

S.I.L. NO. 06-560-02

SERVICE INFORMATION LETTER

FROM: JetProp LLC

19 September 2011

SUBJECT: Header Tank Capacitance Probe (Change 1)

TO: JetProp Owners (Jetprop Numbers 1-155)

As a part of our continued product improvement, we have recently tested and received FAA approval for a capacitance probe for the JetProp header tank fuel quantity indicating system. The capacitance probe replaces the old float type sensor. The following instructions outline the procedure for replacing the float type quantity sender with the capacitance probe.

1. Disconnect the batteries.
2. Remove the header tank vapor shield (requires removing the forward baggage compartment interior).
3. Shut off the fuel with the fuel selector and with the firewall shutoff.
4. Drain all of the fuel out of the header tank. (It may have an air lock since the fuel is shut off. Finish draining the header tank after loosening or removing the header tank lid if necessary.)
5. Remove the header tank lid.
6. Ensure the header tank is completely drained.
7. Remove the old fuel quantity float from the lid.
8. Install the new capacitance probe sender adapter and gasket on the lid as shown on Drawing 560.08.240.
9. Reinstall the header tank lid. (Replace the gasket if necessary.)
10. Install the O ring on the capacitance probe (If not already accomplished) then install the capacitance probe into the sender adapter in the header tank lid. Tighten by hand until the O ring just makes contact. Then tighten approximately one turn until the capacitance probe makes positive contact with the top of the sender adapter. See Drawing 560.08.200.
11. If the aircraft has a Horizon header tank fuel quantity gauge (round individual gauge), then accomplish steps 12 and 13. If the aircraft has Moritz instruments (header tank fuel quantity gauge incorporated with the other instruments), then accomplish steps 14 and 15.
12. **Wiring with the Horizon Header Tank Fuel Quantity Indicator.** The original float type fuel quantity sender only had one wire running to it. The capacitance sender needs a power and ground wire along with the existing wire. Therefore,

run wire JPQ20A22 and JPQ20B22 as shown in drawing 560.12.002 from the + terminal of the capacitance probe back through the pressure bulkhead to a power source. The drawing shows the wire going to the “Fuel Quantity” circuit breaker. However, it is much easier to connect to the + terminal on the back of the Main Fuel Quantity Indicator. Also, add a ground wire from the capacitance probe negative terminal to a suitable ground such as the ground block on the forward side of the pressure bulkhead.

13. Verification of readings with the Horizon Header Tank Fuel Quantity Indicator.

- a. Now you will need to verify the fuel quantity reads correctly at zero and full fuel. Reconnect the batteries and turn power on. The capacitance probe has been cut to a length so that it would be just touching the unusable fuel in the header tank (if the 1.1 gallons of unusable fuel was in the header tank). Therefore, with the header tank empty the fuel quantity indicator should read zero. This gives us a good setting on the low side.
- b. Now turn the firewall shutoff to ON and the fuel selector to the left or right tank and fill the header tank. Ensure the header tank is full by leaving the wing transfer pump/emergency transfer pump on until the fuel pressure shows approximately 7 to 8 psi at which time the header tank high pressure light should illuminate. Turn off the wing transfer/emergency pump. Now the header tank fuel quantity gauge should read full.

14. Wiring with the Moritz Header Tank Fuel Quantity Indicator. The original float type fuel quantity sender only had one wire running to it. The capacitance sender needs a power and ground wire along with the existing wire. Therefore, run wire JPQ20A22 and JPQ20B22 as shown in drawings 560.12.068 and 560.12.072A from the + terminal of the capacitance probe back through the pressure bulkhead to a power source at the header tank fuel conditioner box. The fuel conditioner box is located in the pilot’s floor just in front of the seat. Splice the power wire (JPQ20A22) into the existing header tank conditioner power wire (JPE79A22). Also, add a ground wire from the capacitance probe negative terminal to a suitable ground such as the ground block on the forward side of the pressure bulkhead.

15. Adjustment with the Moritz Header Tank Fuel Quantity Indicator.

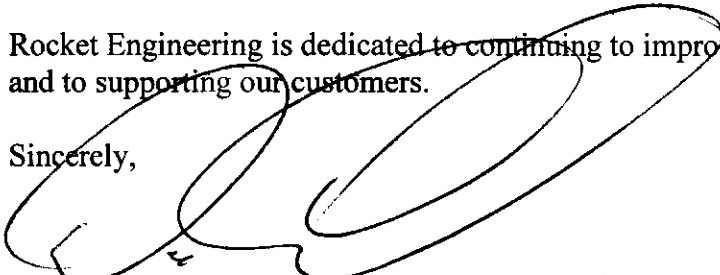
- a. After the wiring is complete reconnect the batteries and turn power on. We are going to check the zero fuel reading first. The capacitance probe has been cut to a length so that it would be just touching the unusable fuel in the header tank (if the 1.1 gallons of unusable fuel was in the header tank). Therefore, with the header tank empty the fuel quantity indicator should read zero. To insure it is set properly, locate the header tank fuel conditioner box installed under the pilots floor panel just in front of the seat. Adjust the header tank “zero” adjustment until the header tank quantity indicates just above zero and then reduce it until it just reads zero. This gives us a good setting on the low side.

- b. Now turn the firewall shutoff to ON and the fuel selector to the left or right tank and fill the header tank. Ensure the header tank is full by leaving the wing transfer pump/emergency transfer pump on until the fuel pressure shows approximately 7 to 8 psi at which time the header tank high pressure light should illuminate. Turn off the wing transfer/emergency pump. Now adjust the "span" or high setting on the header tank fuel conditioner box until the header tank fuel quantity is slightly less than full and then increase it until it just reads full. This should complete the needed adjustments.
17. Now that everything is working, we will have to make a slight modification to the header tank vapor shield to fit around/over the new capacitance probe. Turn electrical power off and disconnect the battery while we are doing our trial fits. Install the Vapor Shield Support Ring (a PVC ring) around the capacitance probe with the wires running through the protective notch. This ring is designed to protect the capacitance probe terminals. Now locate the center of the capacitance probe on the vapor shield. Cut a 4" diameter hole in the vapor shield to allow it to set down over the vapor shield support ring. Check and make sure it is located properly. Now rivet the vapor shield bubble in place over the relief hole we just cut as shown in Drawing 560.08.300.
18. Now install the vapor shield and forward baggage compartment interior.
19. Connect the batteries.
20. Make a logbook entry reflecting that JetProp Service Letter 06-560-02 has been complied with.

If there are any questions, please contact Rich Runyon in Engineering or Steve Nitchman the chief of maintenance at (509) 535-4401.

Rocket Engineering is dedicated to continuing to improve the JetProp DLX Conversion and to supporting our customers.

Sincerely,



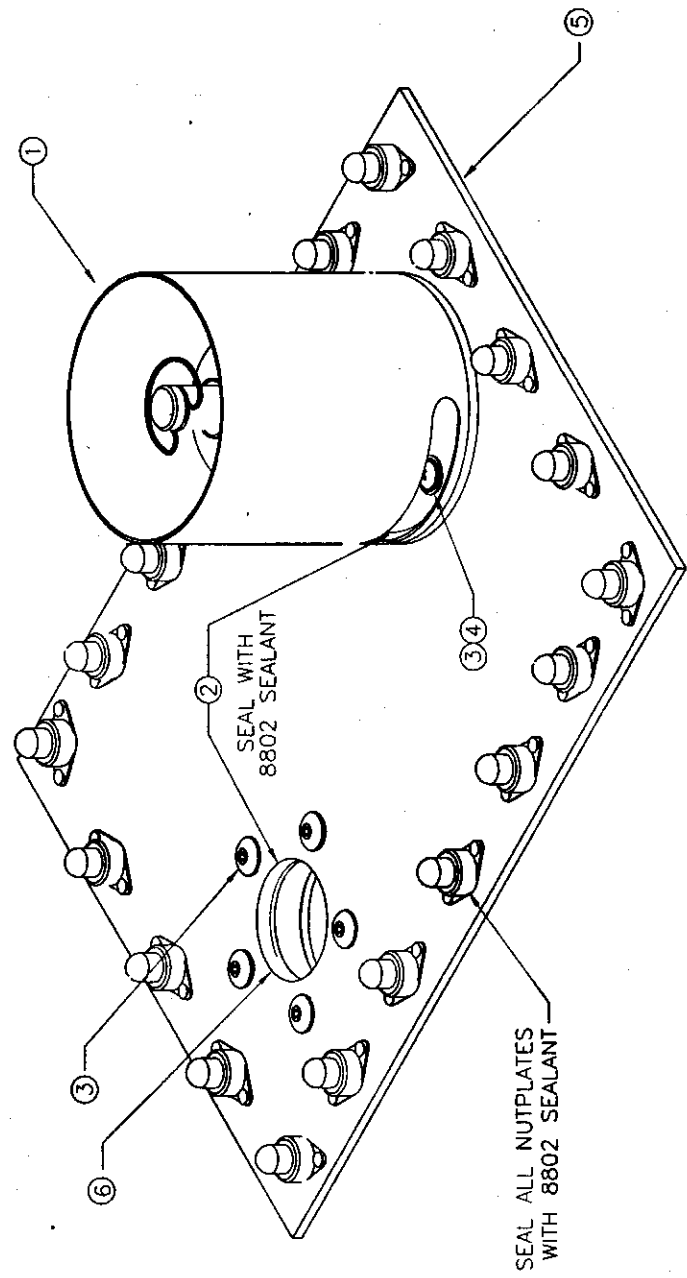
Darwin C. Conrad
President
JetPROP, LLC

Attachments

- Drawing 560.08.240
- Drawing 560.08.200
- Drawing 560.12.002
- Drawing 560.12.068
- Drawing 560.12.072A
- Drawing 560.08.300
- Capacitance Probe Upgrade Parts Listing

REVISION DESCRIPTION

- △ CORRECTED B.O.M.
- △ CHANGED TO SHOW FLOAT SWITCH.
- △ CHANGED PART.
- △ CHANGED SCREWS.



ITEM	QTY	PART NO.	DESCRIPTION
6	1	560.08.244	SENDER ADAPTER
5	1	560.08.221	HEADER TANK LID
4	5	AN960-10L	WASHER
3	10	AN525-1032R8	SCREW
2	2	560.08.228	HEADER TANK SENDING UNIT GASKET
1	1	560.08.260	SWITCH CAN WELDMENT

BILL OF MATERIALS		REVISION	
SCALE:	NTS	SIZE:	B
UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES			
TOLERANCES: X ±.10 .XX ±0.30 .XXX ±0.03 Z. ±.1			
REMOVE BURRS AND SHARP EDGES			
BY	J. WEEG	DATE	3/00
CHECKED	<i>[Signature]</i>	DATE	12/05
APPROVD	<i>[Signature]</i>	DATE	1/05
FAA APPL		DATE	12/05

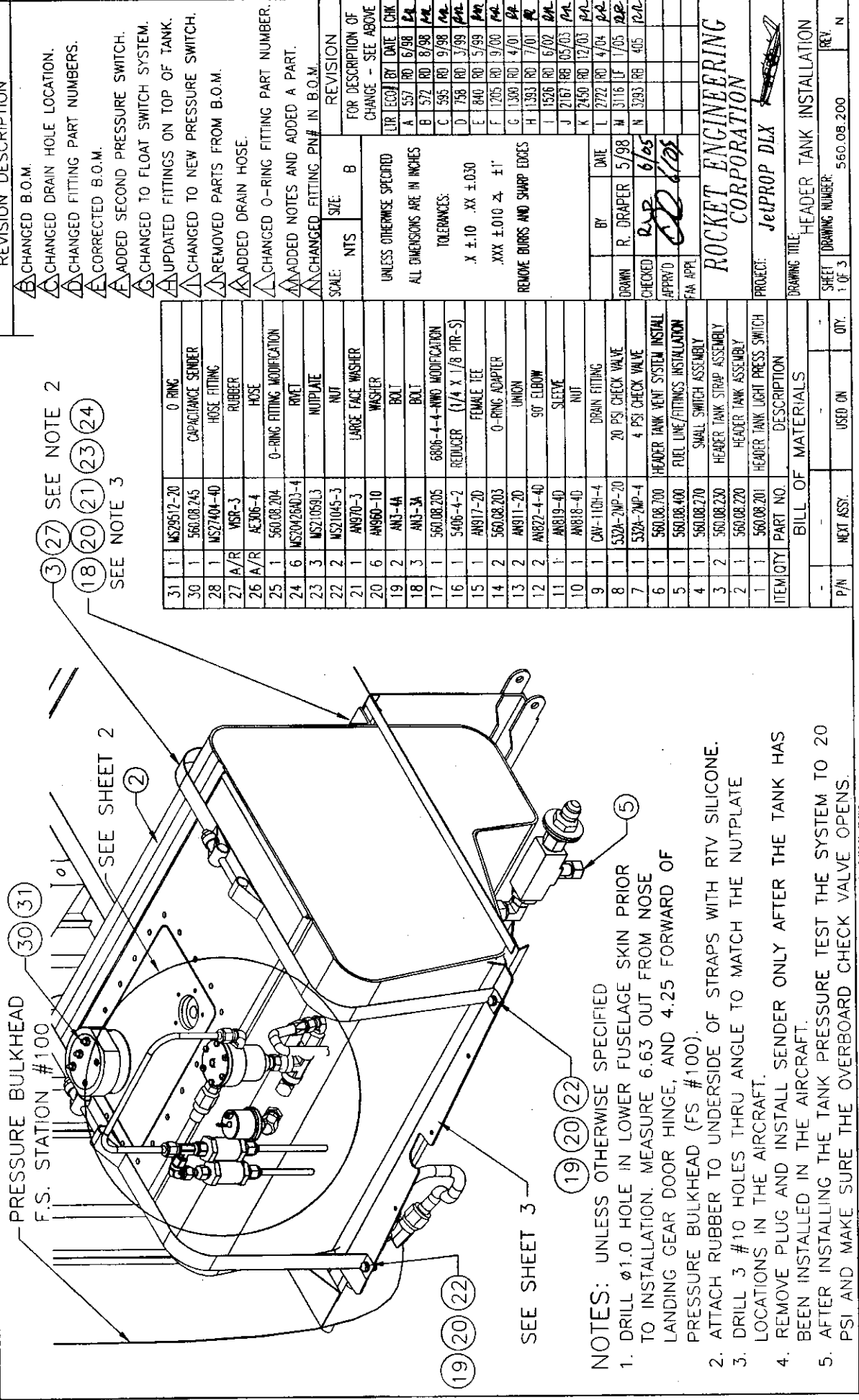
ROCKET ENGINEERING CORPORATION

PROJECT: JetPROP DLX

DRAWING TITLE: FUEL LEVEL SENDER ASSY	
SHEET 1 OF 1	REV. D
DRAWING NUMBER: 560.08.240	

240	560.08.220	1
P/N	NEXT ASSY.	QTY.
	HEADER TANK ASSY	USED ON

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REVISION DESCRIPTION

- △ CHANGED B.O.M.
- △ CHANGED DRAIN HOLE LOCATION.
- △ CHANGED FITTING PART NUMBERS.
- △ CORRECTED B.O.M.
- △ ADDED SECOND PRESSURE SWITCH.
- △ CHANGED TO FLOAT SWITCH SYSTEM.
- △ UPDATED FITTINGS ON TOP OF TANK.
- △ CHANGED TO NEW PRESSURE SWITCH.
- △ REMOVED PARTS FROM B.O.M.
- △ ADDED DRAIN HOSE.
- △ CHANGED O-RING FITTING PART NUMBER.
- △ ADDED NOTES AND ADDED A PART.
- △ CHANGED FITTING PN# IN B.O.M.

SCALE:	NTS	SIZE:	B
UNLESS OTHERWISE SPECIFIED			
ALL DIMENSIONS ARE IN INCHES			
TOLERANCES:			
X ± 1.0 .XX ± 0.30			
.XXX ± 0.10 ± .1"			
REMOVE BURRS AND SHARP EDGES			

REV	BY	DATE	CHK
A	557	RD	6/98
B	572	RD	6/98
C	595	RD	9/98
D	758	RD	3/99
E	840	RD	5/99
F	1205	RD	9/00
G	1300	RD	4/01
H	1393	RD	7/01
I	1526	RD	6/02
J	2167	RD	05/03
K	2450	RD	12/03
L	2722	RD	4/04
M	3116	LF	1/05
N	3293	RB	4/05

BY: DATE
 DRAWN: R. DRAPER 5/98
 CHECKED: R.P. 6/05
 APPROV'D: [Signature] 6/05
 FAA APPL: [Signature]

ROCKET ENGINEERING CORPORATION
 PROJECT: JetPROP DLX

DRAWING TITLE:		HEADER TANK INSTALLATION	
SHEET	DRAWING NUMBER:	560.08.200	REV.
1 OF 3			N

31 27 SEE NOTE 2
 18 20 21 23 24
 SEE NOTE 3

31	1	MS29512-20	O-RING
30	1	560.08.245	CAPACITANCE SENDER
28	1	MS27404-40	HOSE FITTING
27	A/R	MSR-3	RUBBER
26	A/R	AC306-4	HOSE
25	1	560.08.204	O-RING FITTING MODIFICATION
24	6	MS2042603-4	RIVET
23	3	MS21059L3	NUTPLATE
22	2	MS21045-3	NUT
21	1	AN970-3	LARGE FACE WASHER
20	6	AN960-10	WASHER
19	2	AN3-4A	BOLT
18	3	AN3-3A	BOLT
17	1	560.08.205	6806-4-4-NNO MODIFICATION
16	1	5406-4-2	REDUCER (1/4 X 1/8 PTR-S)
15	1	AN917-20	FEMALE TEE
14	2	560.08.203	O-RING ADAPTER
13	2	AN911-20	UNION
12	2	AN822-4-40	90° ELBOW
11	1	AN819-40	SLEEVE
10	1	AN818-40	NUT
9	1	CW-110H-4	DRAIN FITTING
8	1	532A-2MP-20	20 PSI CHECK VALVE
7	1	532A-2MP-4	4 PSI CHECK VALVE
6	1	560.08.200	HEADER TANK VENT SYSTEM INSTAL
5	1	560.08.400	FUEL LINE/FITTINGS INSTALLATION
4	1	560.08.270	SMALL SWITCH ASSEMBLY
3	2	560.08.230	HEADER TANK STRAP ASSEMBLY
2	1	560.08.220	HEADER TANK ASSEMBLY
1	1	560.08.201	HEADER TANK LIGHT PRESS SWITCH
ITEM/QUANTITY	PART NO.	DESCRIPTION	

BILL OF MATERIALS		
P/N	NEXT ASSY:	USED ON
		QTY.

- NOTES: UNLESS OTHERWISE SPECIFIED
- DRILL $\phi 1.0$ HOLE IN LOWER FUSELAGE SKIN PRIOR TO INSTALLATION. MEASURE 6.63 OUT FROM NOSE LANDING GEAR DOOR HINGE, AND 4.25 FORWARD OF PRESSURE BULKHEAD (FS #100).
 - ATTACH RUBBER TO UNDERSIDE OF STRAPS WITH RTV SILICONE.
 - DRILL 3 #10 HOLES THRU ANGLE TO MATCH THE NUTPLATE LOCATIONS IN THE AIRCRAFT.
 - REMOVE PLUG AND INSTALL SENDER ONLY AFTER THE TANK HAS BEEN INSTALLED IN THE AIRCRAFT.
 - AFTER INSTALLING THE TANK PRESSURE TEST THE SYSTEM TO 20 PSI AND MAKE SURE THE OVERBOARD CHECK VALVE OPENS.

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USE FOR ALL AIRCRAFT

HORIZON INSTRUMENTS

REVISION DESCRIPTION

△ CHANGED TO NEWEST VERSION.
 △ CHANGED TO CAPACITANCE SENDER.

SCALE:	SIZE:	REVISION
	B	FOR DESCRIPTION OF CHANGE - SEE ABOVE
UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES		
TOLERANCES:		
X ± .10	XX ± .030	LR EOOD BY DATE CHK
XXX ± .005	± .1"	A 557 KS 7/98 <i>DL</i>
REMOVE BURRS AND SHARP EDGES		
BY	DATE	B 569 KS 8/98 <i>DL</i>
		C 2131 RD 3/03 <i>ML</i>
		D 3264 RD 4/05 <i>ML</i>
DRAWN	K. SOGGE	4/98
CHECKED	<i>DL</i>	<i>6/05</i>
APPROV'D	<i>DL</i>	<i>7/01</i>
FAA APPL		

ROCKET ENGINEERING CORPORATION

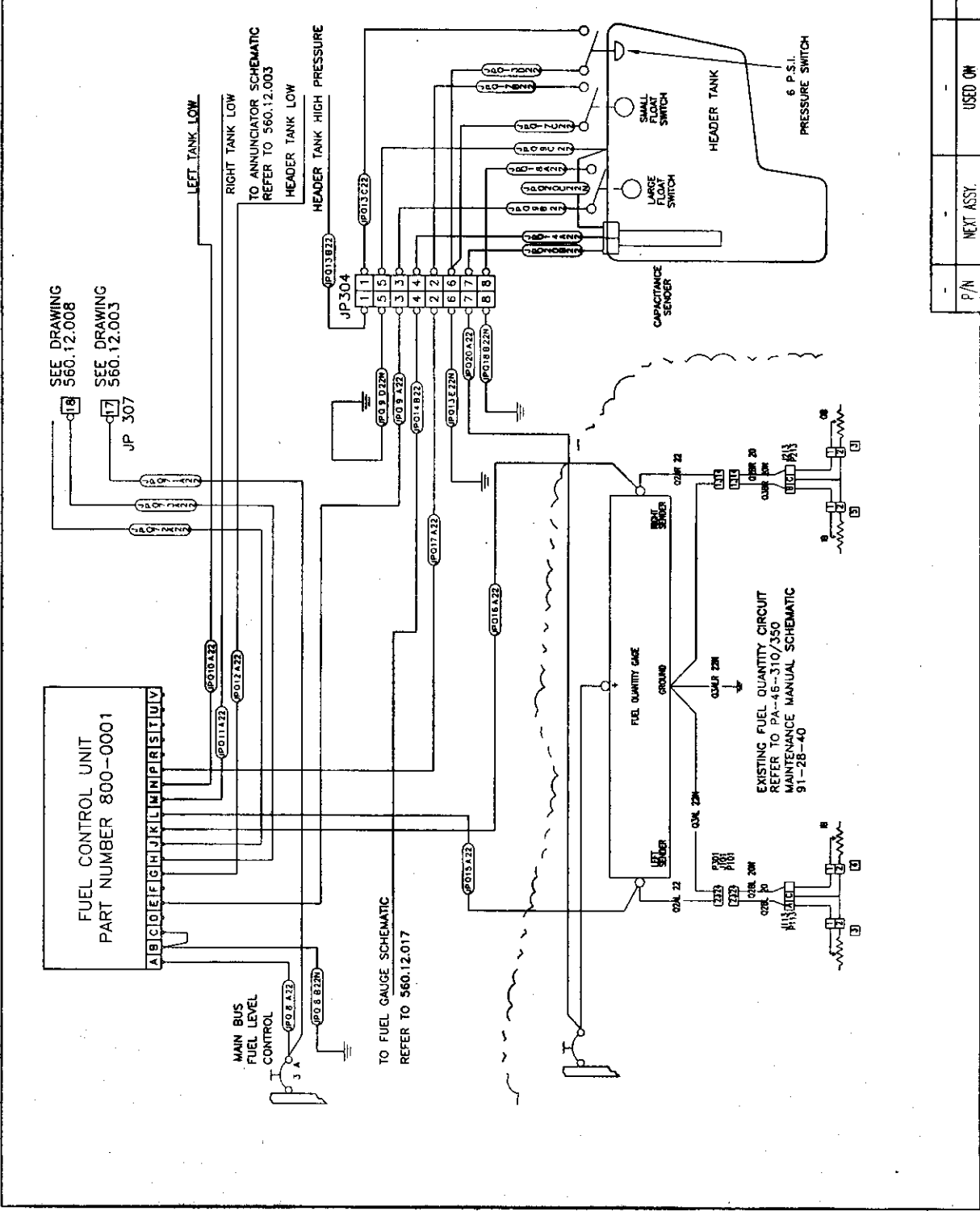
PROJECT: JetPROP DLX

DRAWING TITLE: FUEL QUANTITY/CONTROL SCHEMATIC

SHEET 1 OF 1

DRAWING NUMBER: 560.12.002

REV. D



SEE DRAWING 560.12.008

SEE DRAWING 560.12.003

JP 307

LEFT TANK LOW

RIGHT TANK LOW

TO ANNUNCIATOR SCHEMATIC REFER TO 560.12.003

HEADER TANK LOW

HEADER TANK HIGH PRESSURE

JP 304

1 1

5 5

3 3

4 4

2 2

6 6

7 7

8 8

P013B32

P013C32

P013D32

P013E32

P013F32

P013G32

P013H32

P013I32

P013J32

P013K32

P013L32

P013M32

P013N32

P013O32

P013P32

P013Q32

P013R32

P013S32

P013T32

P013U32

P013V32

P013W32

P013X32

P013Y32

P013Z32

P014A32

P014B32

P014C32

P014D32

P014E32

P014F32

P014G32

P014H32

P014I32

P014J32

P014K32

P014L32

P014M32

P014N32

P014O32

P014P32

P014Q32

P014R32

P014S32

P014T32

P014U32

P014V32

P014W32

P014X32

P014Y32

P014Z32

P015A32

P015B32

P015C32

P015D32

P015E32

P015F32

P015G32

P015H32

P015I32

P015J32

P015K32

P015L32

P015M32

P015N32

P015O32

P015P32

P015Q32

P015R32

P015S32

P015T32

P015U32

P015V32

P015W32

P015X32

P015Y32

P015Z32

P016A32

P016B32

P016C32

P016D32

P016E32

P016F32

P016G32

P016H32

P016I32

P016J32

P016K32

P016L32

P016M32

P016N32

P016O32

P016P32

P016Q32

P016R32

P016S32

P016T32

P016U32

P016V32

P016W32

P016X32

P016Y32

P016Z32

P017A32

P017B32

P017C32

P017D32

P017E32

P017F32

P017G32

P017H32

P017I32

P017J32

P017K32

P017L32

P017M32

P017N32

P017O32

P017P32

P017Q32

P017R32

P017S32

P017T32

P017U32

P017V32

P017W32

P017X32

P017Y32

P017Z32

P018A32

P018B32

P018C32

P018D32

P018E32

P018F32

P018G32

P018H32

P018I32

P018J32

P018K32

P018L32

P018M32

P018N32

P018O32

P018P32

P018Q32

P018R32

P018S32

P018T32

P018U32

P018V32

P018W32

P018X32

P018Y32

P018Z32

P019A32

P019B32

P019C32

P019D32

P019E32

P019F32

P019G32

P019H32

P019I32

P019J32

P019K32

P019L32

P019M32

P019N32

P019O32

P019P32

P019Q32

P019R32

P019S32

P019T32

P019U32

P019V32

P019W32

P019X32

P019Y32

P019Z32

P020A32

P020B32

P020C32

P020D32

P020E32

P020F32

P020G32

P020H32

P020I32

P020J32

P020K32

P020L32

P020M32

P020N32

P020O32

P020P32

P020Q32

P020R32

P020S32

P020T32

P020U32

P020V32

P020W32

P020X32

P020Y32

P020Z32

P021A32

P021B32

P021C32

P021D32

P021E32

P021F32

P021G32

P021H32

P021I32

P021J32

P021K32

P021L32

P021M32

P021N32

P021O32

P021P32

P021Q32

P021R32

P021S32

P021T32

P021U32

P021V32

P021W32

P021X32

P021Y32

P021Z32

P022A32

P022B32

P022C32

P022D32

P022E32

P022F32

P022G32

P022H32

P022I32

P022J32

P022K32

P022L32

P022M32

P022N32

P022O32

P022P32

P022Q32

P022R32

P022S32

P022T32

P022U32

P022V32

P022W32

P022X32

P022Y32

P022Z32

P023A32

P023B32

P023C32

P023D32

P023E32

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P023J32

P023K32

P023L32

P023M32

P023N32

P02

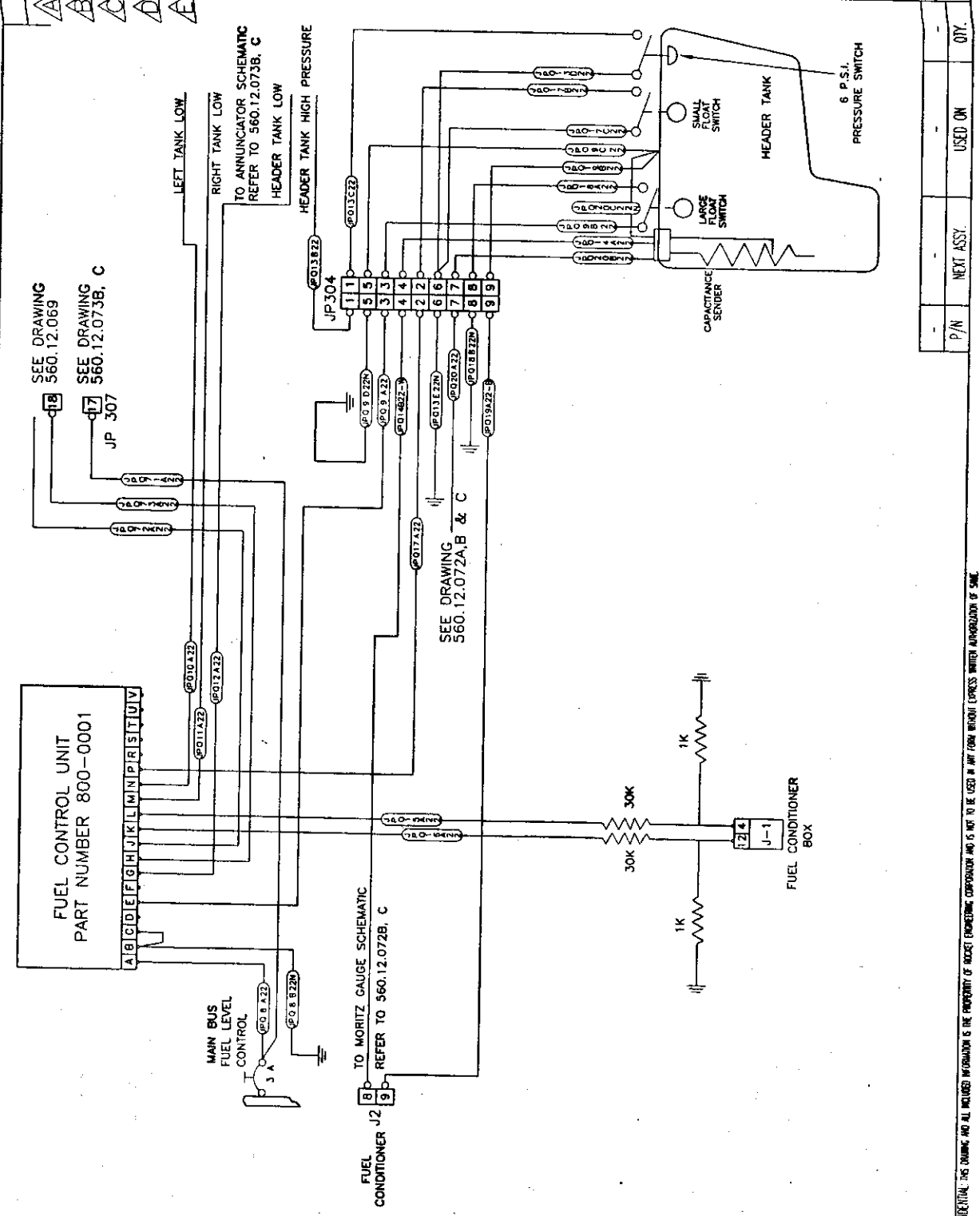
USE FOR ALL AIRCRAFT

MORITZ INSTRUMENTS

REVISION DESCRIPTION	
△	CHANGED WIRE AND PIN NUMBERS.
△	CHANGED WIRING FOR QUANTITY INDICATION.
△	CHANGED YEAR CALLOUT.
△	CHANGED TO CAPACITANCE SENDER.
△	CHANGED WIRES TO CAPACITANCE SENDER.

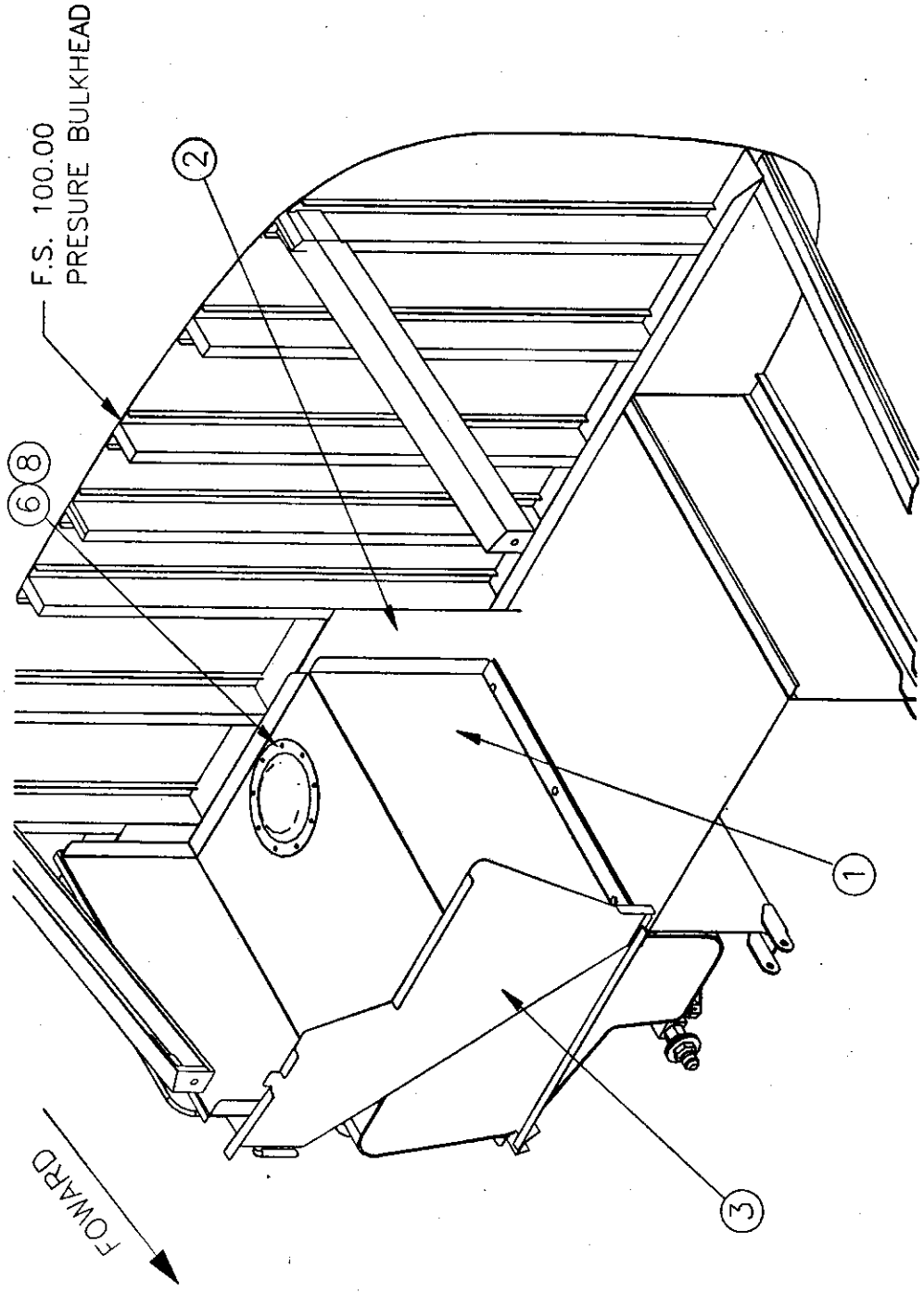
SCALE:	SIZE:	REVISION
-	B	FOR DESCRIPTION OF CHANGE - SEE ABOVE
UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES		
UR	ECO	BY DATE CHK
A	150	RD 2/02 PLO
B	164	RD 7/02 PLO
C	2587	RD 1/04 PLO
D	3118	RD 1/05 PLO
E	3321	RD 4/05 PLO
TOLERANCES: X ± .10 .XX ± 0.30 XXX ± .005 Δ ± .1		
REMOVE BURRS AND SHARP EDGES		
DRAWN	R. DRAPER	12/01
CHECKED	RJD	6/05
APPROV	PLD	7/01
FAA APPL		

ROCKET ENGINEERING CORPORATION	
PROJECT: JetPROP DLX	
DRAWING TITLE: FUEL QUANTITY/CONTROL SCHEMATIC	
SHEET 1 OF 1	DRAWING NUMBER: 560.12.068
	REV. E



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FAA JUN 30 2005



F.S. 100.00
PRESSURE BULKHEAD

FIREWALL AND FUSELAGE
SKIN NOT SHOWN FOR CLARITY

- NOTES: UNLESS OTHERWISE SPECIFIED
1. MATCH DRILL HOLES TO MOUNTING POINTS IN FORWARD BAGGAGE COMPARTMENT.
 2. USE RTV SILICONE SEALANT TO SEAL AROUND EDGES OF VAPOR SHIELD.
 3. MIRAGE PART SHOWN. (SEE INSTALLATION MANUAL FOR MALIBU)(304A)

REVISION DESCRIPTION

- △ CHANGED HARDWARE USED
- △ CHANGED HARDWARE USED
- △ ADDED PARTS TO B.O.M.
- △ CHANGED PARTS IN B.O.M.

A/R	288	RTV SILICONE SEALANT
9	10 16RX1/2THASS	FINISHING SCREW
8	9 MS20615M3-3	RIVETS
7	1 560.08.306	VAPOR SHIELD SUPPORT RING
6	1 560.08.305	VAPOR SHIELD BUBBLE
5	1 560.08.304B	VAPOR SHIELD UPPER MOUNT
4	1 560.08.304A	VAPOR SHIELD UPPER MOUNT
3	1 560.08.303	VAPOR SHIELD, FORWARD SIDE
2	1 560.08.302	VAPOR SHIELD, AFT SIDE
1	1 560.08.301	HEADER TANK VAPOR SHIELD
ITEM QTY PART NO. DESCRIPTION		
BILL OF MATERIALS		
SCALE:	NTS	SIZE: B
UNLESS OTHERWISE SPECIFIED		
ALL DIMENSIONS ARE IN INCHES		
TOLERANCES:		
X ±1 XX ±0.3		
XXX ±0.05 ±.1		
REMOVE BURRS AND SHARP EDGES		
DRWN	K. SOGGE	3/98
CHECKED	<i>[Signature]</i>	3/06
APPROV	<i>[Signature]</i>	3/06
FM APPL		
ROCKET ENGINEERING CORPORATION		
PROJECT: JetPROP DLX		
DRAWING TITLE: HDR TANK VAPOR SHIELD INSTALL		
SHEET DRAWING NUMBER: 560.08.300		REV. D
1 OF 2		

P/N	NEXT ASSY.	USED ON	QTY.
-	-	-	-

Capacitance Probe Upgrade Parts Listing

Quantity	Part Number	Description
1	560.08.244	Sender Adapter
5	AN525-10R10	Screw
1	560.08.228	Header Tank Sending Unit Gasket
1	560.08.245	Capacitance Sender
1	MS29512-20	O Ring
1	560.08.305	Vapor Shield Bubble
1	560.08.306	Vapor Shield Support Ring
9	MS20615M3-3	Rivets
1	CS3204 B1/2	Sealkit