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*						
3244770-1	3244770-2	3244770-3	3244770-4	3244770-5	3244770-6	3244770-7

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	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.*			

CALIBRAÇÃO E LIMITAÇÃO DO TESTE | *CALIBRATION AND TEST LIMITATIONS*

Table 701 (Sheet 1 of 5)
Calibration and Test Limitations

TEST POINT	SPEED (rpm)	FUEL SUPPLY (pph)	THROTTLE ANGLE (deg.)	Pc AIR SUPPLY (psia)	NOZZLE FLOW (pph) Min.	Recorded	Max.	P1-P2 (in. Hg.)	P2 (psig)	MISCELLANEOUS	NOTES
Relief Valve Opening Check											
SEQ.	1	4	2	3							
1.01	0	200/275	MAX	120						P1-Po(psi) 1000 [ ] 1050	1.
Pressurizing Valve Opening Check											
SEQ.	1		2	3							
1.02	0	-	MAX	120						P1-Po(psi) 55 [ ] 68	2.
Metering Valve Orifice and Bypass Valve Differential Pressure Setting									Pn (psig)		
SEQ.	2	3,6	1	4					5		
* 2.01	5800	1300	MAX	40.0	240	[ ]	250	[ ]	113		3.
* 2.02	2900	660	28-30	40.0	90	[ ]	93	[ ]	18		3.
									P2 (psig)		
* 2.03	5800	1300	MAX.	90.0	542	[ ]	562	[ ]	510	Pc-Py [ ]	3,4.
* 2.04	5800	1300	MAX.	120.0	714	[ ]	758	[ ]	860		
* 2.05	5800	1300	MAX.	135.0	749	[ ]	X	[ ]	860		

NOTES

1. Record relief valve opening pressure.
2. Record pressurizing valve pressure.
3. Set P1-P2 to 30 to 47 inches Hg and record.
4. Record Pc-Py pressure. Max. 3.9 inches Hg.

Table 701 (Sheet 2 of 5)
Calibration and Test Limitations

TEST POINT	SPEED (rpm)	FUEL SUPPLY (pph)	THROTTLE ANGLE (deg.)	Pc AIR SUPPLY (psia)	NOZZLE FLOW (pph) Min.	Recorded	Max.	P1-P2 (in. Hg)	P2 (psig)	MISCELLANEOUS	NOTES
Metering Valve Orifice and Bypass Valve Differential Pressure Setting (Cont'd)											
SEQ.	2	3,6	1	4					5		
* 2.06	5800	1300	MAX.	135.0	703		723		815		5.
									Pn (psig)		
* 2.07	5800	1300	MAX.	40.0	-10		+10		113		6.
* 2.08	1700	400	MAX.	25	149		159		48		
Governor Spring Setting and Speed Reset Adjustment											
									P2 (psig)		
SEQ.	4	3,7	1	2,5					6		
* 3.01	6646	1575		95	492		504		420		7.
* 3.02	6796	1575		95	X		X		280	pph Diff ___ Bleed size ___	8,9.
* 3.03		1575		95	X		X		420		10.
									Pn (psig)		
3.03A	6646	1575	30-35	95	X		225		100		10A.

Table 701 (Sheet 3 of 5)
Calibration and Test Limitations

TEST POINT	SPEED (rpm)	FUEL SUPPLY (pph)	THROTTLE ANGLE (deg.)	Pc AIR SUPPLY (psia)	NOZZLE FLOW (pph) Min.	Recorded	Max.	POWER RESET (psig)	P2 (psig)	MISCELLANEOUS	NOTES
Governor Spring Setting ans Water Reset Adjustment (Cont'd)											
SEQ.	4	2	1	3,6					5		
3.04	6540	1575	87	95	X		X	0	420		
3.05	6650	1575	87	95	X		X	30	420	-7 pph Diff. +7	11.
3.06	6646	1575	MAX.	95	492		504	0	420		
3.07	6686	1575	MAX.	95	X		X	30	420	-5 pph Diff. +5	12.
Idle Speed Stop Setting and Trottle Pick-Up Angle											
									Pn (psig)		
SEQ.	4	1,7	5	2,6					3,8		
4.01	3250	740	28-30	30.0	115		125		30		
4.02	3250	740								pph Incr. ___ Spring Stripes ___	13.
Low End Acceleration and Throttle Movement Effect											
SEQ	2	5	3	1					4,6		
5.01	815	200	40	Ambient	85		X		18		
5.02	1700	400	40	25.0	149		159		48	pph Decr. ___	14.

NOTES

5. Set maximum metering valve stop.
6. Hysteresis from Test Point 2.01.
7. Set governor break throttle angle at 89 to 91 degrees.
8. Record nozzle flow difference (100 to 130 pph) from Test Point 3.01.
9. Record air flow jet (45, IPL Fig. 2) size finally installed (Size 58D to 62D).
10. Hysteresis from Test Point 3.01. Nozzle flow same as for Test Point 3.01.

10A If minimum schedule cannot be met, select larger Py bleed size and recheck Test Points 3.01 through 3.03A.

11. Record nozzle flow difference (±7 pph) from TP. 3.04.
12. Record nozzle flow difference (±5 pph) from TP. 3.06.
13. Move thottle angle 31 to 35 degrees. Observe that minimum nozzle flow increase is not more than 4 pph from Test Point 4.01 and record. Record throttle angle. Record spring stripes used.
14. Move throttle angle to 30 degrees. Observe that maximum nozzle flow decrease is not more than 5 pph and record.

Table 701 (Sheet 4 of 5)
Calibration and Test Limitations

TEST POINT	SPEED (rpm)	FUEL SUPPLY (pph)	THROTTLE ANGLE (deg.)	Pc AIR SUPPLY (psia)	NOZZLE FLOW (pph) Min.	Recorded	Max.	P1-P2 (in. Hg.)	Pn (psig)	MISCELLANEOUS	NOTES
Maximum Idle Reset Stop Adjustment											
SEQ.	1	3,5		2					4		
6.01	4380	990		70	262		274		130		15.
Cut-off Modulation and Cut-off Leakage											
SEQ.	2	3,6	1	4					5,7		
7.01	2200	500	20	A.R.	160		170		55	pph Incr.	16,17.
7.02	2200	500	8-10	A.R.	0		0.5 c.c./ min.			P1 pressure	18.
SEQ.	2	3,5	1	4							
7.03	2200	500	-5	A.R.						P1 pressure	19.
7.04	2200	500	MIN. MAX. MIN.	Ambient						Throttle Torque	20.
7.05	2200	500	8-10	Ambient	0		20.0 c.c./ min.			P1 pressure	18.
7.06	6645	1575	MAX.	135	0		85			Min. 0.375 in.	21.

NOTES

15. Record Throttle angle.
16. Move throttle angle to 30 degrees. Observe that maximum nozzle flow increase is not more than 2 pph and record.
17. Record P1-P2 pressure.
18. Observe P1 pressure does not exceed 250 psig and record.
19. P1 pressure to be equal to, or less than, P1 at Test Point 7.02. Record P1.
20. Observe that throttle torque does not exceed 15 lb. in. maximum and record.
21. Set throttle angle to -5 degrees. Distance between centers of pin and throttle lever link must be minimum 0.375 inch. Observe and record nozzle flow (85 pph maximum).

Table 701 (Sheet 5 of 5)
Calibration and Test Limitations

TEST POINT	SPEED (rpm)	FUEL SUPPLY (pph)	THROTTLE ANGLE (deg.)	Pc AIR SUPPLY (psia)	NOZZLE FLOW (pph) Min.	Recorded	Max.	P1-P2 (in.Hg.)	Pn (psig)	MISCELLANEOUS	NOTES
Spill Valve Setting (For units P/N 3244770-1 through -5)											
SEQ.	1	3	2	4							
8.01	1530	370	28-30	1.0	x		X		32		22.
8.02	1530	370	28-30	1.0	82		86		25		22.
8.03	2400	550	28-30	9.0	X		X		60		22.
8.04	2400	550	28-30	9.0	X		X		60	0 pph Diff. 1	22,23.
8.05	Check spill valve Pa port for leakage.									OK REJ	24.
Spill Valve Setting (For units P/N 3244770-6 and up)											
SEQ.	1	3	2	4							
8.01	1530	370	28-30	1.0	X		X		32		22.
8.02	1530	370	28-30	1.0	X		X		32	0 pph Diff. 1	22,25.
8.05	Check spill valve Pa port for leakage									OK REJ.	24.
Detent Cup Measurement											
9.01										Dim 'X'	26.

NOTES

22. Record nozzle flow.
23. Record difference in flow from from TP. 8.03.
24. Port may be wet but no measurable leakage permitted.
25. Record difference in flow from TP. 8.01
26. Measure dimension 'X' as per Figue 704, and record.

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
	MM/DD/AAAA		
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