

	REGISTRO RECORD	REVISÃO REVISION 01
CÓDIGO CODE IAS-RG-0223	FICHA DE SERVIÇOS Service Sheet	PÁGINA PAGE 1/16

COMPONENTE Component	O.S W.O	MODELO Model	PN	SN
FUEL CONTROL UNIT		DP-F2 Main Fuel Control Unit		

IDENTIFICAÇÃO IDENTIFICATION	
TÍTULO TITLE	FICHA PARA REGISTROS DE TESTE DA FUEL CONTROL UNIT FUEL CONTROL UNIT TEST SHEET

PUBLICAÇÃO PUBLICATION	REFERÊNCIA REFERENCE	TLN	DATA DATE
COMPONENT MAINTENANCE MANUAL WITH ILLUSTRATED PARTS LIST	73-20-13	TLN02402	April 22,2022 Revision 14
		CONJUNTO MAIOR MAIN PART	
		PN	SN

Teste Aplicável aos Part Numbers Test Applicable to Part Numbers	
3244769-6	3244769-7

TESTE DA UNIDADE DE CONTROLE DE COMBUSTÍVEL FUEL CONTROL UNIT TEST				
ITEM Item	PROCEDIMENTOS TOLERÂNCIAS Procedures Serviceable limits	Resultado Result	Data Date	Executante Performed by
A	Instale a MFCU na bancada de teste usando o adaptador estriado e adaptador de montagem, ou equivalente. <i>Assemble the MFCU to the test stand, using spline adapter and mounting adapter, or equivalent.</i>			
B	Remova o plug da porta e instale o acessório especial PN 2561527. Remova o plug e instale um adaptador padrão nas portas. <i>Remove plug from port and assemble PN 2561527 special fixture. Remove plug from port and install a standard adapter.</i>			
C	Remova o contra pino, porca e espaçador do eixo de aceleração. Instale o quadrante de aceleração na extremidade do eixo de aceleração e torqueie de 40-45 lb.in. <i>Remove cotter pin, nut, and spacer from throttle shaft. Assemble throttle quadrant on end of cam shaft and tighten to 40-45 lb.in.</i>			
D	Mantenha uma pressão Po de 30-50 psig na conexão de Po, exceto quando houver outra especificação. Mantenha a pressão P2 dentro de ± 10 psi do valor especificado em pressões abaixo de 200 pph e dentro de ± 25 psi em pressões mais altas, usando a válvula reguladora de contrapressão Pn. <i>Maintain a Po pressure of 30-50 psig on Po pressure gage, except where otherwise specified. Maintain P2 pressure within ± 10 psi of the value specified at pressures below 200 pph and within ± 25 psi at higher pressures, using Pn back pressure regulator valve.</i>			
E	Aumente a pressão do combustível (P1) e observe o início do fluxo de combustível. Durante o teste, ajuste e mantenha a (Po) a 40 ± 2 psig. <i>Increase fuel supply pressure (P1) and observe start of fuel flow. During this test, adjust and maintain (Po) at 40 ± 2 psig</i>			

	REGISTRO RECORD	REVISÃO REVISION 01
	CÓDIGO CODE IAS-RG-0223	FICHA DE SERVIÇOS Service Sheet

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ITEM Item	PROCEDIMENTOS TOLERÂNCIAS Procedures Serviceable limits	Resultado Result	Data Date	Executante Performed by
F	Ajuste o parafuso de pressão diferencial P1-P2 para uma pressão de 30-47 in.Hg. Ajuste o orifício da <i>sleeve</i> da <i>metering valve</i> até a pressão diferencial P1-P2 e o fluxo de injeção estarem de acordo com os limites especificados. <i>Adjust P1-P2 pressure differential adjustment screw for a pressure of 30-47 in.Hg. Adjust metering valve sleeve assembly orifice until P1-P2 pressure differential and nozzle flow are within the limits specified.</i>			
G	Torqueie as porcas de 35-40 lb.in e 25-35 lb.in respectivamente. Registre todas as pressões diferenciais de P1-P2 e o fluxo de injeção e adicionalmente, a pressão Pc-Py no Ponto de Teste. <i>Torque nuts to 35-40 lb.in and 25-35 lb.in respectively. Record all P1-P2 differential pressures and nozzle flows and additionally, Pc-Py pressure at Test Point.</i>			

TESTE AETS 15816 | AETS 15816 TEST

		Number AETS 15816		Rev. M																																																												
		TEST SPECIFICATION																																																														
		Sheet 1 of 9																																																														
Orig By: ESA Group	Chk By: M. Taylor	Project Leader: W. H. Foster	MFG Approval: S. Graveline																																																													
Date:	Test Stand No.:	Operator:	S/N:																																																													
Unit:	Model: DP-F2/A-45	P/N: 3244769																																																														
REL DATE REV/	RECORDS OF PREVIOUS REV. OMITTED	SAVED 98 M	SHT REV STATUS	<table border="1"> <tr> <td>M</td><td>M</td><td>M</td><td>M</td><td>M</td><td>M</td><td>M</td><td>M</td><td>M</td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td></td><td></td><td></td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>13</td><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td><td>20</td><td>21</td><td>22</td><td>23</td><td>24</td><td></td><td></td><td></td> </tr> </table>	M	M	M	M	M	M	M	M	M							1	2	3	4	5	6	7	8	9	10	11	12																			13	14	15	16	17	18	19	20	21	22	23	24			
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A. See AEEI 15717 for location of adjustments and pressure taps. B. (1) Install throttle quadrant fixture with a 4.0 lbs. load applied to throttle lever to hold lever against max. throttle stop. (2) Index throttle quadrant to 90° T.A. Torque throttle quadrant fixture to 40-45 in.lbs. C. Control rotation CW as viewed from control shaft end. D. Maintain Po pressure to 30 to 50 psig at control by-pass tap, except where otherwise specified. E. P2 pressure shall be set within ± 10 psi of specified value at pressures below 200 psig and ± 25 psi of specified value at pressures above 200 psig. F. Set test conditions (speed, supply, Pc, etc.) in the sequence indicated by numbers 1, 2, 3, etc. (a) When two numbers are listed, set and then trim test condition in the sequence indicated. (b) Approach all speeds, total fuel supplies, and Pc settings from a lower value, except at hysteresis points. G. All adjustments are to be properly torqued. Test points indicated (*) require special attention and are to be checked following proper torquing. <table border="0"> <tr> <td>1. Metering valve orifice torque</td> <td>35</td> <td></td> <td>40 in. lbs.</td> </tr> <tr> <td>2. Bypass setting torque</td> <td>25</td> <td></td> <td>35 in. lbs.</td> </tr> <tr> <td>3. Min. M.V. stop (breakaway) torque</td> <td>4</td> <td></td> <td>20 in. lbs.</td> </tr> <tr> <td>4. Max. flow M.V. stop torque</td> <td>20</td> <td></td> <td>25 in. lbs.</td> </tr> <tr> <td>5. Max. gov. eccentric lock-nut torque</td> <td>7</td> <td></td> <td>7.5 in. lbs.</td> </tr> <tr> <td>6. Max. throttle stop torque</td> <td>20</td> <td></td> <td>25 in. lbs.</td> </tr> <tr> <td>7. Idle speed stop torque</td> <td>20</td> <td></td> <td>25 in. lbs.</td> </tr> <tr> <td>8. Flow body to drive body torque</td> <td>20</td> <td></td> <td>25 in. lbs.</td> </tr> <tr> <td>9. Drive body adapter to drive body torque</td> <td>25</td> <td></td> <td>30 in. lbs.</td> </tr> <tr> <td>10. Bleeds torque</td> <td>9</td> <td></td> <td>11 in. lbs. in 5 in. lbs.increments</td> </tr> <tr> <td>11. Max. speed stop torque</td> <td>4</td> <td></td> <td>X in. lbs.</td> </tr> </table>					1. Metering valve orifice torque	35		40 in. lbs.	2. Bypass setting torque	25		35 in. lbs.	3. Min. M.V. stop (breakaway) torque	4		20 in. lbs.	4. Max. flow M.V. stop torque	20		25 in. lbs.	5. Max. gov. eccentric lock-nut torque	7		7.5 in. lbs.	6. Max. throttle stop torque	20		25 in. lbs.	7. Idle speed stop torque	20		25 in. lbs.	8. Flow body to drive body torque	20		25 in. lbs.	9. Drive body adapter to drive body torque	25		30 in. lbs.	10. Bleeds torque	9		11 in. lbs. in 5 in. lbs.increments	11. Max. speed stop torque	4		X in. lbs.																
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	REGISTRO <i>RECORD</i>	REVISÃO <i>REVISION</i> 01
CÓDIGO CODE IAS-RG-0223	FICHA DE SERVIÇOS <i>Service Sheet</i>	PÁGINA <i>PAGE</i> 3/16

			TEST SPECIFICATION				AETS 15816				
							SHEET		SHEETS		REV.
							2 OF 9				
TEST POINT	SPEED RPM	SUPPLY PPH	THRO DEG.	TEMP °F	Pc psia	NOZZLE FLOW, PPH			P1 - P2 "Hg	P2 psi	
						MIN	REC	MAX			
H. Speed for test points 3.01 to 3.07, 4.01, 4.02 and 6.01 is to be set to ± 2 RPM of specified value. All other points are to be set within ± 20 RPM of specified value. I. Total supply is to be set to ± 20 PPH of the specified value or within limits when shown. When aircraft pump is used, ignore total supply and Po pressure settings except at T.P. 1.02 and 7.02 adjust boost pressure to obtain specified Po values. J. Valve in spill valve outlet to be kept in closed position unless otherwise indicated. K. Close shut-off valves to Pn and Py gauges. L. Before calibration, check for external air leakage using "Lec-Tec". Slow bubbling is permitted at the joint of drive body and drive body adapter, at the torsion shaft cover and at the bellows and torsion shaft locknuts. No leakage is permitted at any other point. Pc = 100 psia. If leakage is considered excessive, measure Px-Py when Pc = 100 psia, RPM = 0 and T/A = Max. Px to be measured at bellows ratio lever cover. Px-Py ± 1.2" Hg. Max. M. After by-pass valve adjustment has been completed and the detent cup has been locked in position check specific gravity adjustment at min. M/V setting. 1) Rotate the cup 3 clicks cw from original position – nozzle flow must increase at each click. 2) Rotate the cup 3 clicks ccw from original position – nozzle flow must decrease at each click. 3) Return the detent cup to the original position and recheck M/V settings.											
Checked: _____											

	REGISTRO RECORD	REVISÃO REVISION 01
CÓDIGO CODE IAS-RG-0223	FICHA DE SERVIÇOS Service Sheet	PÁGINA PAGE 4/16

				TEST SPECIFICATION			AETS 15816			
							SHEET 3	SHEETS OF 9	REV. M	
TEST POINT	SPEED RPM	SUPPLY PPH	THRO DEG.	TEMP °F	Pc psia	NOZZLE FLOW, PPH			P1 - P2 "Hg	P2 psi
						MIN	REC	MAX		
<u>CHECK RELIEF VALVE OPENING</u>										
(a) Cap outlet port. (b) Increase fuel flow until supply is within limits specified and observe P1-Po differential. (c) If P1-Po differential is out of limits, shim as required. Add shims to increase differential.										
1.01	1 A.R.	4 200-275	2 Max		3 120	Relief valve opening			P1-Po 1000	1050 psi
<u>CHECK PRESSURIZING VALVE OPENING</u>										
(a) Increase supply pressure with outlet port open, observe start of nozzle flow. During this test adjust and maintain Po at 40 ± 2 PSIG. (b) If P1 is out of limits, shim as required. Add shims to increase differential.										
1.02	1 A.R.	4 A.R.	2 Max		3 120	Press. valve opening			P1 - Po 55	68 psi
If valve cover has been removed and reassembled, torque screws to 4.5 - 5.0 in. lbs. in 1 in. lb. increment maximum, while alternating between the screws.										
<u>METERING VALVE ORIFICE AND BY-PASS HEAD (P1-P2"HG) SETTING</u>										
Test points 2.01 thru 2.03, 2.06 and 2.08 are interrelated and should be recorded after all five (5) adjustments have been made. At test points 2.01, 2.02 and 2.07 and 2.08 open shut-off valve to Pn gauge. Close valve after test.										
2.01*	2 5800	3-6 1300	1 Max	-	4 40.0	240		250		5 Pn=113 psig
Adjust head and orifice P1 - P2 = 30 - 47"Hg										
2.02*	2900	660	28-30	-	40.0	90		93		Pn = 18 psig
Set min. M.V. stop after removing Py line										
2.03*	5800	1300	Max	-	90	542		562		510
Pc-Py 3.9 in. Hg Max										
2.04*	5800	1300	Max	-	120	714		758		860
2.05*	5800	1300	Max	-	135	749		X		860

	REGISTRO <i>RECORD</i>	REVISÃO <i>REVISION</i> 01
CÓDIGO CODE IAS-RG-0223	FICHA DE SERVIÇOS <i>Service Sheet</i>	PÁGINA <i>PAGE</i> 5/16

TEST SPECIFICATION						AETS 15816				
						SHEET 4 OF 9			SHEETS	
TEST POINT	SPEED RPM	SUPPLY PPH	THRO DEG.	TEMP °F	Pc psia	NOZZLE FLOW, PPH			P1 - P2 "Hg	P2 psi
						MIN	REC	MAX		
2.06*	5800	1300	Max	-	135	703		723		815
Set max. M.V. stop										
2.07*	5800	1300	Max	-	40.0	-10		+10		Pn=113 psig
Hysteresis of T.P. 2.01										
2.08*	1700	400	Max	-	25	149		159		Pn=48 psig
MAX. GOVERNOR SPRING SETTING AND POWER RESET ADJUSTMENT										
(a) Adjust eccentric shaft to meet flow limits.										
(b) If unable to set with eccentric, max. T.A. may be varied within T.A. limits.										
(c) If unable to set with eccentric max. T.A. maintain eccentric shaft scribe line in position furthest away from drive body and determine amount of RPM off.										
(d) Split control and adjust gov. spring as required (CALIBRATION ONLY) (CW adj. of gov. spring delays break approx. 1 flat on adj. nut per 50 RPM).										
(e) If gov. slope is not in limits, select Py bleed per parts list, (Higher number bleed to increase difference in flow).										
BLEED SIZE 58 62										
3.01*	4 6646	3-7 1575	1 		2-5 95	492		504		6 420
Set Gov. break T.A. at 89° - 91°.										
3.02*	6796	1575			95	X		X		280
Lever must be .050" min. away from stop plate, at the centerline of stop-screw.										
Diff. From T.P. 3.01 (Gov. Slope) 100 130										
3.03*		1575			95	X		X		420
Hysteresis -50 RPM hysteresis of T.P. 3.01 (Max.)										
3.03a	6646	1575	30° - 35°		95	X		225		Pn = 100 psig
If minimum schedule cannot be met, select larger no. Py bleed and recheck T.P. 3.01 to 3.03a.										

	REGISTRO RECORD	REVISÃO REVISION 01
CÓDIGO CODE IAS-RG-0223	FICHA DE SERVIÇOS Service Sheet	PÁGINA PAGE 6/16

			TEST SPECIFICATION			AETS 15816					
						SHEET 5 OF 9			SHEETS		REV. M
TEST POINT	SPEED RPM	SUPPLY PPH	THRO DEG.	TEMP °F	Pc psia	NOZZLE FLOW, PPH			P1 - P2 "Hg	P2 psi	
						MIN	REC	MAX			
3.04	4 6540	2 1575	1 87		3-6 95	X		X		5 420	
Apply 30 psig to speed reset port.											
3.05	6650	1575	87		95	X		X		420	
Difference from T.P. 3.04 -7 +7 PPH											
If difference is out of limits adjust speed reset rod length. Rotate rod C.W. to increase flow. If adjustment was made, retest T.P. 3.04 and 3.05.											
Adjust speed reset pressure to 0 psig.											
3.06	6646	1575	Max.		95	492		504		420	
Apply 30 psig to speed reset port.											
3.07	6686	1575	Max.		95	X		X		420	
Difference from T.P. 3.06 -5 +5 PPH											
If difference is out of limits, adjust max. speed stop. Rotate screw C.W. to reduce flow. If adjustment was made, retest T.P. 3.06 and 3.07.											
Return speed reset pressure to 0 psig.											
IDLE SPEED STOP SETTING AND PICK-UP ANGLE											
A- At test point 4.01 insert .1875 dia. rigging pin and check T.A. If out of limits re-adjust rigging bracket position. At test point 4.02 increase T.A. until 4 PPH max. fuel flow from 4.01 is observed. (T.A. where flow starts to increase is pick-up angle). B- If throttle cam pick-up angle is out of limits, replace gov. spring. (1) Use a higher numbered spring to increase pick-up angle. (2) Use a lower numbered spring to decrease pick-up angle. (3) Adjust spring tension to same load as set on spring removed. (4) Re-set gov. break at T.P. 3.01 and rerun T.P. 3.02 to 3.07 inclusive. (5) Re-set idle stop screw at T.P. 4.01.											

	REGISTRO RECORD	REVISÃO REVISION 01
	CÓDIGO CODE IAS-RG-0223	FICHA DE SERVIÇOS Service Sheet

						TEST SPECIFICATION			AETS 15816		
						SHEET 6 OF 9		SHEETS 9		REV. M	
TEST POINT	SPEED RPM	SUPPLY PPH	THRO DEG.	TEMP °F	Pc psia	NOZZLE FLOW, PPH			P1 - P2 °Hg	P2 psi	
						MIN	REC	MAX			
4.01	4 3881	1-7 880	5 28-30	-	2-6 39	141		153		3-8 Pn = 70 psig	
Open shut-off valve to Pn gauge. Set idle stop screw (CW adj. incr. flow) decrease and reset speed after adjustment.											
4.02	3881	880									
Idle throttle angle 32° 36° Remove rigging pin Spring Stripe											
LOW END ACCEL. FLOW AND THROTTLE MOVEMENT EFFECT											
5.01	2 815	5 200	3 40	-	1 Local	85		X		4-6 Pn = 18 psig	
5.02	1700	400	40	-	25.0	149		159		Pn = 48 psig	
Move T.A. to 30° 5 PPH max. dec.											
(a) After recording nozzle flow at test point 5.02 move throttle to 30 T.A.. Close shut-off valve to Pn gauge. (b) Observe nozzle flow change and record.											
MAX. IDLE RESET STOP ADJ.											
6.01	1 4380	3-5 990	-	-	2 70	262			274	4 Pn=130 psig	
Set max. idle reset stop. Record T.A.											
Open Pn shut-off valve to Pn gauge. Close valve after test.											

	REGISTRO RECORD	REVISÃO REVISION 01
CÓDIGO CODE IAS-RG-0223	FICHA DE SERVIÇOS Service Sheet	PÁGINA PAGE 8/16

						TEST SPECIFICATION		AETS 15816		
								SHEET 7	SHEETS OF 9	REV. 
TEST POINT	SPEED RPM	SUPPLY PPH	THRO DEG.	TEMP °F	Pc psia	NOZZLE FLOW, PPH			P1 - P2 "Hg	P2 psi
						MIN	REC	MAX		
2	3-6	1	4							5-7
<u>CUT-OFF MODULATION AND CUT-OFF LEAKAGE</u>										
A. At test point 7.01 set test condition with 20° T.A. (a) Move thro. to 30° T.A. and observe nozzle flow change. (b) If nozzle flow change is excessive - (1) Reset thro. to 20° T.A. (2) Back off override adj. nut on cut-off link. (3) Adjust cut off link longer to meet max. flow change limit. (4) Open shut-off valve to Pn gauge.										
7.01	2200	500	20	-	A.R.	160		170		Pn = 55psig
						Nozzle flow change 2 PPH max.				
B. At test point 7.02 check cut-off leakage. (a) Remove nozzle outlet from control. (b) Set total supply with throttle in cut-off position (highest T.A. position where no leakage is observed at outlet fitting). (c) Increase T.A. to permit flow out the outlet fitting, and adjust Po pressure to 40 ± 2 psig. (d) Decrease T.A. as required until no leakage is observed at outlet fitting (Observe T.A.). (e) If T.A. is out of limits, shim cut-off valve seat (1) Remove shims under C.O. valve seat to increase T.A. (.002" thickness shim changes T.A. approx. 2°). (f) Same Pc as established for T.P. 7.01. (g) Record cut-off leakage. (h) Record P1. (i) Open valve in spill valve outlet.										
7.02	2200	500	8-10	-	A.R.	0		0.5 cc/min		
						P1 pressure 250 psig max.				
C. At test point 7.03 (-5° T.A.). (a) Observe P1 pressure. (b) Adjust override nut for; .000" clearance between nut and bushing. (c) Adjust upper lever (idle reset lever) stop to just contact lever. (d) At 0° T.A. lower C.O. lever to be within ± 5° of horizontal.										

	REGISTRO <i>RECORD</i>	REVISÃO <i>REVISION</i> 01
CÓDIGO CODE IAS-RG-0223	FICHA DE SERVIÇOS <i>Service Sheet</i>	PÁGINA <i>PAGE</i> 9/16

TEST POINT		SPEED RPM				SUPPLY PPH		THRO DEG.		TEMP °F		Pc psia		TEST SPECIFICATION			AETS 15816		REV. M
														NOZZLE FLOW, PPH			P1 - P2 "Hg	P2 psi	
														MIN	REC	MAX			
At test point 7.04 (a) Operate throttle lever over full range of travel. (b) Record throttle torque.																			
7.03	2 2200	3-5 500	1 -5	4 A.R.															
P1 pressure equal to or less than T.P. 7.02																			
7.04	2200	500	MIN-MAX-MIN	Local	Thro. Torque		15 in. lbs. max.												
D. At test point 7.05 test spill valve reverse flow leakage through its check valve. (a) Remove nozzle outlet from control. (b) Close valve in spill valve outlet. (c) Adjust Po = 60 psig.																			
7.05	2200	500	8-10	-	Loc.	0		20 cc/min.											
P1 pressure 250 psig. Max.																			
7.06	6646	1575	Max.	-	135														
Reconnect nozzle outlet. Set condition lever to -5°, distance between centres of idle reset lever shaft and Max. idle reset link must be .375 Min. X. Nozzle flow less than 85 pph. NOTE: Re-adjust Po to 40 psig.																			
8.01	1 1530	3 370	2 28-30	-	4 1.0	X		X											
Open shut-off valves to Pn and Py gauges. Set Pn to 32 psig. Valve in spill valve line closed.																			
8.02	1530	370	28-30	-	1.0	X		X											
Open spill valve outlet valve. Adjust screw so that nozzle flow is within 1 PPH of T.P. 8.01.																			
0 1																			

	REGISTRO <i>RECORD</i>	REVISÃO <i>REVISION</i> 01
CÓDIGO CODE IAS-RG-0223	FICHA DE SERVIÇOS <i>Service Sheet</i>	PÁGINA <i>PAGE</i> 10/16

						TEST SPECIFICATION			AETS 15816			
									SHEET	SHEETS		REV. M
									9	OF	9	
TEST POINT	SPEED RPM	SUPPLY PPH	THRO DEG.	TEMP °F	Pc psia	NOZZLE FLOW, PPH			P1 - P2 "Hg	P2 psi		
						MIN	REC	MAX				
8.03 Check spill valve Pa port. Port may be wet but there must be no measurable leakage. Close shut-off valves to Pn and Py gauges. Note: Air pressure is Py in psig as shown in the appropriate column. <u>EXTERNAL LEAKAGE CHECK</u> A. Cap Po at drive flange by-pass tap. B. Remove Po line to control and install Po plug. C. Cap outlet port and both spill valve ports. D. Set P1 pressure to 1000 psig. E. Observe leakage for 2-3 minutes. F. No leakage permitted. OK REJ.												

	REGISTRO <i>RECORD</i>	REVISÃO <i>REVISION</i>	01
	CÓDIGO CODE IAS-RG-0223	FICHA DE SERVIÇOS <i>Service Sheet</i>	PÁGINA <i>PAGE</i>

TESTE AETS 15817
AETS 15817 TEST

		TEST SPECIFICATION		Number AETS 15817	Rev. J
				Sheet 1 of 6	
Orig By: ESA Group		Chk By: M. Taylor		Project Leader: W. H. Foster	
Date:		Test Stand No.:		MFG Approval: S. Graveline	
Unit:		Operator:		S/N:	
Model: DP-F2/A-45		P/N: 3244769			
REL DATE REV.	RECORDS OF PREVIOUS REV OMITTED SAUG 98 J	SHT REV STATUS SHT REV SHT REV	1 J	2 J	3 J
			4 J	5 J	6 J
			7 	8 	9
			10 	11 	12
			13 	14 	15
			16 	17 	18
			19 	20 	21
			22 	23 	24
A. See AEEI 15717 for location of adjustments and pressure taps. B. (1) Install throttle quadrant fixture with a 4.0 lbs. load applied to throttle lever to hold lever against max. throttle stop. (2) Index throttle quadrant to 90° T.A.. C. Control rotation CW as viewed from control shaft end. D. Maintain Po pressure to 30 to 50 psig at control by-pass tap, except where otherwise specified. E. P2 pressure shall be set within ± 10 psi of specified value at pressures below 200 psig and ± 25 psi of specified value at pressures above 200 psig. F. Set test conditions (supply and Pc) in the sequence indicated by numbers 1, 2, 3, etc. (a) When two numbers are listed, set and then trim test condition in the sequence indicated. (b) Approach all speeds, total fuel supplies, and Pc settings from a lower value, except at hysteresis points. G. Speed for test points 3.01 to 3.07, 4.01, 4.02 and 6.01 is to be set to ± 2 RPM of specified value. All other points are to be set within ± 20 RPM of specified value. H. Total supply is to be set to ± 20 PPH of the specified value or within limits when shown. When aircraft pump is used, ignore total supply and Po pressure settings except at T.P. 1.02 and 7.02 adjust boost pressure to obtain specified Po values. I. Valve in spill valve outlet to be kept in closed position unless otherwise specified. J. Close shut-off valves to Pn and Py gauges.					

	REGISTRO <i>RECORD</i>	REVISÃO <i>REVISION</i> 01
CÓDIGO CODE IAS-RG-0223	FICHA DE SERVIÇOS <i>Service Sheet</i>	PÁGINA <i>PAGE</i> 12/16

				TEST SPECIFICATION			AETS 15817				
							SHEET 2 OF 6		SHEETS 6		REV. J
TEST POINT	SPEED RPM	SUPPLY PPH	THRO DEG.	TEMP °F	Pc psia	NOZZLE FLOW, PPH			P1 - P2 "Hg	P2 psi	
						MIN	REC	MAX			
<u>CHECK RELIEF VALVE OPENING</u>											
(a) Cap outlet port.											
(b) Increase fuel flow until fuel supply is within limits specified and observe P1-Po differential.											
1.01	1 A.R.	4 200-275	2 Max		3 120	Relief valve opening P1-Po 1000			1050 psi		
<u>CHECK PRESSURIZING VALVE OPENING</u>											
(a) Increase supply pressure with outlet port open, observe start of nozzle flow. During this test adjust and maintain Po at 40 ± 2 PSIG.											
1.02	1 A.R.	4 A.R.	2 Max		3 120	Press. valve opening P1 - Po 55			68 psi		
<u>METERING VALVE ORIFICE AND BY-PASS HEAD (P1-P2"HG) SETTING</u>											
Note: At test points 2.01, 2.02 and 2.05 open shut-off valve to Pn gauge. Close valve after tests.											
2.01	2 5800	3-6 1300	1 Max	-	4 40.0	235		255		5 Pn=113 psig	
										P1 - P2 = 30 - 47"Hg	
2.02	2900	660	28-30	-	40.0	88		93		Pn = 18 psig	
										Remove Py line	
2.03	5800	1300	Max	-	90	530		574		510	
										Pc-Py 3.9 in. Hg Max	
2.04	5800	1300	Max	-	135	700		726		815	
										Max. M.V. flow	
2.05	5800	1300	Max	-	40.0	-10		+10		Pn=113 psig	
Hysteresis of T.P. 2.01											

	REGISTRO <i>RECORD</i>	REVISÃO <i>REVISION</i> 01
CÓDIGO CODE IAS-RG-0223	FICHA DE SERVIÇOS <i>Service Sheet</i>	PÁGINA <i>PAGE</i> 13/16

				TEST SPECIFICATION			AETS 15817				
							SHEET 3 OF 6		SHEETS 6		REV. J
TEST POINT	SPEED RPM	SUPPLY PPH	THRO DEG.	TEMP °F	Pc psia	NOZZLE FLOW, PPH			P1 - P2 "Hg	P2 psi	
						MIN	REC	MAX			
MAX. GOVERNOR SPRING SETTING											
3.01	4 6646	3-7 1575	1 Max.		2-5 95	473		523		6 420	
3.02	6796	1575	Max.		95	X		X		280	
					Diff. From T.P. 3.01 (Gov. Slope)	95		135			
3.03		1575	Max.		95	X		X		420	
					Hysteresis -50 RPM hysteresis of T.P. 3.01 (Max.)						
3.03a	6646	1575	30° - 35°		95	X		225		Pn = 100 psig	
3.04	6540	1575	87		95	X		X		420	
Apply 30 psig to speed reset port.											
3.05	6650	1575	87		95	X		X		420	
					Difference from T.P. 3.04	-9		+9 PPH			
If difference is out of limits adjust speed reset rod length. Rotate rod C.W. to increase flow. If adjustment was made, retest T.P. 3.04 and 3.05.											
Adjust speed reset pressure to 0 psig.											
3.06	6646	1575	Max.		95	473		523		420	
Apply 30 psig to speed reset port.											
3.07	6686	1575	Max.		95	X		X		420	
					Difference from T.P. 3.06	-7		+7 PPH			
If difference is out of limits, adjust max. speed stop. Rotate screw C.W. to reduce flow. If adjustment was made, retest T.P. 3.06 and 3.07.											
Return speed reset pressure to 0 psig.											

	REGISTRO RECORD	REVISÃO REVISION 01
CÓDIGO CODE IAS-RG-0223	FICHA DE SERVIÇOS Service Sheet	PÁGINA PAGE 14/16

TEST SPECIFICATION		AETS 15817								
		SHEET			SHEETS			REV.		
		4			OF 6			J		
TEST POINT	SPEED RPM	SUPPLY PPH	THRO DEG.	TEMP °F	Pc psia	NOZZLE FLOW, PPH			P1 - P2 "Hg	P2 psi
						MIN	REC	MAX		
<u>IDLE SPEED STOP SETTING AND PICK-UP ANGLE</u>										
At test point 4.01 insert .1875 dia. rigging pin and check T.A. at test point 4.02 increase T.A. until 4 PPH max. fuel flow from 4.01 is observed. (T.A. where flow starts to increase is pick-up angle).										
4.01	4 3881	1-7 880	5 28-30	-	2-6 39	137		157		3-8 Pn = 70 psig
Open shut-off valve to Pn gauge.										
Set idle stop screw (CW adj. incr. flow) decrease and reset speed after adjustment.										
4.02	3881	880								
Idle throttle angle 32° 36°										
Remove rigging pin										
<u>LOW END ACCEL. FLOW AND THROTTLE MOVEMENT EFFECT</u>										
5.01	2 815	5 200	3 40	-	1 Local	80		X		4-6 Pn = 18 psig
5.02	1700	400	40	-	25.0	148		160		Pn = 48 psig
Move T.A. to 30° 5 PPH max. dec.										
(a) After recording nozzle flow at test point 5.02 move throttle to 30 T.A.. Close shut-off valve to Pn gauge.										
(b) Observe nozzle flow change and record.										
<u>MAX. IDLE RESET STOP ADJ.</u>										
Hold idle reset lever against idle reset stop. Record fuel flow.										
6.01	1 4380	3-5 990	-	-	2-4 70	258		278		6 Pn=130 psig
Record T.A.										
Open Pn shut-off valve to Pn gauge. Close valve after test.										

	REGISTRO RECORD	REVISÃO REVISION 01
	CÓDIGO CODE IAS-RG-0223	FICHA DE SERVIÇOS Service Sheet

						TEST SPECIFICATION			AETS 15817		
						SHEET 5 OF SHEETS 6			REV. J		
TEST POINT	SPEED RPM	SUPPLY PPH	THRO DEG.	TEMP °F	Pc psia	NOZZLE FLOW, PPH			P1 - P2 "Hg	P2 psi	
						MIN	REC	MAX			
CUT-OFF MODULATION AND CUT-OFF LEAKAGE											
A. At test point 7.01 set test condition with 20° T.A.											
(a) Move thro. to 30° T.A. and observe nozzle flow change.											
7.01	2 2200	3-6 500	1 20	-	4 A.R.	160		170		5-7 Pn = 55psig	
Open shut-off valve to Pn gauge.											
Nozzle flow change 2 PPH max.											
B. At test point 7.02 check cut-off leakage.											
(a) Remove nozzle outlet from control.											
(b) Set total supply with throttle in cut-off position (highest T.A. position where no leakage is observed at outlet fitting).											
(c) Increase T.A. to permit flow out of the outlet fitting, and adjust Po pressure to 40 ± 2 psig.											
(d) Decrease T.A. as required until no leakage is observed at outlet fitting (Observe T.A.).											
(e) Same Pc as established for T.P. 7.01.											
(f) Record cut-off leakage.											
(g) Record P1.											
(h) Open valve in spill valve outlet.											
7.02	2200	500	8-10	-	A.R.	0		0.5 cc/min			
P1 pressure 250 psig max.											
C. At test point 7.03 (-5 T.A.).											
(a) Observe P1 pressure.											
At test point 7.04											
(a) Operate throttle lever over full range of travel.											
(b) Record throttle torque.											
7.03	2200	500	-5		A.R.						
P1 pressure equal to or less than T.P. 7.02											

	REGISTRO RECORD	REVISÃO REVISION 01
	CÓDIGO CODE IAS-RG-0223	FICHA DE SERVIÇOS Service Sheet

TEST SPECIFICATION						AETS 15817				
						SHEET 6 OF 6		SHEETS 6		REV. J
TEST POINT	SPEED RPM	SUPPLY PPH	THRO DEG.	TEMP °F	Pc psia	NOZZLE FLOW, PPH			P1 - P2 "Hg	P2 psi
						MIN	REC	MAX		
7.04	2200		MIN-MAX-MIN		Local	Thro. Torque			15 in. lbs. max.	
D. At test point 7.05 test spill valve reverse flow leakage through its check valve. (a) Remove nozzle outlet from control. (b) Close valve in spill valve outlet. (c) Adjust Po = 60 psig.										
7.05	2200	500	8-10	-	Loc.	0		20 cc/min.		
						P1 pressure 250 psig. Max.				
7.06	6646	1575	Max.	-	135					
Reconnect nozzle outlet. Set condition lever to -5°, distance between centres of idle reset lever shaft and Max. idle reset link must be .375 Min. X. Nozzle flow less than 85 pph. <u>Note:</u> Re-adjust Po to 40 psig.										
8.01	1530	370	28-30	-	1.0	X		X		
Open shut-off valves to Pn and Py gauges. Set Pn to 32 psig. Valve in spill valve line closed.										
8.02	1530	370	28-30	-	1.0	X		X		
Open spill valve outlet valve. Nozzle flow must be within 1 PPH of T.P. 8.01. 0 1										
8.03	Check spill valve Po port.									
Port may be wet but there must be no measurable leakage.										
Close shut-off valves to Pn and Py gauges.										
Note: Air pressure is Py in psig as shown in the appropriate column.										
EXTERNAL LEAKAGE CHECK										
A. Cap Po at drive flange by-pass tap. B. Remove Po line to control and install Po plug. C. Cap outlet port and both spill valve ports. D. Set P1 pressure to 1000 psig. E. Observe leakage for 2-3 minutes. F. No leakage permitted.										
						OK		REJ.		

Observações Remarks	

Aprovação Approval	Nome Name	Data Date	Assinatura Signature
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