COMPONENTE | *Component*	O.S | *W.O*	MODELO | *Model*	P/N	S/N
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*
OVERHAUL MANUAL WITH ILLUSTRATED PARTS LIST	73-20-21	TLN02461	January 11th, 2016 Temporary Revision 73-17

CONJUNTO MAIOR | *MAIN PART*	
P/N	S/N

TESTE APLICÁVEL AOS PART NUMBERS | *TEST APPLICABLE TO PART NUMBERS*	
3244770-8	3244770-9

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	Monte a FCU na bancada de teste, usando o adaptador estriado e o adaptador de montagem. *Assemble the Main Fuel Control Unit to the test stand, using spline adapter and mounting adapter, or equivalent.*			
B	Remova o plugue e instale o acessório especial de teste. Remova o plugue e instale um adaptador padrão nas portas. Instale o Quadrante de Aceleração na extremidade do eixo de aceleração e torqueie de 40-45 lb.in. *Remove plug and assemble, special testing fixture. Remove plug and install a standard adapter into ports. Assemble throttle quadrant and pointer on the end of throttle shaft and tighten to 40-45 lb.in.*			
C	Remova o contra pino, porca e espaçador do eixo de aceleração. *Remove cotter pin, nut, and spacer from throttle shaft.*			
D	Mantenha uma pressão Po de 30 a 50 psig dos limites especificados, usando uma válvula de controle Po. Mantenha a pressão P2 dentro de ± 10 psig do valor especificado para o fluxo de injeção abaixo de 200 pph e entre ± 25 psi nos fluxos superiores, usando uma válvula controladora de pressão Pn. *Maintain Po pressure of 30 to 50 psig on Po pressure gage using 90 back pressure regulator valve, except where otherwise specified. Maintain P2 pressure within ± 10 psig of value specified for nozzle flows below 200 pph and within ± 25 psi at higher flows, using Pn back pressure control valve.*			
E	Ajuste o parafuso de pressão diferencial P1-P2 para uma pressão entre 30 - 47 in.Hg. Ajuste o orifício da *sleeve* da *metering valve* até a pressão diferencial P1-P2 e o fluxo de injeção estarem de acordo com os limites especificados. *Adjust P1-P2 pressure differential adjustment screw between 30 - 47 in.Hg. Adjust metering valve sleeve assembly orifice until P1-P2 pressure differential and nozzle flow are within the limits specified.*			

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*
F	Torqueie as porcas para os valores especificados. Registre todas as pressões diferenciais de P1-P2 e fluxo de injeção e adicionalmente a pressão (Pc-Py) no ponto de teste 2.03. *Torque nuts to values specified. Record all P1-P2 differential pressure and nozzle flows, and additionally, (Pc-Py) pressure at test point 2.03.*			
G	Se o fluxo do injetor não estiver de acordo com os limites especificados, troque o fluxo de ar (Py). Torqueie o fluxo de ar Py no valor especificado. Registre o fluxo de ar (Py) instalado. *If the nozzle flow is not within the specified limits, change Py air flow jet. Torque air flow jet to value specified. Record (Py) air flow jet size installed.*			
H	Após ajustar o parafuso de ajuste da velocidade de marcha lenta, torqueie a porca de 20 – 25 lb.in. *After resetting idle speed adjustment screw, torque nut to 20 – 25 lb.in.*			

TESTE AETS 15818 | *AETS 15818 TEST*

	TEST SPECIFICATION	Number AETS 15818	Rev. L
		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-45B	P/N: 3244770

REL DATE	REV.
RECORDS OF PREVIOUS REV. OMITTED	L
5 AUG 98	

SHT	REV STATUS	SHT	REV
1	L	13	
2	L	14	
3	L	15	
4	L	16	
5	L	17	
6	L	18	
7	L	19	
8	L	20	
9	L	21	
10		22	
11		23	
12		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. 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.

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.

	TEST SPECIFICATION	AETS 15818 SHEET 2 OF SHEETS 9	REV. L

TEST POINT	SPEED RPM	SUPPLY PPH	THRO DEG.	TEMP °F	Pc psia	NOZZLE FLOW, PPH MIN	NOZZLE FLOW, PPH REC	NOZZLE FLOW, PPH MAX	P1 - P2 "Hg	P2 psi

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 the bellows ratio lever cover.

Px - Py [ ] ± 1.2" Hg. Max.

Checked: _____

TEST SPECIFICATION

AETS 15818

SHEET 3 OF SHEETS 9 REV. L

TEST POINT	SPEED RPM	SUPPLY PPH	THRO DEG.	TEMP °F	Pc psia	NOZZLE FLOW, PPH MIN	NOZZLE FLOW, PPH REC	NOZZLE FLOW, PPH MAX	P1 - P2 "Hg	P_2 psi

CHECK RELIEF VALVE OPENING

(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	4	2		3					
1.01	A.R.	200-275	Max		120					
						Relief valve opening	P1-Po	1000	[ ]	1050 psi

CHECK PRESSURIZING VALVE OPENING

(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	4	2		3					
1.02	A.R.	A.R.	Max		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.

METERING VALVE ORIFICE AND BY-PASS HEAD (P1-P2"HG) SETTING

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	3-6	1		4					5
2.01*	5800	1300	Max	-	40.0	240	[ ]	250	[ ]	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

TEST SPECIFICATION

AETS 15818

SHEET 4 OF SHEETS 9 REV.

TEST POINT	SPEED RPM	SUPPLY PPH	THRO DEG.	TEMP °F	Pc psia	NOZZLE FLOW, PPH MIN	NOZZLE FLOW, PPH REC	NOZZLE FLOW, PPH MAX	P1 - P2 "Hg	P_2 psi
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

	4	3-7	1		2-5					6
3.01*	6646	1575			95	492		504		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		X	
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.

TEST SPECIFICATION

AETS 15818

SHEET 5 OF SHEETS 9 REV. \

TEST POINT	SPEED RPM	SUPPLY PPH	THRO DEG.	TEMP °F	Pc psia	NOZZLE FLOW, PPH MIN	NOZZLE FLOW, PPH REC	NOZZLE FLOW, PPH MAX	P1 - P2 "Hg	P_2 psi
	4	2	1		3-6					5
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 -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.

TEST SPECIFICATION

AETS 15818

SHEET 6 OF SHEETS 9 REV. L

TEST POINT	SPEED RPM	SUPPLY PPH	THRO DEG.	TEMP °F	Pc psia	NOZZLE FLOW, PPH MIN	NOZZLE FLOW, PPH REC	NOZZLE FLOW, PPH MAX	P1 - P2 "Hg	P_2 psi
	4	1-7	5		2-6					3-8
4.01	3250	740	28-30	-	30	115	[ ]	125		Pn = 30 psig

Open shut-off valve to Pn gauge.

Set idle stop screw (CW adj. incr. flow) decrease and reset speed after adjustment.

4.02	3250	740								

Idle throttle angle 31° [ ] 35°

Remove rigging pin

Spring [ ] Stripe

LOW END ACCEL. FLOW AND THROTTLE MOVEMENT EFFECT

	2	5	3		1					4-6
5.01	815	200	40	-	Local	85	[ ]	X		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.

	1	3-5			2					4
6.01	4380	990	-	-	70	262	[ ]	274		Pn=130 psig

Set max. idle reset stop. Record T.A. [ ]

Open Pn shut-off valve to Pn gauge. Close valve after test.

	TEST SPECIFICATION	AETS 15818		
		SHEET 7	SHEETS OF 9	REV.

TEST POINT	SPEED RPM	SUPPLY PPH	THRO DEG.	TEMP °F	Pc psia	NOZZLE FLOW, PPH MIN	NOZZLE FLOW, PPH REC	NOZZLE FLOW, PPH MAX	P1 - P2 "Hg	P_2 psi
	2	3-6	1		4					5-7

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.

(b) If nozzle flow change is excessive -
(1) Reset throt 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.

	TEST SPECIFICATION	AETS 15818
		SHEET 8 OF SHEETS 9 — REV.

TEST POINT	SPEED RPM	SUPPLY PPH	THRO DEG.	TEMP °F	Pc psia	NOZZLE FLOW, PPH MIN	NOZZLE FLOW, PPH REC	NOZZLE FLOW, PPH MAX	P1 - P2 "Hg	P_2 psi
	At test point 7.04									
	(a) Operate throttle lever over full range of travel.									
	(b) Record throttle torque.									
	2	3-5	1		4					
7.03	2200	500	-5		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.									
	1	3	2		4					
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. Adjust screw so that nozzle flow is within 1 PPH of T.P. 8.01.									
						0		1		

	TEST SPECIFICATION	AETS 15818
		SHEET 9 OF SHEETS 9
		REV. L

TEST POINT	SPEED RPM	SUPPLY PPH	THRO DEG.	TEMP °F	Pc psia	NOZZLE FLOW, PPH MIN	NOZZLE FLOW, PPH REC	NOZZLE FLOW, PPH MAX	P1 - P2 "Hg	P_2 psi

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.

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.

TESTE AETS 15819 | *AETS 15819 TEST*

TEST SPECIFICATION

Number AETS 15819 — Rev. J

Sheet 1 of 6

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-45B	P/N: 3244770

REV.	RECORDS OF REVISIONS	REL DATE
J	REV CHANGED	10 AUG 98

SHT	REV STATUS	SHT	REV
1	J	13	
2	J	14	
3	J	15	
4	J	16	
5	J	17	
6	J	18	
7		19	
8		20	
9		21	
10		22	
11		23	
12		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.

	TEST SPECIFICATION	AETS 15819		
		SHEET 2	SHEETS OF 6	REV. J

TEST POINT	SPEED RPM	SUPPLY PPH	THRO DEG.	TEMP °F	Pc psia	NOZZLE FLOW, PPH MIN	NOZZLE FLOW, PPH REC	NOZZLE FLOW, PPH MAX	P1 - P2 "Hg	P_2 psi
CHECK RELIEF VALVE OPENING										
	(a) Cap outlet port.									
	(b) Increase fuel flow until fuel supply is within limits specified and observe P1-Po differential.									
	1	4	2		3					
1.01	A.R.	200-275	Max		120					
						Relief valve opening	P1-Po 1000			1050 psi
CHECK PRESSURIZING VALVE OPENING										
	(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	4	2		3					
1.02	A.R.	A.R.	Max		120					
						Press. valve opening	P1 - Po 55			68 psi
METERING VALVE ORIFICE AND BY-PASS HEAD (P1-P2"HG) SETTING										
	Note: At test points 2.01, 2.02 & 2.05 open shut-off valve to Pn gauge. Close valve after tests.									
	2	3-6	1		4					5
2.01	5800	1300	Max	-	40.0	235		255		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

TEST SPECIFICATION

AETS 15819

SHEET 3 OF SHEETS 6 — REV. J

TEST POINT	SPEED RPM	SUPPLY PPH	THRO DEG.	TEMP °F	Pc psia	NOZZLE FLOW, PPH MIN	NOZZLE FLOW, PPH REC	NOZZLE FLOW, PPH MAX	P1 - P2 "Hg	P_2 psi
	MAX. GOVERNOR SPRING SETTING									
	4	3-7	1		2-5					6
3.01	6646	1575	Max.		95	473		523		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.									

	TEST SPECIFICATION	AETS 15819 SHEET 4 SHEETS OF 6	REV. J

TEST POINT	SPEED RPM	SUPPLY PPH	THRO DEG.	TEMP °F	Pc psia	NOZZLE FLOW, PPH MIN	REC	MAX	P1 - P2 "Hg	P_2 psi
	4	1-7	5		2-6					3-8
4.01	3250	740	28-30	-	30	112		128		Pn = 30 psig
	Open shut-off valve to Pn gauge.									
	Set idle stop screw (CW adj. incr. flow) decrease and reset speed after adjustment.									
4.02	3250	740								
	Idle throttle angle 31°							35°		
	Remove rigging pin									
	2	5	3		1					4-6
5.01	815	200	40	-	Local	80		X		Pn = 18 psig
5.02	1700*	400	40	-	25.0	148		160		Pn = 48 psig
					Move T.A. to 30°			5 PPH max. dec.		
	1	3-5			2-4					6
6.01	4380	990	-	-	70	258		278		Pn=130 psig
					Record T.A.					

IDLE SPEED STOP SETTING AND PICK-UP ANGLE

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).

Open shut-off valve to Pn gauge.

Set idle stop screw (CW adj. incr. flow) decrease and reset speed after adjustment.

Idle throttle angle 31° [ ] 35°

Remove rigging pin

LOW END ACCEL. FLOW AND THROTTLE MOVEMENT EFFECT

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.

Hold idle reset lever against idle reset stop. Record fuel flow.

Record T.A. [ ]

Open Pn shut-off valve to Pn gauge. Close valve after test.

	TEST SPECIFICATION	AETS 15819			REV. J
		SHEET 5	OF	SHEETS 6	

TEST POINT	SPEED RPM	SUPPLY PPH	THRO DEG.	TEMP °F	Pc psia	NOZZLE FLOW, PPH MIN	REC	MAX	P1 - P2 "Hg	P_2 psi
	2	3-6	1		4					5-7
7.01	2200	500	20	-	A.R.	160		170		Pn = 55psig

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.

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	☐
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.

TEST SPECIFICATION

AETS 15819

SHEET 6 OF SHEETS 6 REV. J

TEST POINT	SPEED RPM	SUPPLY PPH	THRO DEG.	TEMP °F	Pc psia	NOZZLE FLOW, PPH MIN	NOZZLE FLOW, PPH REC	NOZZLE FLOW, PPH MAX	P1 - P2 "Hg	P_2 psi
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.									
	1	3	2		4					
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*

HISTÓRICO DE REVISÃO / *REVISION HISTORY*

REV	*DATA (DATE)*	*MOTIVO DA REVISÃO (REVISION REASON)*	*NOME (Name)*
00	**Aug 2nd, 2022**	Original	Jean Andrade
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