

DOCKET NO. SA-516

EXHIBIT NO. 11G

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

COMPONENT SHOP RECORD AND TESTING CARDS

(PAGES G-1 THRU G-27)

TWA**COMPONENT SHOP RECORD CARD**TWA P/N 15000 SERIAL NO. 285

FORM NO. M-241 (8-87)

MFG P/N RR24360 SERIAL NO. 285

REMOVAL DATA		REASON FOR REMOVAL	FINDINGS AND WORK PERFORMED	SERVICEABLE DATE
HRS.	<u>7947</u>	<u>PUMP INDIC</u>	<u>WORN BEARINGS CAUSING ROTOR RUB. REPLACED STATOR, BEARINGS BLADES, VALVE HOUSING, LINER + ROTOR 0/H</u>	MECH.
PLN.	<u>17119</u>			<u>2744</u>
DATE	<u>8-15-94</u>			DATE
STA.	<u>STL</u>			<u>10-18-94</u>
HRS.				MECH.
PLN.				
DATE				DATE
STA.			M.O. - S/B	
HRS.				MECH.
PLN.				
DATE				DATE
STA.			M.O. - S/B	
HRS.				MECH.
PLN.				
DATE				DATE
STA.			M.O. - S/B	
HRS.				MECH.
PLN.				
DATE				DATE
STA.			M.O. - S/B	

G-1

Entry	A.C. Eng	DATE RMVD	STA	TSLO	DATE	S.C.	O.H.	U J	MECH	Reason for removal
1	7115	6-12-73	JFK	7942	6-22-73		F	J	96816	PUMP FROZEN TO TEST
2					8-23-73				96816	REC'D FROM FACTORY
3	-	-	-	-	4/8/5		✓		67138	LAW PUMP
4	7119	3/19/78	LAX		4/18/78		X		41218	Low pressure
5	17109	7-11-90	JFK	59678	9-6-90		REF	J	70716	INCL
6	17134	9-26-91	LAX	2119	1-15-92		REF	J	70716	won't pump
7										
8										
9										
10										

Entry in the S.C. or O.H. columns will be by inserting (T) to indicate time change or (F) for failure.

Entry Findings and Repairs

1	BLADES JAMMED WITH METAL FLAKES FUSE BLOWN IN STATOR	comp overhaul	TO FACTORY FOR
2	TEST OIC		
3	Overhaul unit returned to factory for test. ok for use		
4	Routed overhaul.		
5	PUMP ROTOR WORN	MOTOR ROTOR SPLINE BROK	
6	REPLACED STATOR & ROTOR.		
7			
8			
9			
10			

Serial No. M 285 Date 10-20-94 Tested By: 92412

I. Break-in Run (1575 - 1700 PPH for 15 minutes).

TESTED

II. Relief Valve Adj.
Shim if necessary.

Disc. Press 17.3 AT 1524PPH psid.

III. Calibration Test

Wf	Disc Press.	Phase L-1	Phase L-2	Phase L-3	Amps Per Phase Max.
0	24.2	1.1	1.1	1.1	1.4
381	22.4	1.1	1.1	1.1	1.4
762	20.6	1.1	1.1	1.1	1.4
1143	19.3	1.1	1.1	1.1	1.4
1524	17.3	1.0	1.0	1.0	1.4
1905	15.4	1.0	1.0	1.0	1.4

IV. Reprime Test

REPRIME TEST	LIMITS
<u>6.7</u>	9.0 Seconds Max.

@ 1524 PPH

V. External Leakage

No leakage allowed from electrical connection or plugs.

During Test OK

G-3

TWA**COMPONENT SHOP RECORD CARD**

TWA P/N

15001

SERIAL NO

M 365

FORM NO. M-241 (8-87)

MFG P/N

RA 24640

SERIAL NO

M 365

REMOVAL DATA	REASON FOR REMOVAL	FINDINGS AND WORK PERFORMED	SERVICEABLE D
HRS. <u>69670</u>	<u>INOP</u>	<u>BRUSHES WORN ROTOR DAMAGED</u>	MECH.
PLN. <u>17133</u>			<u>70716</u>
DATE <u>4-2-90</u>			DATE
STA. <u>MKC</u>			<u>9-6-90</u>
HRS.		M.O. - S/B	MECH.
PLN.			
DATE			DATE
STA.		M.O. - S/B	
HRS.			MECH.
PLN.			
DATE			DATE
STA.		M.O. - S/B	
HRS.			MECH.
PLN.			
DATE			DATE
STA.		M.O. - S/B	
HRS.			MECH.
PLN.			
DATE			DATE
STA.		M.O. - S/B	

G-4

Serial Nbr. M365 Date 9-12-90 Tested By 94734

1. Break in run: Minimum pressure for 30 minutes. Record Flow 1581 PSID 12.5.

CAUTION: ALL TESTS BELOW - 2 MINUTES ON/1 MINUTE OFF - DUTY CYCLE.

2. Relief Valve Adj.

Set Wf 1190 PPH. Discharge pressure must be above 18 PSID. Shim if necessary.

Record Discharge pressure 26.5 PSID.

3. Stop and Restart Test

Set Wf at 1190 PPH	Volts	Amps	Limits
Before shutoff	28.0	5.1	None
After Restart	27.9	4.9	Within 100 milliseconds

4. Calibration Test

PPH Wf	Disc Press	Disc. Press Limits	Amps	Max Amps
0	30.0	18 PSID Min.	6.8	7.2
253	29.0	18 PSID Min.	6.3	7.2
503	27.5	18 PSID Min.	6.0	7.2
756	25.5	18 PSID Min.	5.5	7.2
1006	24.0	18 PSID Min.	5.4	7.2
1190	21.5	18 PSID Min.	4.9	7.2

5. Reprime Test

second try
 5958
 1/1/85

Reprime Time	Limits
17.1	15 Seconds

6. External leak check 2, 50, 75 & -6 PSIG
 No leakage allowed

7. Dry Run

Operate for 2 minutes with no fuel. Amps must not exceed 3 Amps.

Record 2.6

TWA 

COMPONENT SHOP RECORD CARD

TWA P/N

15012

SERIAL NO.

0003

FORM NO. M-241 (8-87)

MFG P/N

SERIAL NO.

REMOVAL DATA	REASON FOR REMOVAL	FINDINGS AND WORK PERFORMED	SERVICEABLE DA
HRS. <u>120</u>	<u>NO WRITE UP</u>	<u>FUSE OPEN</u> <u>REPLACED FUSE</u> <u>ROTOR & PACKING</u> M.O. - S/B	MECH.
PLN. <u>17105</u>			<u>70716</u>
DATE <u>9-16-93</u>			DATE
STA. <u>JFK</u>			<u>12-15-93</u>
HRS.			MECH.
PLN.			
DATE			DATE
STA.		M.O. - S/B	
HRS.			MECH.
PLN.			
DATE			DATE
STA.		M.O. - S/B	
HRS.			MECH.
PLN.			
DATE			DATE
STA.		M.O. - S/B	
HRS.			MECH.
PLN.			
DATE			DATE
STA.		M.O. - S/B	

M139-1522TIS FUEL COMPONENT TEST RECORD 28-22-02
 May 21/82

TWA STK NBR: 15012 MFG P/N: 60-75501

S/N 680003

NOMENCLATURE: Fuel Boost Pump

DATE: 12-27-93 MECHANIC: 92412

TWA STK NBR: 15012

TEST

I. Stop & Restart Test

NOTE: Fill outer housing with fuel before starting pump.

	PHASE L-1	PHASE L-2	PHASE L-3	LIMITS
BEFORE SHUTOFF	4.5	4.5	4.5	
AFTER RESTART	4.5	4.5	4.5	±.10 Amp of Before Shutoff

II. Calibration Test

WY	DTSC PRESS	DTSC PRESS LIMITS	PHASE L-1	PHASE L-2	PHASE L-3	MAX. AMPS PER PHASE
0	25.0	20.0 - 26.0	4.4	4.4	4.4	6.0
1000	24.5	20.0 - 29.0	4.4	4.4	4.4	6.0
4000	23.0	17.5 - 24.0	4.4	4.4	4.4	6.0
7000	21.4	16.0 - 23.0	4.4	4.4	4.4	6.0
10000	19.3	14.7 - 22.0	4.4	4.4	4.4	6.0
13000	17.0	13.4 - 22.0	4.4	4.4	4.4	6.0
16000	15.0	12.0 - 22.0	4.5	4.5	4.5	6.0
18000	13.5	11.2 - 22.0	4.5	4.5	4.5	6.0
20000	11.8	10.3 - 22.0	4.5	4.5	4.5	6.0
22000	9.9	9.3 - 22.0	4.6	4.6	4.6	6.0

III. Reprime Test

REPRIME TIME	LIMITS
1.5	4.0 Seconds Max.

IV. External Leakage

No Leakage Allowed at Anytime During Test.

OK

S/N 680003

REMOVAL INFO - FINDINGS & REPAIR CARD

P/N 15012 UNIT BOOST PUMP MFG. SER. NO. 6795309A TWA SER. NO. 5309A

ENTRY	A.C. ENG.	DATE RMVD	STA	TSLO	DATE	S.C.	O.H.	U J	MECH.	REASON FOR REMOVAL
1.	17203	2-13-89	MKC	30354	4-3-89				REP J 70716	INOP EXC ^{4/0 CT} A-A
2.	17119	10-14-91	JFK	9868	11-21-91				REP J 70716	NO WRITE UP
3.	17134	12-23-91	114	247	3-2-92				REP J 70716	INOP
4.										
5.										
6.										
7.										
8.										
9.										
10.										

Entry in the S.C. or O.H. columns will be by inserting (T) to indicate time change or (F) for failure.

FINDINGS & REPAIRS

1.	STATOR OPEN IMPELLER PLATES + INLET DAMAGED RE
2.	REPLACED BEARINGS + BEPKIME IMPELLER
3.	STATOR BURNED UP
4.	
5.	
6.	
7.	
8.	
9.	
10.	

M139-1522TIS FUEL COMPONENT TEST RECORD 28-22-02
 May 21/82

TWA STK NBR: 15012 MFG P/N: 60-75501

S/N 95309A

NOMENCLATURE: Fuel Boost Pump

DATE: 3-2-92 MECHANIC: 92412

TWA STK NBR:
15012

I. Stop & Restart Test

NOTE: Fill outer housing with fuel before starting pump.

	PHASE L-1	PHASE L-2	PHASE L-3	LIMITS
BEFORE SHUTOFF	4.6	4.7	4.6	
AFTER RESTART	4.6	4.7	4.6	±.10 Amp of Before Shutoff

II. Calibration Test

WV	DISC PRESS	DISC PRESS LIMITS	PHASE L-1	PHASE L-2	PHASE L-3	MAX. AMPS PER PHASE
0	26.0	18.5 - 26.0	4.7	4.7	4.6	6.0
1000	25.0	18.5 - 25.0	4.6	4.7	4.6	6.0
4000	24.0	17.5 - 24.0	4.6	4.6	4.5	6.0
7000	22.8	16.0 - 23.0	4.6	4.6	4.5	6.0
10000	20.6	14.7 - 22.0	4.5	4.5	4.4	6.0
13000	18.2	13.4 - 22.0	4.5	4.5	4.4	6.0
16000	15.9	12.0 - 22.0	4.6	4.6	4.5	6.0
18000	14.3	11.2 - 22.0	4.6	4.6	4.5	6.0
20000	12.5	10.3 - 22.0	4.7	4.7	4.6	6.0
22000	10.6	9.3 - 22.0	4.7	4.7	4.6	6.0

III. Reprime Test

REPRIME TIME	LIMITS
1.7	4.0 Seconds Max.

IV. External Leakage

No Leakage Allowed at Anytime During Test.

OK

S/N 95309A

Entry	A.C. Tag	DATE RMD	STA	TSIC	DATE	S.C.	O.E.	U J	MECH	Reason for removal
1	7118	5/28/74	ORD	9604	4/27/74		X	J	41268	Precautionary.
2		RETURNED		FROM	TEST				11-29-74	
3		RETURNED		FROM	TEST				12-14-76	
4	7115	11/4/81	JFK	20708	11/30/81		X	J	41268	Inop.
5	"	"	"	"	11/5/82		X		41268	Right for Test ^{Engine in} stall.
6	7104	5/29/86	MCI	17869	4/24/86		X		92108	nothing on tag
7	17301	11/24/86	JFK	3209	12/8/86	Rep		U	2728	inop
8	17301	6-9-91	MCI	LKN	9-11-91		REP	J	7076	INOP
9										
10										

Entry in the S.C. or O.E. columns will be by inserting (T) to indicate time change or (F) for failure.

Entry	Findings and Repairs
1	Field shorted cycle overh.
2	
3	OVERHAULED
4	Routed overh.
5	" "
6	Stator open + burnt OH ran O/K
7	ROTOR SCORED
8	
9	
10	

M139-1522TIS FUEL COMPONENT TEST RECORD 28-22-02
 May 21/82

TWA STK NBR: 15012 MFG P/N: 60-75501

S/N 700763

NOMENCLATURE: Fuel Boost Pump

DATE: 9-24-91 MECHANIC: 92412

TWA STK NBR:

15012

I. Stop & Restart Test

NOTE: Fill outer housing with fuel before starting pump.

	PHASE L-1	PHASE L-2	PHASE L-3	LIMITS
BEFORE SHUTOFF	4.7	4.6	4.8	
AFTER RESTART	4.7	4.6	4.7	±.10 Amp of Before Shutoff

II. Calibration Test

WF	DISC PRESS	DISC PRESS LIMITS	PHASE L-1	PHASE L-2	PHASE L-3	MAX. AMPS PER PHASE
0	25.0	18.5 - 28.0	4.6	4.6	4.7	6.0
1000	24.6	18.5 - 25.0	4.7	4.6	4.7	6.0
4000	23.1	17.5 - 24.0	4.6	4.6	4.6	6.0
7000	21.4	16.0 - 23.0	4.6	4.5	4.6	6.0
10000	19.1	14.7 - 22.0	4.5	4.5	4.6	6.0
13000	16.9	13.4 - 22.0	4.6	4.5	4.6	6.0
16000	14.7	12.0 - 22.0	4.6	4.6	4.6	6.0
18000	13.1	11.2 - 22.0	4.7	4.6	4.7	6.0
20000	11.4	10.3 - 22.0	4.7	4.6	4.8	6.0
22000	9.5	9.3 - 22.0	4.7	4.6	4.8	6.0

III. Reprime Test

REPRIME TIME	LIMITS
1.6	4.0 Seconds Max.

IV. External Leakage

No Leakage Allowed at Anytime During Test.

OK.

S/N 700763

Entry	A.C. Eng	DATE RMYD	STA	TSLO	DATE	S.C.	C.H.	U J	MECH	Reason for removal
1	7105	7-29 71	LAX	SE08	9-21 72		F	J	95816	TROUBLE SHOOTING
2					10-26 72				06516	REC'D FROM FACTORY TEST
3		3-12 72		100	5-23 73		F	J	96816	PAA PAUL ITEM
4					6-22 73				96816	REC'D FROM FACTORY TEST
5	7105	11/13/74	?	23 193	11/21/74		X		4268	High pressure thoo
6	7105	7-14-8	JFK	46800	10-5-8		REF	J	70116	LOW PRESSURE LITE
7										
8										
9										
10										

Entry in the S.C. or O.H. columns will be by inserting (T) to indicate time change or (F) for failure.

Entry	Findings and Repairs
1	2 FUSES BLOWN - ROTOR HAD BEEN DRAGGING DUE TO BEARING FAILURE TO FACTORY FOR MOD 28-2 + TEST
2	TEST OK
3	2 FUSES BLOWN - CAUSE UNKNOWN TO FACTORY FOR TEST
4	TEST OK
5	Port and Inlet Turb OK. Inlet Mod.
6	STATOR SHORTED
7	
8	
9	
10	

M139-1522TIS FUEL COMPONENT TEST RECORD 28-22-02
 May 21/82

TWA STK NBR: 15012 MFG P/N: 60-75501

S/N 690223

NOMENCLATURE: Fuel Boost Pump

DATE: 11-3-90 MECHANIC: 92412

TWA STK NBR: 15012

I. Stop & Restart Test

NOTE: Fill outer housing with fuel before starting pump.

	PHASE L-1	PHASE L-2	PHASE L-3	LIMITS
BEFORE SHUTOFF	4.8	3.8	4.7	
AFTER RESTART	4.5	4.1	4.8	±.10 Amp of Before Shutoff

II. Calibration Test

WT	DISC PRESS	DISC PRESS LIMITS	PHASE L-1	PHASE L-2	PHASE L-3	MAX. AMPS PER PHASE
0	23.4	18.5 - 26.0	4.6	3.8	4.6	6.0
1000	22.9	18.5 - 25.0	4.6	3.6	4.6	6.0
4000	21.7	17.5 - 24.0	4.5	3.6	4.5	6.0
7000	20.4	16.0 - 23.0	4.5	2.9	4.6	6.0
10000	18.8	14.7 - 22.0	4.5	3.0	4.6	6.0
13000	16.8	13.4 - 22.0	4.6	3.1	4.6	6.0
16000	14.8	12.0 - 22.0	4.6	3.4	4.6	6.0
18000	13.3	11.2 - 22.0	4.4	3.0	4.7	6.0
20000	11.6	10.3 - 22.0	4.8	3.8	4.7	6.0
22000	10.1	9.3 - 22.0	4.8	2.5	4.9	6.0

III. Reprime Test

REPRIME TIME	LIMITS
1.8	4.0 Seconds Max.

IV. External Leakage

No Leakage Allowed at Anytime During Test.

OK

S/N 690223

TWA

COMPONENT SHOP RECORD CARD

TWA P/N 15013

SERIAL NO. 690469

FORM NO. M-241 (8-87)

MFG P/N 60-203104

SERIAL NO. 2690469

REMOVAL DATA		REASON FOR REMOVAL	FINDINGS AND WORK PERFORMED	SERVICEABLE DATE
HRS. <u>64</u>		<u>WILL NOT FLOW FUEL (OPEN FUSES)</u>	<u>REPLACED STATOR BEARINGS & ROTOR O/H</u>	MECH. <u>27448</u>
PLN. <u>17108</u>				DATE <u>3-14-96</u>
DATE <u>1-24-96</u>				
STA. <u>JFK</u>				
HRS.			M.O. - S/B	
PLN.				MECH.
DATE				DATE
STA.			M.O. - S/B	
HRS.				MECH.
PLN.				DATE
DATE				DATE
STA.			M.O. - S/B	
HRS.				MECH.
PLN.				DATE
DATE				DATE
STA.			M.O. - S/B	
HRS.				MECH.
PLN.				DATE
DATE				DATE
STA.			M.O. - S/B	

G-14

TWA**COMPONENT SHOP RECORD CARD**

TWA P/N

15013

SERIAL NO.

690469

FORM NO. M-241 (8-87)

MFG P/N

60-703104

SERIAL NO.

12690469

REMOVAL DATA	REASON FOR REMOVAL	FINDINGS AND WORK PERFORMED	SERVICEABLE DATA
HRS. 8883	TIME	REPLACED ROTOR, STATOR BOTH PORT PLATES, REPAIR ROTOR & BEARINGS M.O. - S/B O/H	MECH.
PLN. 17303			274113
DATE 9-24-95			DATE
STA. JFK			10-13-95
HRS.			MECH.
PLN.			
DATE			DATE
STA.		M.O. - S/B	
HRS.			MECH.
PLN.			
DATE			DATE
STA.		M.O. - S/B	
HRS.			MECH.
PLN.			
DATE			DATE
STA.		M.O. - S/B	
HRS.			MECH.
PLN.			
DATE			DATE
STA.		M.O. - S/B	

G-15

Serial Nbr. 690469 Date 3-18-96 Tested By 92412

I. Stop and Restart Test

TESTED

NOTE: Fill outer housing with fuel before starting pump.

	PHASE A-1	PHASE A-2	PHASE A-3	
BEFORE SHUTOFF	13.9	14.0	13.8	LIMITS
AFTER SHUTOFF	13.9	14.0	13.8	±0.5 Amp of Before Shutoff
G2 PRESSURE *	Condition I Min. 13.0 PSI ACT =			G2 Gage is less than 6 inches above pump center line
	Condition II Min. 11.6 PSI ACT = 17.0			Existing G2 gage is 4.5 feet above pump center line **

- * Read G2 Pressure at 6,000 to 57,000 PPH weight flow.
- ** Reading adjusted (.3217 PSI x 4.5 ft) to compensate for gage elevation.

II. Calibration Test

Wt	Disk Press	Disc Press Limits	AMPS			VOLTS			Actual Wattage	Maximum Wattage
			Phase A-1	Phase A-2	Phase A-3	Phase L-1	Phase L-2	Phase L-3		
0	48.6	47.6-50.4	10.0	10.1	10.0	117	117	117	2697	4050
6,000	47.5	45.9-50.4	10.6	10.7	10.6	117	117	117	2908	4135
12,000	45.4	44.0-50.4	11.3	11.4	11.3	116	116	116	3124	4235
20,000	42.6	41.2-50.4	12.3	12.3	12.2	116	116	116	3430	4355
22,000	42.0	40.3-50.4	12.5	12.6	12.5	116	116	116	3511	4365
30,000	38.7	37.3-50.4	13.3	13.4	13.3	116	116	116	3748	4560
60,000	24.2	23.9-50.4	13.8	13.9	13.8	116	116	116	3903	4560

III. Reprime Test

REPRIME TIME	LIMITS
2.1	2.5 Seconds Max.

IV. External Leakage

No Leakage Allowed at Anytime During Test

OK

TWA

COMPONENT SHOP RECORD CARD

(690394)

TWA P/N 15013

SERIAL NO. 394

FORM NO. M-241 (8-87)

MFG P/N 60-703104

SERIAL NO. 1069039

REMOVAL DATA	REASON FOR REMOVAL	FINDINGS AND WORK PERFORMED	SERVICEABLE DA
HRS. 8898 PLN. 17302 DATE 3-25-92 STA. JFK	Time change	Replaced worn primer, inglet bearings, and liner per M.M. 28-31-01	MECH. 5/309 DATE 6-11-92
HRS. 8909 PLN. 17108 DATE 1-23-94 STA. JFK	TIME CHANGE	REPLACED BEARINGS O/H	MECH. 27448 DATE 12-6-94
HRS. PLN. DATE STA.		M.O. - S/B	MECH. DATE
HRS. PLN. DATE STA.		M.O. - S/B	MECH. DATE
HRS. PLN. DATE STA.		M.O. - S/B	MECH. DATE

Serial Nbr. 690394 Date 12-8-94 Tested By 92412

I. Stop and Restart Test

NOTE: Fill outer housing with fuel before starting pump.

TESTED

	PHASE A-1	PHASE A-2	PHASE A-3	
BEFORE SHUTOFF	14.5	14.7	14.6	LIMITS
AFTER SHUTOFF	14.5	14.7	14.6	±0.5 Amp of Before Shutoff
G2 PRESSURE * 16.0	Condition I Min. 13.0 PSI ACT =			G2 Gage is less than 6 inches above pump center line
	Condition II Min. 11.6 PSI ACT = 16.0			Existing G2 gage is 4.5 feet above pump center line **

* Read G2 Pressure at 6,000 to 57,000 PPH weight flow.

** Reading adjusted (.3217 PSI x 4.5 ft) to compensate for gage elevation.

II. Calibration Test

WT	Disk Press	Disc Press Limits	AMPS			VOLTS			Actual Wattage	Maximum Wattage
			Phase A-1	Phase A-2	Phase A-3	Phase L-1	Phase L-2	Phase L-3		
0	50.4	47.6-50.4	10.7	10.9	10.8	117	117	117	2639	4050
6,000	49.5	45.9-50.4	10.9	11.1	11.0	116	116	116	2738	4135
12,000	48.0	44.0-50.4	11.5	11.6	11.6	116	116	116	2929	4235
20,000	45.5	41.2-50.4	12.3	12.5	12.4	116	116	116	3216	4355
22,000	45.0	40.3-50.4	12.6	12.7	12.6	116	116	116	3304	4365
30,000	42.0	37.3-50.4	13.3	13.5	13.4	116	116	116	3545	4560
60,000	27.0	23.9-50.4	14.4	14.6	14.6	116	116	116	3901	4560

III. Reprime Test

REPRIME TIME	LIMITS
1.7	2.5 Seconds Max.

IV. External Leakage

No Leakage Allowed at Anytime During Test

O.K.

TWA**COMPONENT SHOP RECORD CARD**TWA P/N 15013SERIAL NO. 700822

FORM NO. M-241 (8-87)

MFG P/N 60-703103SERIAL NO. 0770082

REMOVAL DATA	REASON FOR REMOVAL	FINDINGS AND WORK PERFORMED	SERVICEABLE DA
HRS. <u>8808</u>	<u>TIME CHANGE</u>	<u>REPLACED BEARINGS IMPELLER BEPRIME ELEMENT, BOTH PORT PLATES. DURING BUILD-UP M.O. - S/B STATOR FAILED - REPAID 7/4</u>	MECH.
PLN. <u>17133</u>			<u>27446</u>
DATE <u>4-10-94</u>			DATE
STA. <u>JFK</u>			<u>2-16-95</u>
HRS.			MECH.
PLN.			
DATE			DATE
STA.		M.O. - S/B	
HRS.			MECH.
PLN.			
DATE			DATE
STA.		M.O. - S/B	
HRS.			MECH.
PLN.			
DATE			DATE
STA.		M.O. - S/B	
HRS.			MECH.
PLN.			
DATE			DATE
STA.		M.O. - S/B	

G-19

Serial Nbr. 700822 Date 2-23-95 Tested By 92412

I. Stop and Restart Test

NOTE: Fill outer housing with fuel before starting pump.

	PHASE A-1	PHASE A-2	PHASE A-3	
BEFORE SHUTOFF	12.5	12.4	12.5	LIMITS
AFTER SHUTOFF	12.5	12.4	12.5	±0.5 Amp of Before Shutoff
G2 PRESSURE *	Condition I Min. 13.0 PSI ACT =			G2 Gage is less than 6 inches above pump center line
	Condition II Min. 11.6 PSI ACT = 14.5			Existing G2 gage is 4.5 feet above pump center line **

* Read G2 Pressure at 6,000 to 57,000 PPH weight flow.

** Reading adjusted (.3217 PSI x 4.5 ft) to compensate for gage elevation.

II. Calibration Test

Wt	Disk Press	Disc Press Limits	AMPS			VOLTS			Actual Wattage	Maximum Wattage
			Phase A-1	Phase A-2	Phase A-3	Phase L-1	Phase L-2	Phase L-3		
0	50.1	47.6-50.4	9.9	9.9	9.9	117	117	117	2837	4050
6,000	48.5	45.9-50.4	10.4	10.3	10.4	117	117	117	2960	4135
12,000	47.0	44.0-50.4	10.8	10.7	10.7	117	117	117	3128	4235
20,000	44.0	41.2-50.4	11.7	11.5	11.6	116	116	116	3357	4355
22,000	43.4	40.3-50.4	11.8	11.7	11.8	116	116	116	3405	4365
30,000	39.9	37.3-50.4	12.5	12.4	12.5	116	116	116	3603	4560
60,000	23.9	23.9-50.4	12.4	12.4	12.5	116	116	116	3616	4560

III. Reprime Test

REPRIME TIME	LIMITS
1.3	2.5 Seconds Max.

IV. External Leakage

No Leakage Allowed at Anytime During Test

C.K.

G-20

TWA P/N 15013 SERIAL NO. 0934

FORM NO. M-241 (8-87)

MFG P/N 60-703 104 SERIAL NO. 870084

REMOVAL DATA	REASON FOR REMOVAL	FINDINGS AND WORK PERFORMED	SERVICEABLE D:
HRS <u>8898</u> PLN <u>17110</u> DATE <u>9-30-93</u> STA <u>LAX</u>	<u>TIME CHANGE</u>	<u>TIME O/H</u>	MECH. <u>70716</u> DATE <u>10-13-93</u>
HRS <u>4632</u> PLN <u>17109</u> DATE <u>2-14-95</u> STA <u>JFK</u>	<u>NO WRITE-UP</u> <u>(PUMP WAS INOP)</u>	<u>REPLACED MAIN STATOR,</u> <u>ROTOR, BEARING HOLDER</u> <u>BEARING, ELEMENT, BEARINGS</u> <u>+ CRANKS 60-705-5-2 INH2</u> <u>O/H</u>	MECH. <u>27448</u> DATE <u>4-18-95</u>
HRS <u>75</u> PLN <u>17134</u> DATE <u>5-4-95</u> STA <u>CDG</u>	<u>PRESS LITE ILLUM,</u> <u>WITH SW ON.</u>	<u>PLATING FLOKED OFF ROTOR</u> <u>DAMAGED ROTOR BEARING, STATOR</u> <u>FUSES BLOWN. REPLACED STATOR,</u> <u>ROTOR, BEARINGS.</u> <u>O/H</u>	MECH. <u>27448</u> DATE <u>5-24-95</u>
HRS PLN DATE STA		M.O. - S/B	MECH. DATE
HRS PLN DATE STA		M.O. - S/B	MECH. DATE

Serial Nbr. 700934 Date 5-31-95 Tested By 92412

I. Stop and Restart Test

TESTED

NOTE: Fill outer housing with fuel before starting pump.

	PHASE A-1	PHASE A-2	PHASE A-3	
BEFORE SHUTOFF	14.8	14.7	14.7	LIMITS
AFTER SHUTOFF	14.8	14.7	14.7	±0.5 Amp of Before Shutoff
G2 PRESSURE *	Condition I Min. 13.0 PSI ACT =			G2 Gage is less than 6 inches above pump center line
	16.0	Condition II Min. 11.6 PSI ACT = 16.0		

* Read G2 Pressure at 6,000 to 57,000 PPH weight flow.

** Reading adjusted (.3217 PSI x 4.5 ft) to compensate for gage elevation.

II. Calibration Test

Wt	Disk Press	Disc Press Limits	AMPS			VOLTS			Actual Wattage	Maximum Wattage
			Phase A-1	Phase A-2	Phase A-3	Phase L-1	Phase L-2	Phase L-3		
0	48.5	47.6-50.4	11.1	11.1	11.0	116	116	116	3056	4050
6,000	47.0	45.9-50.4	11.5	11.5	11.6	115	115	115	3341	4135
12,000	45.0	44.0-50.4	12.7	12.6	12.6	115	115	115	3517	4235
20,000	42.5	41.2-50.4	13.4	13.3	13.3	115	115	115	3626	4355
22,000	42.0	40.3-50.4	13.5	13.5	13.6	115	115	115	3774	4365
30,000	39.4	37.3-50.4	13.6	13.6	13.7	115	115	115	3877	4560
60,000	24.9	23.9-50.4	14.8	14.7	14.8	115	115	115	4167	4560

III. Reprime Test

REPRIME TIME	LIMITS
1.8	2.5 Seconds Max.

IV. External Leakage

No Leakage Allowed at Anytime During Test

O.K.

G-22

TWA

COMPONENT SHOP RECORD CARD

TWA P/N 15013 SERIAL NO. 712059

FORM NO. M-241 (8-87)

MFG P/N 60703104 SERIAL NO. 2712059

REMOVAL DATA	REASON FOR REMOVAL	FINDINGS AND WORK PERFORMED	SERVICEABLE DA
REDACTED	REDACTED	REDACTED	REDACTED
REDACTED	REDACTED	REDACTED	REDACTED
REDACTED	REDACTED	REDACTED	REDACTED
REDACTED	REDACTED	REDACTED	REDACTED
HRS. <u>8871</u>	<u>TIME CHANGE</u>	<u>REPLACED BEARINGS + BEARING HOLDER.</u>	MECH. <u>27448</u>
PLN. <u>17119</u>			DATE <u>5-25-94</u>
DATE <u>4-5-95</u>			M.O. - S/B <u>O/H</u>
STA. <u>JF1K</u>			
HRS.			
PLN.			MECH.
DATE			DATE
STA.		M.O. - S/B	
HRS.			MECH.
PLN.			DATE
DATE			DATE
STA.		M.O. - S/B	
HRS.			MECH.
PLN.			DATE
DATE			DATE
STA.		M.O. - S/B	

AY2 PP-132
6/18/81 Rev.

REMOVAL INFO - FINDINGS & REPAIR CARD

P/N 15013 UNIT FUEL JETT PUMP MFG. SER. NO. 02712059 TWA SER. NO. 2059

Entry	A. C. Eng.	Date RMVD	STA	TSLO	DATE	S. C.	O. H.	U J	MECH.	REASON FOR REMOVAL
1.	7304	5/11/85 4/14/85	JAL	-	4/16/85		X	J	41268	720 hrs
2.	17134	8/9/87	JFK	8918	8/13/87		X	J	2728	TIME
3.	17126	12-14-97	JFK	8954	12-31-99		✓	J	70716	TIME
4.	17202	5-31-92	AAK	8650	7-10-91		✓	J	70716	TIME
5.										
6.										
7.										
8.										
9.										
10.										

Entry in the 'S.C. or O.H. columns will be by inserting (T) to indicate time change or (F) for failure.

FINDINGS and REPAIRS

1.	Rebuilt O.H. Run OK.
2.	Rebuilt O.H. new bearings
3.	TIME
4.	TIME
5.	
6.	
7.	
8.	
9.	
10.	

G-24

Serial Nbr. 712059 Date 5-1-95 Tested By 92412

TESTED

I. Stop and Restart Test

NOTE: Fill outer housing with fuel before starting pump.

	PHASE A-1	PHASE A-2	PHASE A-3	LIMITS
BEFORE SHUTOFF	14.7	15.0	14.8	
AFTER SHUTOFF	14.7	15.0	14.8	±0.5 Amp of Before Shutoff
G2 PRESSURE * 15.4	Condition I Min. 13.0 PSI		ACT =	G2 Gage is less than 6 inches above pump center line
	Condition II Min. 11.6 PSI		ACT = 15.4	

• Read G2 Pressure at 6,000 to 57,000 PPH weight flow.

** Reading adjusted (.3217 PSI x 4.5 ft) to compensate for gage elevation.

II. Calibration Test

WT	Disk Press	Disc Press Limits	AMPS			VOLTS			Actual Wattage	Maximum Wattage
			Phase A-1	Phase A-2	Phase A-3	Phase L-1	Phase L-2	Phase L-3		
0	49.3	47.6-50.4	11.8	12.1	11.9	116	116	116	2123	4050
6,000	48.1	45.9-50.4	12.4	12.6	12.4	116	116	116	3319	4135
12,000	46.8	44.0-50.4	12.7	13.0	12.8	116	116	116	3476	4235
20,000	44.5	41.2-50.4	13.2	13.5	13.3	116	116	116	3584	4355
22,000	43.8	40.3-50.4	13.5	13.8	13.4	116	116	116	3678	4365
30,000	40.0	37.3-50.4	14.5	14.7	14.4	116	116	116	4069	4560
60,000	26.2	23.9-50.4	14.7	15.0	14.7	116	116	116	4124	4560

III. Reprime Test

REPRIME TIME	LIMITS
1.3	2.5 Seconds Max.

IV. External Leakage

No Leakage Allowed at Anytime During Test

OK

G-25

TWA**COMPONENT SHOP RECORD CARD**TWA P/N 15013SERIAL NO. 790293

FORM NO. M-241 (8-87)

MFG P/N 60-703104SERIAL NO. "

REMOVAL DATA	REASON FOR REMOVAL	FINDINGS AND WORK PERFORMED	SERVICEABLE DA
HRS. <u>8931</u>	<u>Time change</u>	<u>Replaced bearings and</u> <u>unit good per M.M. 28-31-01</u>	MECH. <u>5/309</u>
PLN. <u>17109</u>			DATE <u>4-27-92</u>
DATE <u>4-19-92</u>			
STA. <u>SL</u>			
HRS. <u>8975</u>	<u>TIME</u>	<u>REPLACED ROTOR, BEARING</u> <u>BOTH PLATES, & ELEMENT.</u> <u>O/H</u>	MECH. <u>27448</u>
PLN. <u>17108</u>			DATE <u>8-8-55</u>
DATE <u>10-7-94</u>			
STA. <u>JFK</u>			
HRS. <u>8?</u>			MECH.
PLN.			DATE
DATE			
STA.		M.O. - S/B	
HRS.			MECH.
PLN.			DATE
DATE			
STA.		M.O. - S/B	
HRS.			MECH.
PLN.			DATE
DATE			
STA.		M.O. - S/B	

G-26

Serial Nbr. 790293Date 8/28/95Tested By 90399

I. Stop and Restart Test

NOTE: Fill outer housing with fuel before starting pump.

	PHASE A-1	PHASE A-2	PHASE A-3	LIMITS
BEFORE SHUTOFF	14.5	14.5	14.5	
AFTER SHUTOFF	14.5	14.5	14.4	±0.5 Amp of Before Shutoff
G2 PRESSURE *	Condition I Min. 13.0 PSI ACT = <u>N/A</u>			G2 Gage is less than 6 inches above pump center line
	Condition II Min. 11.6 PSI ACT = <u>17.5</u>			Existing G2 gage is 4.5 feet above pump center line **

* Read G2 Pressure at 6,000 to 57,000 PPH weight flow.

** Reading adjusted (.3217 PSI x 4.5 ft) to compensate for gage elevation.

II. Calibration Test

Wt	Disk Press	Disc Press Limits	AMPS			VOLTS			Actual Wattage	Maximum Wattage
			Phase A-1	Phase A-2	Phase A-3	Phase L-1	Phase L-2	Phase L-3		
0	49.4	47.6-50.4	10.6	10.6	10.6	116	116	116	2450	4050
6,000	48.0	45.9-50.4	11.2	11.2	11.2	116	116	116	2665	4135
12,000	46.2	44.0-50.4	11.7	11.7	11.7	116	116	116	2860	4235
20,000	43.5	41.2-50.4	12.5	12.5	12.5	116	116	116	3145	4355
22,000	42.9	40.3-50.4	12.7	12.7	12.7	116	116	116	3220	4365
30,000	40.0	37.3-50.4	13.4	13.4	13.4	116	116	116	3440	4560
60,000	25.6	23.9-50.4	14.4	14.4	14.4	116	116	116	3745	4560

III. Reprime Test

REPRIME TIME	LIMITS
1.7 Sec	2.5 Seconds Max.

IV. External Leakage

No Leakage Allowed at Anytime During Test

OK - 90399