AIRCRAFT MAINTENANCE MANUAL SUPPLEMENT

FOR

CONTINUED AIRWORTHINESS

OF THE

DE HAVILLAND MODEL DHC-2 MK I BEAVER

MODIFIED WITH

WIPAIRE STCSA01186CH

TURBINE ENGINE POWERPLANT

Dated April 9, 2012

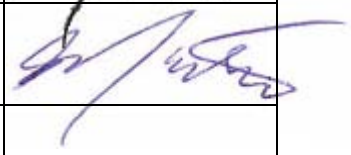
REG. NO. _____

SER. NO. _____

1700 Henry Ave – Fleming Field (KSGS), South St. Paul, MN 55075
Ph: 651.451.1205 Fax: 651.457.7858
www.wipaire.com

TABLE OF CONTENT

LOG OF REVISIONS

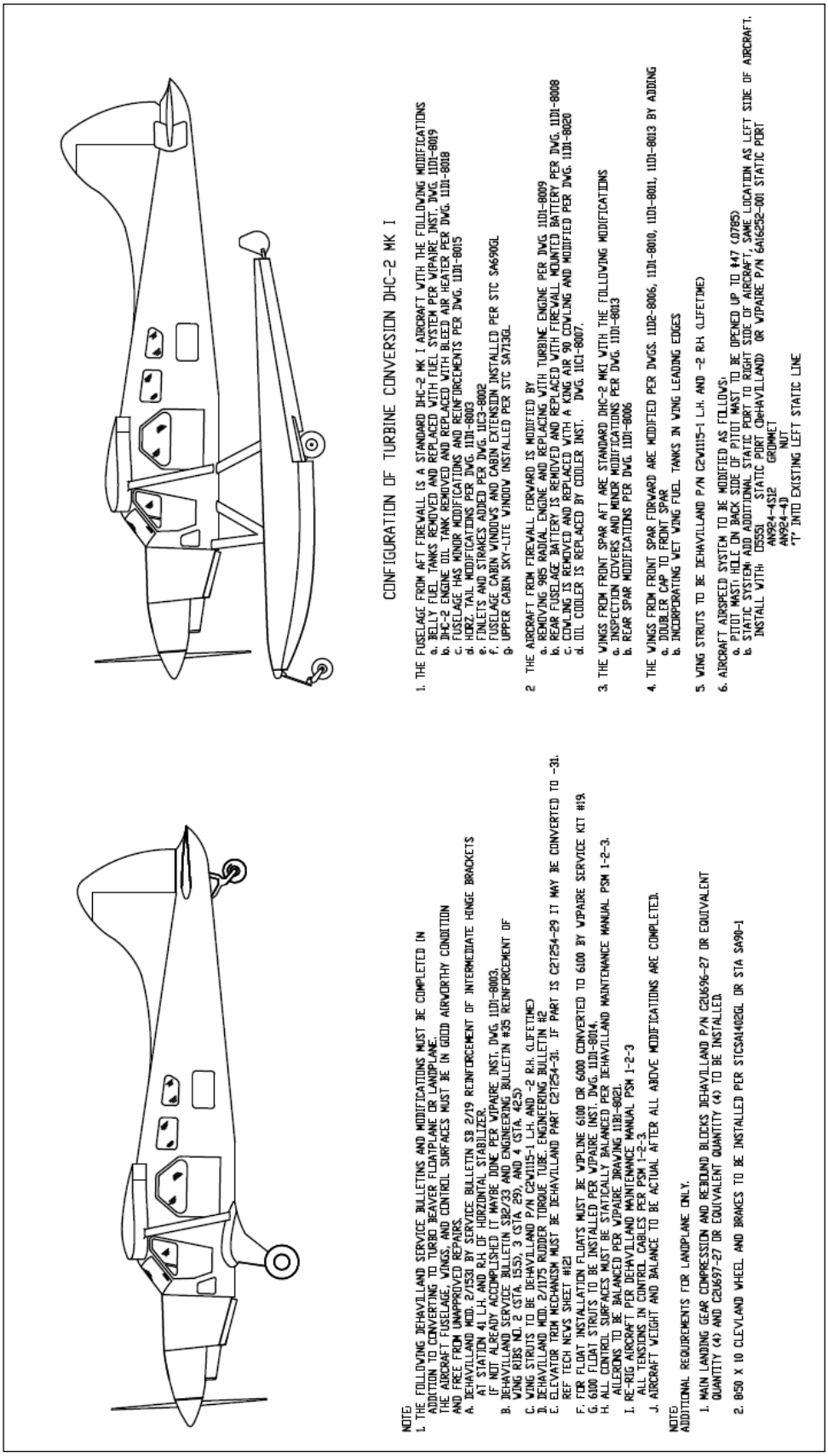
REV.	PAGES	DESCRIPTION	DATE	FAA ACCEPTANCE
A	ALL	REFORMAT ALL PAGES, UPDATE TO ALL FIGURES, UPDATE TO A.D. 2011-10-09 WAS A.D. 87-20-03	4/9/2012	
B	3, 5, 59	Updated Figure 1, added additional requirements for landplane (ONLY), Added text (IF INSTALLED) to Fuel system section, item 4	11/14/2012	

LATEST REVISIONS & SERVICE LETTERS AVAILABLE AT
WWW.WIPAIRE.COM

INTRODUCTION

This manual is a supplement to the de Havilland Maintenance Manual PSM 1-2-2 and is made necessary as a result of converting the DHC-2 to turbine power using Wipaire STC SA01186CH. Maintenance, repairs and modifications accomplished on this airframe must be compatible not only with the original airframe, but with the modifications as installed. This supplement is considered a controlled document, and thus revisions must be kept up to date and are available on our Web site at http://www.wipaire.com or by calling Wipaire at 651-286-6609.

It will be noted that the modification is accomplished with the use of existing, easy to obtain parts and accessories. For example, the forward cowling is that of a Beechcraft 90 series aircraft and many of the systems are almost identical to the Cessna 208. This manual, while not a complete parts manual, does reference most of the parts necessary for maintenance and continued airworthiness.



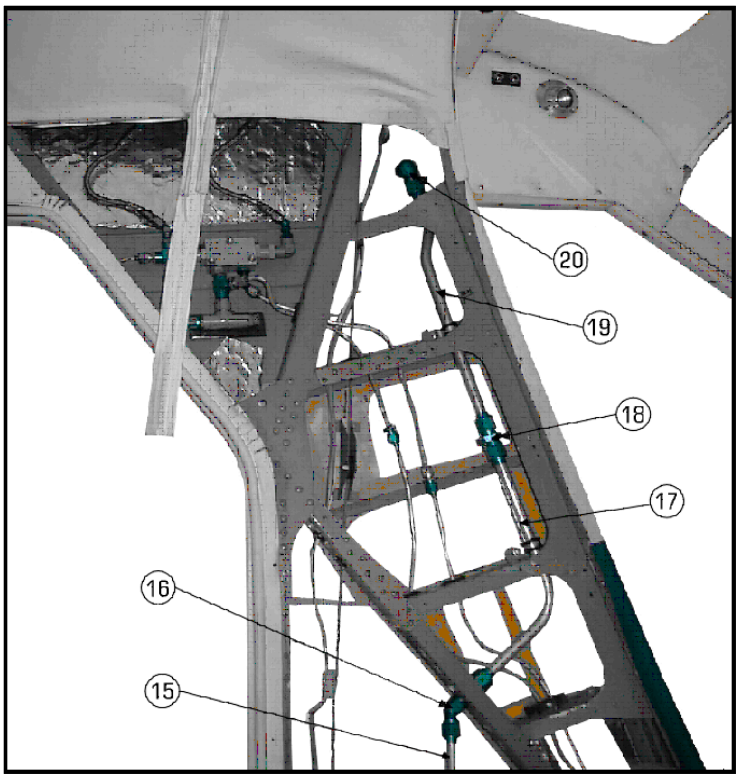
CONFIGURATION OF TURBINE CONVERSION DHC-2 MK I

1. THE FUSELAGE FROM AFT FIREWALL IS A STANDARD DHC-2 MK I AIRCRAFT WITH THE FOLLOWING MODIFICATIONS
   a. BELLY FUEL TANKS REMOVED AND REPLACED WITH FUEL SYSTEM PER WIPAIRE INST. DWG. 1101-8019
   b. DHC-2 ENGINE OIL TANK REMOVED AND REPLACED WITH BLEED AIR HEATER PER DWG. 1101-8018
   c. FUSELAGE HAS MINOR MODIFICATIONS AND REINFORCEMENTS PER DWG. 1101-8015
   d. HORZ. TAIL MODIFICATIONS PER DWG. 1101-8003
   e. FINLETS AND STRAKES ADDED PER DWG. 1103-8002
   f. FUSELAGE CABIN WINDOWS AND CABIN EXTENSION INSTALLED PER STC SA690GL
   g. UPPER CABIN SKY-LITE WINDOW INSTALLED PER STC SA713GL
2. THE AIRCRAFT FROM FIREWALL FORWARD IS MODIFIED BY
   a. REMOVING 985 RADIAL ENGINE AND REPLACING WITH TURBINE ENGINE PER DWG 1101-8009
   b. REAR FUSELAGE BATTERY IS REMOVED AND REPLACED WITH FIREWALL MOUNTED BATTERY PER DWG. 1101-8008
   c. COWLING IS REMOVED AND REPLACED WITH A KING AIR 90 COWLING AND MODIFIED PER DWG. 1101-8020
   d. OIL COOLER IS REPLACED BY COOLER INST. DWG. 1101-8007.
3. THE WINGS FROM FRONT SPAR AFT ARE STANDARD DHC-2 MKI WITH THE FOLLOWING MODIFICATIONS
   a. INSPECTION COVERS AND MINOR MODIFICATIONS PER DWG. 1101-8013
   b. REAR SPAR MODIFICATIONS PER DWG. 1101-8006
4. THE WINGS FROM FRONT SPAR FORWARD ARE MODIFIED PER DWGS. 1102-8006, 1101-8010, 1101-8011, 1101-8013 BY ADDING
   a. DOUBLER CAP TO FRONT SPAR
   b. INCORPORATING WET WING FUEL TANKS IN WING LEADING EDGES
5. WING STRUTS TO BE DEHAVILLAND P/N C2W115-1 L.H. AND -2 R.H. (LIFETIME)
6. AIRCRAFT AIRSPEED SYSTEM TO BE MODIFIED AS FOLLOWS:
   a. PITOT MAST HOLE IN BACK SIDE OF PITOT MAST TO BE OPENED UP TO #47 (.0785)
   b. STATIC SYSTEM ADD ADDITIONAL STATIC PORT TO RIGHT SIDE OF AIRCRAFT, SAME LOCATION AS LEFT SIDE OF AIRCRAFT.
      INSTALL WITH DS53I STATIC PORT (DeHAVILLAND) OR WIPAIRE P/N 6A16C52-001 STATIC PORT
      AN924-4S12 GROMMET
      AN924-4D NUT
      "T" INTO EXISTING LEFT STATIC LINE

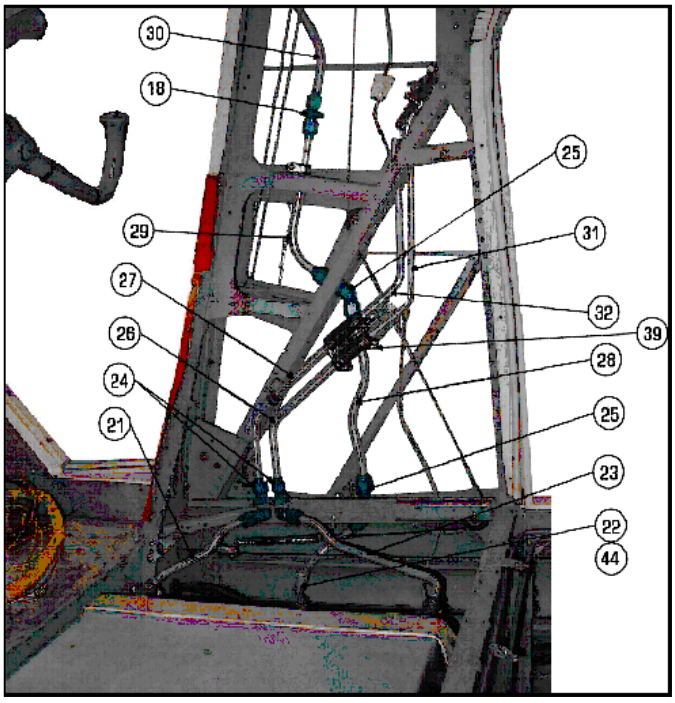
NOTE:
1. THE FOLLOWING DEHAVILLAND SERVICE BULLETINS AND MODIFICATIONS MUST BE COMPLETED IN ADDITION TO CONVERTING TO TURBO BEAVER FLOATPLANE OR LANDPLANE.
   THE AIRCRAFT FUSELAGE, WINGS, AND CONTROL SURFACES MUST BE IN GOOD AIRWORTHY CONDITION AND FREE FROM UNAPPROVED REPAIRS.
   A. DEHAVILLAND MOD. 2/1531 BY SERVICE BULLETIN SB 2/19 REINFORCEMENT OF INTERMEDIATE HINGE BRACKETS AT STATION 41 L.H. AND R.H. OF HORIZONTAL STABILIZER.
      IF NOT ALREADY ACCOMPLISHED IT MAYBE DONE PER WIPAIRE INST. DWG. 1101-8003.
   B. DEHAVILLAND SERVICE BULLETIN SB2/33 AND ENGINEERING BULLETIN #35 REINFORCEMENT OF WING RIBS NO. 2 (STA. 155), 3 (STA. 29), AND 4 (STA. 42.5)
   C. WING STRUTS TO BE DEHAVILLAND P/N C2W115-1 L.H. AND -2 R.H. (LIFETIME)
   D. DEHAVILLAND MOD. 2/1175 RUDDER TORQUE TUBE ENGINEERING BULLETIN #2
   E. ELEVATOR TRIM MECHANISM MUST BE DEHAVILLAND PART C2T254-29. IF PART IS C2T254-29 IT MAY BE CONVERTED TO -31.
      REF TECH NEWS SHEET #121
   F. FOR FLOAT INSTALLATION FLOATS MUST BE WIPLINE 6100 OR 6000 CONVERTED TO 6100 BY WIPAIRE SERVICE KIT #19.
   G. 6100 FLOAT STRUTS TO BE INSTALLED PER WIPAIRE INST. DWG. 1101-8014.
   H. ALL CONTROL SURFACES MUST BE STATICALLY BALANCED PER DEHAVILLAND MAINTENANCE MANUAL PSM 1-2-3.
      AILERONS TO BE BALANCED PER WIPAIRE DRAWING 1181-8021.
   I. RE-RIG AIRCRAFT PER DEHAVILLAND MAINTENANCE MANUAL PSM 1-2-3
      ALL TENSIONS IN CONTROL CABLES PER PSM 1-2-3.
   J. AIRCRAFT WEIGHT AND BALANCE TO BE ACTUAL AFTER ALL ABOVE MODIFICATIONS ARE COMPLETED.

NOTE:
ADDITIONAL REQUIREMENTS FOR LANDPLANE ONLY.
   1. MAIN LANDING GEAR COMPRESSION AND REBOND BLOCKS DEHAVILLAND P/N C2U696-27 OR EQUIVALENT QUANTITY (4) AND C2U697-27 OR EQUIVALENT QUANTITY (4) TO BE INSTALLED.
   2. 850 X 10 CLEVLAND WHEEL AND BRAKES TO BE INSTALLED PER STCSA1402GL OR STA SA90-1

FIGURE 1



RIGHT HAND CABIN – TANK



LEFT HAND CABIN

FIGURE 2

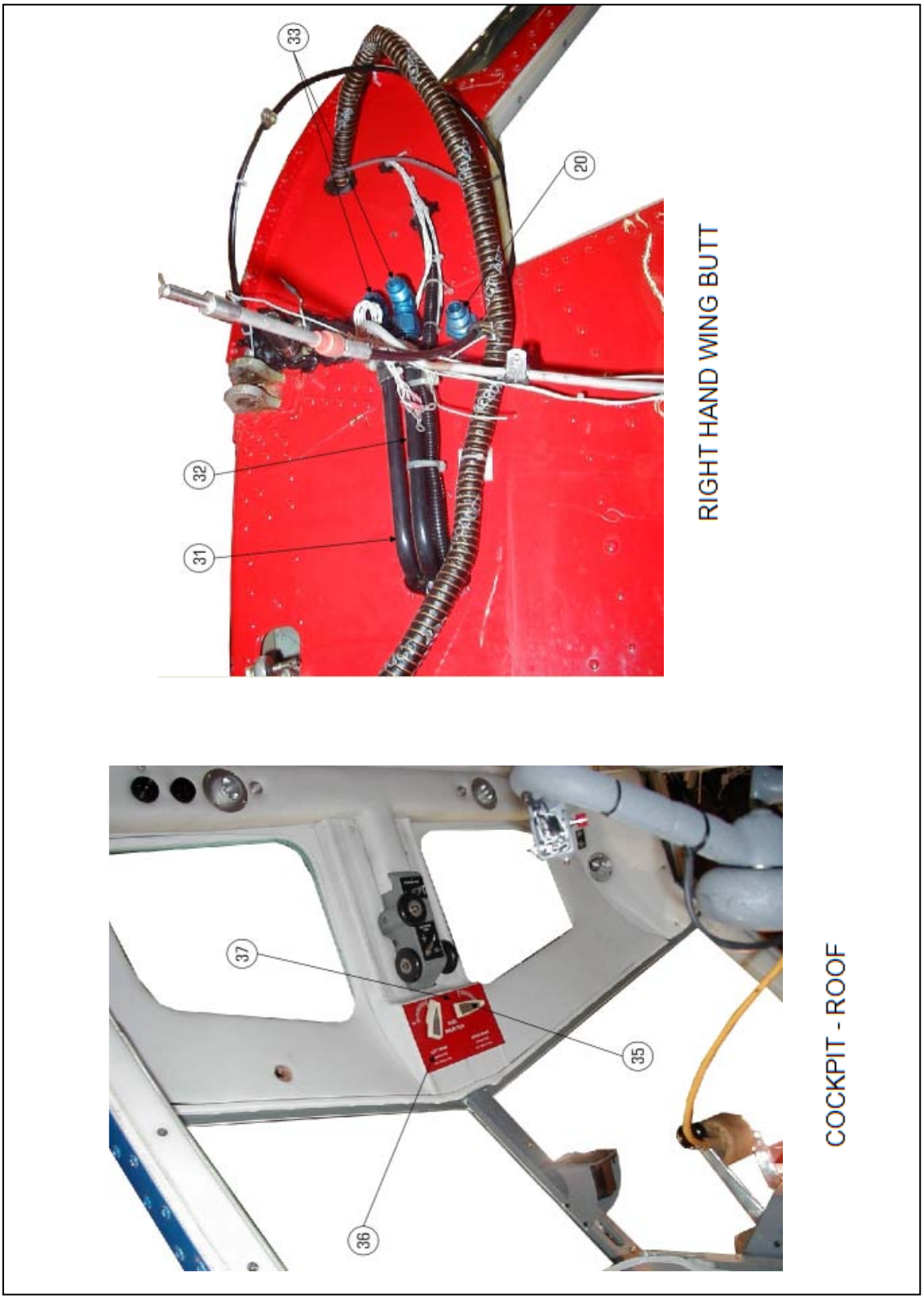


FIGURE 3

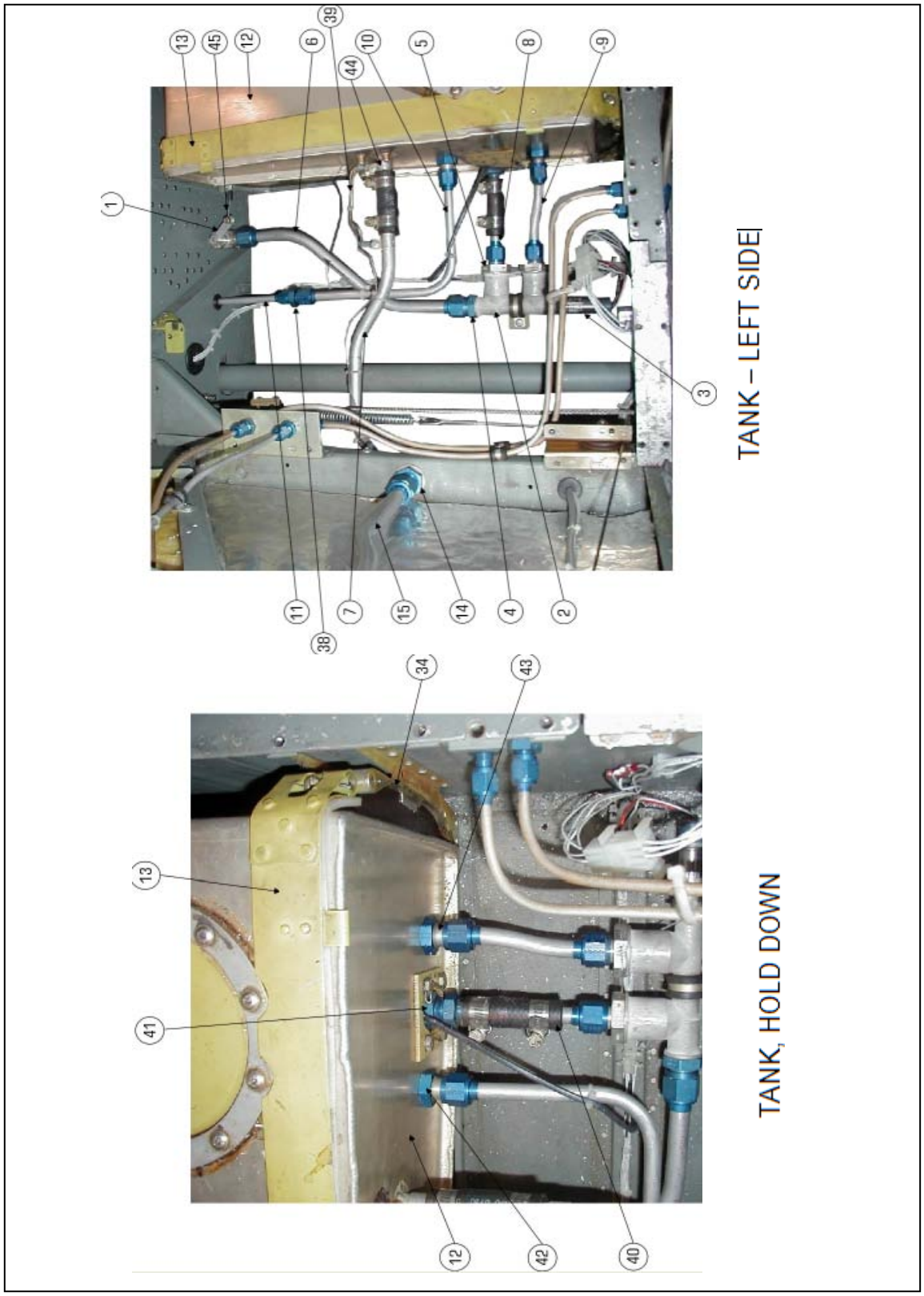
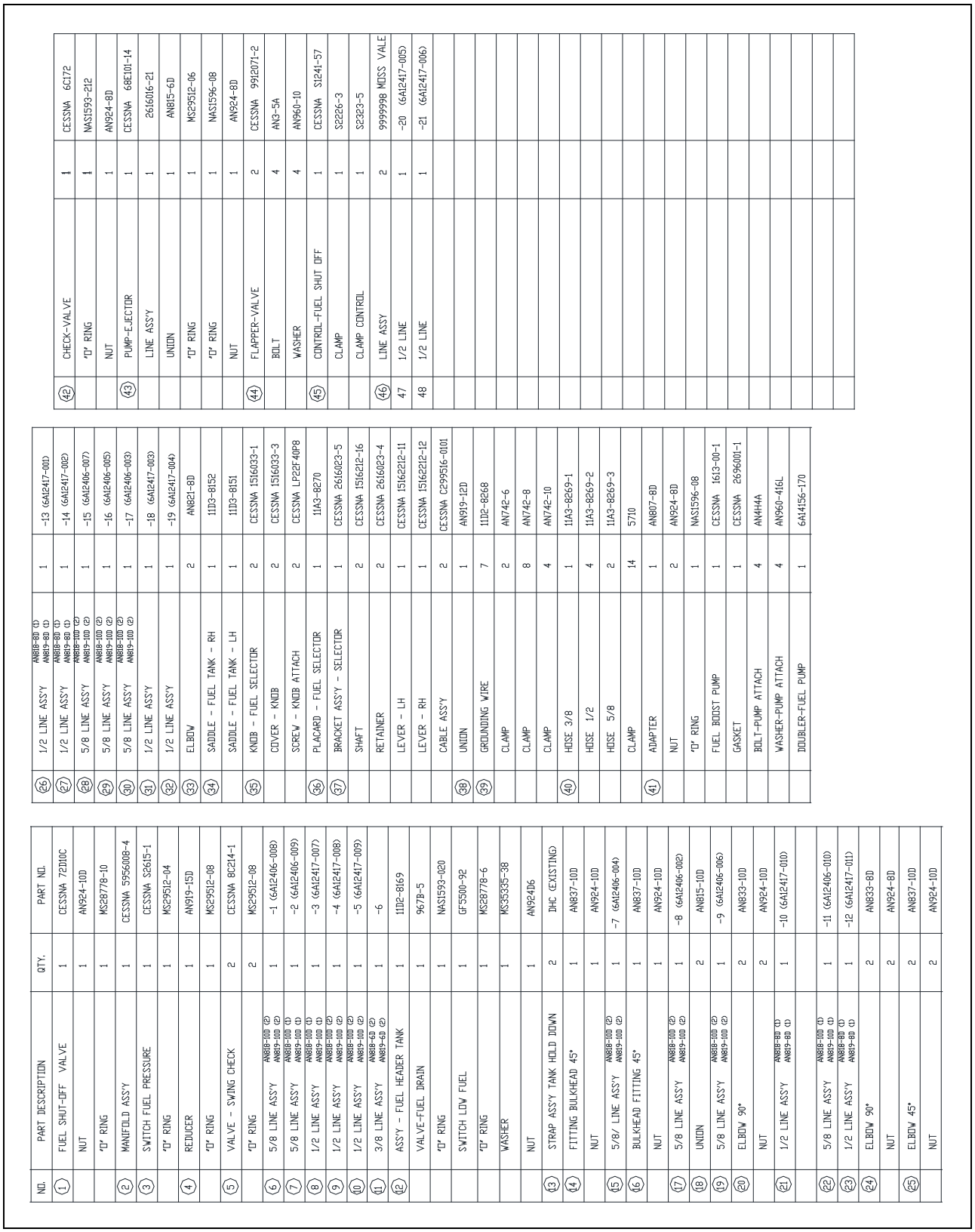

13
45
12
6
39
10
44
5
8
9
1
3
11
38
7
15
14
4
2
TANK – LEFT SIDE
34
43
13
41
12
42
40
TANK, HOLD DOWN

FIGURE 4



NO.	PART DESCRIPTION	QTY.	PART NO.
(1)	FUEL SHUT-OFF VALVE	1	CESSNA 7210C
	NUT	1	AN924-10D
	"O" RING	1	MS28778-10
(2)	MANIFOLD ASSY	1	CESSNA 5956008-4
(3)	SWITCH FUEL PRESSURE	1	CESSNA S2615-1
	"O" RING	1	MS29512-04
(4)	REDUCER	1	AN919-15D
	"O" RING	1	MS29512-08
(5)	VALVE - SWING CHECK	2	CESSNA 8C214-1
	"O" RING	2	MS29512-08
(6)	5/8 LINE ASSY AN818-10D (2) AN819-10D (2)	1	-1 (6A12406-008)
(7)	5/8 LINE ASSY AN818-10D (1) AN819-10D (1)	1	-2 (6A12406-009)
(8)	1/2 LINE ASSY AN818-10D (1) AN819-10D (1)	1	-3 (6A12417-007)
(9)	1/2 LINE ASSY AN818-10D (2) AN819-10D (2)	1	-4 (6A12417-008)
(10)	1/2 LINE ASSY AN818-10D (2) AN819-10D (2)	1	-5 (6A12417-009)
(11)	3/8 LINE ASSY AN818-6D (2) AN819-6D (2)	1	-6
(12)	ASS'Y - FUEL HEADER TANK	1	11D2-8169
	VALVE-FUEL DRAIN	1	967B-5
	"O" RING	1	NAS1593-020
	SWITCH LOW FUEL	1	GF5500-92
	"O" RING	1	MS28778-6
	WASHER	1	MS35335-38
	NUT	1	AN924D6
(13)	STRAP ASS'Y TANK HOLD DOWN	2	DHC (EXISTING)
(14)	FITTING BULKHEAD 45°	1	AN837-10D
	NUT	1	AN924-10D
(15)	5/8 LINE ASSY AN818-10D (2) AN819-10D (2)	1	-7 (6A12406-004)
(16)	BULKHEAD FITTING 45°	1	AN837-10D
	NUT	1	AN924-10D
(17)	5/8 LINE ASSY AN818-10D (2) AN819-10D (2)	1	-8 (6A12406-002)
(18)	UNION	2	AN815-10D
(19)	5/8 LINE ASSY AN818-10D (2) AN819-10D (2)	1	-9 (6A12406-006)
(20)	ELBOW 90°	2	AN833-10D
	NUT	2	AN924-10D
(21)	1/2 LINE ASSY AN818-8D (1) AN819-8D (1)	1	-10 (6A12417-010)
(22)	5/8 LINE ASSY AN818-10D (1) AN819-10D (1)	1	-11 (6A12406-010)
(23)	1/2 LINE ASSY AN818-8D (1) AN819-8D (1)	1	-12 (6A12417-011)
(24)	ELBOW 90°	2	AN833-8D
	NUT	2	AN924-8D
(25)	ELBOW 45°	2	AN837-10D
	NUT	2	AN924-10D
(26)	1/2 LINE ASSY AN818-8D (1) AN819-8D (1)	1	-13 (6A12417-001)
(27)	1/2 LINE ASSY AN818-8D (1) AN819-8D (1)	1	-14 (6A12417-002)
(28)	5/8 LINE ASSY AN818-10D (2) AN819-10D (2)	1	-15 (6A12406-007)
(29)	5/8 LINE ASSY AN818-10D (2) AN819-10D (2)	1	-16 (6A12406-005)
(30)	5/8 LINE ASSY AN818-10D (2) AN819-10D (2)	1	-17 (6A12406-003)
(31)	1/2 LINE ASSY	1	-18 (6A12417-003)
(32)	1/2 LINE ASSY	1	-19 (6A12417-004)
(33)	ELBOW	2	AN821-8D
(34)	SADDLE - FUEL TANK - RH	1	11D3-8152
	SADDLE - FUEL TANK - LH	1	11D3-8151
(35)	KNOB - FUEL SELECTOR	2	CESSNA 1516033-1
	COVER - KNOB	2	CESSNA 1516033-3
	SCREW - KNOB ATTACH	2	CESSNA LP22F40P8
(36)	PLACARD - FUEL SELECTOR	1	11A3-8270
(37)	BRACKET ASS'Y - SELECTOR	1	CESSNA 2616023-5
	SHAFT	2	CESSNA 1516212-16
	RETAINER	2	CESSNA 2616023-4
	LEVER - LH	1	CESSNA 15162212-11
	LEVER - RH	1	CESSNA 15162212-12
	CABLE ASS'Y	2	CESSNA C299516-0101
(38)	UNION	1	AN919-12D
(39)	GROUNDING WIRE	7	11D2-8268
	CLAMP	2	AN742-6
	CLAMP	8	AN742-8
	CLAMP	4	AN742-10
(40)	HOSE 3/8	1	11A3-8269-1
	HOSE 1/2	4	11A3-8269-2
	HOSE 5/8	2	11A3-8269-3
	CLAMP	14	5710
(41)	ADAPTER	1	AN807-8D
	NUT	2	AN924-8D
	"O" RING	1	NAS1596-08
	FUEL BOOST PUMP	1	CESSNA 1613-00-1
	GASKET	1	CESSNA 2696001-1
	BOLT-PUMP ATTACH	4	AN4H4A
	WASHER-PUMP ATTACH	4	AN960-416L
	DOUBLER-FUEL PUMP	1	6A14156-170
(42)	CHECK-VALVE	1	CESSNA 6G172
	"O" RING	1	NAS1593-212
	NUT	1	AN924-8D
(43)	PUMP-EJECTOR	1	CESSNA 68E101-14
	LINE ASS'Y	1	2616016-21
	UNION	1	AN815-6D
	"O" RING	1	MS29512-06
	"O" RING	1	NAS1596-08
	NUT	1	AN924-8D
(44)	FLAPPER-VALVE	2	CESSNA 9912071-2
	BOLT	4	AN3-5A
	WASHER	4	AN960-10
(45)	CONTROL-FUEL SHUT OFF	1	CESSNA S1241-57
	CLAMP	1	S2226-3
	CLAMP CONTROL	1	S2323-5
(46)	LINE ASSY	2	9999998 MOSS VALE
47	1/2 LINE	1	-20 (6A12417-005)
48	1/2 LINE	1	-21 (6A12417-006)

FIGURE 5

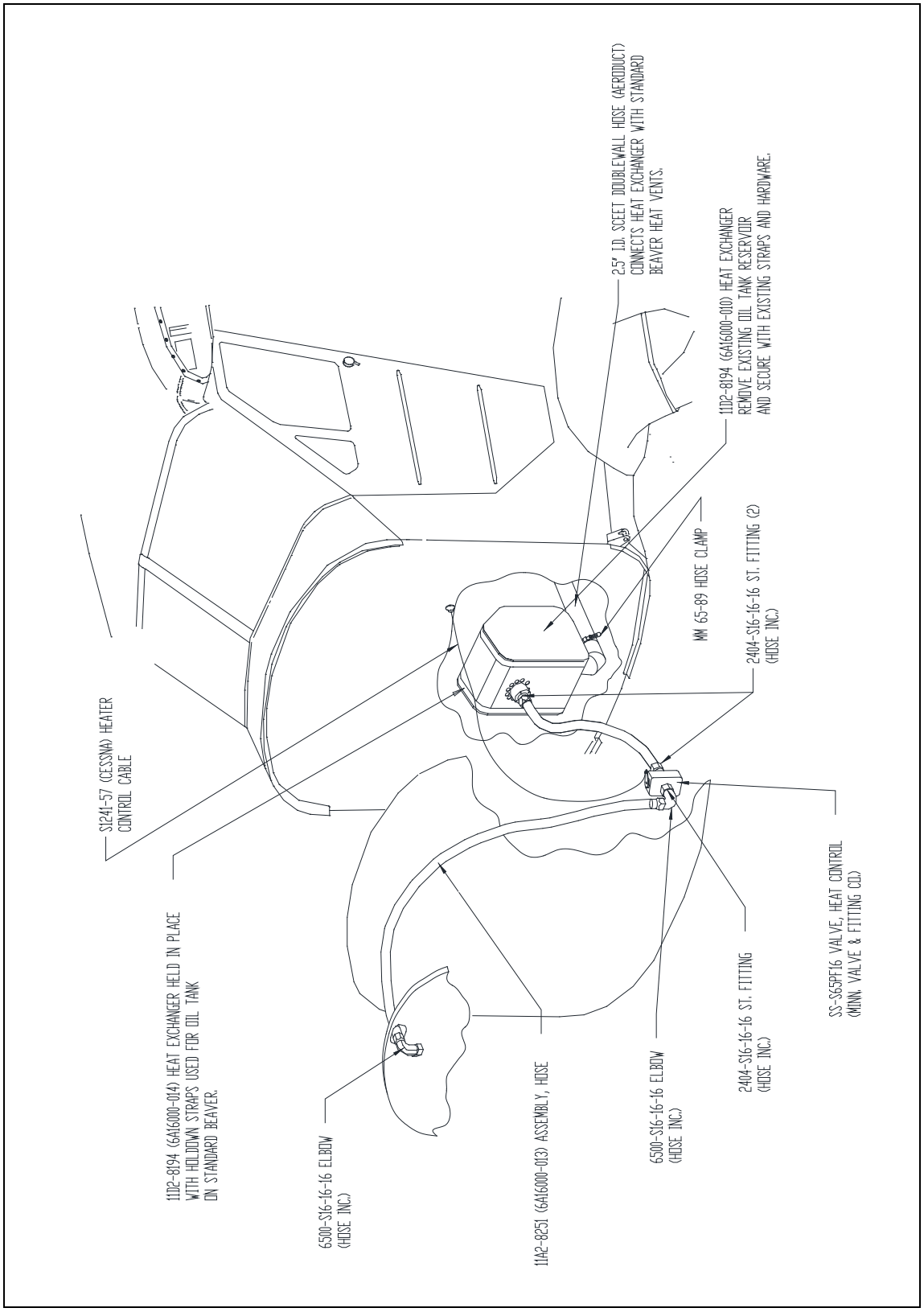

2.5" I.D. SCEET DOUBLEWALL HOSE (AERODUCT)
CONNECTS HEAT EXCHANGER WITH STANDARD
BEAVER HEAT VENTS.
1102-8194 (6A16000-010) HEAT EXCHANGER
REMOVE EXISTING OIL TANK RESERVOIR
AND SECURE WITH EXISTING STRAPS AND HARDWARE.
MM 65-89 HOSE CLAMP
2404-S16-16-16 ST. FITTING (2)
(HOSE INC.)
S1241-57 (CESSNA) HEATER
CONTROL CABLE
1102-8194 (6A16000-014) HEAT EXCHANGER HELD IN PLACE
WITH HOLDDOWN STRAPS USED FOR OIL TANK
ON STANDARD BEAVER.
6500-S16-16-16 ELBOW
(HOSE INC.)
11A2-8251 (6A16000-013) ASSEMBLY, HOSE
6500-S16-16-16 ELBOW
(HOSE INC.)
2404-S16-16-16 ST. FITTING
(HOSE INC.)
SS-S65PF16 VALVE, HEAT CONTROL
(MINN. VALVE & FITTING CO.)

FIGURE 6

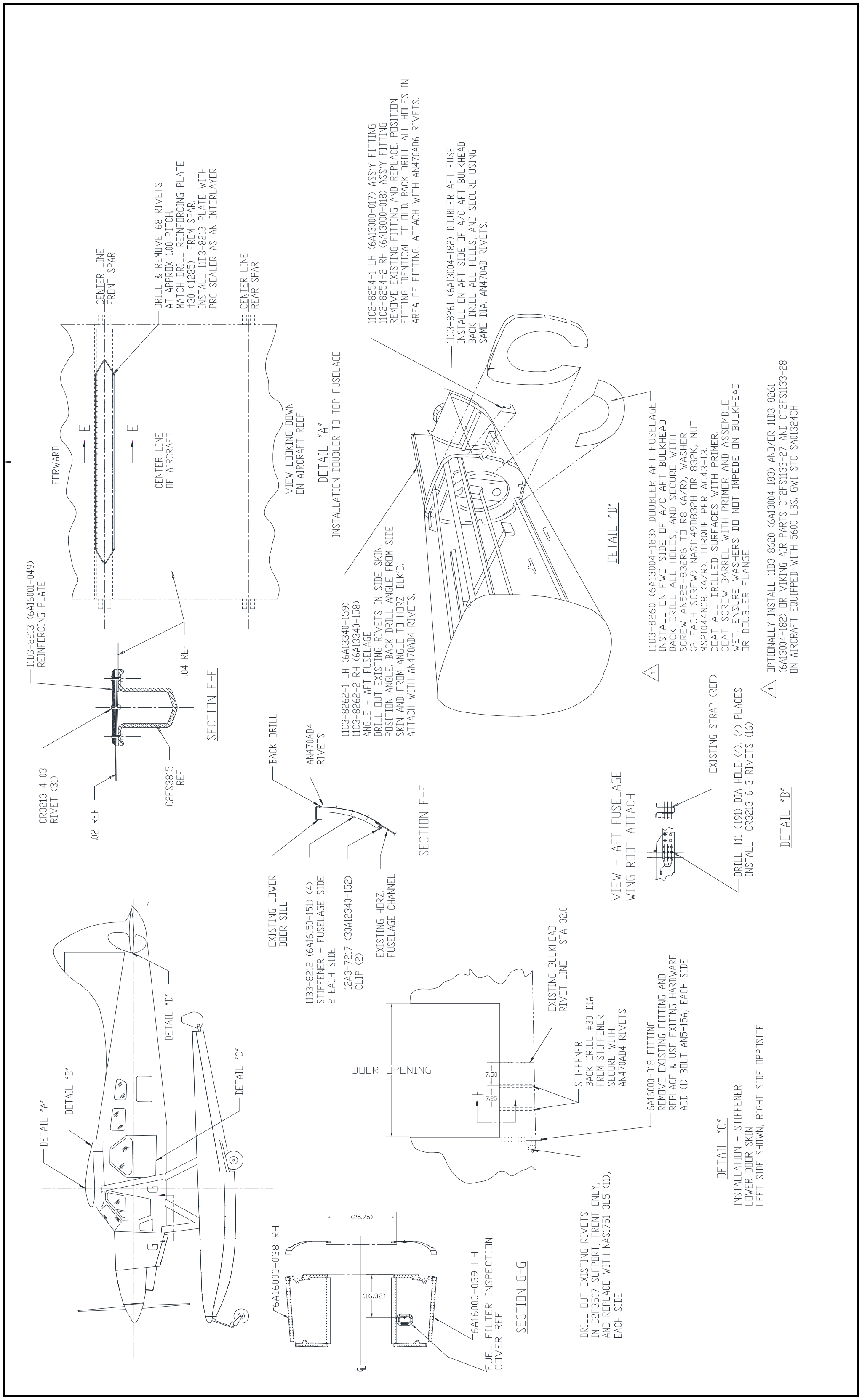

DETAIL 'A'
INSTALLATION DOUBLER TO TOP FUSELAGE
VIEW LOOKING DOWN ON AIRCRAFT ROOF
FORWARD
CENTER LINE OF AIRCRAFT
CENTER LINE FRONT SPAR
CENTER LINE REAR SPAR
DRILL & REMOVE 68 RIVETS AT APPROX 1.00 PITCH. MATCH DRILL REINFORCING PLATE #30 (.1285) FROM SPAR. INSTALL 11D3-8213 PLATE WITH PRC SEALER AS AN INTERLAYER.
11D3-8213 (6A16001-049) REINFORCING PLATE
SECTION E-E
CR3213-4-03 RIVET (31)
C2FS3815 REF
.02 REF
.04 REF
SECTION F-F
BACK DRILL
AN470AD4 RIVETS
EXISTING LOWER DOOR SILL
11B3-8212 (6A16150-151) (4) STIFFENER - FUSELAGE SIDE 2 EACH SIDE
12A3-7217 (30A12340-152) CLIP (2)
EXISTING HORZ. FUSELAGE CHANNEL
DETAIL 'D'
DETAIL 'B'
DETAIL 'C'
VIEW - AFT FUSELAGE WING ROOT ATTACH
EXISTING STRAP (REF)
DRILL #11 (.191) DIA HOLE (4), (4) PLACES INSTALL CR3213-6-3 RIVETS (16)
DOOR OPENING
EXISTING BULKHEAD RIVET LINE - STA 32.0
STIFFENER BACK DRILL #30 DIA FROM STIFFENER SECURE WITH AN470AD4 RIVETS
6A16000-018 FITTING REMOVE EXISTING FITTING AND REPLACE & USE EXITING HARDWARE ADD (1) BOLT AN5-15A, EACH SIDE
DETAIL 'C'
INSTALLATION - STIFFENER LOWER DOOR SKIN LEFT SIDE SHOWN, RIGHT SIDE OPPOSITE
DRILL OUT EXISTING RIVETS IN C2F3507 SUPPORT, FRONT ONLY, AND REPLACE WITH NAS1751-3L5 (11), EACH SIDE
6A16000-038 RH
6A16000-039 LH
FUEL FILTER INSPECTION COVER REF
SECTION G-G
(25.75)
(16.32)

FIGURE 7

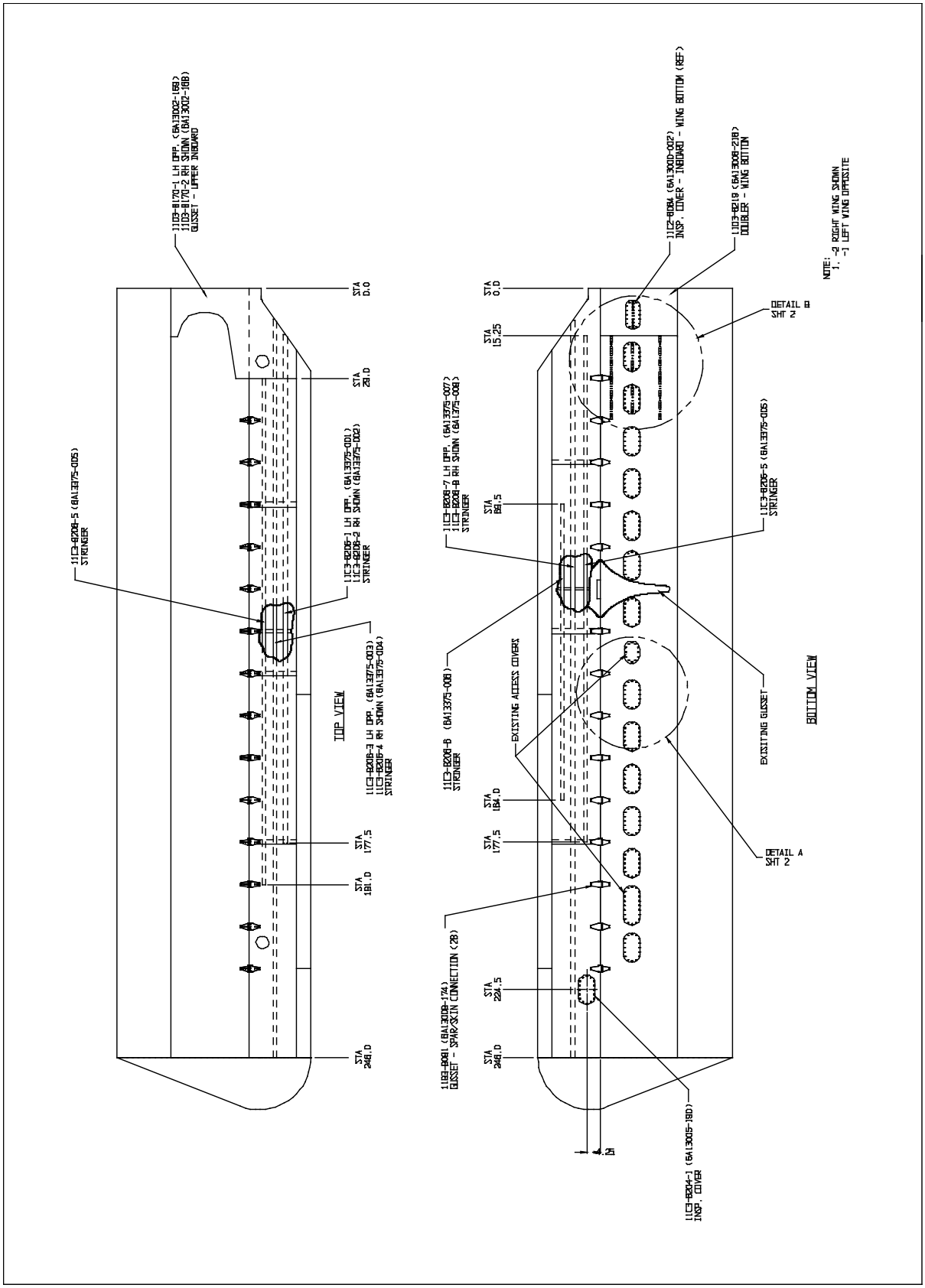
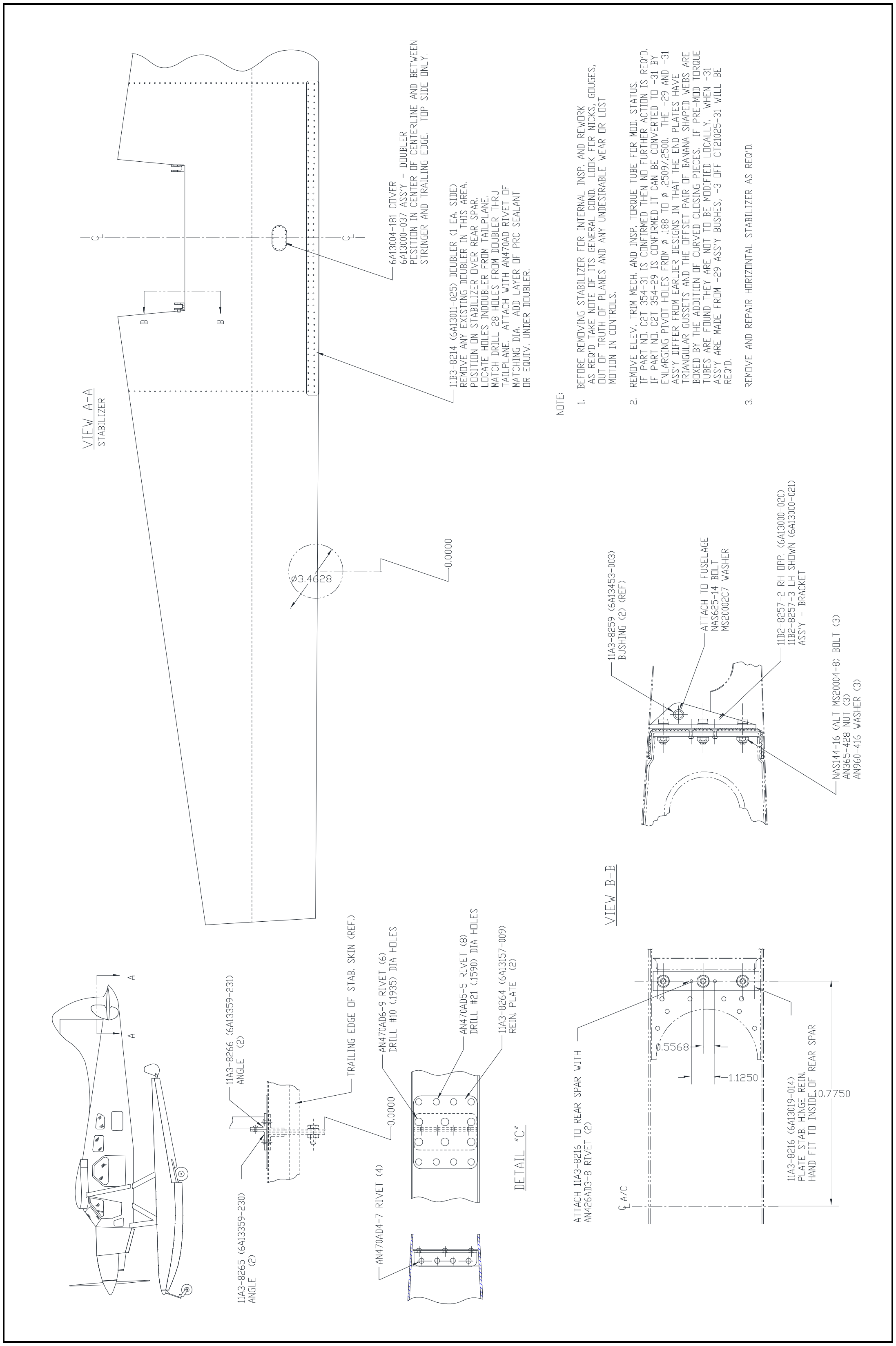

TOP VIEW
BOTTOM VIEW
EXISTING ACCESS COVERS
EXISTING GUSSET
DETAIL A SHT 2
DETAIL B SHT 2
NOTE: 1. -2 RIGHT WING SHOWN -1 LEFT WING OPPOSITE
STA 0.0
STA 28.0
STA 177.5
STA 181.0
STA 246.0
STA 15.25
STA 88.5
STA 184.0
STA 224.5

FIGURE 8



VIEW A-A
STABILIZER
A
A
B
B
ø3.4628
0.0000
6A13004-181 COVER
6A13000-037 ASS'Y - DOUBLER
POSITION IN CENTER OF CENTERLINE AND BETWEEN STRINGER AND TRAILING EDGE. TOP SIDE ONLY.
11B3-8214 (6A13011-025) DOUBLER (1 EA. SIDE)
REMOVE ANY EXISTING DOUBLER IN THIS AREA.
POSITION ON STABILIZER OVER REAR SPAR.
LOCATE HOLES INDOUBLER FROM TAILPLANE.
MATCH DRILL 28 HOLES FROM DOUBLER THRU TAILPLANE. ATTACH WITH AN470AD RIVET OF MATCHING DIA. ADD LAYER OF PRC SEALANT OR EQUIV. UNDER DOUBLER.
NOTE:
1. BEFORE REMOVING STABILIZER FOR INTERNAL INSP. AND REWORK AS REQ'D TAKE NOTE OF ITS GENERAL COND. LOOK FOR NICKS, GOUGES, OUT OF TRUTH OF PLANES AND ANY UNDESIRABLE WEAR OR LOST MOTION IN CONTROLS.
2. REMOVE ELEV. TRIM MECH. AND INSP. TORQUE TUBE FOR MOD. STATUS. IF PART NO. C2T 354-31 IS CONFIRMED THEN NO FURTHER ACTION IS REQ'D. IF PART NO. C2T 354-29 IS CONFIRMED IT CAN BE CONVERTED TO -31 BY ENLARGING PIVOT HOLES FROM ø .188 TO ø .2509/.2500. THE -29 AND -31 ASS'Y DIFFER FROM EARLIER DESIGNS IN THAT THE END PLATES HAVE TRIANGULAR GUSSETS AND THE OFFSET PAIR OF BANANA SHAPED WEBS ARE BOXED BY THE ADDITION OF CURVED CLOSING PIECES. IF PRE-MOD TORQUE TUBES ARE FOUND THEY ARE NOT TO BE MODIFIED LOCALLY. WHEN -31 ASS'Y ARE MADE FROM -29 ASS'Y BUSHES, -3 OFF CT21025-31 WILL BE REQ'D.
3. REMOVE AND REPAIR HORIZONTAL STABILIZER AS REQ'D.
11A3-8265 (6A13359-230)
ANGLE (2)
11A3-8266 (6A13359-231)
ANGLE (2)
TRAILING EDGE OF STAB. SKIN (REF.)
AN470AD4-7 RIVET (4)
0.0000
AN470AD6-9 RIVET (6)
DRILL #10 (.1935) DIA HOLES
AN470AD5-5 RIVET (8)
DRILL #21 (.1590) DIA HOLES
11A3-8264 (6A13157-009)
REIN. PLATE (2)
DETAIL "C"
ATTACH 11A3-8216 TO REAR SPAR WITH
AN426AD3-8 RIVET (2)
VIEW B-B
℄ A/C
0.5568
1.1250
0.7750
11A3-8216 (6A13019-014)
PLATE STAB. HINGE REIN.
HAND FIT TO INSIDE OF REAR SPAR
11A3-8259 (6A13453-003)
BUSHING (2) (REF)
ATTACH TO FUSELAGE
NAS625-14 BOLT
MS20002C7 WASHER
11B2-8257-2 RH OPP. (6A13000-020)
11B2-8257-3 LH SHOWN (6A13000-021)
ASS'Y - BRACKET
NAS144-16 (ALT MS20004-8) BOLT (3)
AN365-428 NUT (3)
AN960-416 WASHER (3)

FIGURE 9

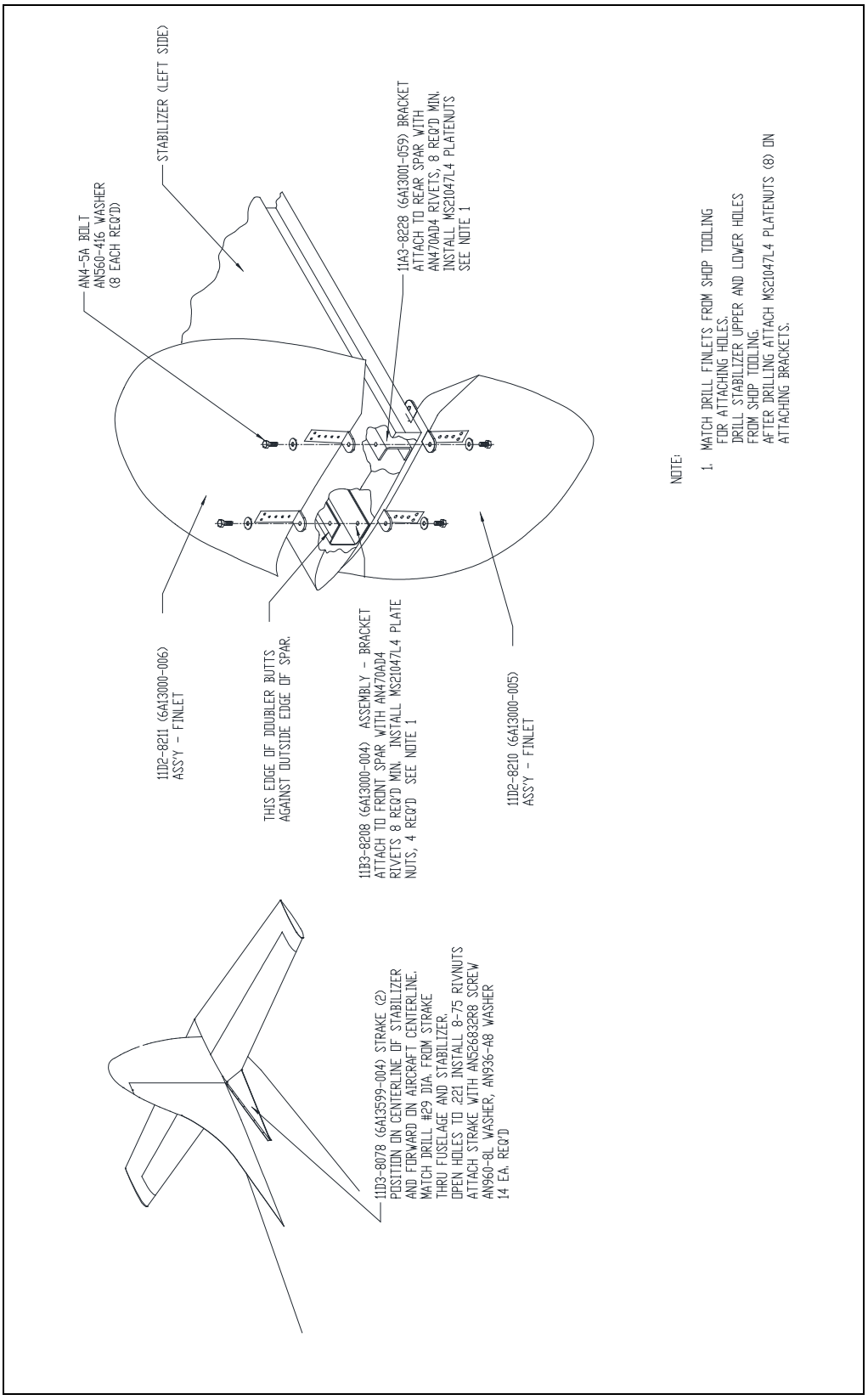

AN4-5A BOLT
AN560-416 WASHER
(8 EACH REQ'D)
STABILIZER (LEFT SIDE)
11A3-8228 (6A13001-059) BRACKET
ATTACH TO REAR SPAR WITH
AN470AD4 RIVETS, 8 REQ'D MIN.
INSTALL MS21047L4 PLATENUTS
SEE NOTE 1
11D2-8211 (6A13000-006)
ASS'Y - FINLET
THIS EDGE OF DOUBLER BUTTS
AGAINST OUTSIDE EDGE OF SPAR.
11B3-8208 (6A13000-004) ASSEMBLY - BRACKET
ATTACH TO FRONT SPAR WITH AN470AD4
RIVETS 8 REQ'D MIN. INSTALL MS21047L4 PLATE
NUTS, 4 REQ'D SEE NOTE 1
11D2-8210 (6A13000-005)
ASS'Y - FINLET
11D3-8078 (6A13599-004) STRAKE (2)
POSITION ON CENTERLINE OF STABILIZER
AND FORWARD ON AIRCRAFT CENTERLINE.
MATCH DRILL #29 DIA. FROM STRAKE
THRU FUSELAGE AND STABILIZER.
OPEN HOLES TO .221 INSTALL 8-75 RIVNUTS
ATTACH STRAKE WITH AN526832R8 SCREW
AN960-8L WASHER, AN936-A8 WASHER
14 EA. REQ'D
NOTE:
1. MATCH DRILL FINLETS FROM SHOP TOOLING
FOR ATTACHING HOLES.
DRILL STABILIZER UPPER AND LOWER HOLES
FROM SHOP TOOLING.
AFTER DRILLING ATTACH MS21047L4 PLATENUTS (8) ON
ATTACHING BRACKETS.

FIGURE 10

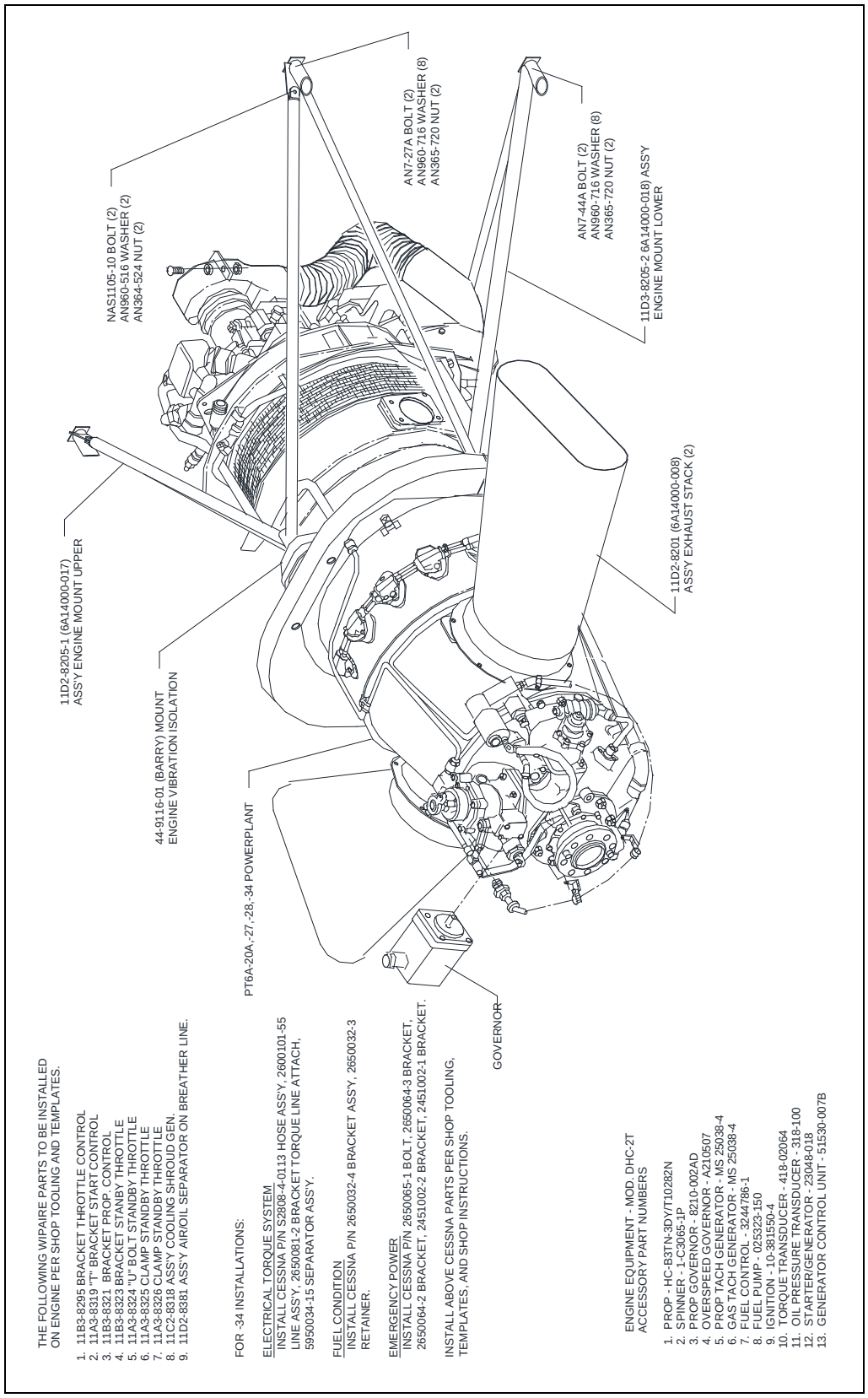

NAS1105-10 BOLT (2)
AN960-516 WASHER (2)
AN364-524 NUT (2)
AN7-27A BOLT (2)
AN960-716 WASHER (8)
AN365-720 NUT (2)
AN7-44A BOLT (2)
AN960-716 WASHER (8)
AN365-720 NUT (2)
11D3-8205-2 6A14000-018) ASS'Y
ENGINE MOUNT LOWER
11D2-8205-1 (6A14000-017)
ASS'Y ENGINE MOUNT UPPER
11D2-8201 (6A14000-008)
ASS'Y EXHAUST STACK (2)
44-9116-01 (BARRY) MOUNT
ENGINE VIBRATION ISOLATION
PT6A-20A,-27,-28,-34 POWERPLANT
GOVERNOR
THE FOLLOWING WIPAIRE PARTS TO BE INSTALLED
ON ENGINE PER SHOP TOOLING AND TEMPLATES.
1. 11B3-8295 BRACKET THROTTLE CONTROL
2. 11A3-8319 "T" BRACKET START CONTROL
3. 11B3-8321 BRACKET PROP. CONTROL
4. 11B3-8323 BRACKET STANBY THROTTLE
5. 11A3-8324 "U" BOLT STANDBY THROTTLE
6. 11A3-8325 CLAMP STANDBY THROTTLE
7. 11A3-8326 CLAMP STANDBY THROTTLE
8. 11C2-8318 ASS'Y COOLING SHROUD GEN.
9. 11D2-8381 ASS'Y AIR/OIL SEPARATOR ON BREATHER LINE.
FOR -34 INSTALLATIONS:
ELECTRICAL TORQUE SYSTEM
INSTALL CESSNA P/N S2808-4-0113 HOSE ASS'Y, 2600101-55
LINE ASS'Y, 2650081-2 BRACKET TORQUE LINE ATTACH,
5950034-15 SEPARATOR ASS'Y.
FUEL CONDITION
INSTALL CESSNA P/N 2650032-4 BRACKET ASS'Y, 2650032-3
RETAINER.
EMERGENCY POWER
INSTALL CESSNA P/N 2650065-1 BOLT, 2650064-3 BRACKET,
2650064-2 BRACKET, 2451002-2 BRACKET, 2451002-1 BRACKET.
INSTALL ABOVE CESSNA PARTS PER SHOP TOOLING,
TEMPLATES, AND SHOP INSTRUCTIONS.
ENGINE EQUIPMENT - MOD. DHC-2T
ACCESSORY PART NUMBERS
1. PROP - HC-B3TN-3DY/T10282N
2. SPINNER - 1-C3065-1P
3. PROP GOVERNOR - 8210-002AD
4. OVERSPEED GOVERNOR - A210507
5. PROP TACH GENERATOR - MS 25038-4
6. GAS TACH GENERATOR - MS 25038-4
7. FUEL CONTROL - 3244786-1
8. FUEL PUMP - 025323-150
9. IGNITION - 10-381550-4
10. TORQUE TRANSDUCER - 418-02064
11. OIL PRESSURE TRANSDUCER - 318-100
12. STARTER/GENERATOR - 23048-018
13. GENERATOR CONTROL UNIT - 51530-007B

FIGURE 11

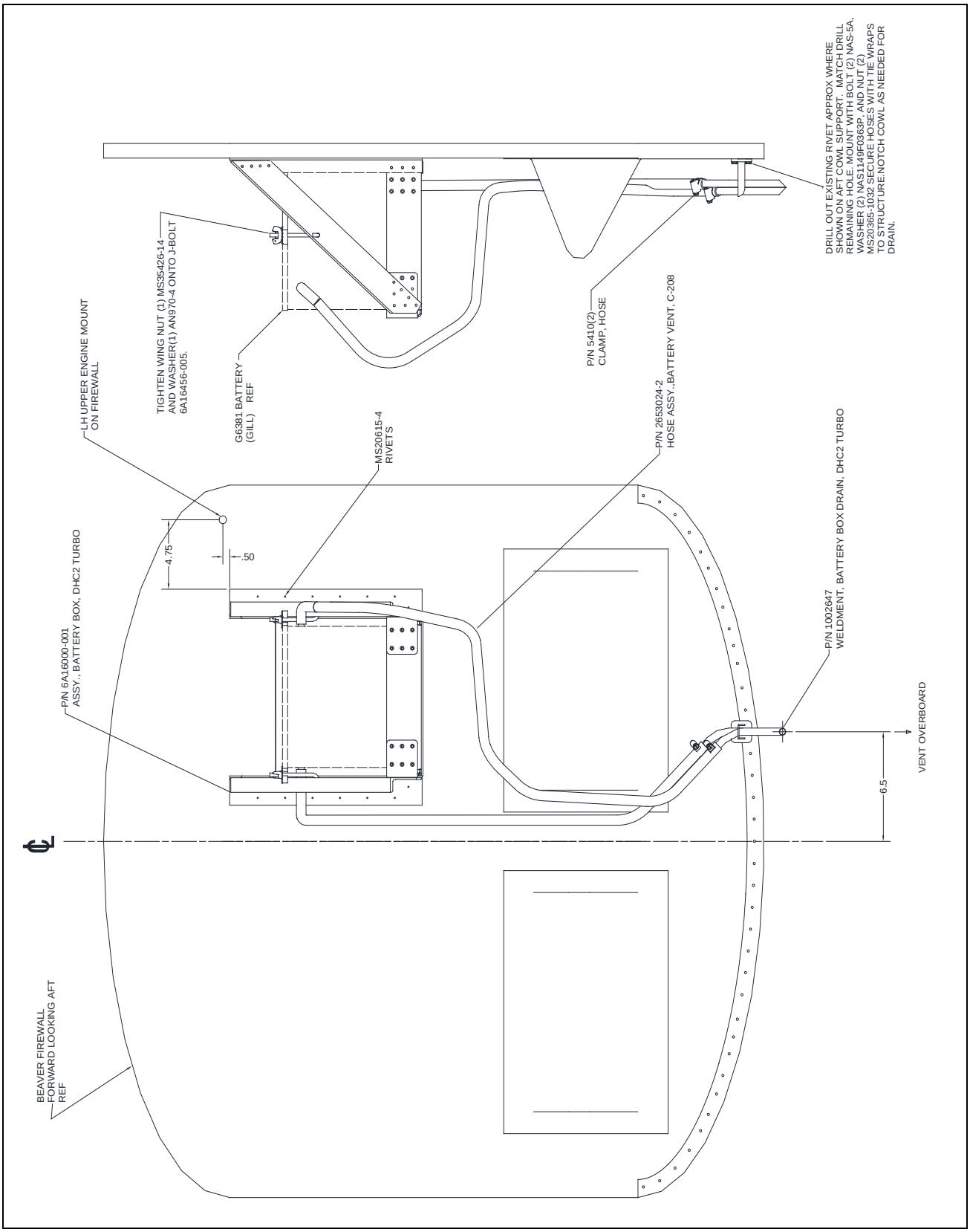

DRILL OUT EXISTING RIVET APPROX WHERE SHOWN ON AFT COWL SUPPORT. MATCH DRILL REMAINING HOLE. MOUNT WITH BOLT (2) NAS-5A, WASHER (2) NAS1149F0363P, AND NUT (2) MS20365-1032 SECURE HOSES WITH TIE WRAPS TO STRUCTURE.NOTCH COWL AS NEEDED FOR DRAIN.
P/N 5410(2) CLAMP, HOSE
P/N 2653024-2 HOSE ASSY., BATTERY VENT, C-208
TIGHTEN WING NUT (1) MS35426-14 AND WASHER(1) AN970-4 ONTO J-BOLT 6A16456-005.
G6381 BATTERY (GILL) REF
LH UPPER ENGINE MOUNT ON FIREWALL
MS20615-4 RIVETS
4.75
.50
P/N 6A16000-001 ASSY., BATTERY BOX, DHC2 TURBO
P/N 1002647 WELDMENT, BATTERY BOX DRAIN, DHC2 TURBO
VENT OVERBOARD
6.5
BEAVER FIREWALL FORWARD LOOKING AFT REF

FIGURE 12

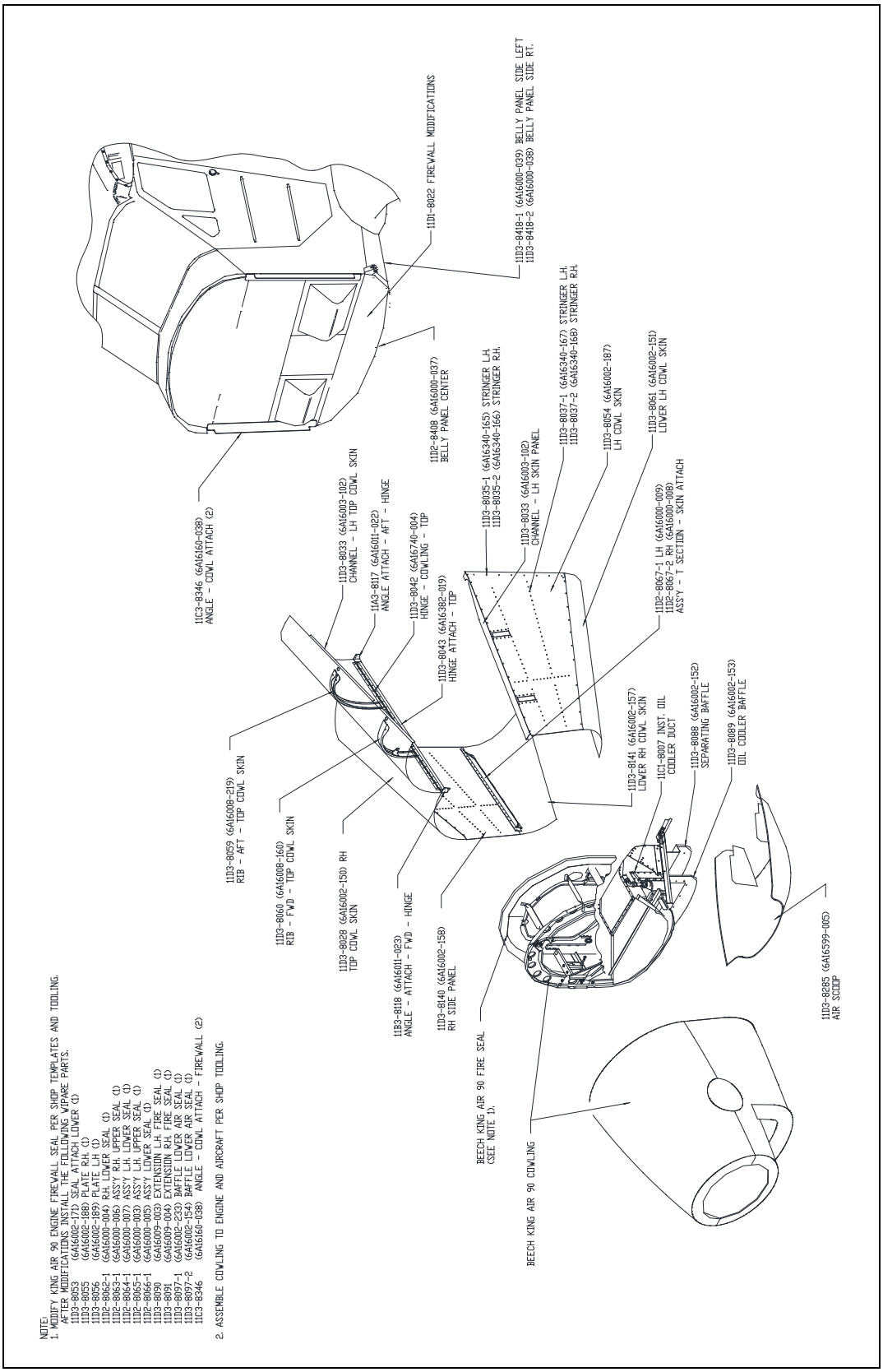

NOTE:
1. MODIFY KING AIR 90 ENGINE FIREWALL SEAL PER SHOP TEMPLATES AND TOOLING.
AFTER MODIFICATIONS INSTALL THE FOLLOWING W/PARE PARTS.
11D3-8053 (6A16002-171) SEAL ATTACH LOWER (1)
11D3-8055 (6A16002-188) PLATE R.H. (1)
11D3-8056 (6A16002-189) PLATE L.H (1)
11D2-8062-1 (6A16000-044) R.H. LOWER SEAL (1)
11D2-8063-1 (6A16000-006) ASS'Y R.H. UPPER SEAL (1)
11D2-8064-1 (6A16000-007) ASS'Y L.H. LOWER SEAL (1)
11D2-8065-1 (6A16000-033) ASS'Y L.H. UPPER SEAL (1)
11D2-8066-1 (6A16000-005) ASS'Y LOWER SEAL (2)
11D3-8090 (6A16009-003) EXTENSION L.H. FIRE SEAL (1)
11D3-8091 (6A16009-004) EXTENSION R.H. FIRE SEAL (1)
11D3-8097-1 (6A16002-233) BAFFLE LOWER AIR SEAL (1)
11D3-8097-2 (6A16002-154) BAFFLE LOWER AIR SEAL (1)
11C3-8346 (6A16160-038) ANGLE - COWL ATTACH - FIREWALL (2)
2. ASSEMBLE COWLING TO ENGINE AND AIRCRAFT PER SHOP TOOLING.
11C3-8346 (6A16160-038) ANGLE - COWL ATTACH (2)
11D1-8022 FIREWALL MODIFICATIONS
11D3-8418-1 (6A16000-039) BELLY PANEL SIDE LEFT
11D3-8418-2 (6A16000-038) BELLY PANEL SIDE RT.
11D2-8408 (6A16000-037) BELLY PANEL CENTER
11D3-8033 (6A16003-102) CHANNEL - LH TIP COWL SKIN
11A3-8117 (6A16011-022) ANGLE ATTACH - AFT - HINGE
11D3-8042 (6A15740-004) HINGE - COWLING - TIP
11D3-8043 (6A16382-019) HINGE ATTACH - TIP
11D3-8035-1 (6A16340-165) STRINGER L.H.
11D3-8035-2 (6A16340-166) STRINGER R.H.
11D3-8033 (6A16003-102) CHANNEL - LH SKIN PANEL
11D3-8037-1 (6A16340-167) STRINGER L.H.
11D3-8037-2 (6A16340-168) STRINGER R.H.
11D3-8054 (6A16002-187) LH COWL SKIN
11D3-8061 (6A16002-151) LOWER LH COWL SKIN
11D2-8067-1 LH (6A16000-009)
11D2-8067-2 RH (6A16000-008)
ASS'Y - T SECTION - SKIN ATTACH
11D3-8059 (6A16008-219) RIB - AFT - TIP COWL SKIN
11D3-8060 (6A16008-160) RIB - FWD - TIP COWL SKIN
11D3-8028 (6A16002-150) RH TIP COWL SKIN
11B3-8118 (6A16011-023) ANGLE - ATTACH - FWD - HINGE
11D3-8140 (6A16002-158) RH SIDE PANEL
BEECH KING AIR 90 FIRE SEAL (SEE NOTE 1).
11D3-8141 (6A16002-157) LOWER RH COWL SKIN
11C1-8007 INST. OIL COOLER DUCT
11D3-8038 (6A16002-152) SEPARATING BAFFLE
11D3-8089 (6A16002-153) OIL COOLER BAFFLE
11D3-8285 (6A16599-005) AIR SCOOP
BEECH KING AIR 90 COWLING

FIGURE 13

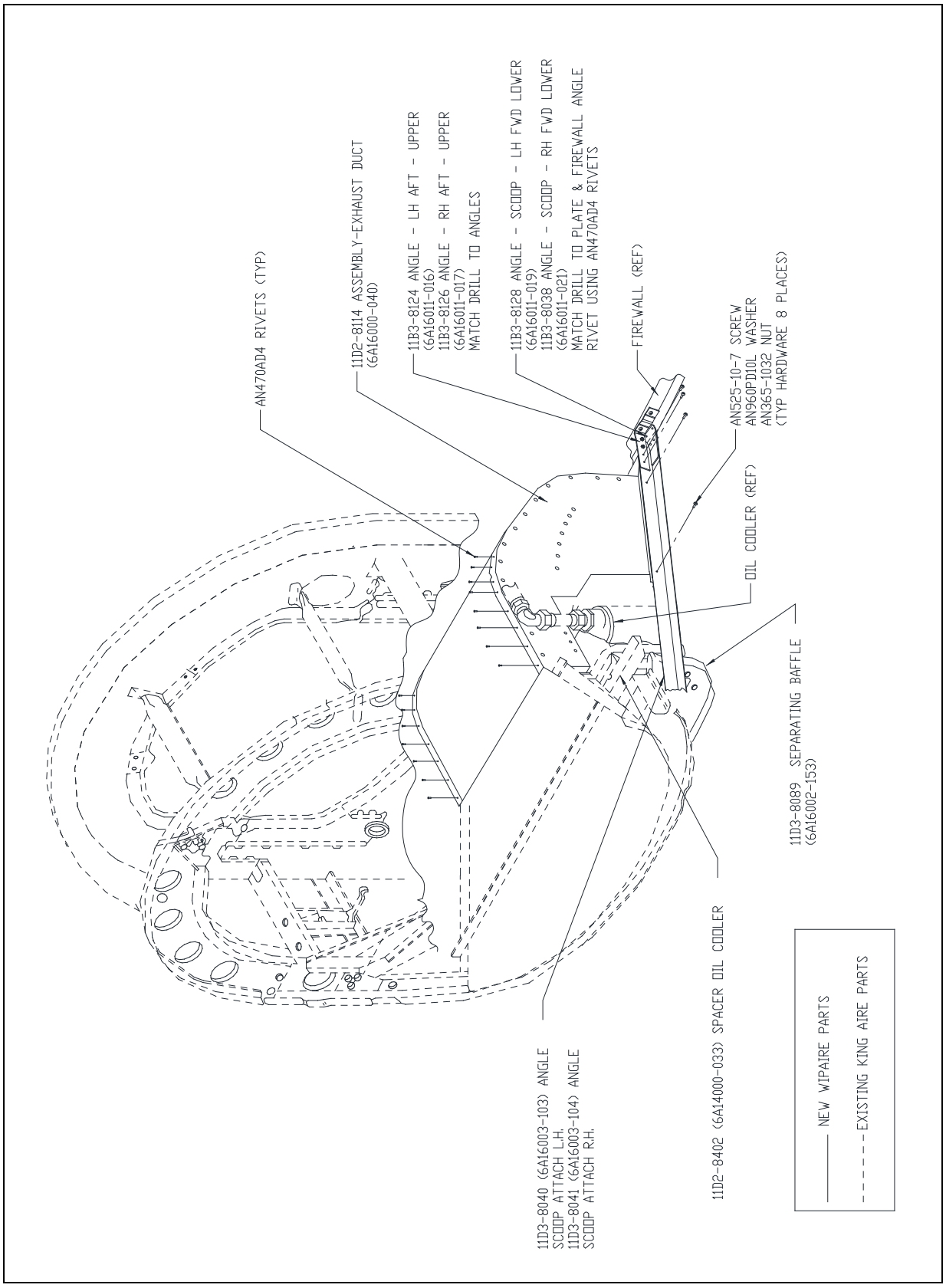

AN470AD4 RIVETS (TYP)
11D2-8114 ASSEMBLY-EXHAUST DUCT
(6A16000-040)
11B3-8124 ANGLE - LH AFT - UPPER
(6A16011-016)
11B3-8126 ANGLE - RH AFT - UPPER
(6A16011-017)
MATCH DRILL TO ANGLES
11B3-8128 ANGLE - SCOOP - LH FWD LOWER
(6A16011-019)
11B3-8038 ANGLE - SCOOP - RH FWD LOWER
(6A16011-021)
MATCH DRILL TO PLATE & FIREWALL ANGLE
RIVET USING AN470AD4 RIVETS
FIREWALL (REF)
AN525-10-7 SCREW
AN960PD10L WASHER
AN365-1032 NUT
(TYP HARDWARE 8 PLACES)
OIL COOLER (REF)
11D3-8089 SEPARATING BAFFLE
(6A16002-153)
11D3-8040 (6A16003-103) ANGLE
SCOOP ATTACH L.H.
11D3-8041 (6A16003-104) ANGLE
SCOOP ATTACH R.H.
11D2-8402 (6A14000-033) SPACER OIL COOLER
NEW WIPAIRE PARTS
EXISTING KING AIRE PARTS

FIGURE 14

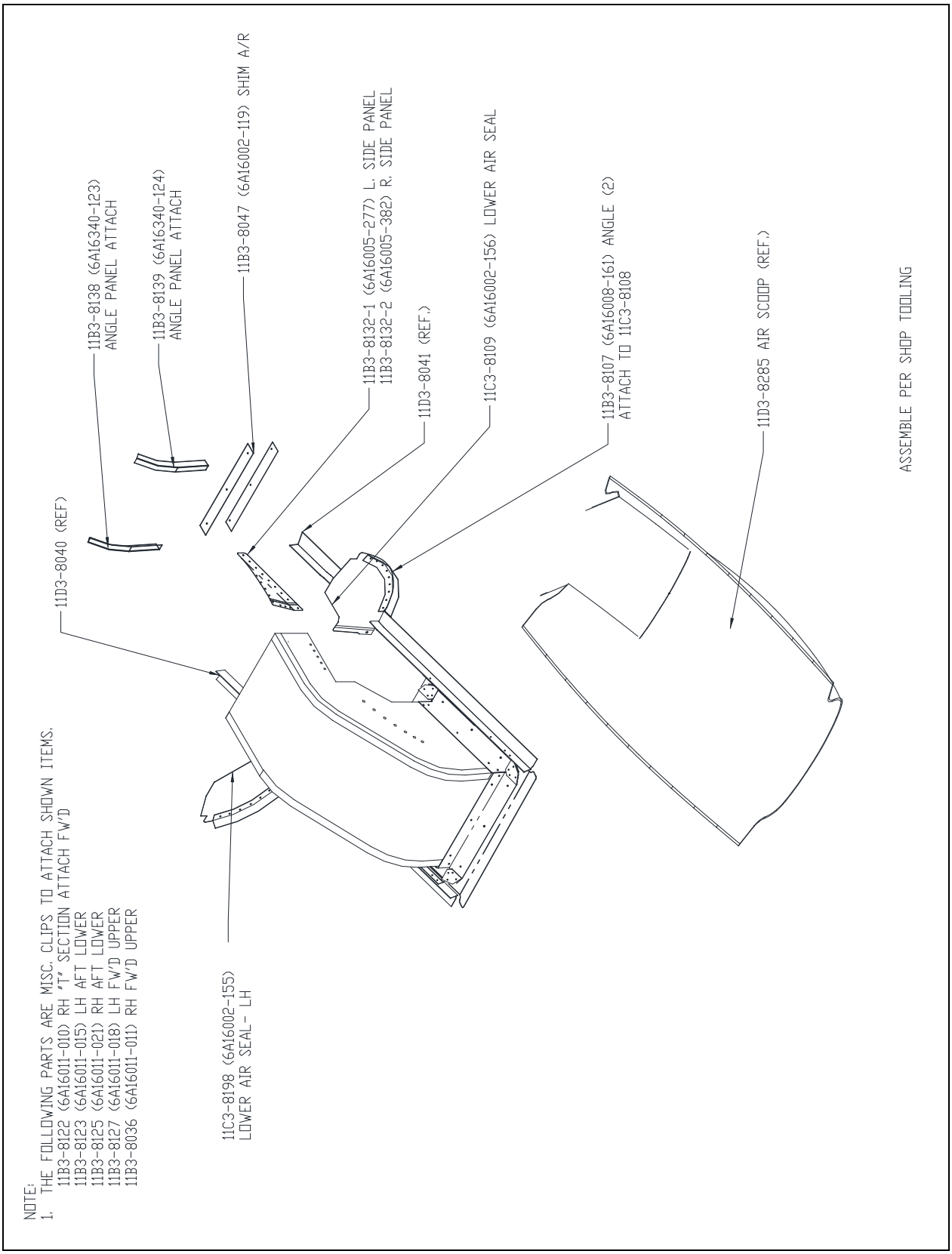

NOTE:
1. THE FOLLOWING PARTS ARE MISC. CLIPS TO ATTACH SHOWN ITEMS.
11B3-8122 (6A16011-010) RH "T" SECTION ATTACH FW'D
11B3-8123 (6A16011-015) LH AFT LOWER
11B3-8125 (6A16011-021) RH AFT LOWER
11B3-8127 (6A16011-018) LH FW'D UPPER
11B3-8036 (6A16011-011) RH FW'D UPPER
11C3-8198 (6A16002-155) LOWER AIR SEAL - LH
11D3-8040 (REF)
11B3-8138 (6A16340-123) ANGLE PANEL ATTACH
11B3-8139 (6A16340-124) ANGLE PANEL ATTACH
11B3-8047 (6A16002-119) SHIM A/R
11B3-8132-1 (6A16005-277) L. SIDE PANEL
11B3-8132-2 (6A16005-382) R. SIDE PANEL
11D3-8041 (REF.)
11C3-8109 (6A16002-156) LOWER AIR SEAL
11B3-8107 (6A16008-161) ANGLE (2) ATTACH TO 11C3-8108
11D3-8285 AIR SCOOP (REF.)
ASSEMBLE PER SHOP TOOLING

FIGURE 15

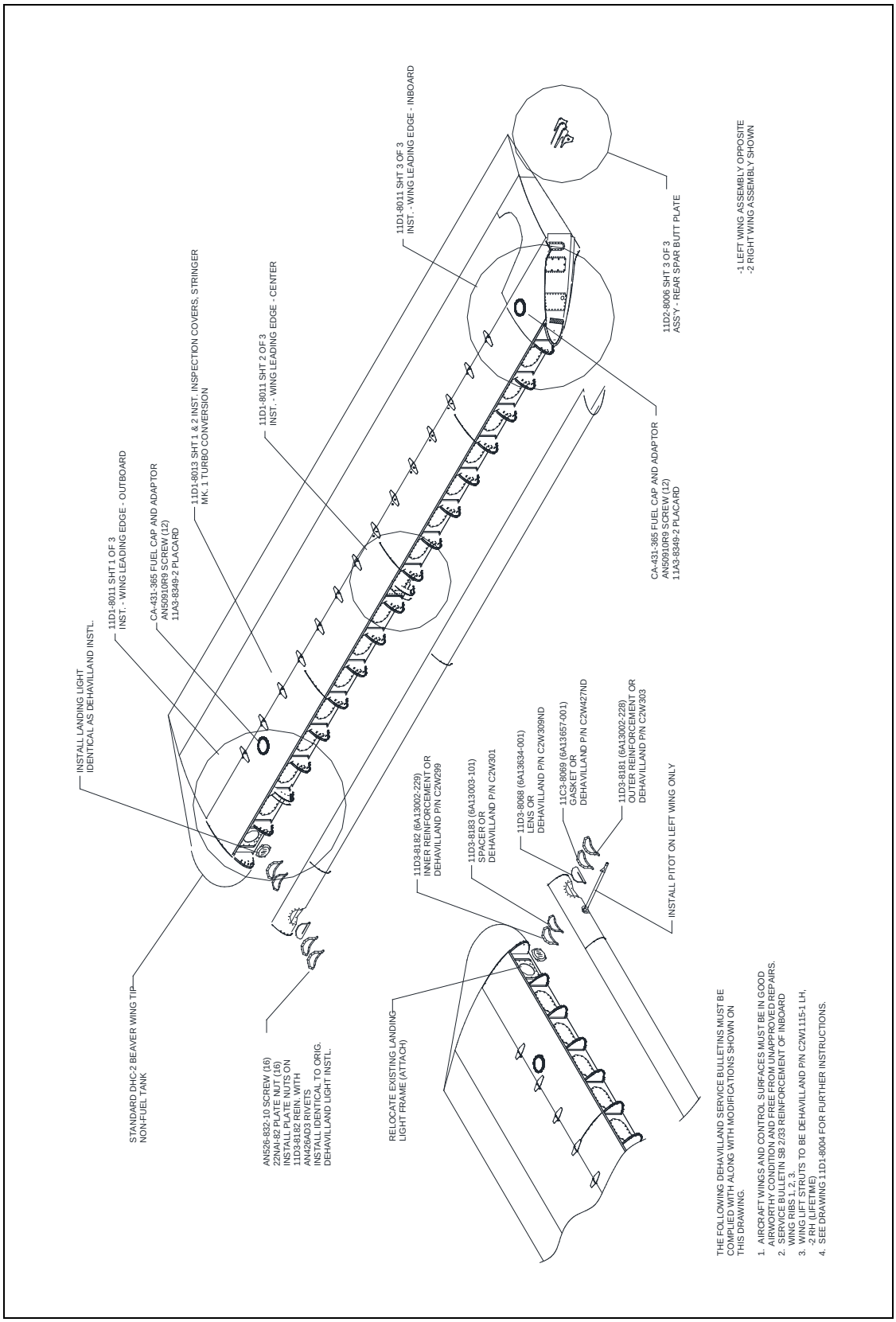

INSTALL LANDING LIGHT
IDENTICAL AS DEHAVILLAND INSTL.
11D1-8011 SHT 1 OF 3
INST. - WING LEADING EDGE - OUTBOARD
CA-431-365 FUEL CAP AND ADAPTOR
AN509I0R9 SCREW (12)
11A3-8349-2 PLACARD
11D1-8013 SHT 1 & 2 INST. INSPECTION COVERS, STRINGER
MK. 1 TURBO CONVERSION
11D1-8011 SHT 2 OF 3
INST. - WING LEADING EDGE - CENTER
11D1-8011 SHT 3 OF 3
INST. - WING LEADING EDGE - INBOARD
11D2-8006 SHT 3 OF 3
ASSY - REAR SPAR BUTT PLATE
-1 LEFT WING ASSEMBLY OPPOSITE
-2 RIGHT WING ASSEMBLY SHOWN
CA-431-365 FUEL CAP AND ADAPTOR
AN509I0R9 SCREW (12)
11A3-8349-2 PLACARD
STANDARD DHC-2 BEAVER WING TIP
NON-FUEL TANK
AN526-832-10 SCREW (16)
22NAI-82 PLATE NUT (16)
INSTALL PLATE NUTS ON
11D3-8182 REIN. WITH
AN426AD3 RIVETS
INSTALL IDENTICAL TO ORIG.
DEHAVILLAND LIGHT INSTL.
RELOCATE EXISTING LANDING
LIGHT FRAME (ATTACH)
11D3-8182 (6A13002-229)
INNER REINFORCEMENT OR
DEHAVILLAND P/N C2W299
11D3-8183 (6A13003-101)
SPACER OR
DEHAVILLAND P/N C2W301
11D3-8068 (6A13634-001)
LENS OR
DEHAVILLAND P/N C2W309ND
11C3-8069 (6A13657-001)
GASKET OR
DEHAVILLAND P/N C2W427ND
11D3-8181 (6A13002-228)
OUTER REINFORCEMENT OR
DEHAVILLAND P/N C2W303
INSTALL PITOT ON LEFT WING ONLY
THE FOLLOWING DEHAVILLAND SERVICE BULLETINS MUST BE
COMPLIED WITH ALONG WITH MODIFICATIONS SHOWN ON
THIS DRAWING.
1. AIRCRAFT WINGS AND CONTROL SURFACES MUST BE IN GOOD AIRWORTHY CONDITION AND FREE FROM UNAPPROVED REPAIRS.
2. SERVICE BULLETIN SB 2/33 REINFORCEMENT OF INBOARD WING RIBS 1, 2, 3.
3. WING LIFT STRUTS TO BE DEHAVILLAND P/N C2W1115-1 LH, 2 RH (LIFETIME)
4. SEE DRAWING 11D1-8004 FOR FURTHER INSTRUCTIONS.

FIGURE 16

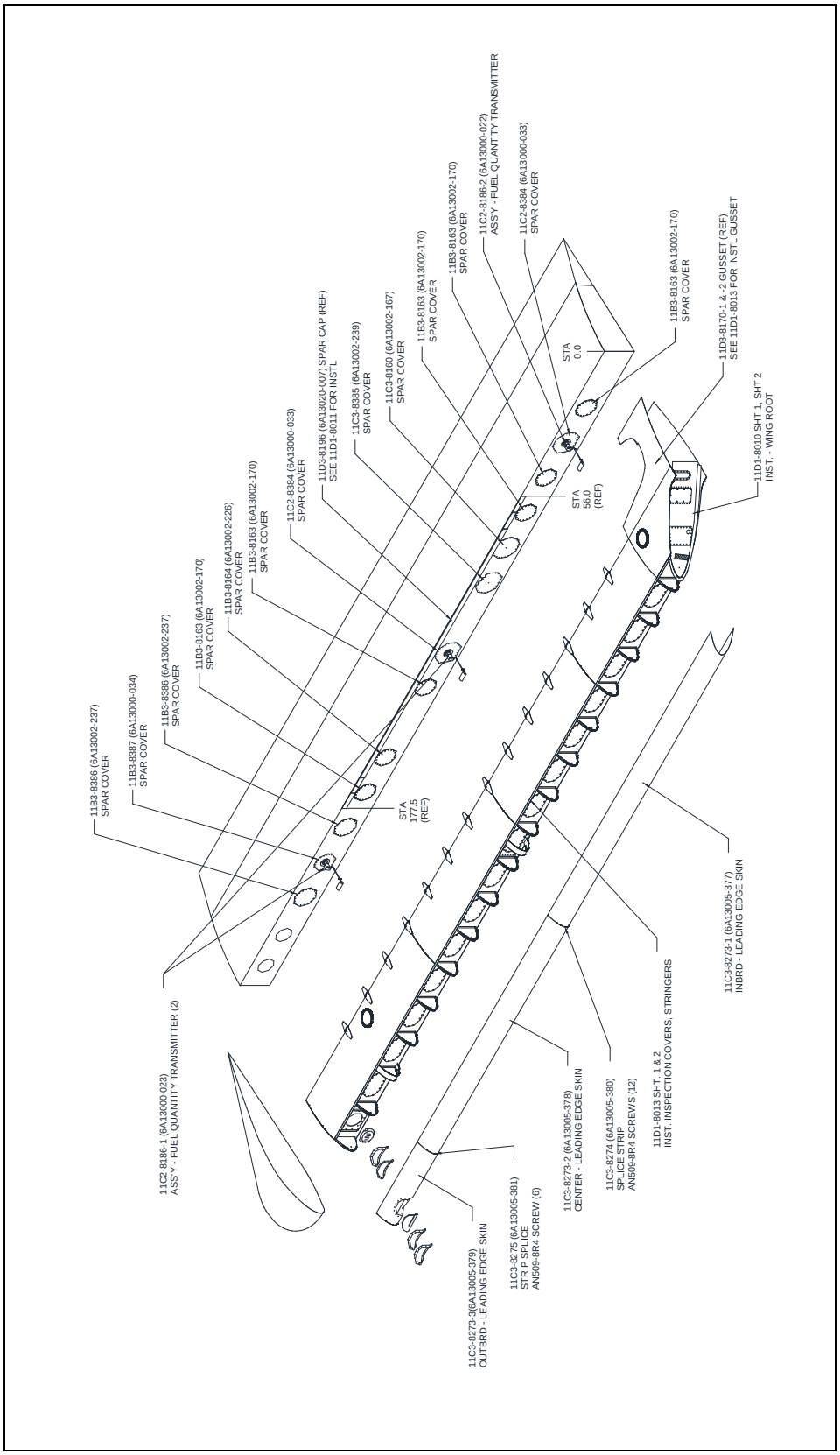

11B3-8386 (6A13002-237)
SPAR COVER
11B3-8387 (6A13000-034)
SPAR COVER
11B3-8386 (6A13002-237)
SPAR COVER
11B3-8163 (6A13002-170)
SPAR COVER
11B3-8164 (6A13002-226)
SPAR COVER
11B3-8163 (6A13002-170)
SPAR COVER
11C2-8384 (6A13000-033)
SPAR COVER
11D3-8196 (6A13020-007) SPAR CAP (REF)
SEE 11D1-8011 FOR INSTL
11C3-8395 (6A13002-239)
SPAR COVER
11C3-8160 (6A13002-167)
SPAR COVER
11B3-8163 (6A13002-170)
SPAR COVER
11B3-8163 (6A13002-170)
SPAR COVER
11C2-8186-2 (6A13000-022)
ASS'Y - FUEL QUANTITY TRANSMITTER
11C2-8384 (6A13000-033)
SPAR COVER
STA
0.0
STA
56.0
(REF)
STA
177.5
(REF)
11B3-8163 (6A13002-170)
SPAR COVER
11D3-8170-1 & -2 GUSSET (REF)
SEE 11D1-8013 FOR INSTL GUSSET
11D1-8010 SHT 1, SHT 2
INST. - WING ROOT
11C2-8186-1 (6A13000-023)
ASS'Y - FUEL QUANTITY TRANSMITTER (2)
11C3-8273-3(6A13005-379)
OUTBRD - LEADING EDGE SKIN
11C3-8275 (6A13005-381)
STRIP SPL ICE
AN509-8R4 SCREW (6)
11C3-8273-2 (6A13005-378)
CENTER - LEADING EDGE SKIN
11C3-8274 (6A13005-380)
SPLICE STRIP
AN509-8R4 SCREWS (12)
11D1-8013 SHT. 1 & 2
INST. INSPECTION COVERS, STRINGERS
11C3-8273-1 (6A13005-377)
INBRD - LEADING EDGE SKIN

FIGURE 17

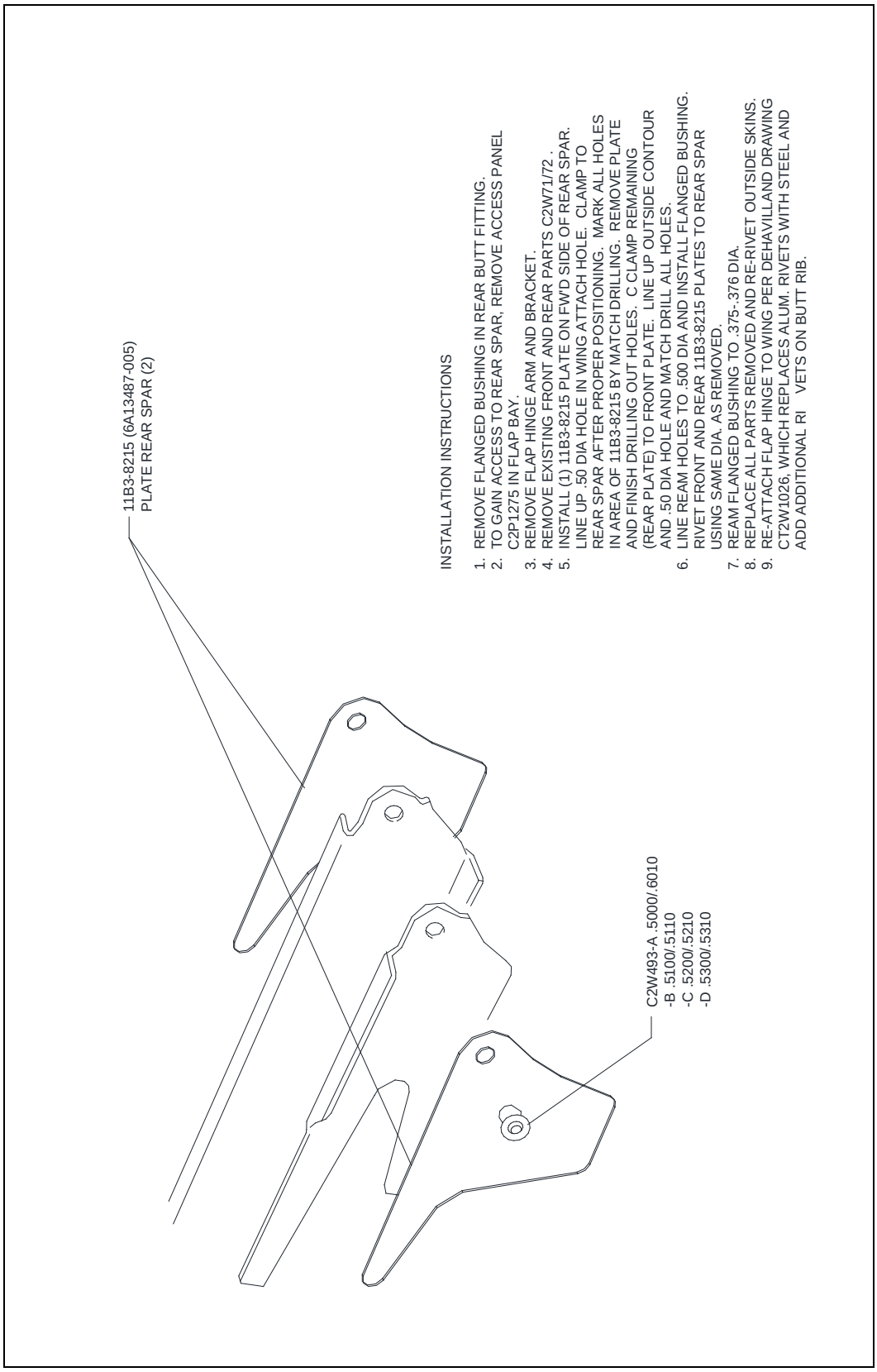

11B3-8215 (6A13487-005)
PLATE REAR SPAR (2)
C2W493-A .5000/.6010
-B .5100/.5110
-C .5200/.5210
-D .5300/.5310
INSTALLATION INSTRUCTIONS
1. REMOVE FLANGED BUSHING IN REAR BUTT FITTING.
2. TO GAIN ACCESS TO REAR SPAR, REMOVE ACCESS PANEL C2P1275 IN FLAP BAY.
3. REMOVE FLAP HINGE ARM AND BRACKET.
4. REMOVE EXISTING FRONT AND REAR PARTS C2W71/72 .
5. INSTALL (1) 11B3-8215 PLATE ON FW'D SIDE OF REAR SPAR. LINE UP .50 DIA HOLE IN WING ATTACH HOLE. CLAMP TO REAR SPAR AFTER PROPER POSITIONING. MARK ALL HOLES IN AREA OF 11B3-8215 BY MATCH DRILLING. REMOVE PLATE AND FINISH DRILLING OUT HOLES. C CLAMP REMAINING (REAR PLATE) TO FRONT PLATE. LINE UP OUTSIDE CONTOUR AND .50 DIA HOLE AND MATCH DRILL ALL HOLES.
6. LINE REAM HOLES TO .500 DIA AND INSTALL FLANGED BUSHING. RIVET FRONT AND REAR 11B3-8215 PLATES TO REAR SPAR USING SAME DIA. AS REMOVED.
7. REAM FLANGED BUSHING TO .375-.376 DIA.
8. REPLACE ALL PARTS REMOVED AND RE-RIVET OUTSIDE SKINS.
9. RE-ATTACH FLAP HINGE TO WING PER DEHAVILLAND DRAWING CT2W1026, WHICH REPLACES ALUM. RIVETS WITH STEEL AND ADD ADDITIONAL RI VETS ON BUTT RIB.

FIGURE 18

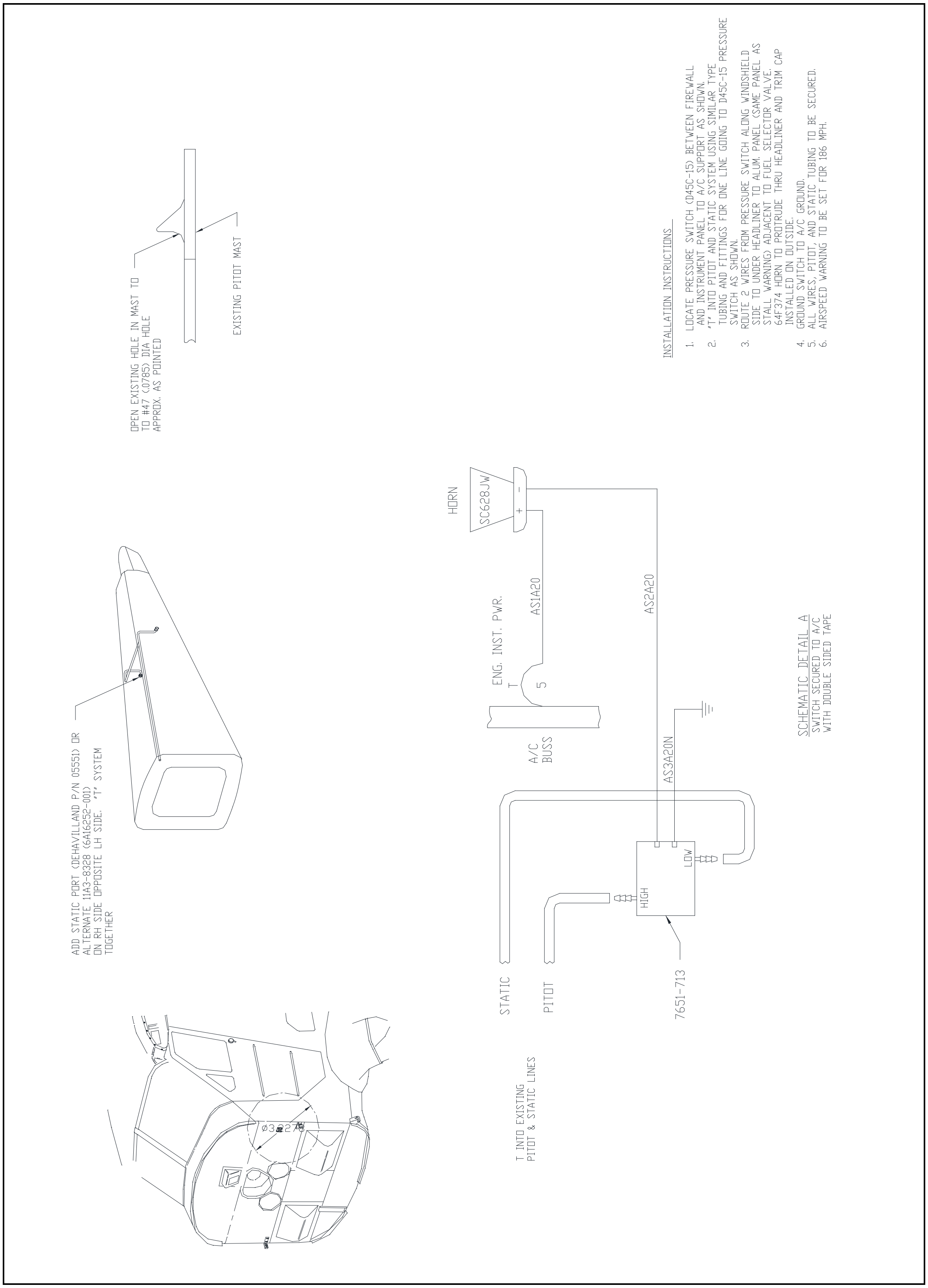

OPEN EXISTING HOLE IN MAST TO
TO #47 (.0785) DIA HOLE
APPROX. AS POINTED
EXISTING PITOT MAST
INSTALLATION INSTRUCTIONS
1. LOCATE PRESSURE SWITCH (D45C-15) BETWEEN FIREWALL AND INSTRUMENT PANEL TO A/C SUPPORT AS SHOWN.
2. 'T' INTO PITOT AND STATIC SYSTEM USING SIMILAR TYPE TUBING AND FITTINGS FOR ONE LINE GOING TO D45C-15 PRESSURE SWITCH AS SHOWN.
3. ROUTE 2 WIRES FROM PRESSURE SWITCH ALONG WINDSHIELD SIDE TO UNDER HEADLINER TO ALUM PANEL (SAME PANEL AS STALL WARNING) ADJACENT TO FUEL SELECTOR VALVE. 64F374 HORN TO PROTRUDE THRU HEADLINER AND TRIM CAP INSTALLED ON OUTSIDE.
4. GROUND SWITCH TO A/C GROUND.
5. ALL WIRES, PITOT, AND STATIC TUBING TO BE SECURED.
6. AIRSPEED WARNING TO BE SET FOR 186 MPH.
HORN
SC628JW
+
−
ENG. INST. PWR.
T
5
AS1A20
AS2A20
A/C BUSS
AS3A20N
SCHEMATIC DETAIL A
SWITCH SECURED TO A/C
WITH DOUBLE SIDED TAPE
ADD STATIC PORT (DEHAVILLAND P/N 05551) OR
ALTERNATE 11A3-8328 (6A16252-001)
ON RH SIDE OPPOSITE LH SIDE. 'T' SYSTEM
TOGETHER
STATIC
PITOT
HIGH
LOW
7651-713
T INTO EXISTING
PITOT & STATIC LINES
Ø3.27

FIGURE 19

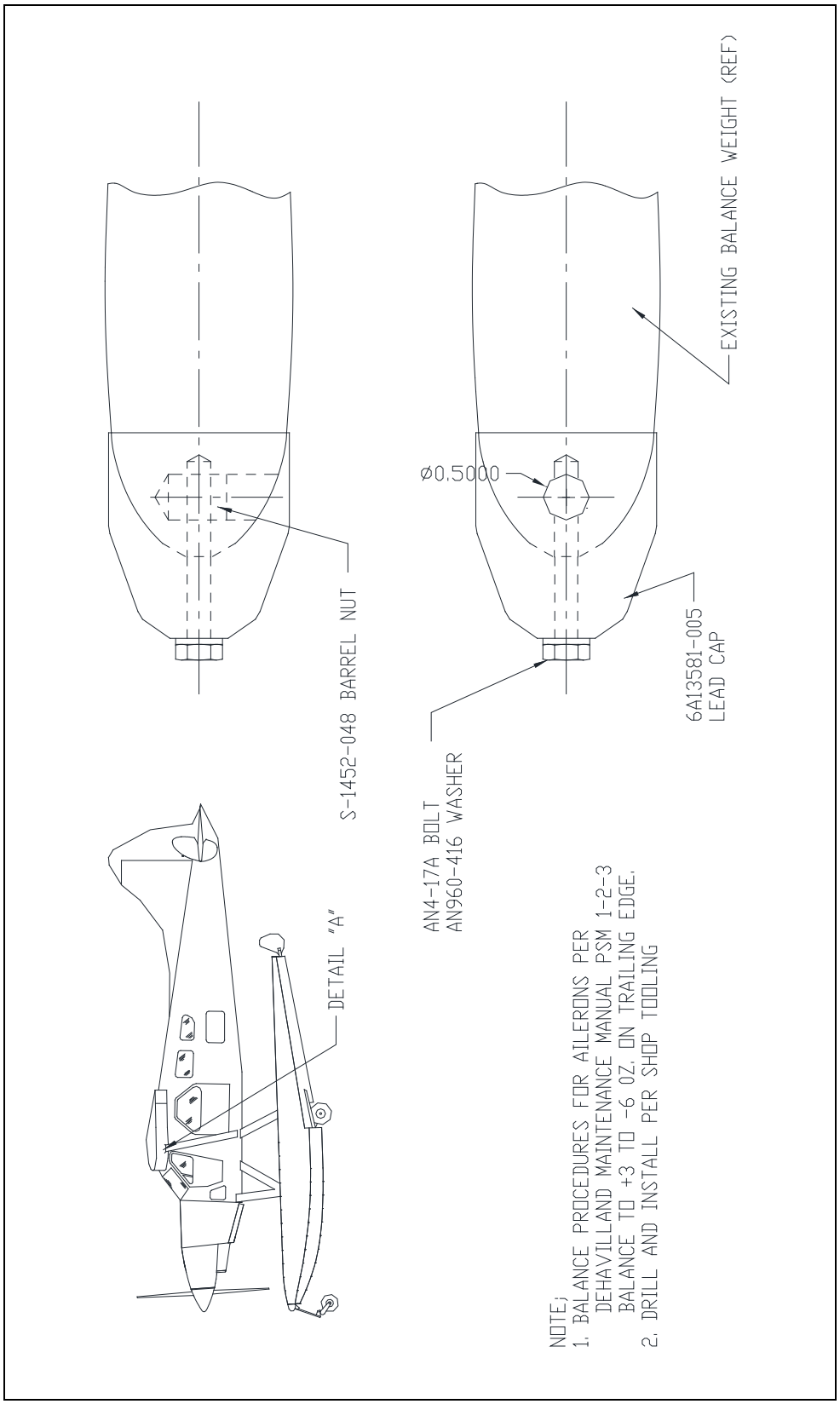

EXISTING BALANCE WEIGHT (REF)
Ø0.5000
S-1452-048 BARREL NUT
6A13581-005
LEAD CAP
AN4-17A BOLT
AN960-416 WASHER
DETAIL "A"
NOTE;
1. BALANCE PROCEDURES FOR AILERONS PER
DEHAVILLAND MAINTENANCE MANUAL PSM 1-2-3
BALANCE TO +3 TO -6 OZ. ON TRAILING EDGE.
2. DRILL AND INSTALL PER SHOP TOOLING

FIGURE 20

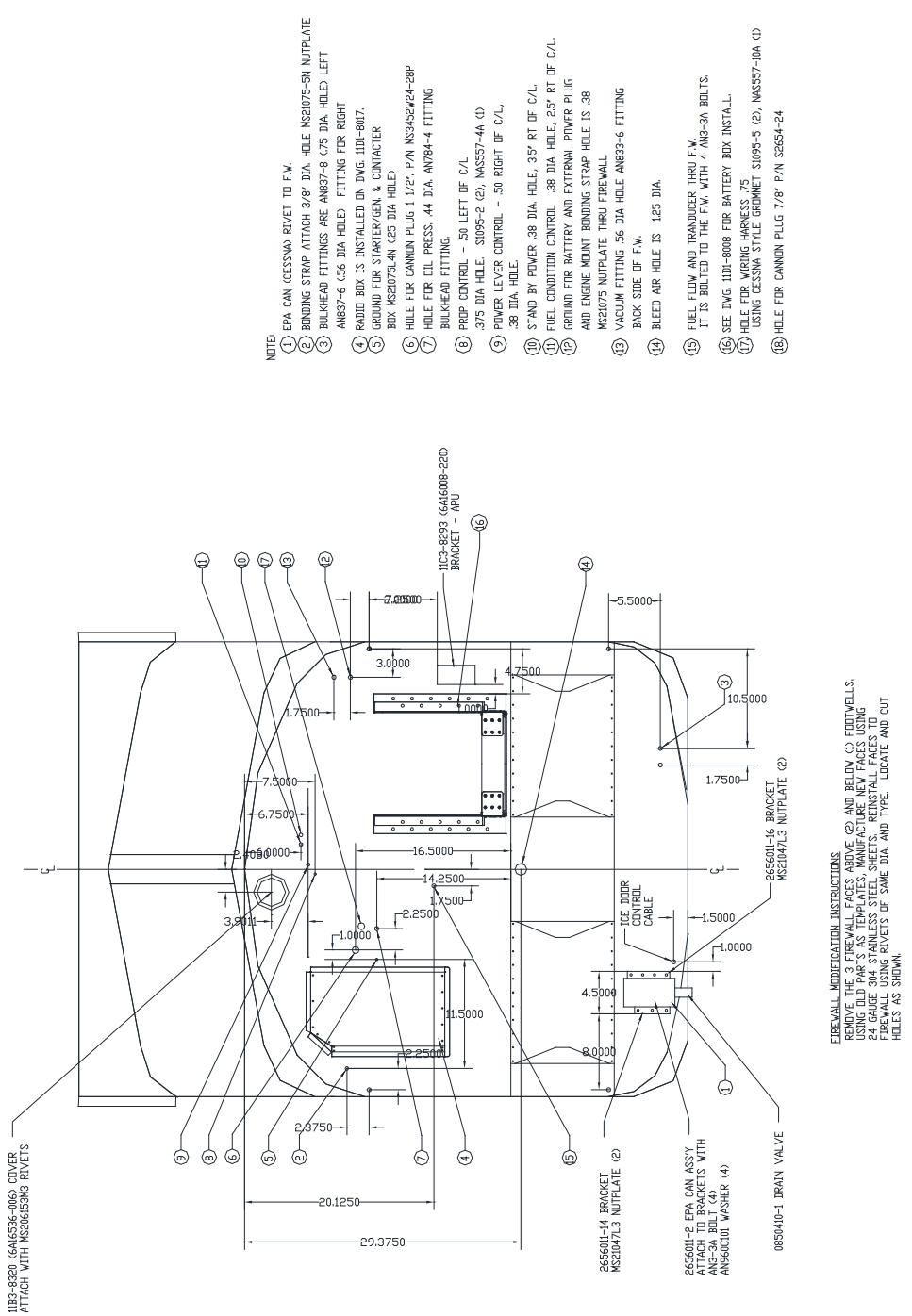
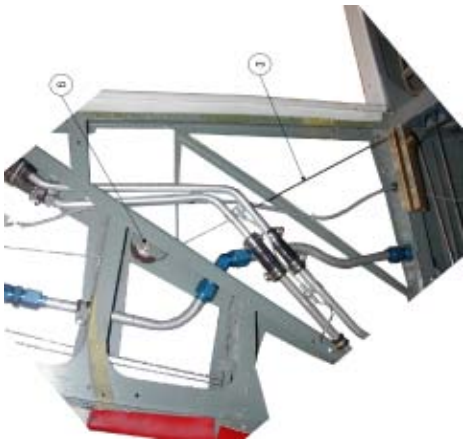

NOTE:
(1) EPA CAN (CESSNA) RIVET TO F.W.
(2) BONDING STRAP ATTACH 3/8" DIA. HOLE MS21075-5N NUTPLATE
(3) BULKHEAD FITTINGS ARE AN837-8 (.75 DIA HOLE) LEFT AN837-6 (.56 DIA HOLE) FITTING FOR RIGHT
(4) RADIO BOX IS INSTALLED ON DWG. 1101-8017.
(5) GROUND FOR STARTER/GEN. & CONTACTER BOX MS21075L4N (.25 DIA HOLE)
(6) HOLE FOR CANNON PLUG 1 1/2". P/N MS3452W24-28P
(7) HOLE FOR OIL PRESS. .44 DIA. AN784-4 FITTING BULKHEAD FITTING.
(8) PROP CONTROL - .50 LEFT OF C/L .375 DIA HOLE. S1095-2 (2), NAS557-4A (1)
(9) POWER LEVER CONTROL - .50 RIGHT OF C/L, .38 DIA. HOLE
(10) STAND BY POWER .38 DIA. HOLE, 3.5" RT OF C/L.
(11) FUEL CONDITION CONTROL .38 DIA. HOLE, 2.5" RT OF C/L.
(12) GROUND FOR BATTERY AND EXTERNAL POWER PLUG AND ENGINE MOUNT BONDING STRAP HOLE IS .38 MS21075 NUTPLATE THRU FIREWALL
(13) VACUUM FITTING .56 DIA HOLE AN833-6 FITTING BACK SIDE OF F.W.
(14) BLEED AIR HOLE IS 1.25 DIA.
(15) FUEL FLOW AND TRANDUCER THRU F.W. IT IS BOLTED TO THE F.W. WITH 4 AN3-3A BOLTS.
(16) SEE DWG. 1101-8008 FOR BATTERY BOX INSTALL.
(17) HOLE FOR WIRING HARNESS .75 USING CESSNA STYLE GROMMET S1095-5 (2), NAS557-10A (1)
(18) HOLE FOR CANNON PLUG 7/8" P/N S2654-24
1103-8203 (6A16608-220) BRACKET - APU
7.2500
5.5000
3.0000
4.7500
1.0000
10.5000
1.7500
1.7500
7.5000
6.7500
2.5000
6.0000
16.5000
14.2500
1.7500
2.2500
3.5011
1.0000
ICE DOOR CONTROL CABLE
1.5000
1.0000
2656011-16 BRACKET MS21047L3 NUTPLATE (2)
4.5000
11.5000
2.2500
8.0000
2.3750
20.1250
29.3750
1183-8320 (6A16536-006) COVER ATTACH WITH MS20615M3 RIVETS
2656011-14 BRACKET MS21047L3 NUTPLATE (2)
2656011-2 EPA CAN ASSY ATTACH TO BRACKETS WITH AN3-3A BOLT (4) AN960C10 WASHER (4)
0850410-1 DRAIN VALVE
FIREWALL MODIFICATION INSTRUCTIONS
REMOVE THE 3 FIREWALL FACES ABOVE (2) AND BELOW (1) FOOTWELLS. USING OLD PARTS AS TEMPLATES, MANUFACTURE NEW FACES USING 24 GAUGE 304 STAINLESS STEEL SHEETS. REINSTALL FACES TO FIREWALL USING RIVETS OF SAME DIA. AND TYPE. LOCATE AND CUT HOLES AS SHOWN.

FIGURE 21

ITEM	DESCRIPTION	PART NO.	QTY
①	CLAMP	6121 S-TEC	4
②	CABLE END-EYE	AN668-3	4
③	CABLE	3/32 STAINLESS STL	AS REQ'D
④	SPRING	12A3-7229 (30A08525-009)	2
⑤	PULLEY BRACKET	5T-417-7 (6A08153-003)	2
	PULLEY	MS20219-2	2
	BOLT	AN4-10A	2
	WASHER	AN960-416	2
	NUT	AN365-428	2
	RIVET - ATTACH	AN470AD4-5	8
⑥	PULLEY BRACKET	5T-417-15L (6S0B359-053)	2
	PULLEY BRACKET	5T-417-15R (6S0B359-054)	2
	PULLEY	MS20219-2	2
	BOLT	AN4-10A	2
	WASHER	AN960-416	2
	NUT	AN365-428	2
	RIVET - ATTACH	AN470AD4-5	4
⑦	PULLEY BRACKET	3A03151-07B	2
	PULLEY	MS24536-1B	2
	BOLT	AN4-7A	2
	WASHER	AN960-416	2
	NUT	AN365-428	2
	RIVET - ATTACH	AN470AD-4-4	4
⑧	PULLEY - BRACKET	11A3-8271 (6A08151-107)	3
	PULLEY	MS24536-1B	3
	BOLT	AN4-7A	3
	WASHER	AN960-416	3
	NUT	AN365-428	3
	EYEBOLT	AN42-4A	6
	BOLT	AN3-22A	3
	WASHER	AN960-10	9
	NUT	AN365-1032	9
⑨	EYE-END TERMINAL	AN668-3	1
⑩	EYE-BOLT	AN42-5	1
	WASHER	AN960-10	1
	NUT	AN365-1032	1

RH SIDE CABIN - UPPER
LH OPP.

RH SIDE CABIN - MIDDLE
LH OPP.



RH SIDE CABIN - LOWER
LH OPP.

FIGURE 22


8
LH SIDE - UPPER CABIN
11A3-8291 (6A16525-010) SPRING ELEV. DOWN
LEFT SIDE
LOCATE AND DRILL ON
CENTERLINE #10 DIA
ON ELEV. TORQUE TUBE
2 3/8" UP FROM
CENTERLINE ROD END
ATTACH POINT.
INSTALL:
AN42-5A EYE BOLT
AN960-10 WASHER (4/R)
NAS679A3W NUT
DRILL OUT 5TH RIVET
DOWN ON FUSELAGE
CHANNEL BHDWN.
INSTALL:
AN428-16A EYE BOLT (1)
AN960-10 WASHER
(6) UNDER HEAD
(10) BETWEEN CHANNEL
AN365-1032 NUT
INST. - ELEVATOR DOWN SPRING
8
3
2
1
RH SIDE - UPPER CABIN
7
LH SIDE - CABIN

FIGURE 23

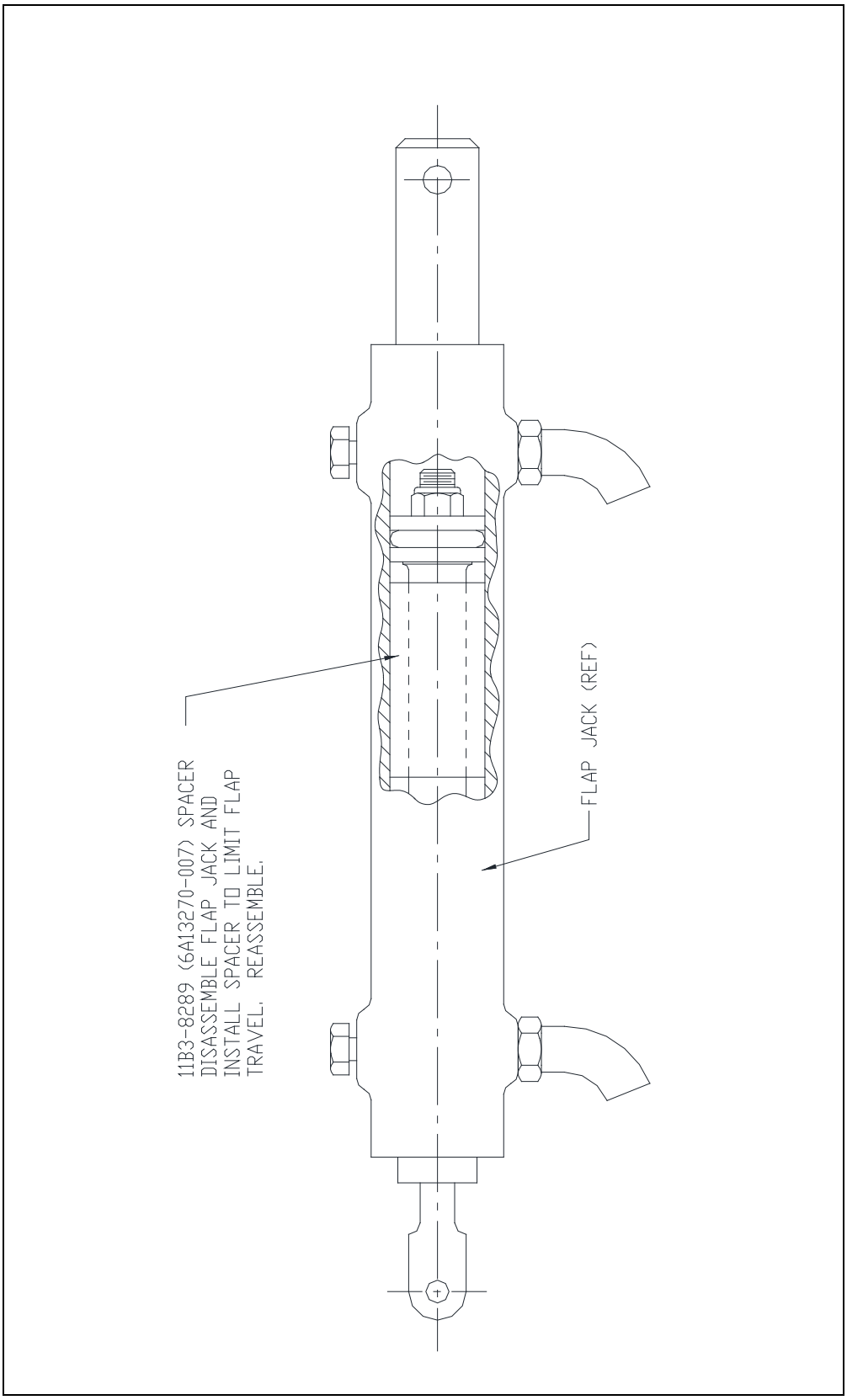

11B3-8289 (6A13270-007) SPACER
DISASSEMBLE FLAP JACK AND
INSTALL SPACER TO LIMIT FLAP
TRAVEL. REASSEMBLE.
FLAP JACK (REF)

FIGURE 24

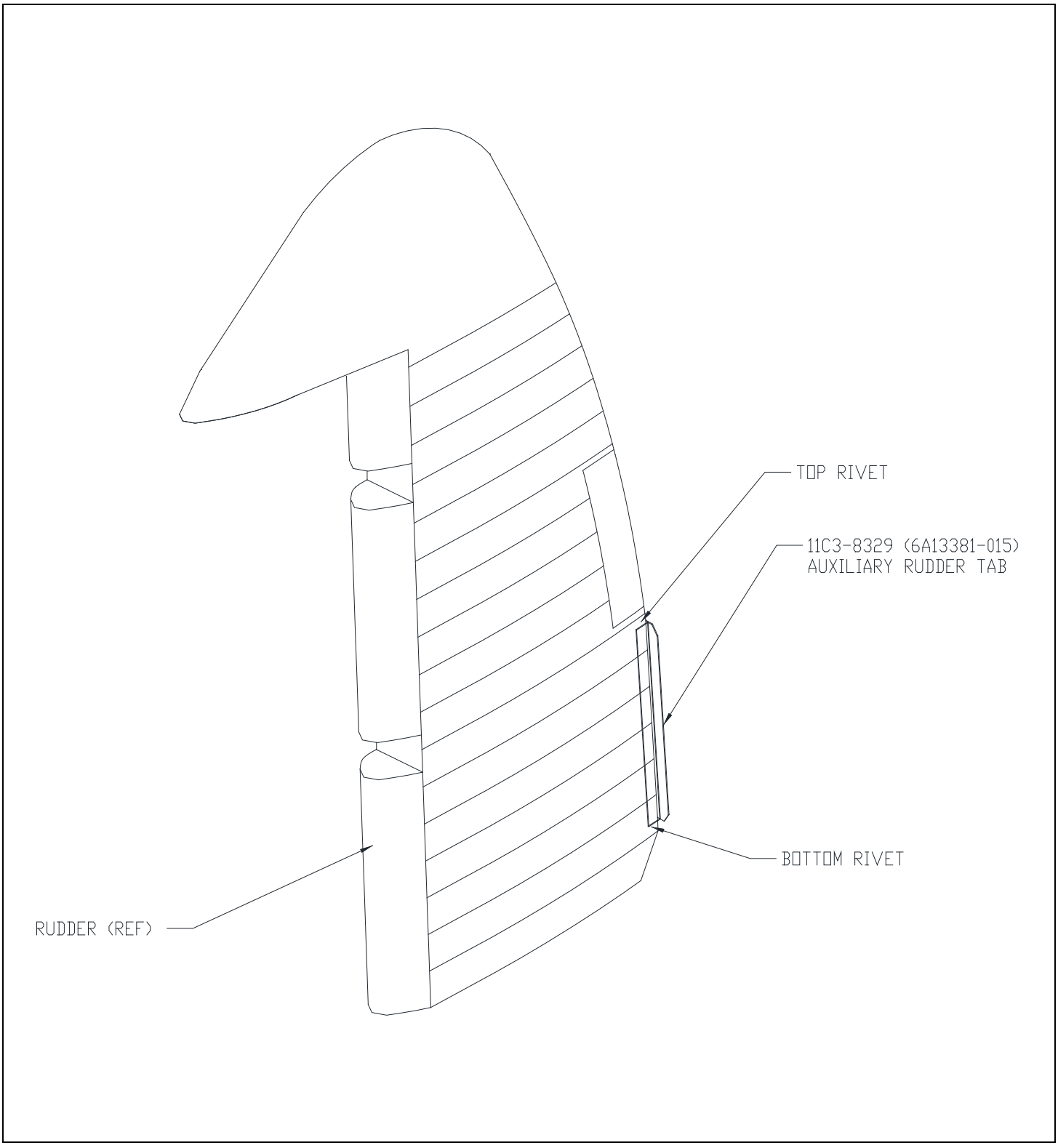

TOP RIVET
11C3-8329 (6A13381-015)
AUXILIARY RUDDER TAB
BOTTOM RIVET
RUDDER (REF)

FIGURE 25

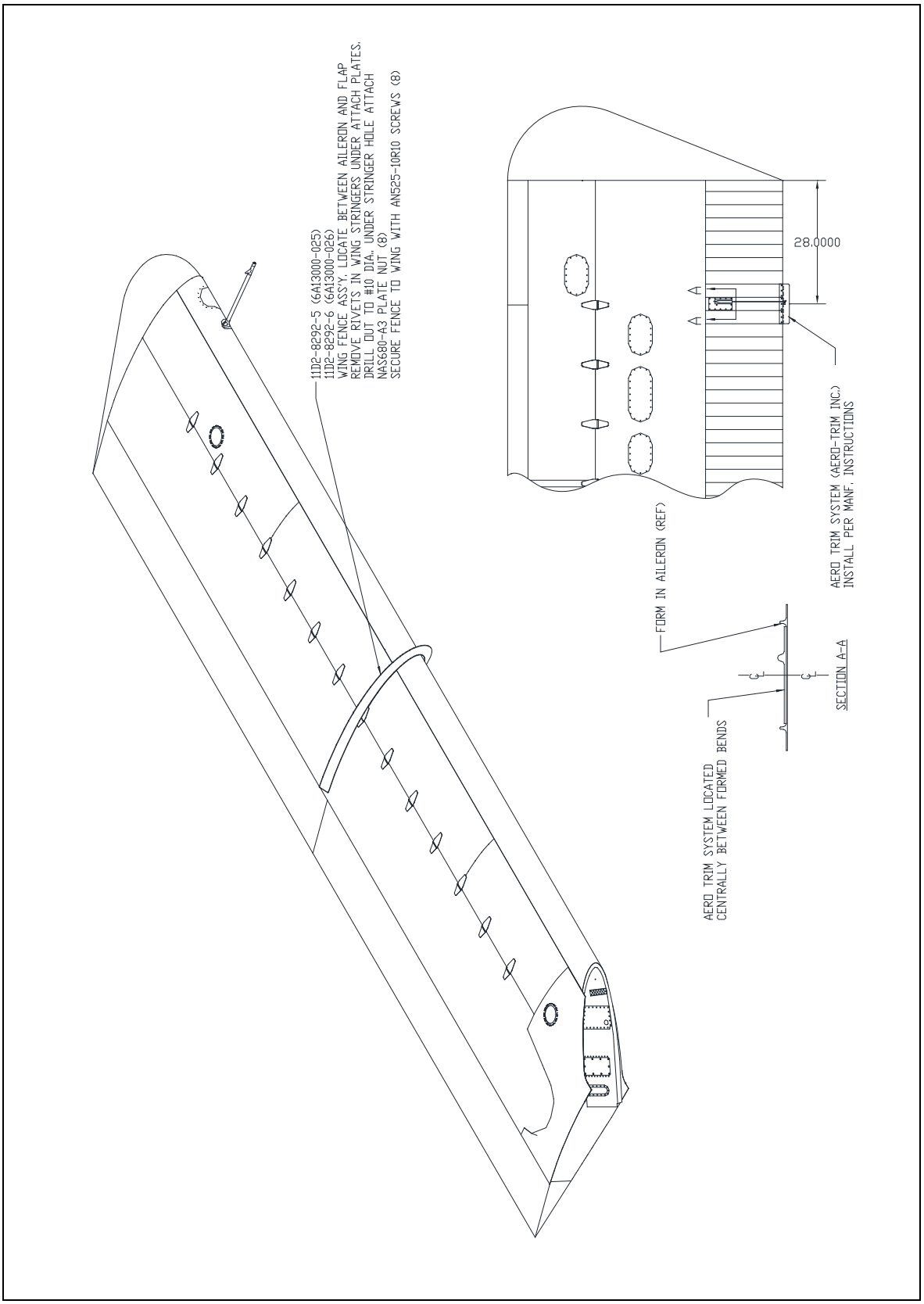
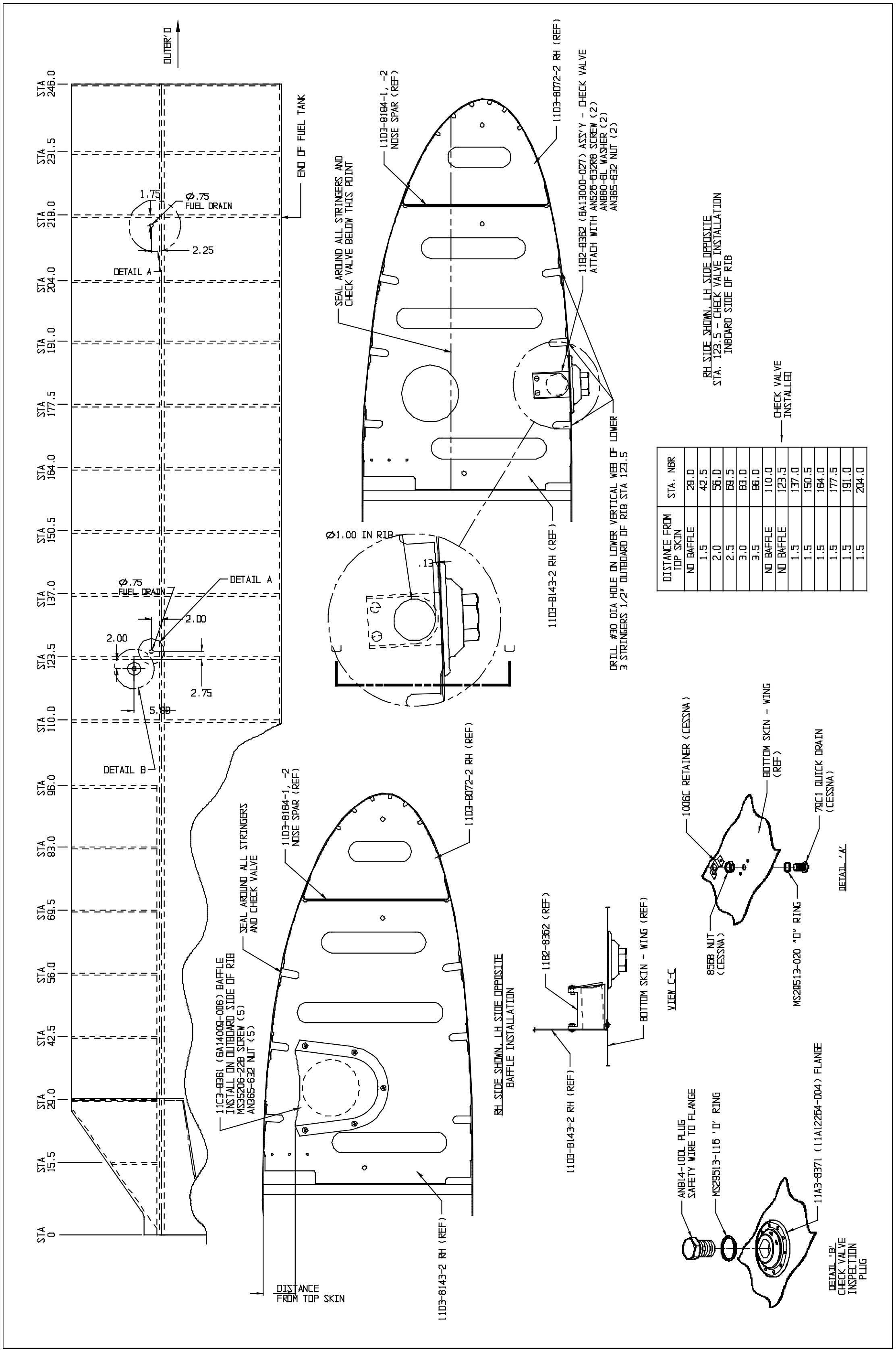

1102-8292-5 (6A13000-025)
1102-8292-6 (6A13000-026)
WING FENCE ASS'Y, LOCATE BETWEEN AILERON AND FLAP
REMOVE RIVETS IN WING STRINGERS UNDER ATTACH PLATES.
DRILL OUT TO #10 DIA. UNDER STRINGER HOLE ATTACH
NAS680-A3 PLATE NUT (8)
SECURE FENCE TO WING WITH AN525-10R10 SCREWS (8)
28.0000
AERO TRIM SYSTEM (AERO-TRIM INC.)
INSTALL PER MANF. INSTRUCTIONS
FORM IN AILERON (REF)
SECTION A-A
AERO TRIM SYSTEM LOCATED
CENTRALLY BETWEEN FORMED BENDS

FIGURE 26



DISTANCE FROM TOP SKIN	STA. NBR
NO BAFFLE	29.0
1.5	42.5
2.0	56.0
2.5	69.5
3.0	83.0
3.5	96.0
NO BAFFLE	110.0
NO BAFFLE	123.5
1.5	137.0
1.5	150.5
1.5	164.0
1.5	177.5
1.5	191.0
1.5	204.0

FIGURE 2

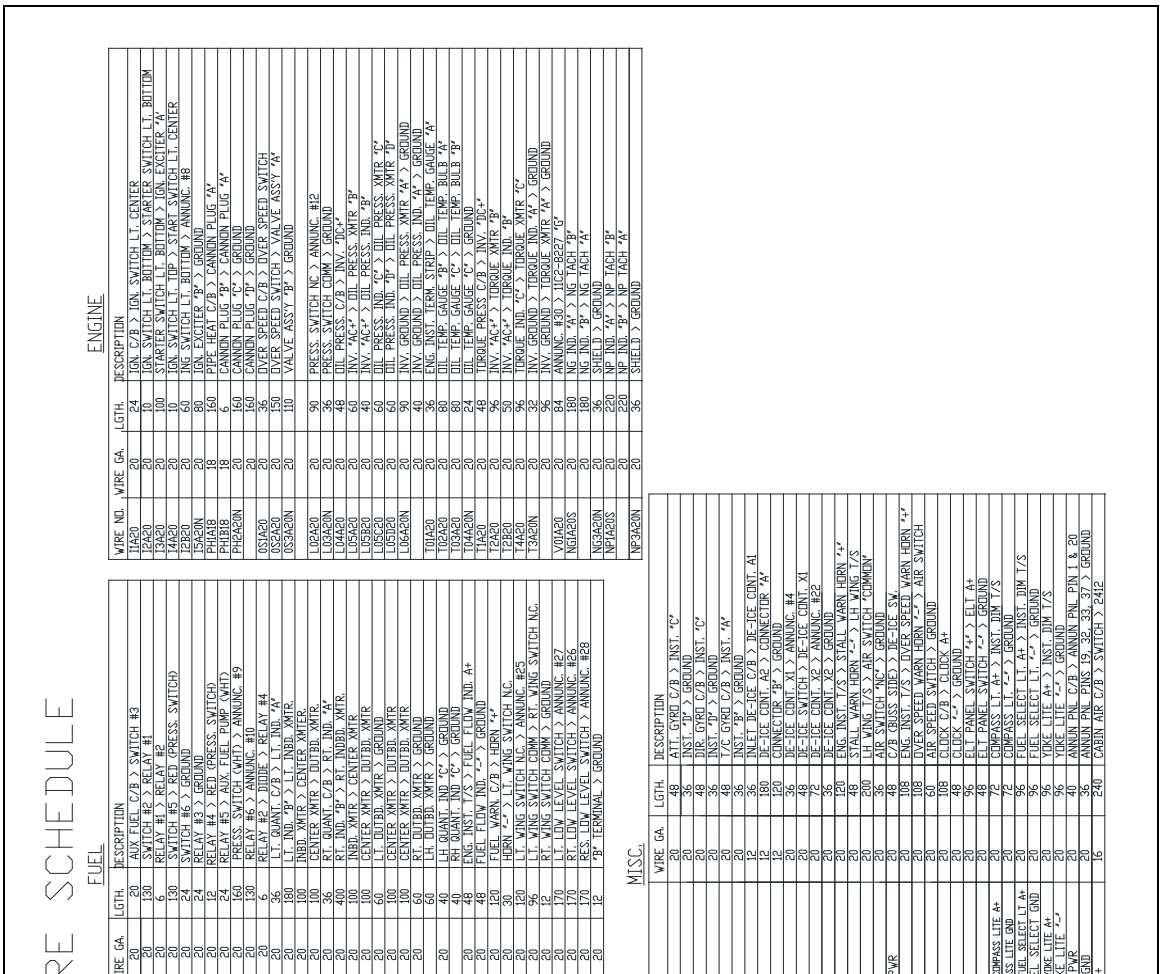
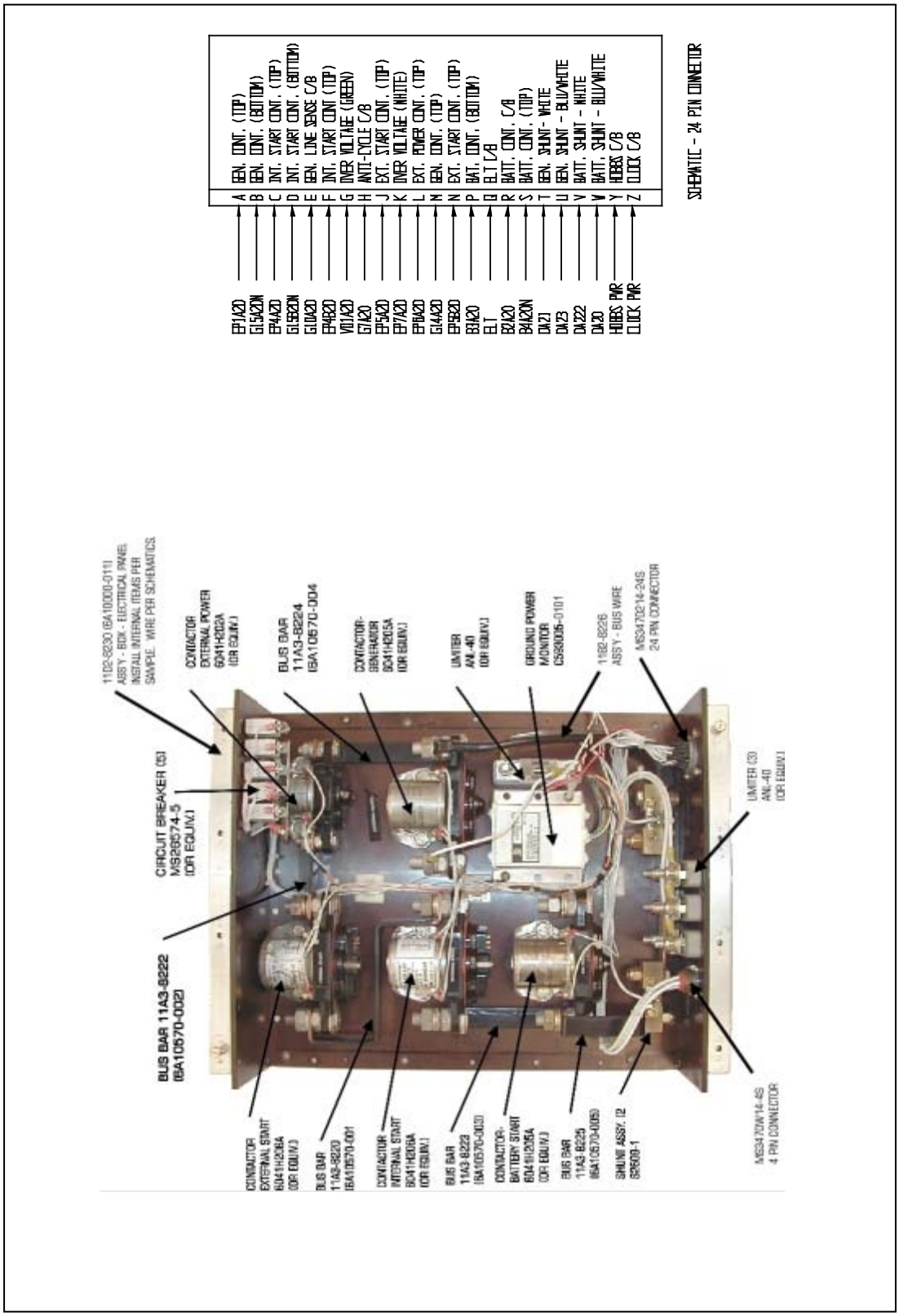
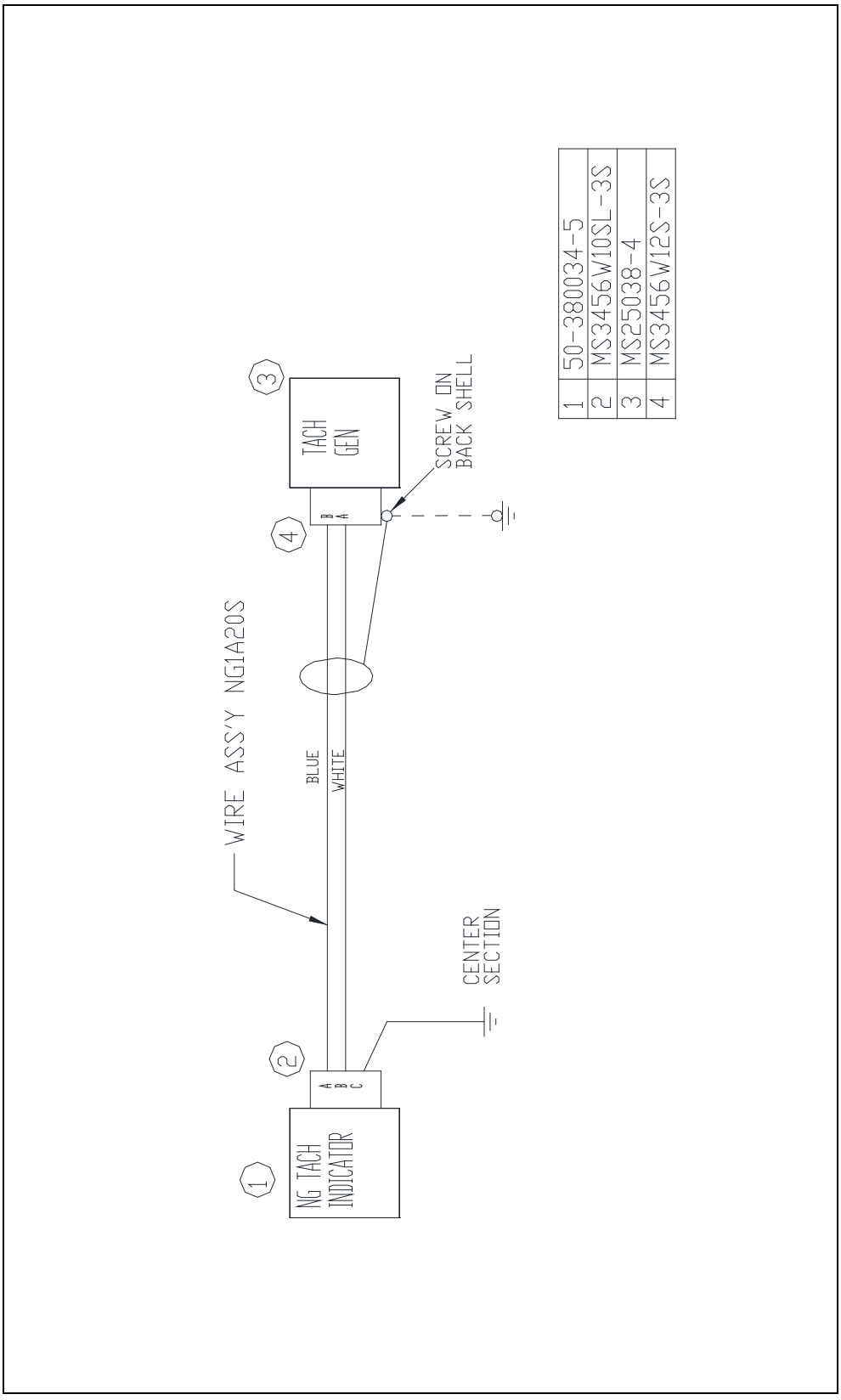


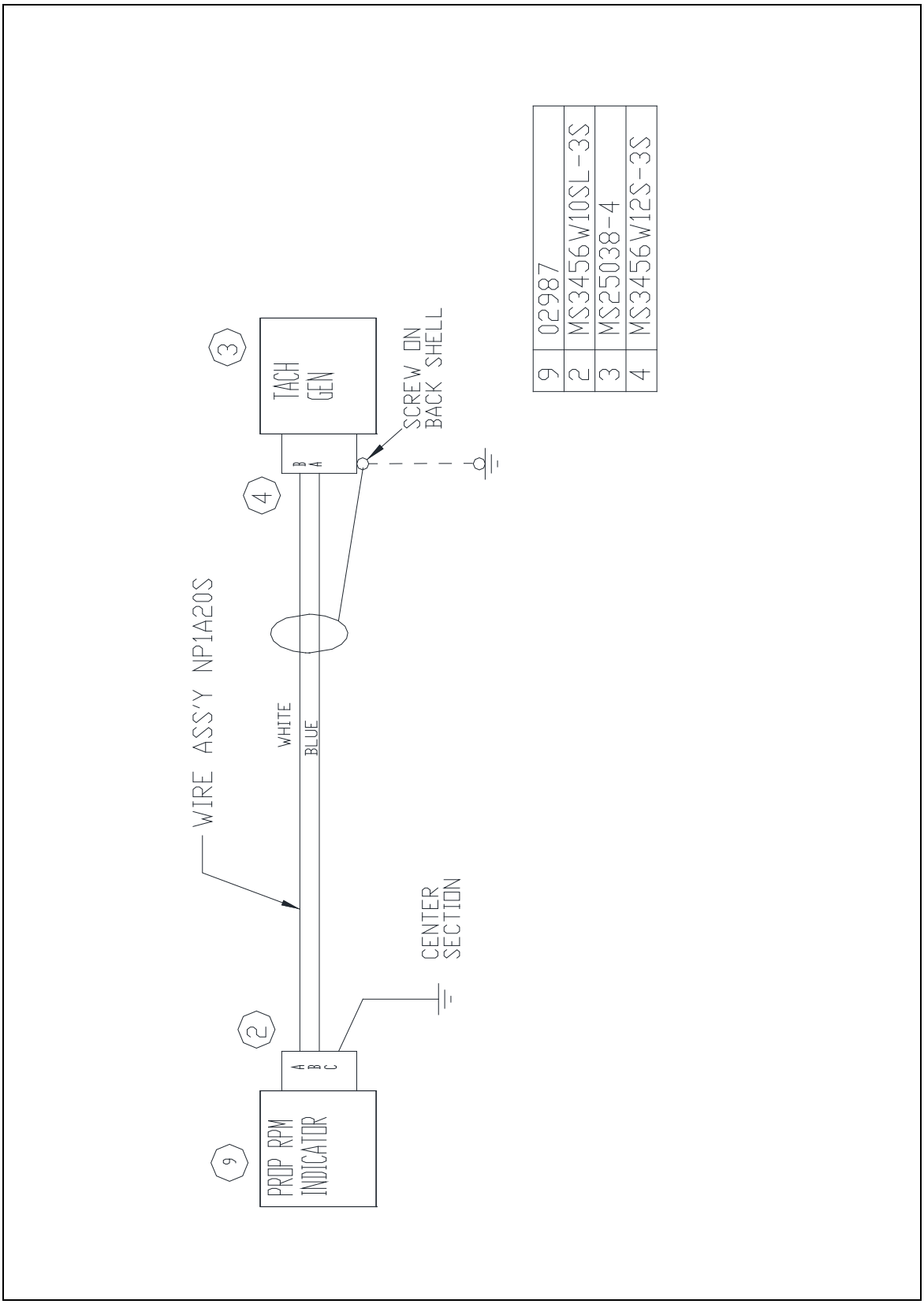
FIGURE 28



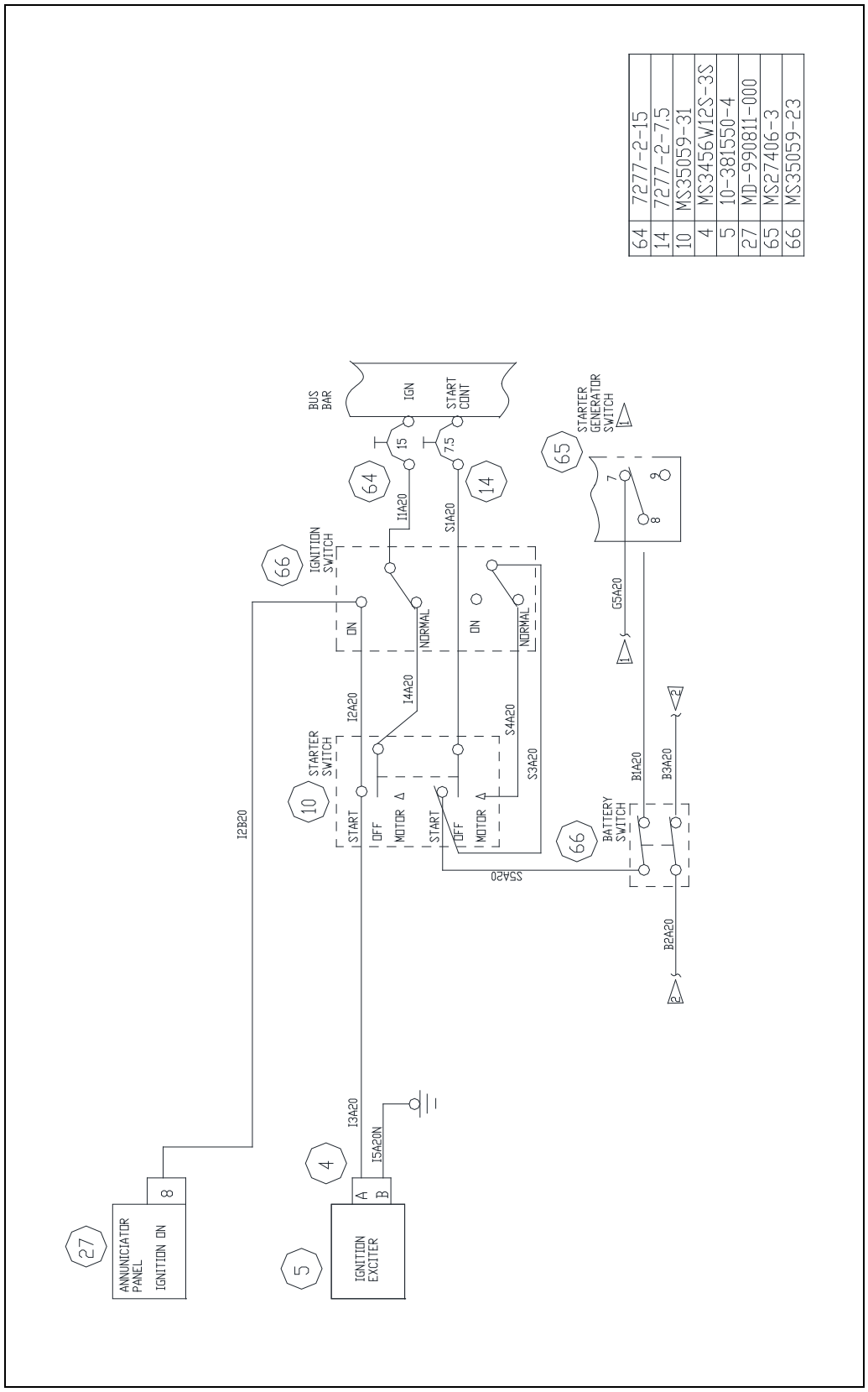
MAIN ELECTRICAL PANEL
FIGURE 29



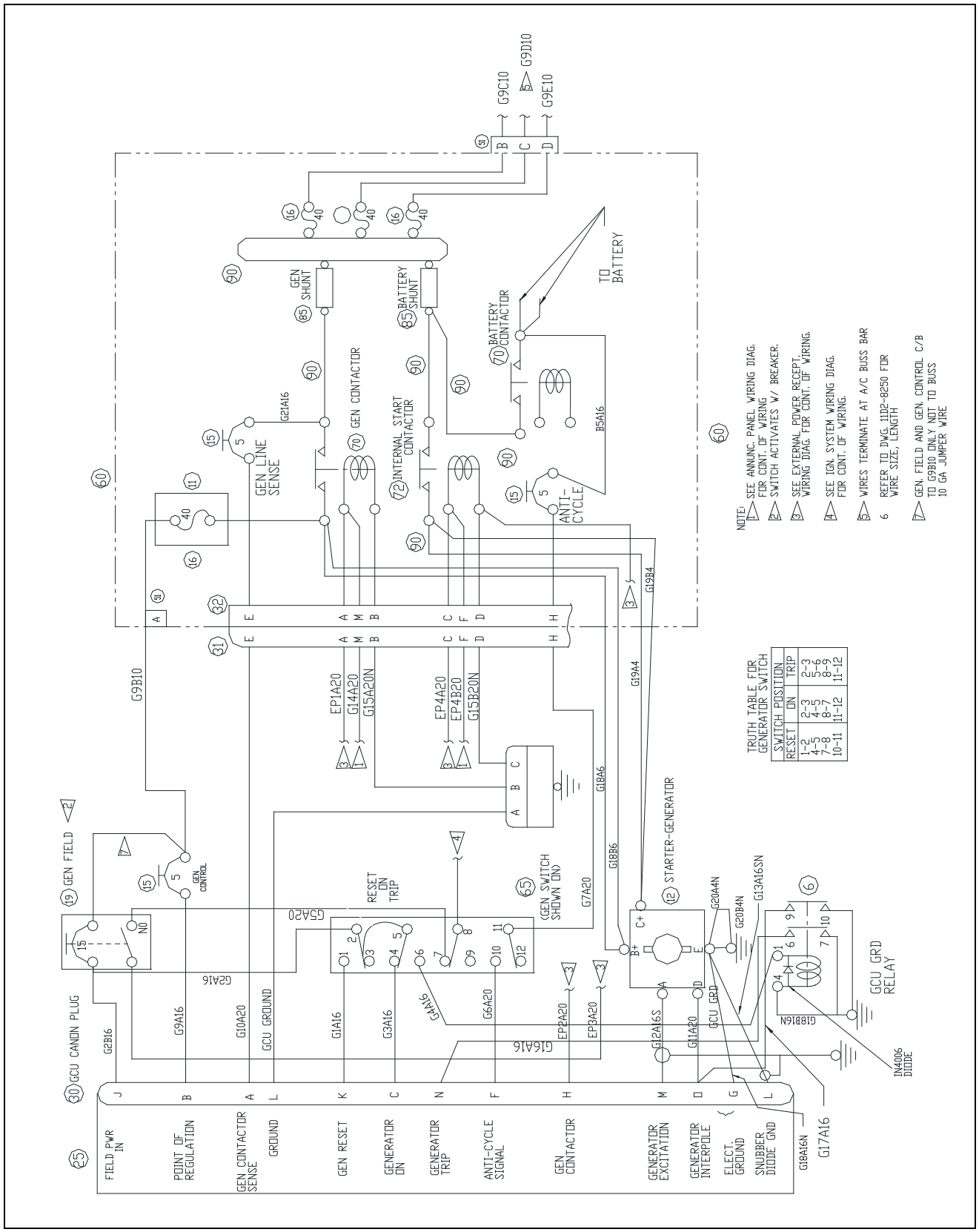
SCHEMATIC – GAS GENERATOR SPEED
FIGURE 30



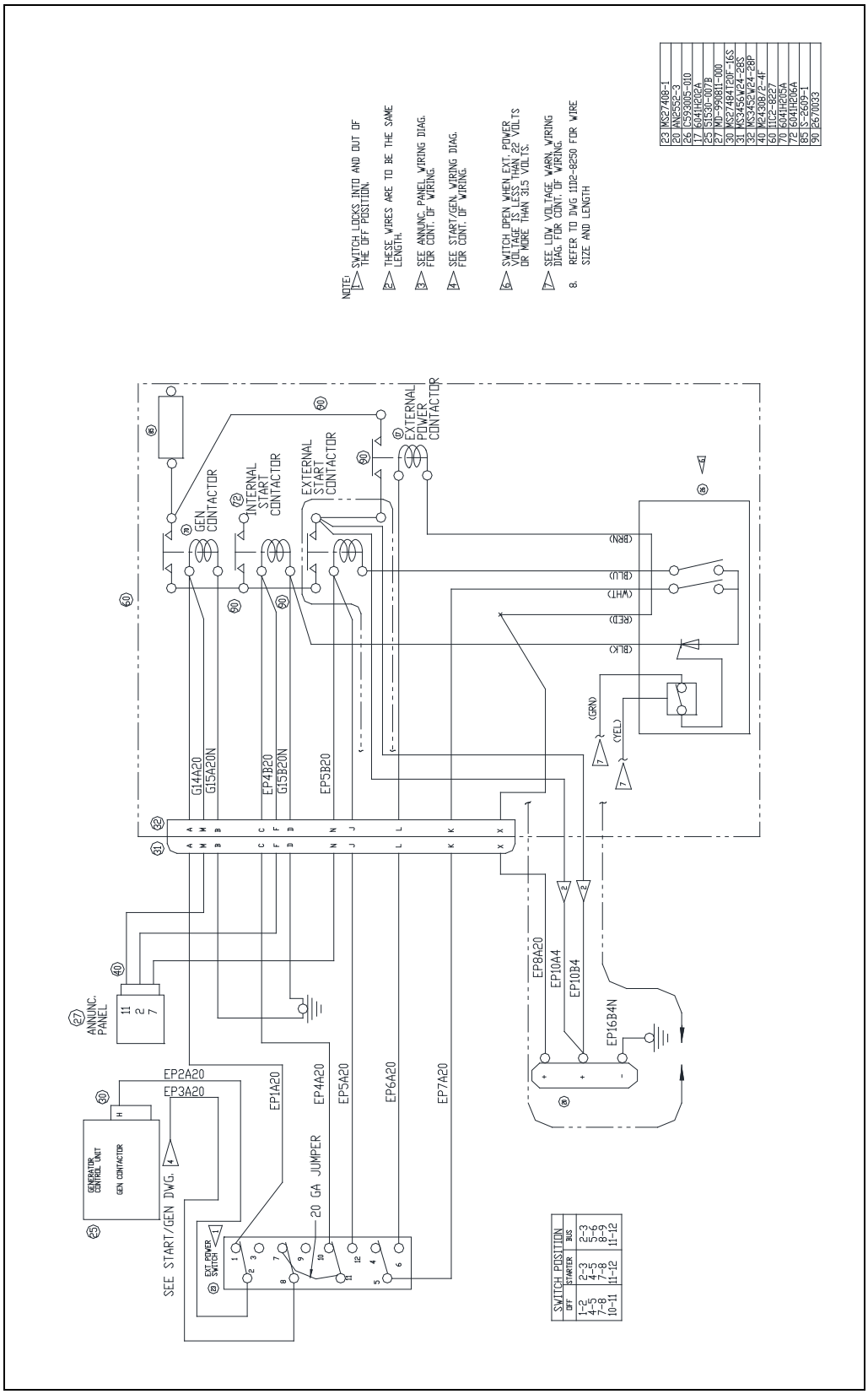
SCHEMATIC – PROPELLER SPEED
FIGURE 31



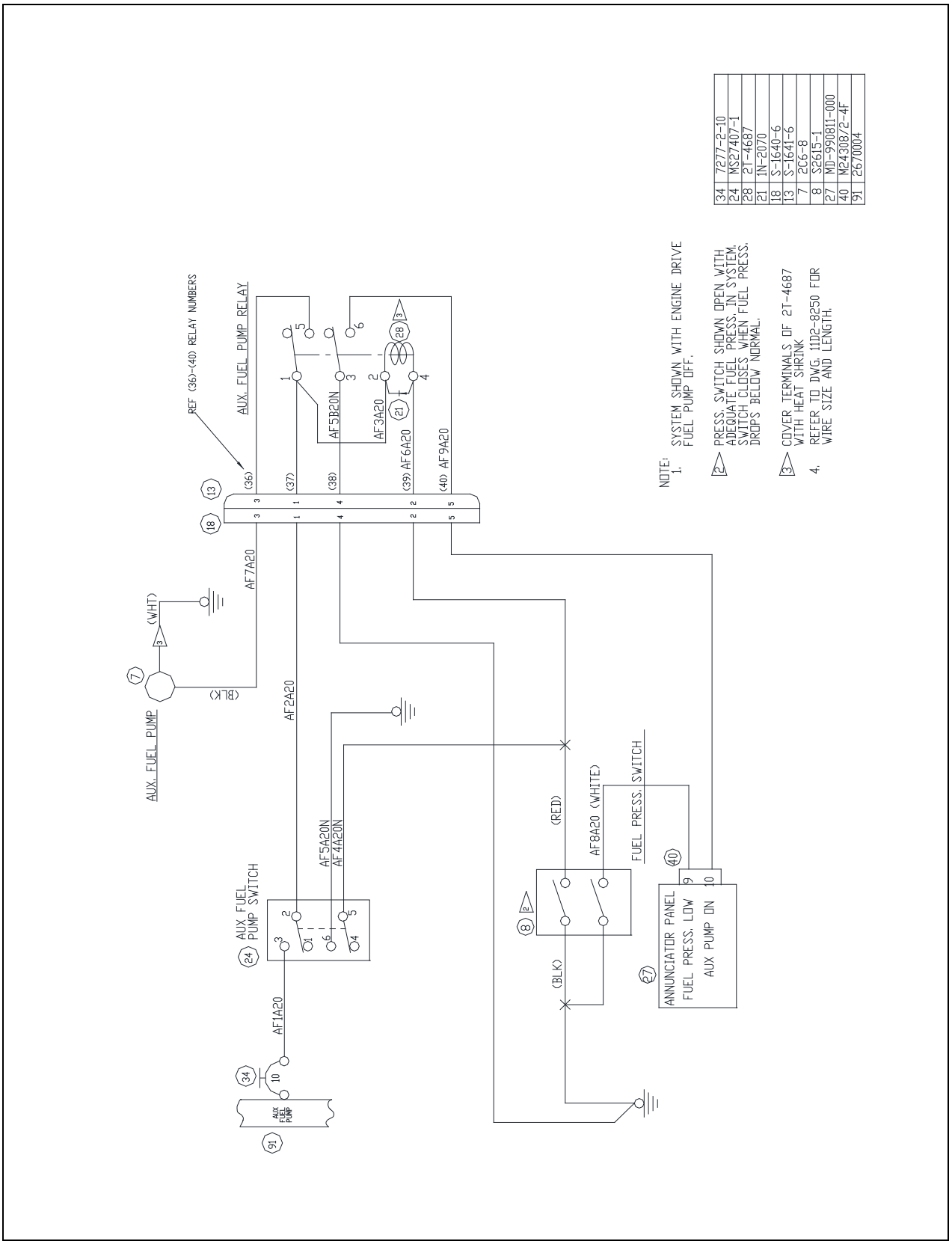
SCHEMATIC – IGNITIONSYSTEM
FIGURE 32



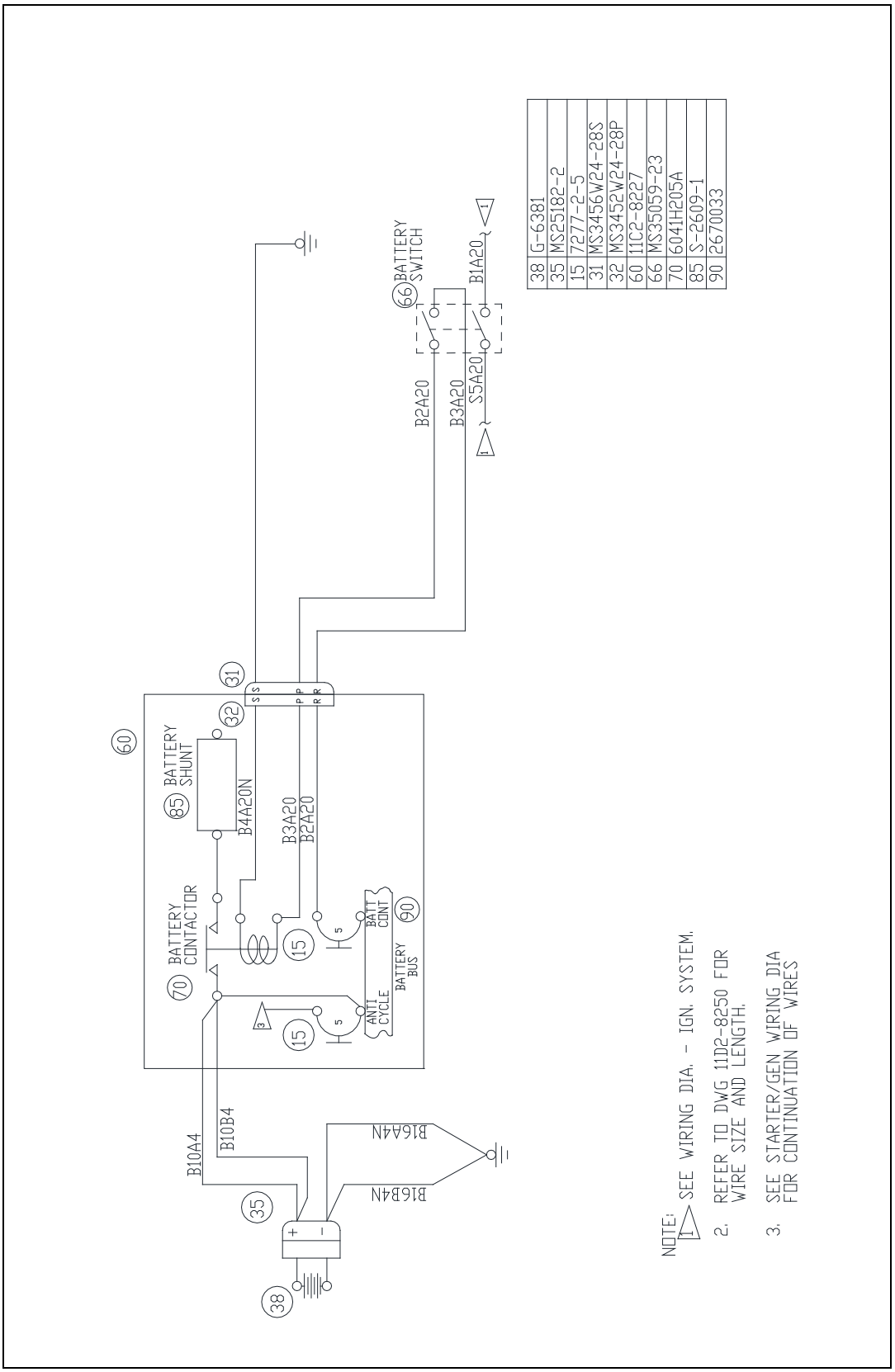
SCHEMATC – STARTER/GENERATOR SYSTEM
FIGURE 33



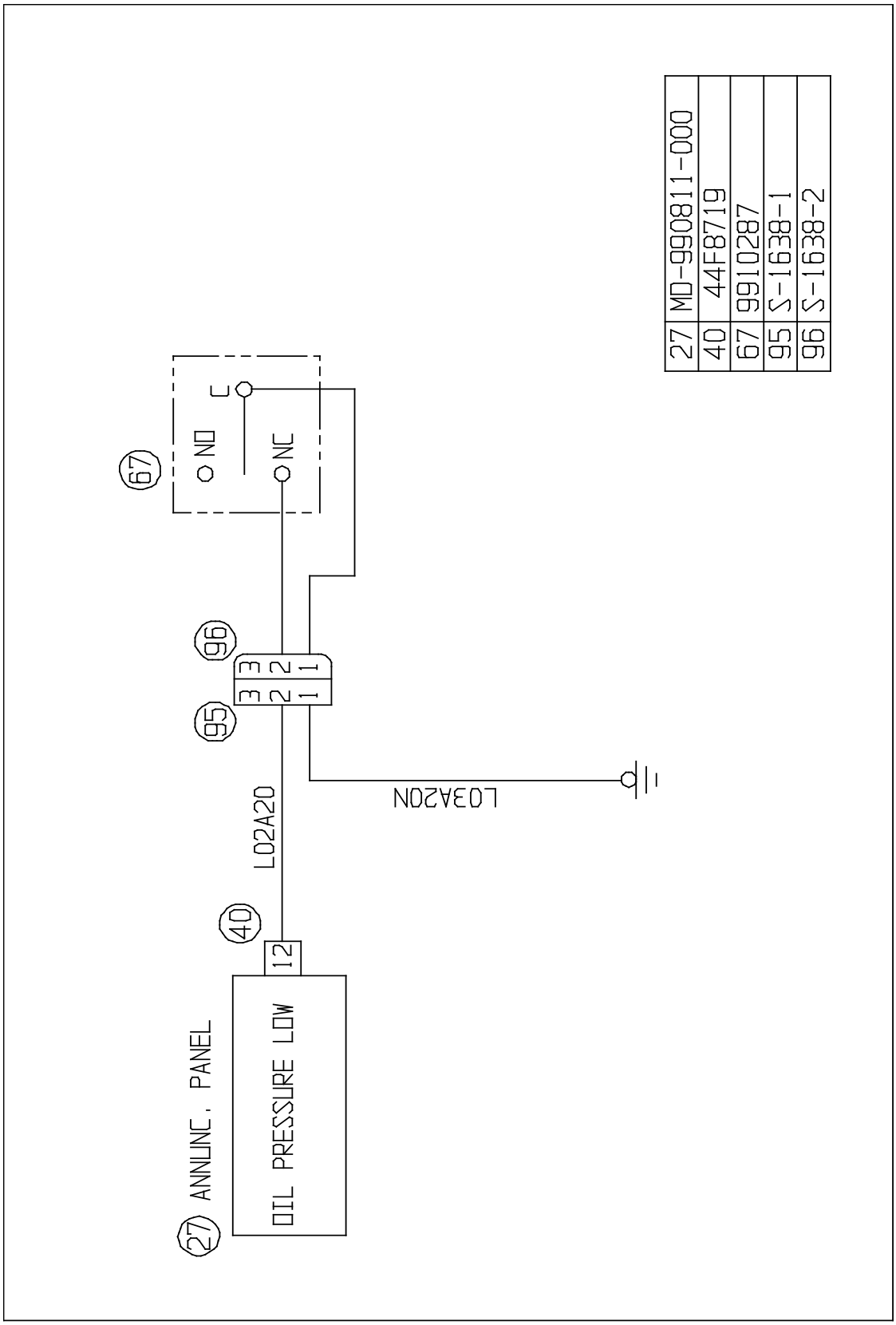
SCHEMATIC – EXTERNAL POWER RECEPTACLE
FIGURE 34



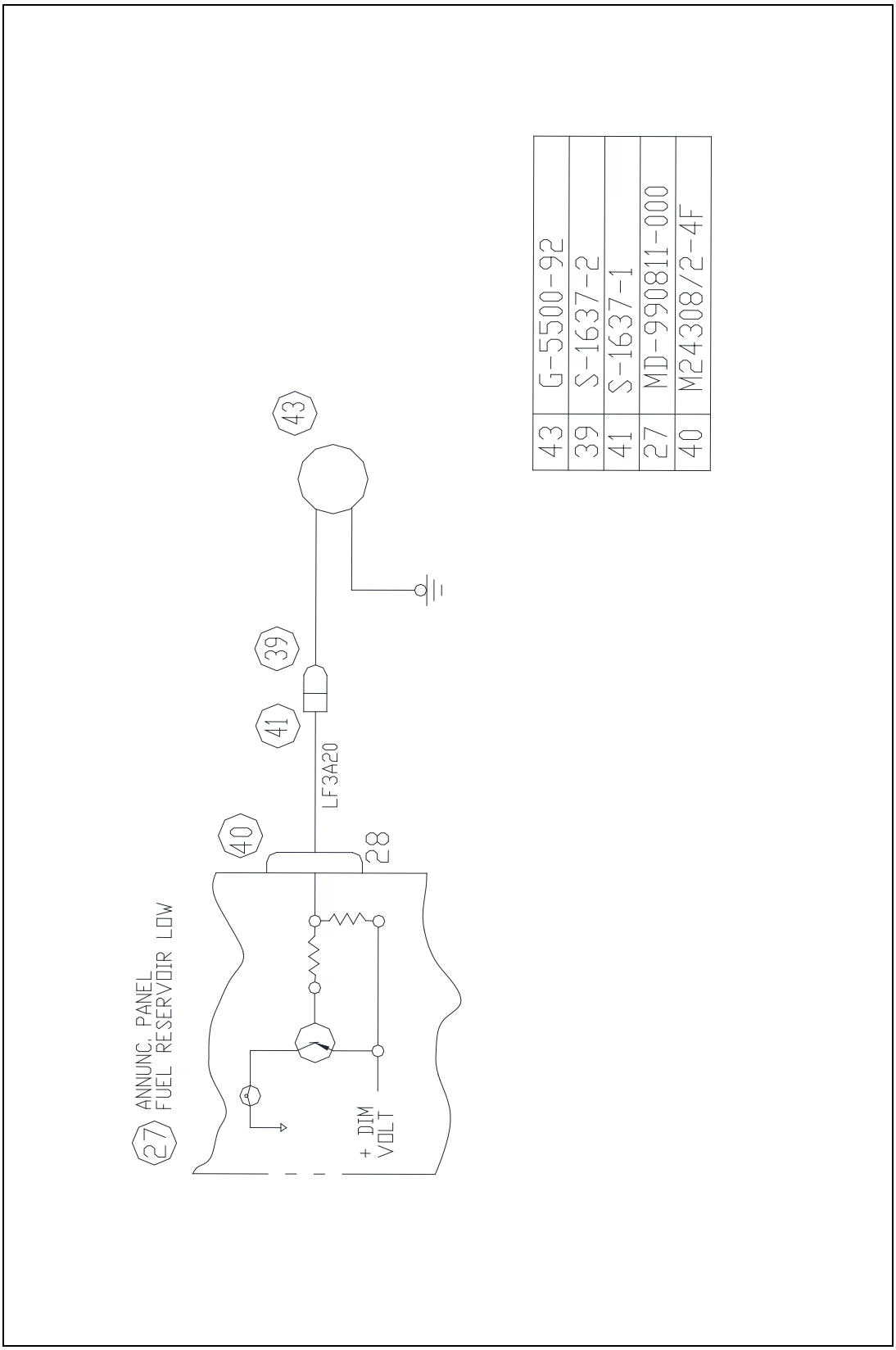
SCHEMATIC – AUXILARY FUEL PUMP
FIGURE 35



SCHEMATIC – BATTERY CIRCUIT
FIGURE 36

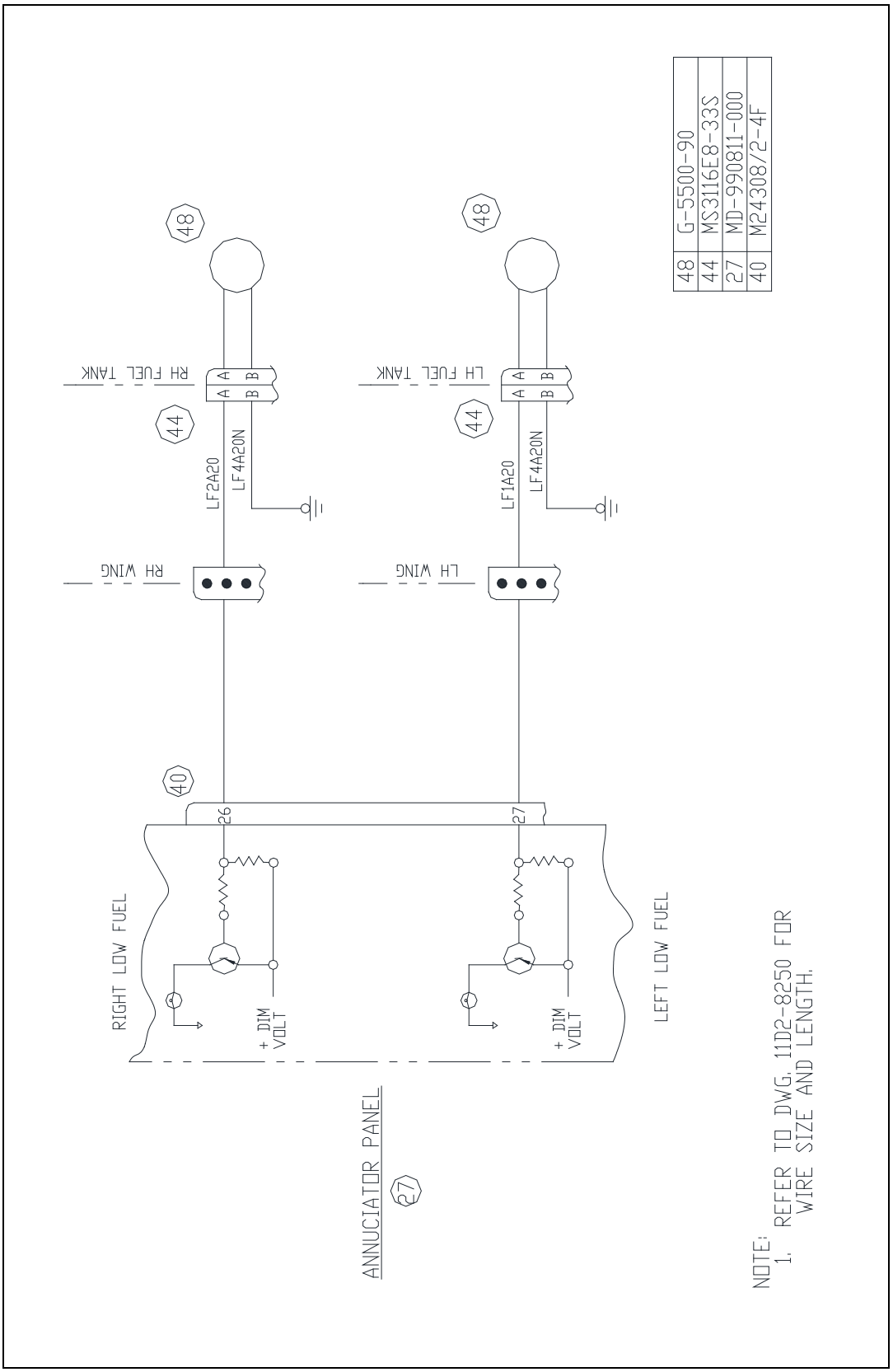


SCHEMATIC – LOW OIL PRESSURE WARNING
FIGURE 37

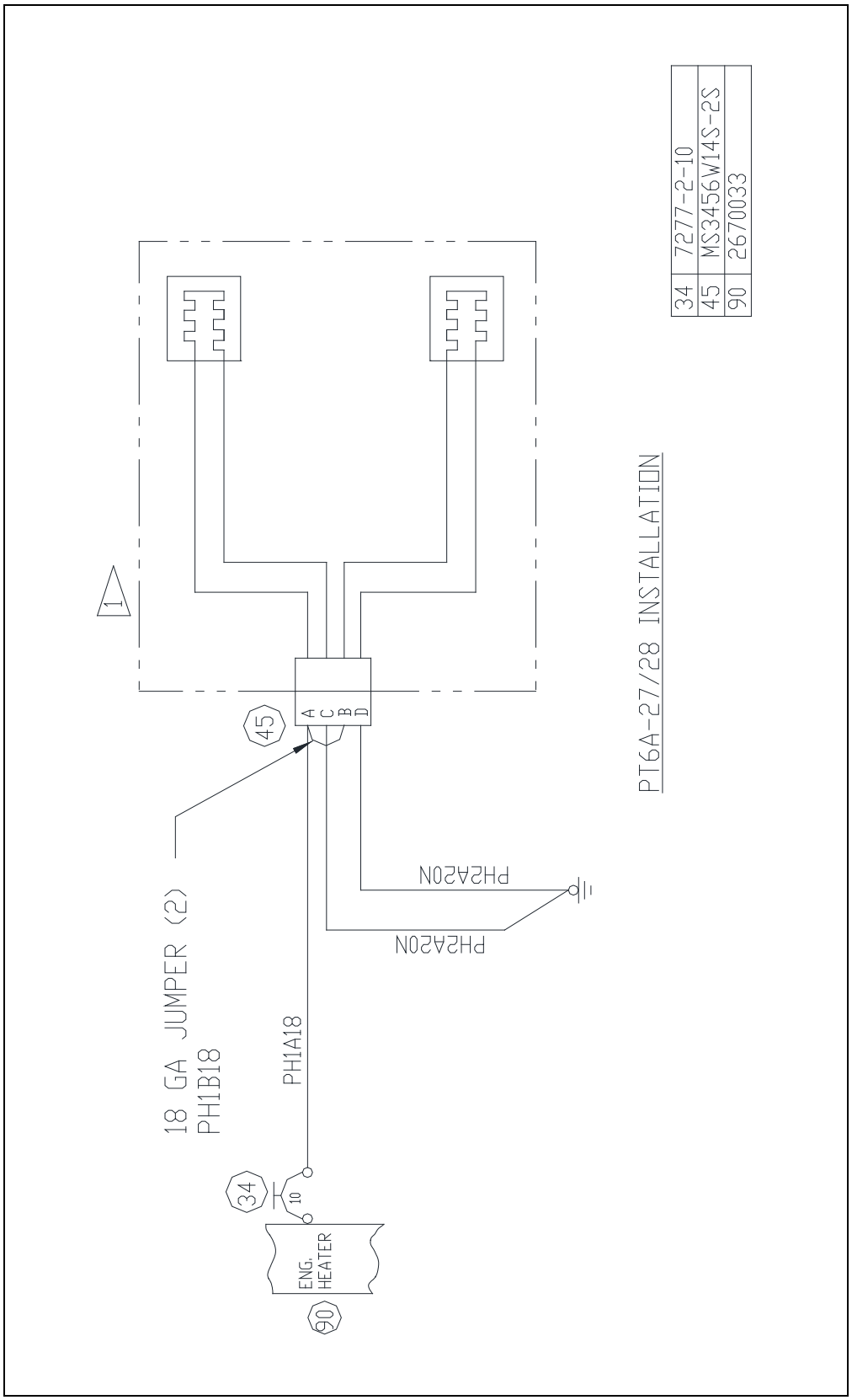


43	G-5500-92
39	S-1637-2
41	S-1637-1
27	MD-990811-000
40	M24308/2-4F

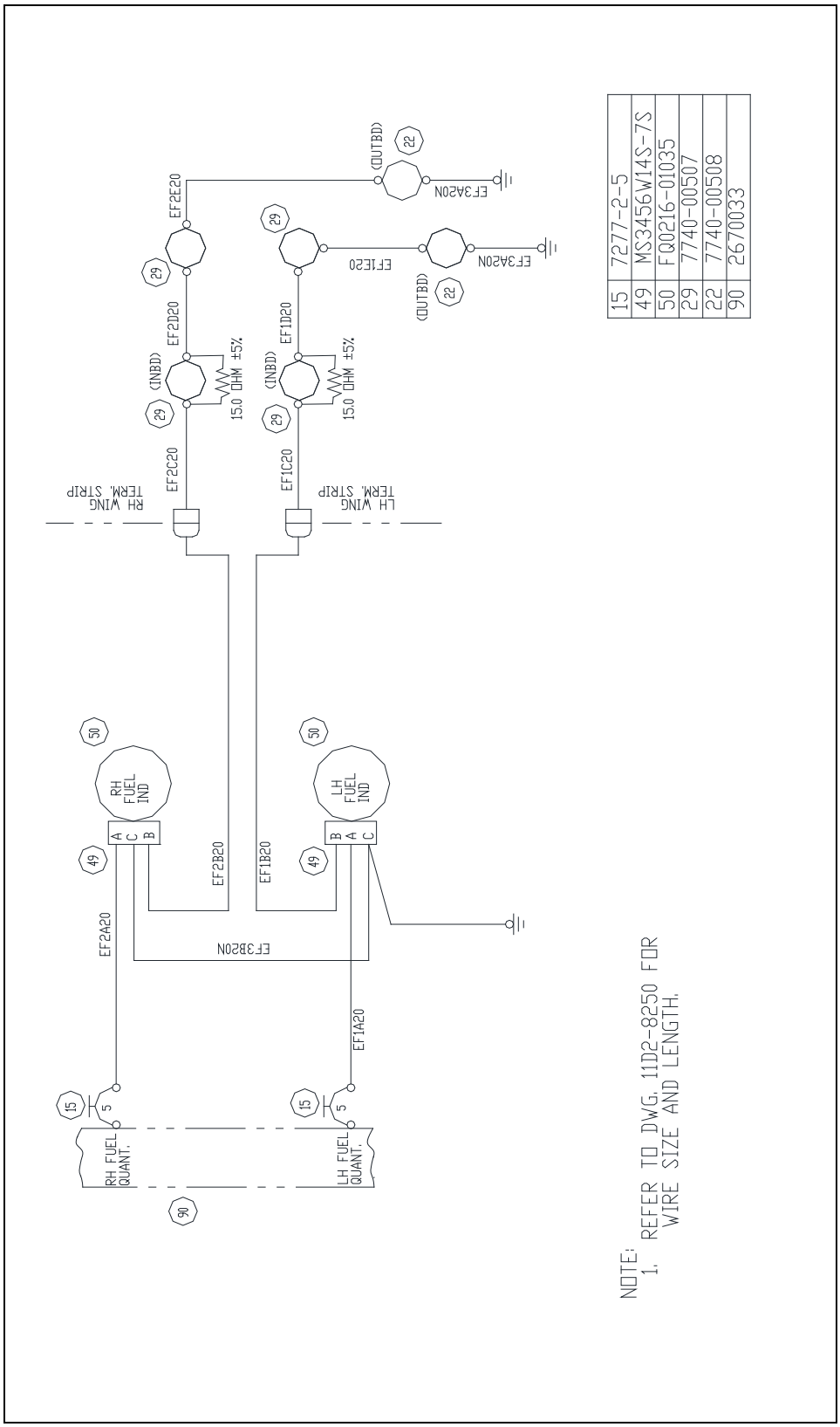
SCHEMATIC – LOW FUEL LEVEL WARNING – RESERVOIR
FIGURE 38



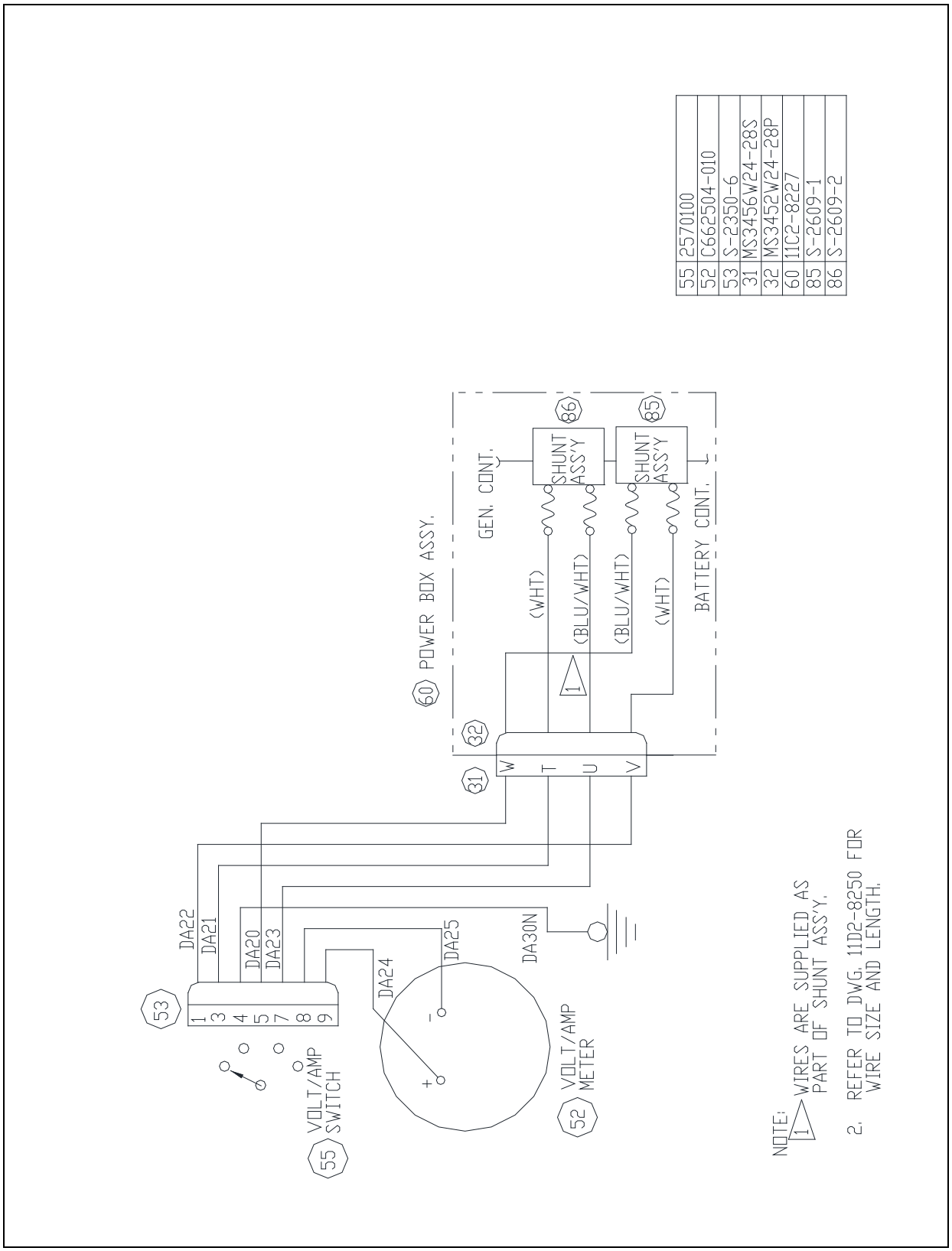
SCHEMATIC – LOW FUEL LEVEL WARNING – WING TANKS
FIGURE 39



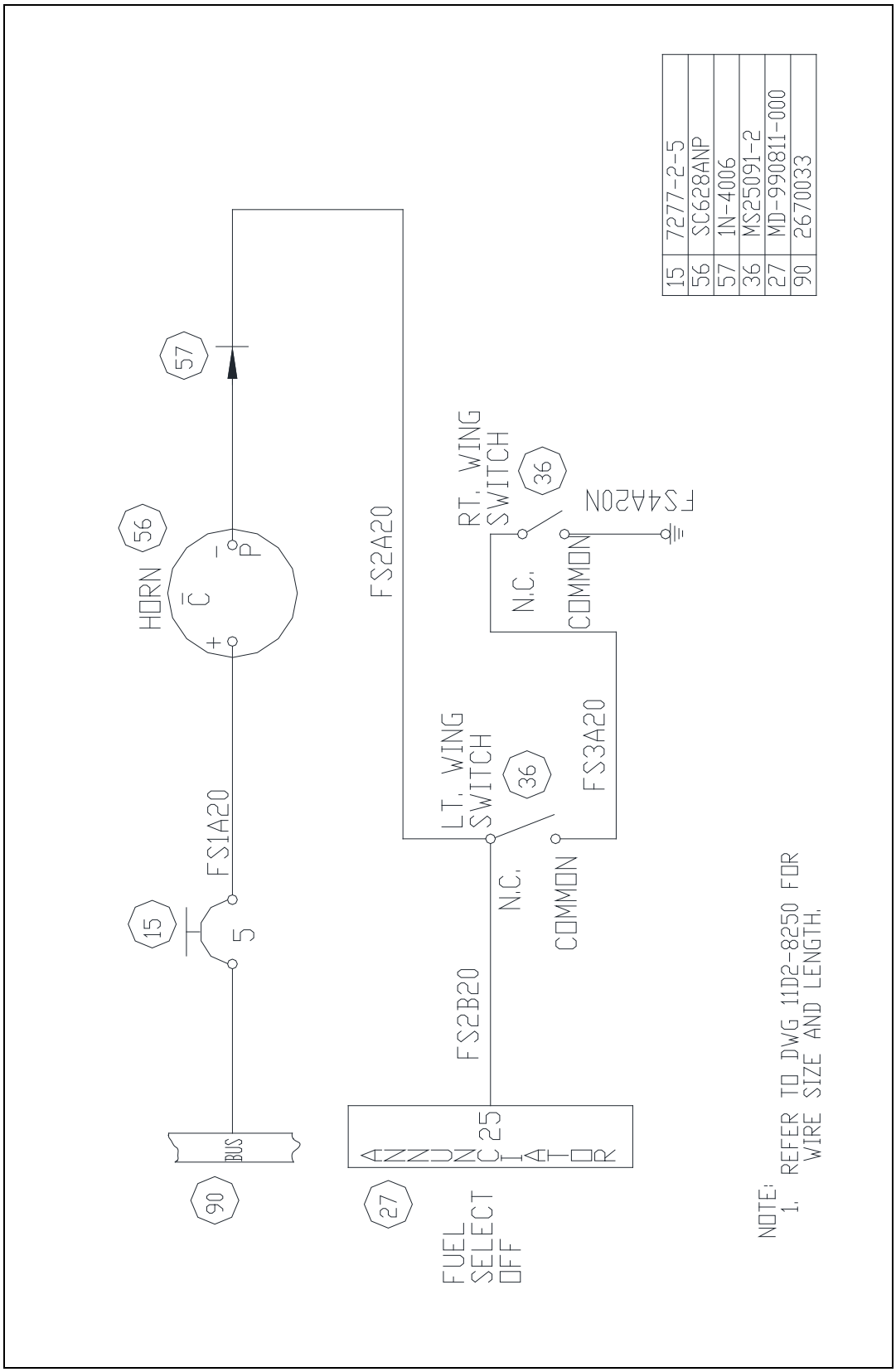
SCHEMATIC – ENGINE FUEL HEATER
FIGURE 40



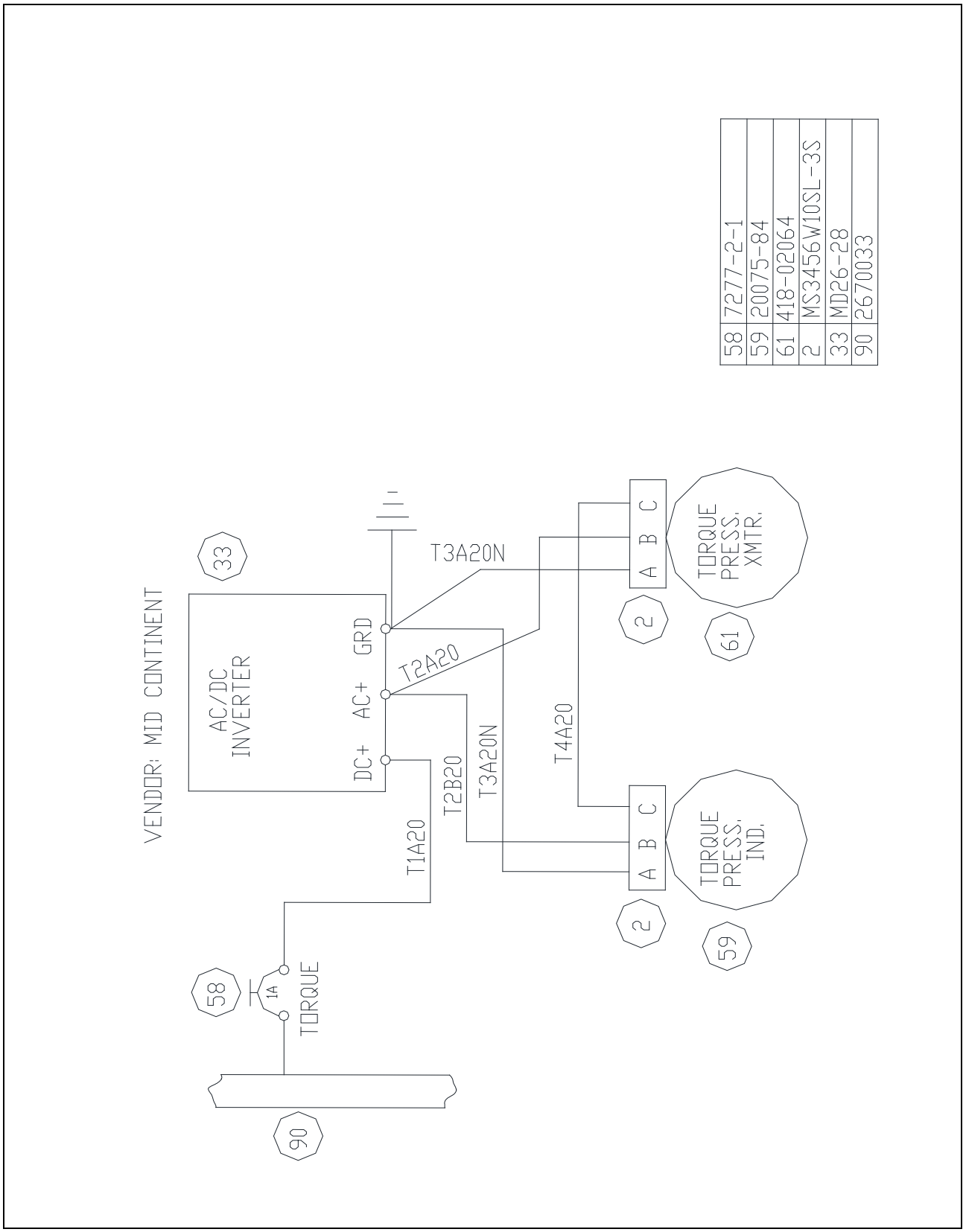
SCHEMATIC – FUEL QUANTITY
FIGURE 41



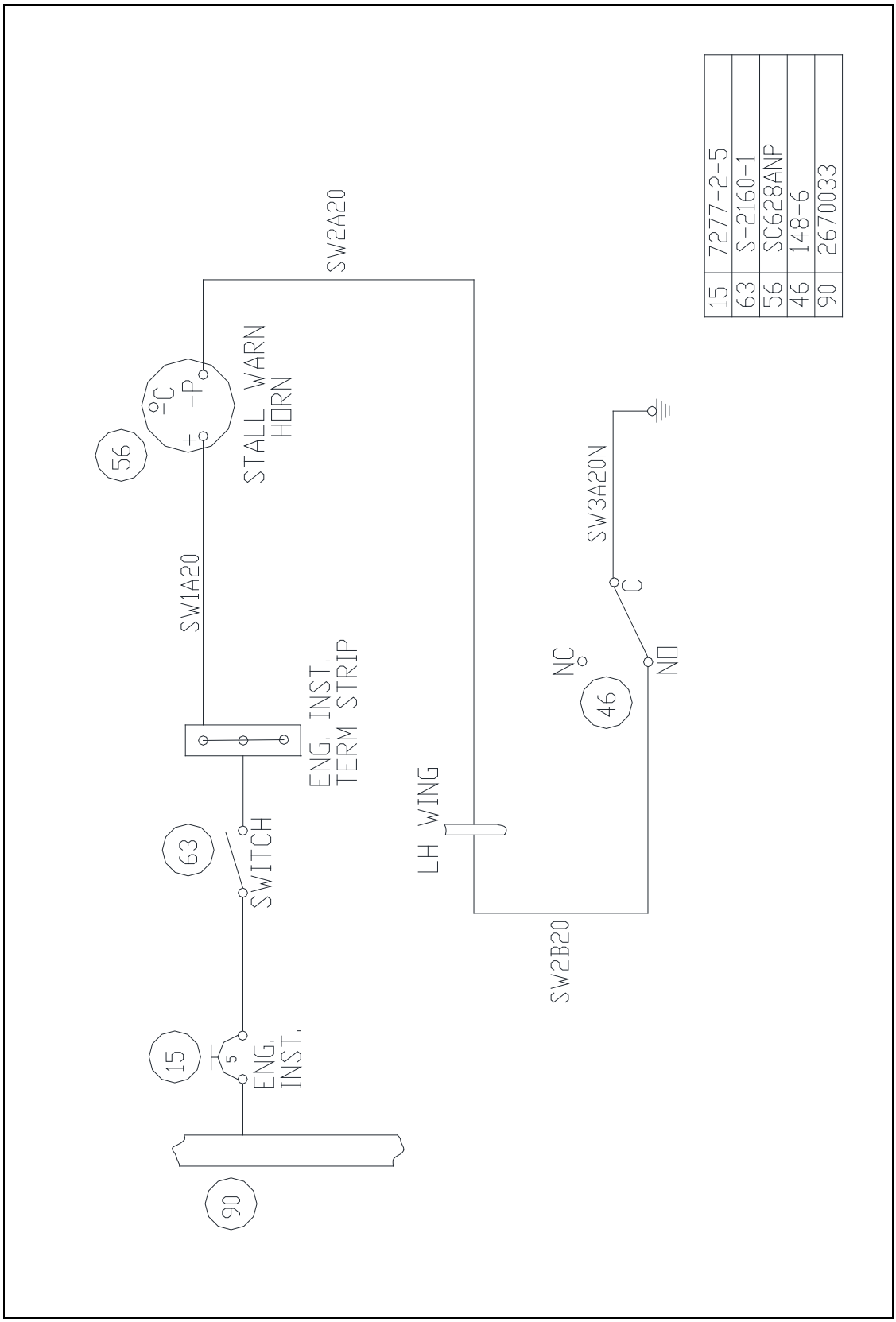
SCHEMATIC – VOLT/AMP METER
FIGURE 42



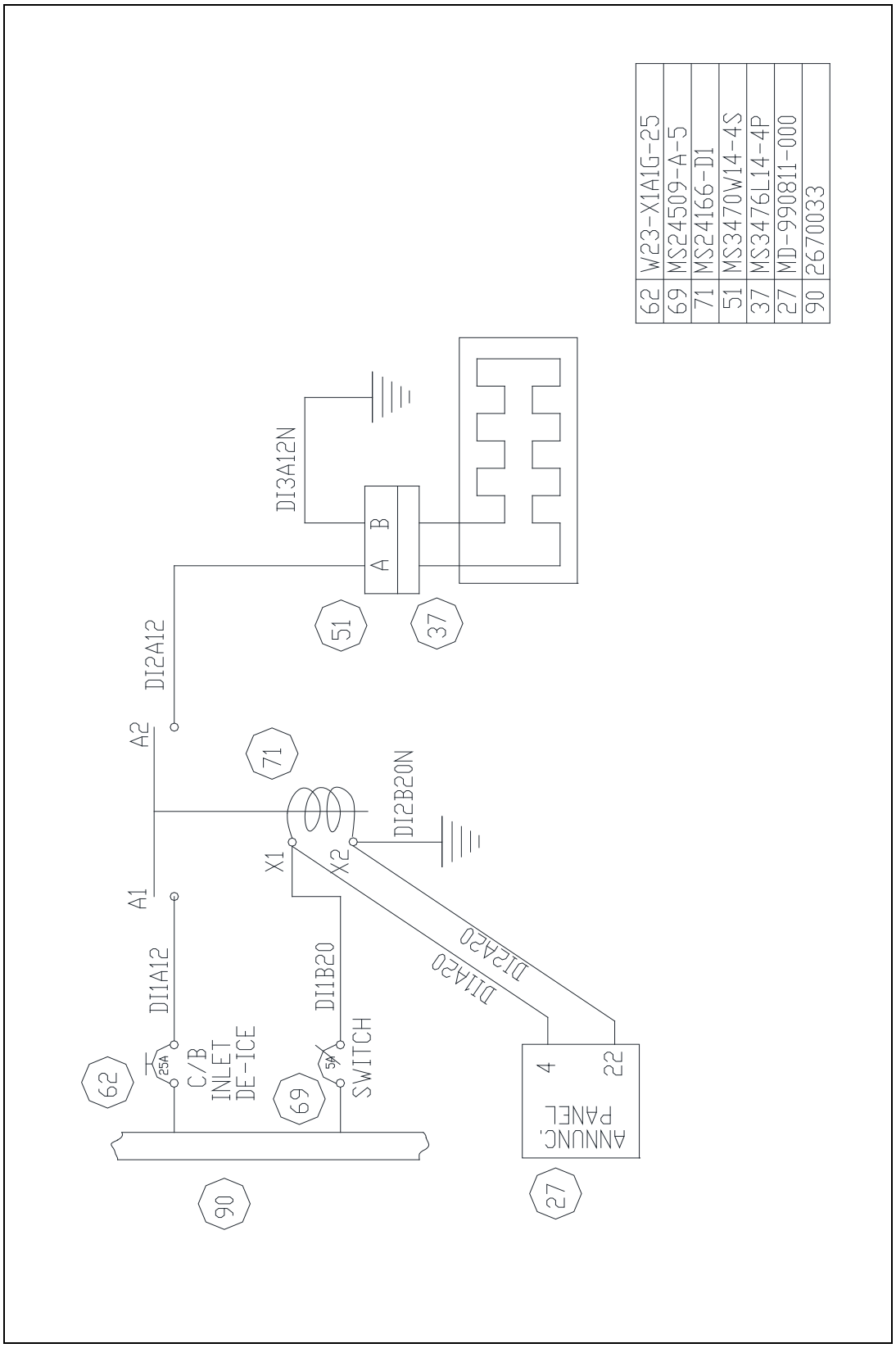
SCHEMATIC – FUEL SELECTOR HORN & ANNUNC. PANEL
FIGURE 43



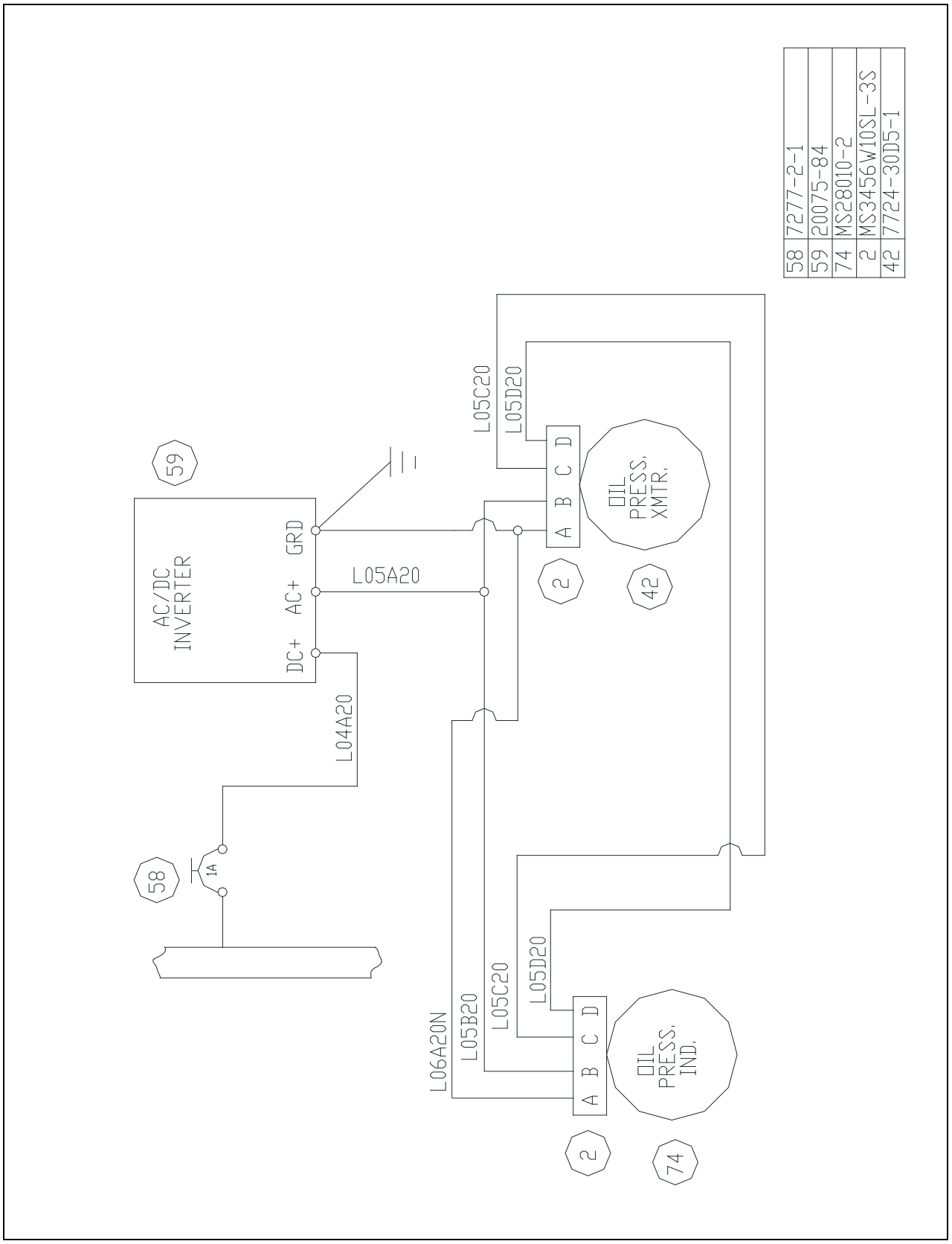
SCHEMATIC – ELECTRIC TORQUE PRESSURE
FIGURE 44



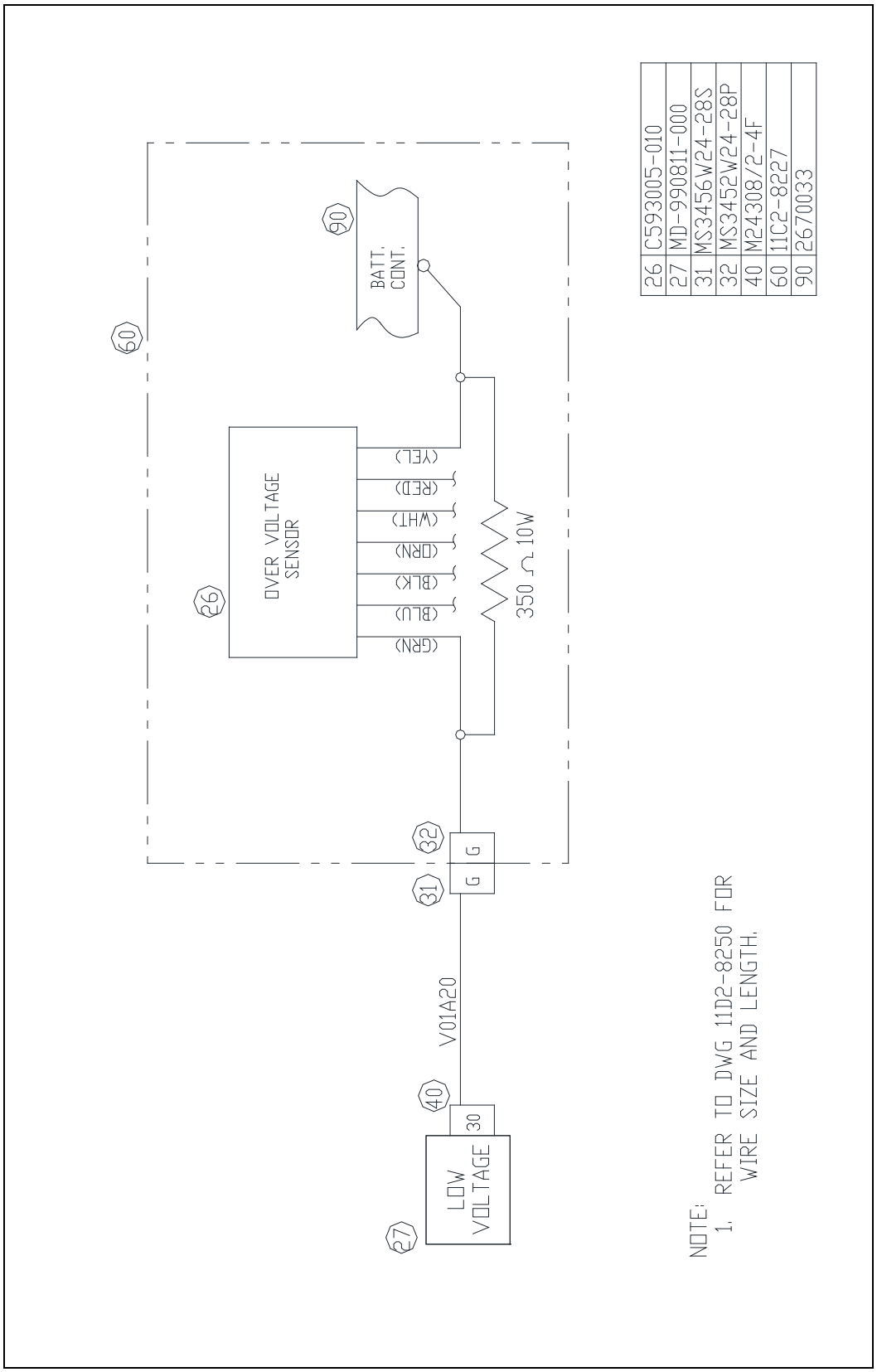
SCHEMATIC – STALL WARNING
FIGURE 45



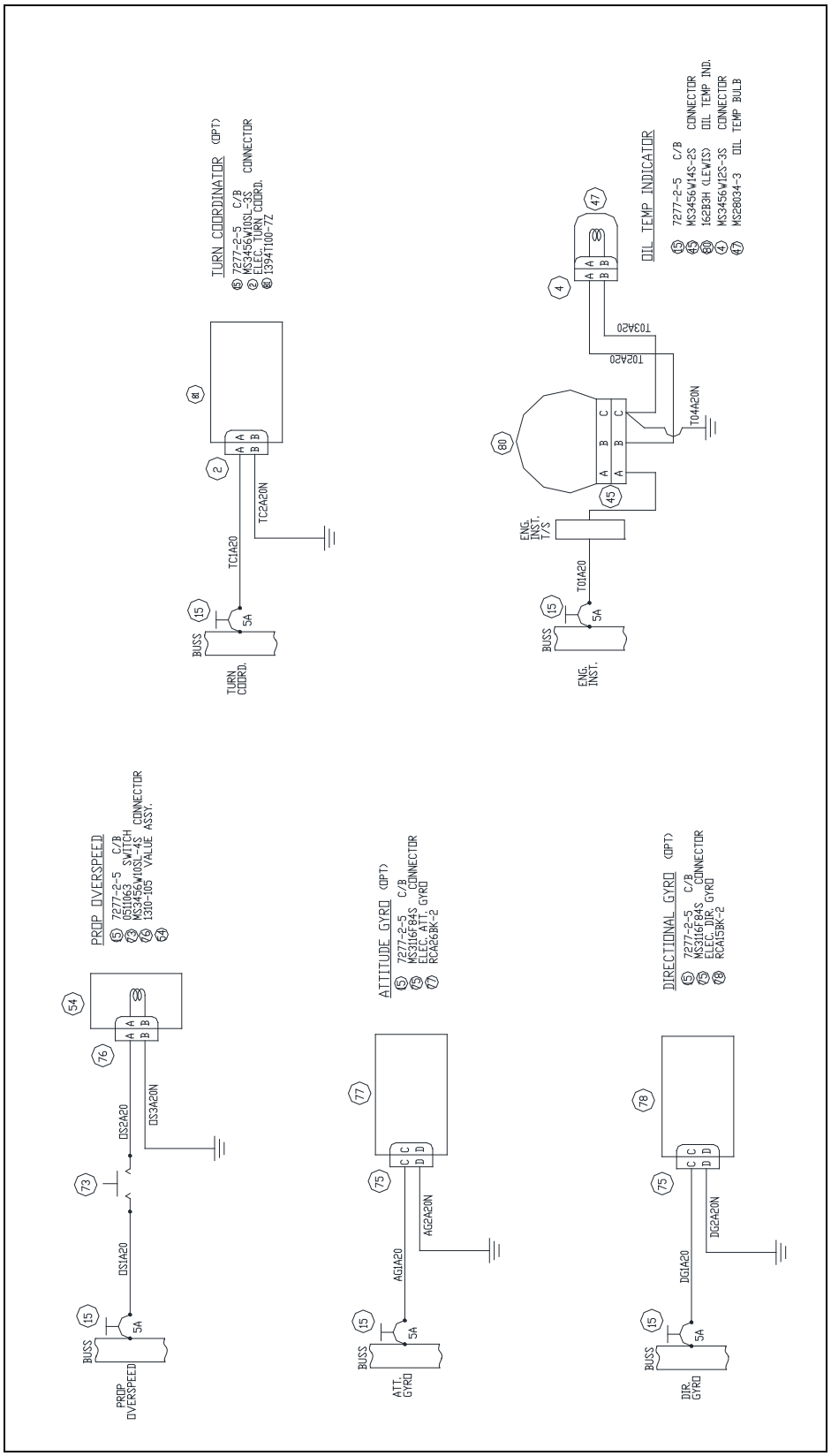
SCHEMATIC – INLET DE-ICE
FIGURE 46



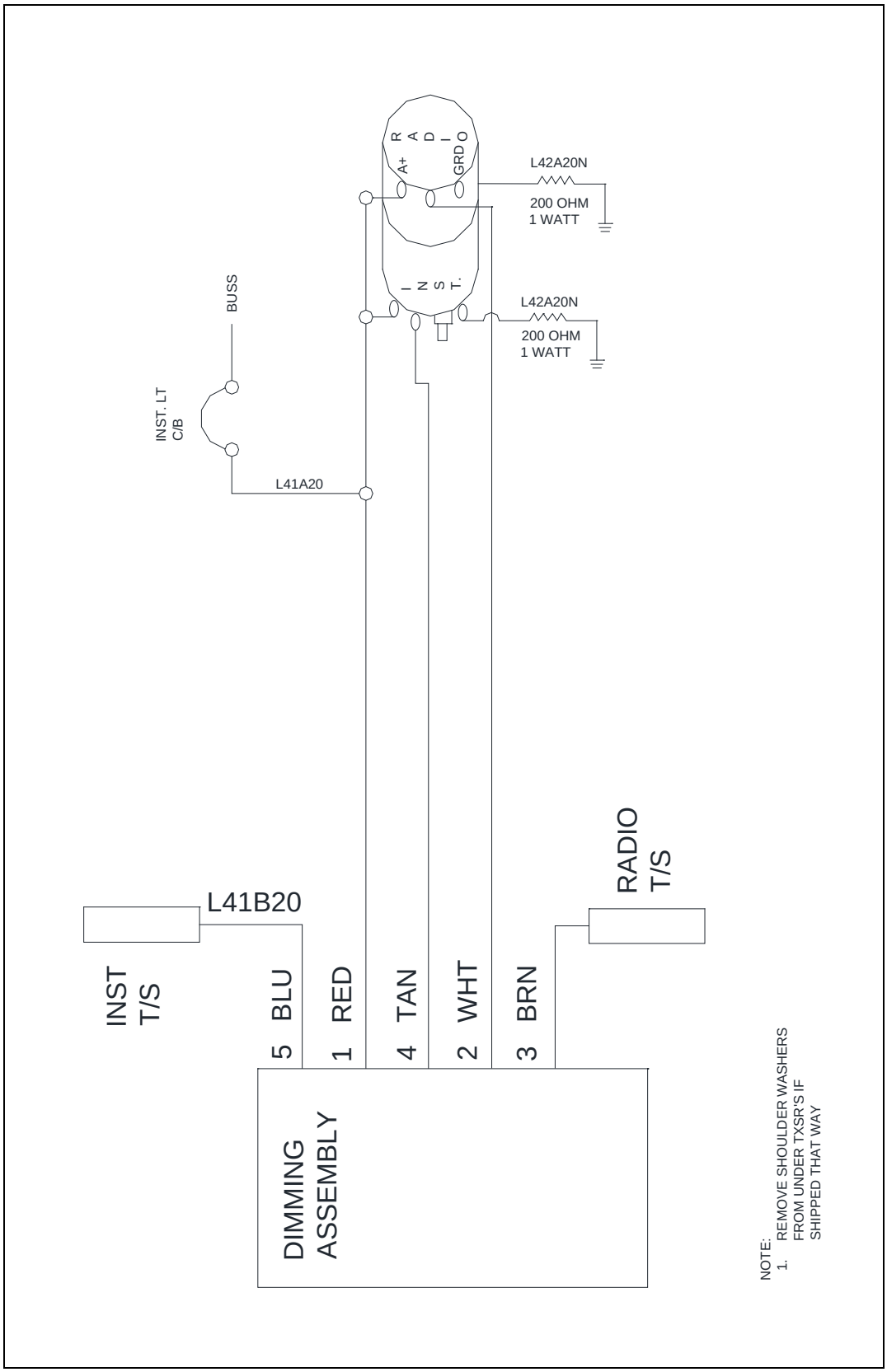
SCHEMATIC – ELECTRIC OIL PRESSURE
FIGURE 47



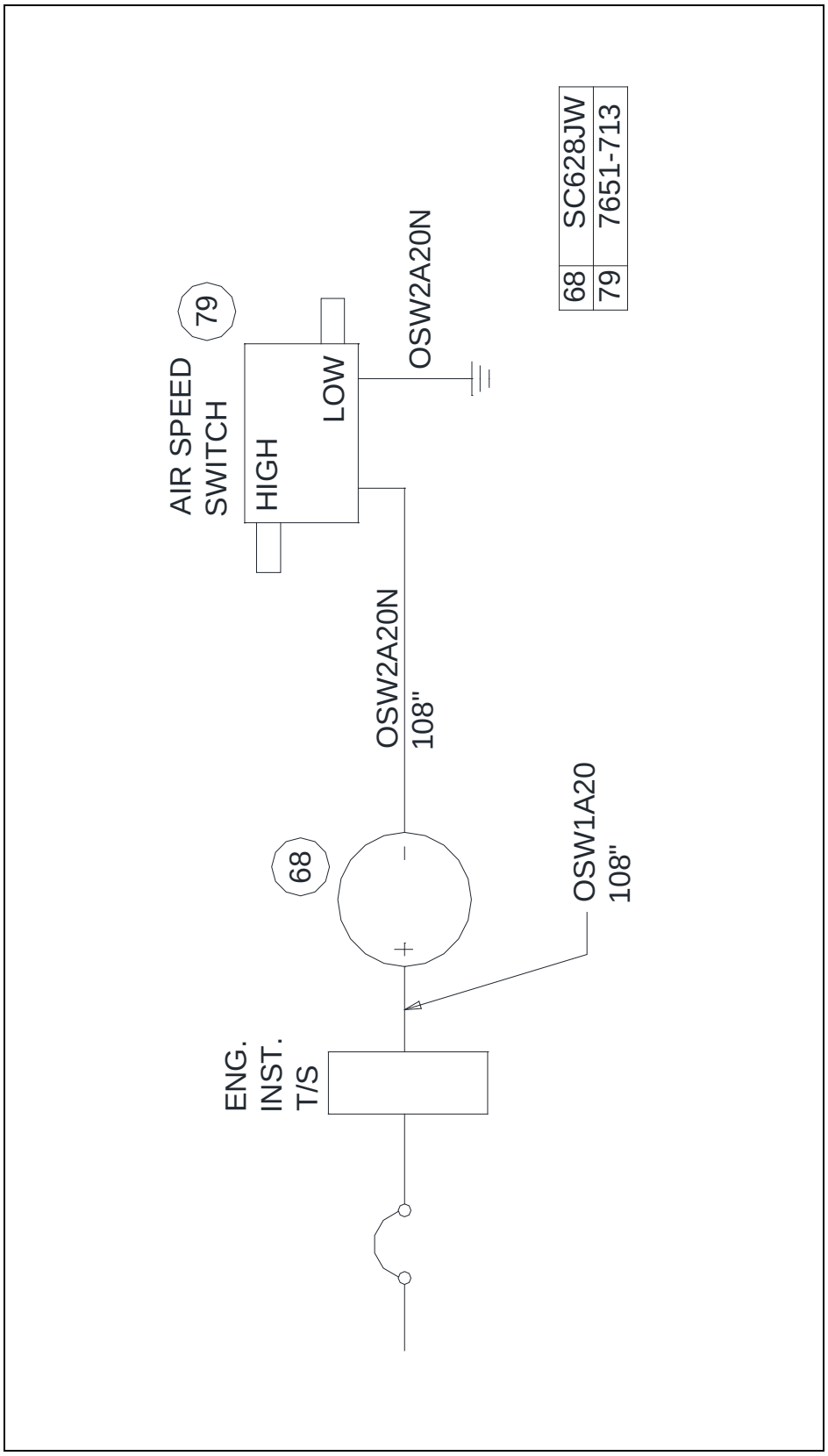
SCHEMATIC – LOW VOLTAGE WARNING
FIGURE 48



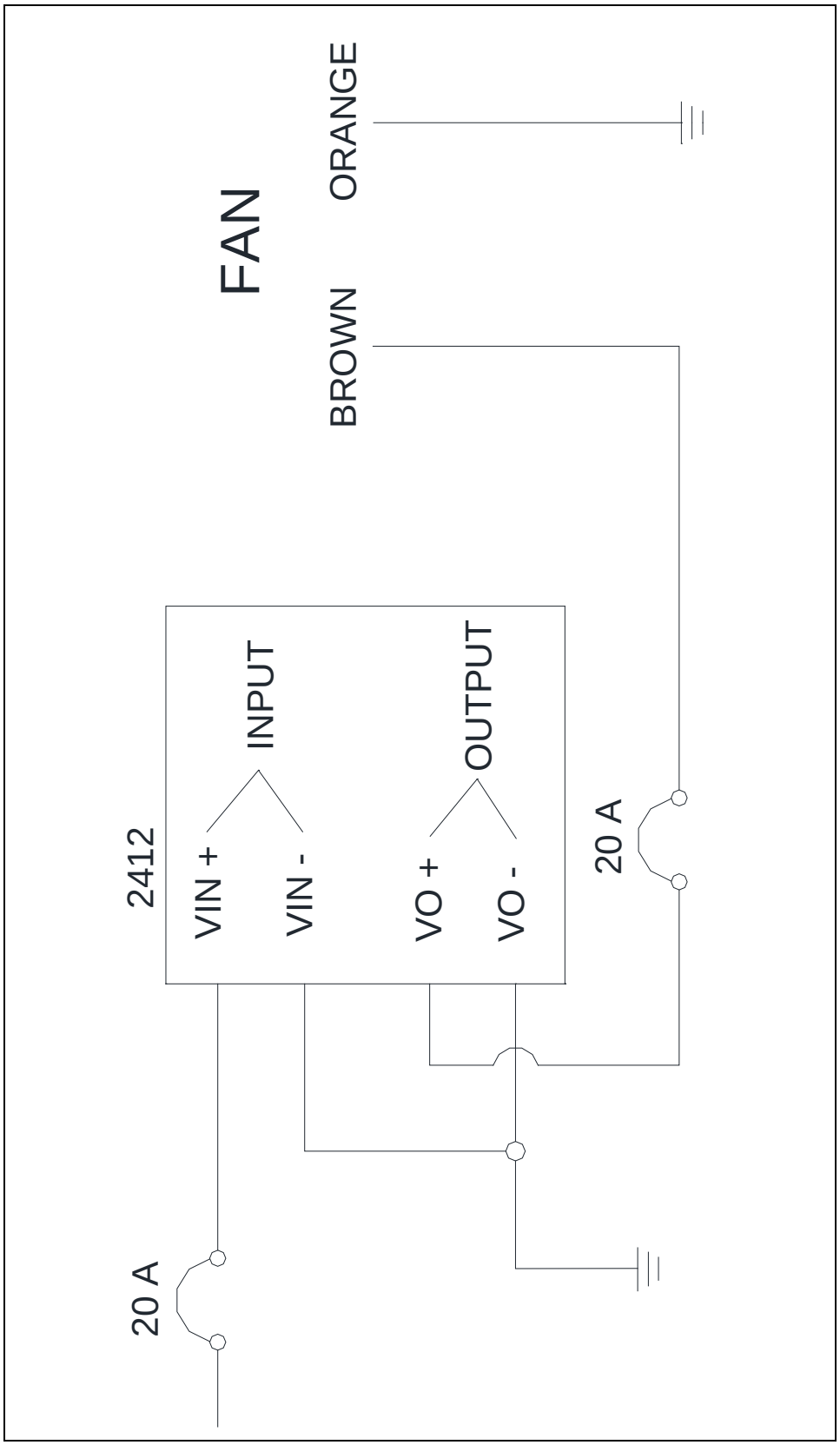
SCHEMATIC – INSTRUMENTS
FIGURE 49



SCHEMATIC – DIMMING ASSY.
FIGURE 50



SCHEMATIC – OVER SPEED WARNING
FIGURE 51



SCHEMATIC – CABIN AIR
FIGURE 52

TIME LIFE COMPONENTS

1. Airframe – With the C2W 115-1/1115-2 lifetime struts installed, there are no life-limited components on the airframe.

2. Engine – See Pratt and Whitney service manual for the applicable PT6 engine.

3. Propeller – See the Hartzell service manual for the HC-B3TN-3DY/T10582N.

CONTINUED AIRWORTHINESS INSPECTION

AIRFRAME

The de Havilland DHC-2 MKI Service Manual and Inspection Schedule is the basic document for servicing this aircraft. The following pages contain information specific to the installation of the Turbine Engine per STC SA01186CH and should be used for all necessary inspections.

Inspected By	Date	Item No.	Description
		1.	Check elevator down spring for corrosion, wear and security.
		2.	Check aileron/rudder interconnect for correct tension.
		3.	Check aileron/rudder interconnect for proper clearance of bridal clamps and structure.
		4.	Perform Cessna A.D. 2011-10-09 R2 if applicable. (If aircraft equipped with STC SA711GL Cessna seats).
		5.	Check the electric flap hydraulic reservoir for correct level and inspect for leaks and security.
		6.	Inspect the following:
			a. Inspect stall fences for damage and security.
			b. Inspect flow energizers for damage and security.
			c. Inspect finlets for cracks, distortion and security
			d. Inspect strakes for cracks, distortion and security.

POWER PLANT

NOTE

Refer to Pratt & Whitney PT6A – 27/28 Service Manual for continued airworthiness and serviceability.

Inspected By	Date	Item No.	Description
		1.	Inspect engine cowlings for cracks and damaged or missing fasteners.
		2.	Inspect cowling intake for cleanliness.
		3.	Check particle separator for proper operation and security.
		4.	Inspect engine mount brackets on engine mount structure for cracks and security.
		5.	Inspect vibration isolators for damage, deterioration and security.

Inspected By	Date	Item No.	Description
		6.	Inspect firewalls and fireseals for damage and security.
		7.	Inspect exhaust stacks for cracks, distortion and security.
		8.	Check power, propeller feather and standby-throttle controls for full and free movement, wear, correct travel at engine and control quadrant, and security. Friction dampers for proper operation.
NOTE **Do not attempt to put power lever into reverse range unless engine is running.**			
		9.	Check combustion, turbine and exhaust sections for the following:
			a. Gas generator case, fire seals and combustion chamber fo
			b. Turbine inlet ducts for cracks and distortion.
			c. Check thermocouple system for cracks, security, wiring
			d. Check engine fuel nozzles for evidence of leakage.
		10.	Check turbine exhaust vanes for cracks, distortion, looseness and erosion.
		11.	Inspect turbine exhaust case and duct for cracks and distortion.
		12.	Replace engine fuel filter.

FUEL SYSTEM

Inspected By	Date	Item No.	Description
		1.	Check header tank drain valve for damage, leaks and positive shut-off.
		2.	Check wing fuel tank drain valves for damage, leaks, and positive shut-off.
		3.	Check fuel system strainer for cleanliness and damage.
		4.	(IF INSTALLED) Check rubber “swing valves” (check valve) located at wing station 123.5 for security and operation. These valves are inspected through the aluminum plugs located on each lower wing panel leading edge at station 121.5. Check valve for security and operation. Valve may not seat 100% with no fuel in tank.
CAUTION **DRAIN FUEL BEFORE REMOVING PLUG FOR INSPECTION**			
			Rubber valve is Cessna part number 9912071-2. Reinstall plug, “O” ring (p/n MS29513-116), and safety wire

Inspected By	Date	Item No.	Description
		5.	Check engine driven fuel pump filter for foreign matter. Replace element.
		6.	Fuel Selector Valves and Linkages (Wing Area) – Inspect shut-off valves, controls and linkage for condition, security and evidence of damage. Inspect all fuel selector valve arms for proper contact with the off stop pins. Rerig if necessary.
		7.	Check auxiliary fuel pump, ejector pump, swing check valves and fuel shut-off valve screens for damage and security of installation. (Access cover on top of reservoir.)
		8.	Check engine fuel shut-off control for damaged conduit, security and freedom of movement; spring lock for sufficient compression.
		9.	Inspect header tank for damage, security and leaks.
		10.	Inspect fuel transfer and vent lines from wings for damage, security and leaks.
		11.	Inspect fuel caps for leakage, deterioration, and proper operation.
		12.	Inspect wing fuel tanks for leaks in leading edge and aft of forward spar.
		13.	Inspect fuel transmitters and wiring for security.
		14.	Inspect all fuel lines for leaks with engine fuel shut-off lever OFF and fuel booster pump switched to ON. Check low fuel pressure light goes out. Check pump runs in “normal” position.
		15.	Drain sufficient fuel from header tank and check that low fuel level light comes on. Approximately 7.5 gallons will be remaining. (Header tank capacity is 12.5 gallons.)
		16.	Drain sufficient fuel from wings and check that low fuel level light comes on. Approximately 15 gallons of fuel will be remaining in each wing.
		17.	Check that audible hom and annunciator are operational with both fuel selectors in the OFF position.

OIL SYSTEM

Inspected By	Date	Item No.	Description
		1.	Remove oil filter and caps, check for foreign matter.
		2.	Inspect oil cooler for leaks and security; and air passages for cleanliness.
		3.	Inspect oil cooler shroud for damage, corrosion, and security.

IGNITION SYSTEM

Inspected By	Date	Item No.	Description
		1.	Check igniters for cleanliness and corrosion.

NOTE

Refer to PT6A –27/28 Service Manual for serviceability limits.

PROPELLER

Inspected By	Date	Item No.	Description
		1.	Remove spinner and check for grease and oil leaks. Reinstall spinner after operations 2 through 6 have been completed.
		2.	Inspect blades for nicks and cracks. Remove nicks at leading edge.
		3.	Inspect hub for cracks.
		4.	Check all visible parts for wear and safety.
		5.	Grease blade clamps through zerk fittings. Care should be taken to avoid blowing out clamp gaskets. Remove one zerk fitting and pump grease into the remaining fitting until grease appears through the hole where the zerk was.

CAUTION

ENSURE THAT THE SAME AMOUNT OF GREASE IS APPLIED TO EACH BLADE CLAMP, OTHERWISE BALANCE OF PROPELLER MAY BE AFFECTED.

UTILITY SYSTEMS

Inspected By	Date	Item No.	Description
		1.	Check heat control for full and free movement, correct operation and security.
		2.	Check heat exchanger for cracks and security.
		3.	Check distributor duct for damage and security, and adjustable outlets for freedom of movement.
		4.	Inspect cabin-heating ducts for damage, cracks, and security.
		5.	Inspect bleed air lines for damage and security.

ELECTRICAL

Inspected By	Date	Item No.	Description
		1.	Remove battery for capacity check. Check electrolyte level before reinstallation.
		2.	Inspect the battery area for evidence of electrolyte leakage or overflow; terminals for pitting and corrosion.
		3.	Check momentary toggle switches for sticking in “ON” position.
		4.	Inspect the generator control unit externally for cleanliness and security; electrical connections for security.
		5.	Inspect inverters externally for cleanliness and security.
		6.	Inspect the starter – generator for cracked or broken mounting flange and security; electrical connections for security.
			NOTE **Refer to starter/gen manufacturers for proper servicing guidelines.**
		7.	Check the starter – generator brushes for specified minimum length, even wear and freedom of movement in brush holders; inspect the commutator for evidence of excessive arcing.
		8.	Inspect the tachometer generators for security.
		9.	Inspect the external power receptacle for cleanliness and contacts for cleanliness.
		10.	Inspect all relays for security of mounting, connections and serviceability of wires.
		11.	Inspect all electrical systems for the following:
			a. Wiring for deterioration, chafing, fraying, evidence of
			b. Connector plugs for corrosion, cracks, evidence of
			c. Wire shielding for fraying, crimping and corrosion.
			d. Junction boxes for cracks, cleanliness and corrosion.
			e. Bonding for damage, corrosion and security.

INSTRUMENTS

Inspected By	Date	Item No.	Description
		1.	Inspect all instrument wiring for deterioration, chafing, fraying, overheating and a proper support. Shielding for fraying, corrosion and damage. Terminal strips, connections and bonding for damage, corrosion and security.

CABLE TENSIONS AT OPERATING TEMPERATURES FOR STC SA01186CH

Cable	Cable Tension (lbs.)
Elevator	85
Rudder	45
Aileron (Fuselage)	28
Elevator & Rudder Trim	9

Notes: 1. Aileron tension should be checked with rudder/aileron interconnect tension relieved.

Rudder/Aileron Interconnect: With right rudder pedal depressed to stop and left aileron to stop, adjust bridal clamp to remove cable slack plus 1 inch. Reverse controls to set opposite side

FLIGHT CONTROL TRAVELS FOR STC SA01186CH

CONTROL SURFACE		ANGULAR DISPLACEMENT	TOLERANCE + OR -		TRAVEL DISTANCE FROM NEUTRAL – IN.	TOLERANCE + OR – IN.	
Ailerons	Up	18°	2°		4.20	0.40	
	Down	11°	2°		2.50	0.40	
	Droop (wing flap fully down)	15°	1 1/2°		3.50	0.30	
Elevator	Up	28°	2°	0°	10.60	0.75	0.00
	Down	23°	2°	0°	8.75	0.75	0.00
Elevator Trim Tab	Up	18°	1 1/2°		1.10	0.1	
	Down	26°	1 1/2°		1.60	0.1	
	Droop (screw jack and cables at center of travel)	4°			0.25		
Rudder	Left	25°	2°		11.40	0.90	
	Right	25°	2°		11.40	0.90	
Rudder Trim Tab	Left	18°	2°		1.125	0.125	
	Right	18°	2°		1.125	0.125	
Wing Flaps	Down	35°	2°		12.30	0.70	

Wing Flap Settings		
	-0°	
	-15°	1°
	-35°	1°

Reference Points:
Ailerons – at outboard end.
Flaps – at inboard flap hinge.
Elevators and tabs – at Station 8.00from CL of aircraft.
Rudder – at bottom aft end or bottom of trim tab in neutral.