system and check it for leaks using a leak detector solution. During pressure testing, do not relieve the pressure in the fuel lines at any time before removing the leak detector. Remove leak detector by thoroughly washing with fresh water, then wiping with a clean DSC 378-3 lint free wiping cloth dampened with water and finally wiping dry with another clean, dry DSC 378-3 lint free wiping cloth.
- Perform the first pressure test at work station 3 and the test APU line from the strainer in the collector bay of the left hand wing to station YC120.00 at the rear spar position as shown in Figure 1.
- Perform the second pressure test at work station 3, testing the line from the rear spar to the APU as shown in Figure 2.
- Correct any leaks by torquing or replacing components as necessary.
- Re-test systems that have been repaired according to this section.

5.5 On completion of leak testing the APU fuel feed system, remove all blanking plugs, caps and adaptors installed to facilitate testing and connect all lines and fittings that were removed.

5.6 Torque all re-connected joints according to PPS 6.03.

6 Requirements

6.1 Pressure test all fuel system lines in the APU system before filling the tanks with fuel. No pressure drop is allowed during the 15 minute isolation test.

7 Safety Precautions

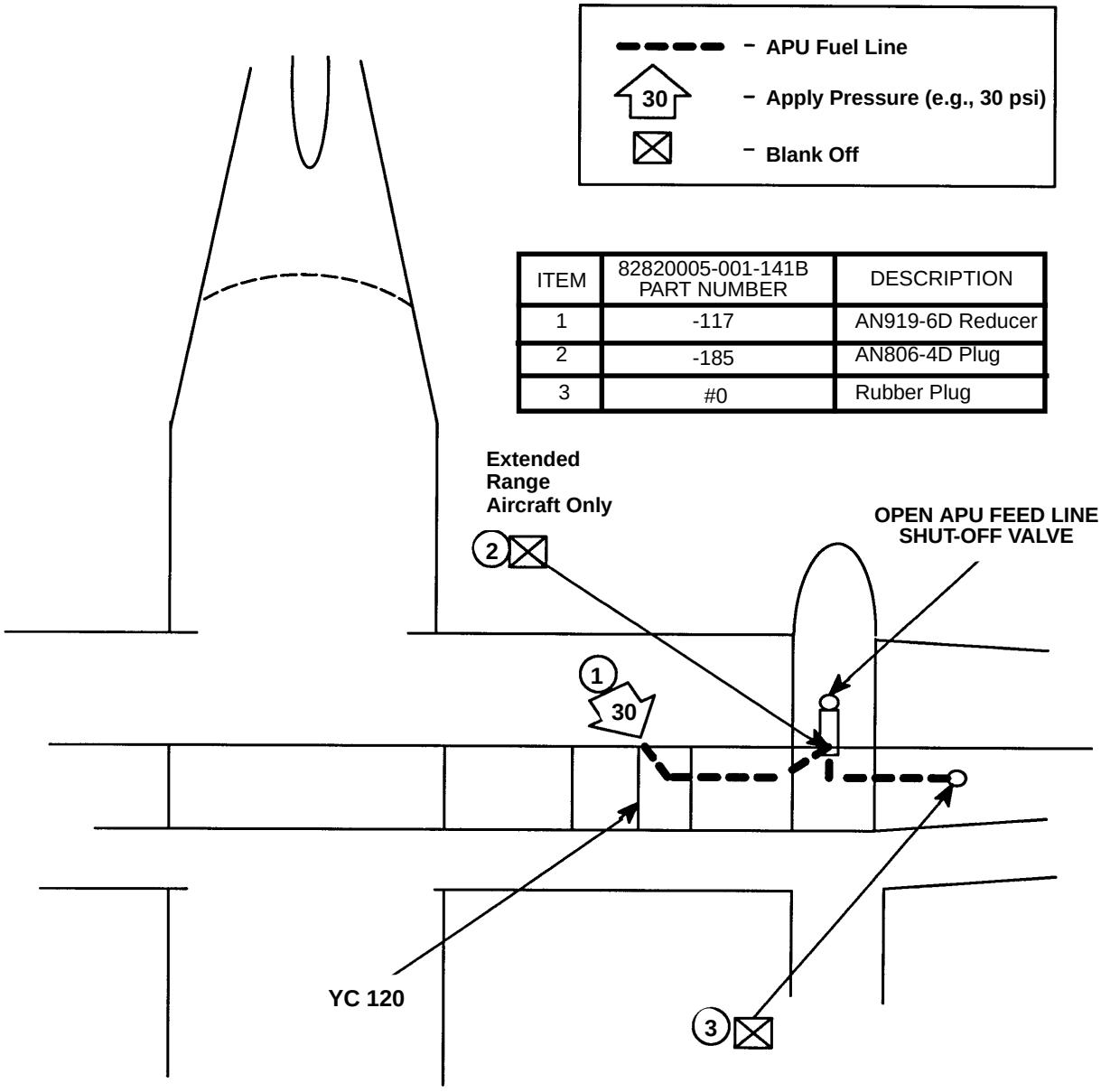
7.1 Observe general shop safety precautions when performing the procedure specified herein.

7.2 Take extreme care at all times when pressurizing the fuel system to ensure that test rig lines are kept clear of structure, stands, etc., and are free of kinks or loops which may restrict air flow through such lines.

7.3 Do not leave the pressure test rig unattended while connected to the shop air supply.

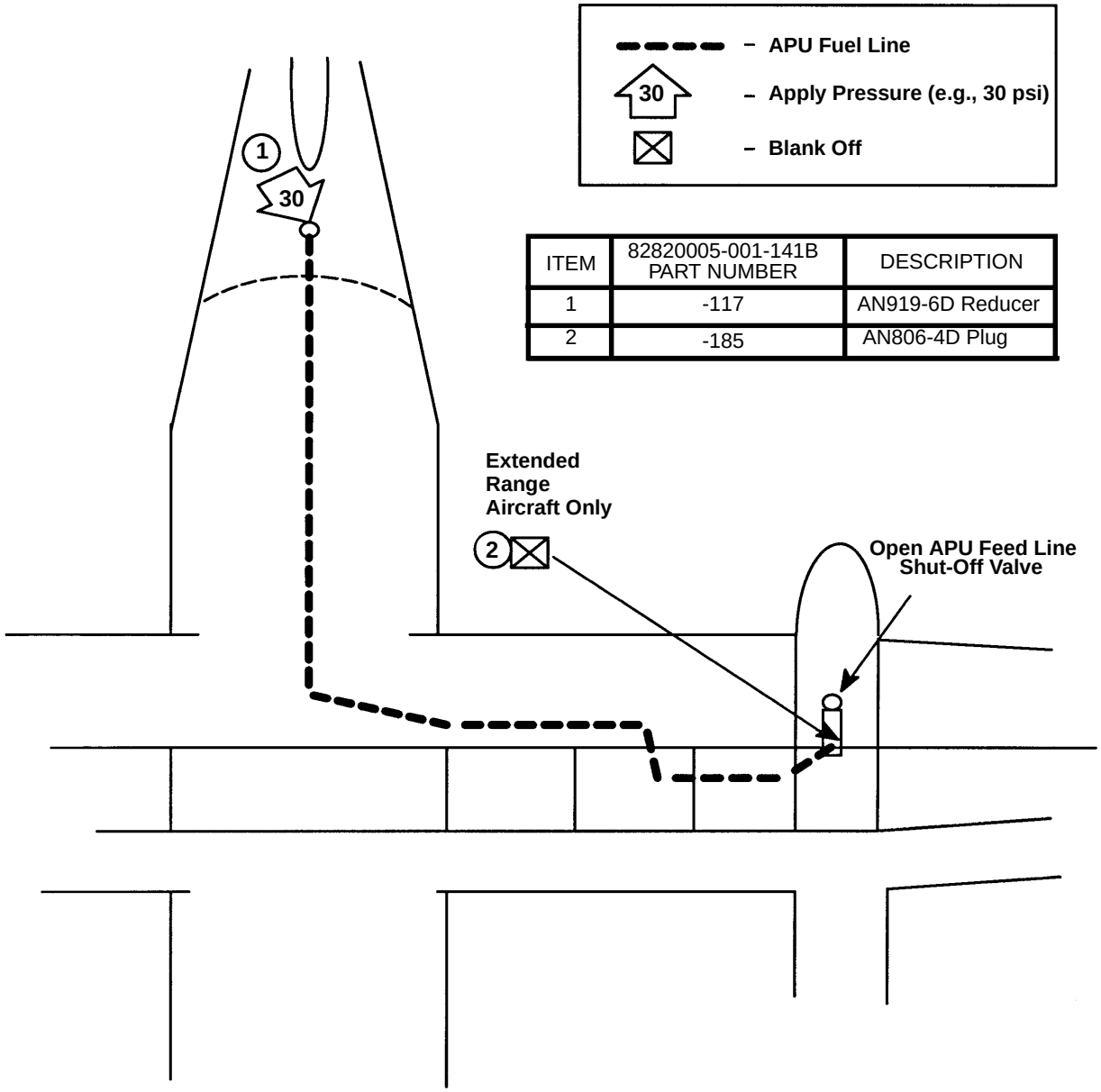
8 Personnel Requirements

8.1 Personnel must have a good working knowledge of the applicable procedure and requirements as specified herein and must have exhibited their competency to their supervisor.



ITEM	82820005-001-141B PART NUMBER	DESCRIPTION
1	-117	AN919-6D Reducer
2	-185	AN806-4D Plug
3	#0	Rubber Plug

Figure 1 - Pressure Test - APU Fuel Line



ITEM	82820005-001-141B PART NUMBER	DESCRIPTION
1	-117	AN919-6D Reducer
2	-185	AN806-4D Plug

Figure 2 - Pressure Test - at Station 3