WIPAIRE

WIPLINE FLOATS | MODIFICATIONS | AIRCRAFT SALES
AVIONICS | INTERIORS | MAINTENANCE | PAINT



# PARTS MANUAL
# FOR
# WIPLINE MODEL 2100 FLOATS
# ON
# PIPER PA-18 & PA-12

**Revision V**

Wipaire | Fire Boss | Lake & Air
1700 Henry Ave – Fleming Field (KSGS), South St. Paul, MN 55075
651.451.1205 info@wipaire.com wipaire.com

THIS PAGE INTENTIONALLY LEFT BLANK

## LOG OF REVISIONS

| Revision | Pages Affected | Description | Date |
|---|---|---|---|
| A-K | All | For previous revision changes, reference Parts Manual for 2100 Floats on Piper PA-18 and PA-12, Revision K, part number 1002166. | 6/1/2020 |
| L | All | Added note about nose and main gear tire/tube. Updated Tire and Tube part numbers AA1D4 and XA1AC. Changed 21A01158-203 to 21S01158-203. Updated bottom skins and stiffeners. Added note about Wipaire drawing 1011065 for alternate part numbers. Changed Ring Terminal R-3 to MS25036-102. Created sections for Post/Pre Service Letter 225 for Hydraulics and Electrical. Updated Hydraulic System Installation for PA-18 and PA-12 images and part lists. Added 1011805 Hydraulic Pump for PA-18 image and parts list. Added 1011830 Hydraulic Pump for PA-12 image and parts list. Updated Hydraulic Pump Overview image and parts list. Updated Electrical Schematic image and parts list. | 5/10/2021 |
| M | 73 | Changed 010-026 Seal to 471570 Seal, Timken. | 5/26/2022 |
| N | 60, 79-80 | Updated Pump Out Cup and Valve image and parts. Updated image and parts list in Main Gear Wheel Grove/Wipaire Assembly section. | 1/30/2023 |
| P | 87, 89 | Updated parts list in Struts, Wires, & Spreader Bars section. | 11/29/2023 |
| R | 128, 130 | Corrected bulb part numbers in gear control indicator assemblies. | 9/23/2024 |
| T | 10-14, 17-19, 23-24, 29, 37, 40, 44, 86, 88-92 | Removed 21A03115-001 and associated hardware in Hull Assemblies for Amphibian and Seaplane sections. Updated images and parts in Bulkheads 21A01000-250, 21A01000-253, 21A01000-261, 21A01000-263, 21A01000-264, and 21A01000-265. Removed Paddle Bracket 1002114, Right Stop 1002113, Left Stop 3A01156-057, Paddle Clip 3A01503-001, and Paddle 0238-0035 from Skins & Stiffeners sections. Added Canoe Paddle section image and parts list. Updated image and renumbered parts list, removed 21A03032-006, 21A03214-003, 21A03115-001, and 21A03154-007, updated MS21044N6 quantity 16 to 12 in Struts, Wires, & Spreader Bars section. Added Fwd Spreader Bar Support Panel Assembly 21A01000-260 image and parts list. Added Aft Spreader Bar Support Panel Assembly 21A01000-259 image and parts list. Added Spreader Bar Tube Mounting image and parts list. | 4/17/2025 |
| U | 20, 47, 50 | Updated image of 21A01000-252 Bulkhead 6. Updated parts and quantities in Top Deck - Amphibian and Seaplane sections. | 9/25/2025 |
| V | 47-48, 50-51, 57, 59-62, 70-73, 84, 105, 109, 112, 129 | Changed Gear Indicator Cover 21A01002-137 and 21A01002-138 to 1009202, changed Placard 10A3-6338-1 to 1009122 and changed Placard 10A3-6338-2 to 1009123, changed 2600-3 quantity from 4 to 2, added Stud 1126000-4, changed 212-12N to 212-12 in Top Deck - Amphibian section. Changed Cross Tie, Top Deck, Baggage 21A01326-004 to 1013020, changed Cross Tie, Top Deck 30S01326-035 to 1013025 in Top Deck sections. Replaced 21S01000-400 After Body Gusset with 1013018 for Right Float and 1013019 for Left Float in Seaplane Hull Extrusions section. Renamed Section 6. Updated image and parts list in Pumpout Cup and Tube section. Added Float Hand Pump section. Updated image and parts list in Nose Gear Retraction Assembly section. Updated image and parts list in Nose Gear Lower Assembly section. Changed O-Ring AN6227-23 to MS28775-218 in Main Gear Wheel Cleveland/Parker Assembly. Changed Assembly, Relay, Time Delay Release from 1005042 to 1012411. | 11/9/2026 |

View most current version of parts manual at www.wipaire.com.

THIS PAGE INTENTIONALLY LEFT BLANK

# TABLE OF CONTENTS

FLOAT PART SALES DEPARTMENT OPERATIONS ....6
INTRODUCTION ....7
SECTION 1 HULL BULKHEAD ASSEMBLIES ....9
SECTION 2 WHEEL WELL ASSEMBLY ....31
SECTION 3 SKINS, STIFFENERS, & PADDLE ....35
SECTION 4 TOP DECK ASSEMBLY ....45
SECTION 5 EXTRUSIONS ....53
SECTION 6 PUMPOUT CUP AND TUBE & FLOAT HAND PUMP ....59
SECTION 7 WATER RUDDER AND STEERING & RETRACT SYSTEM ....63
SECTION 8 LANDING GEAR ....69
SECTION 9 STRUTS, WIRES AND SPREADER BARS ....87
SECTION 10 HYDRAULIC SYSTEM ....95
SECTION 11 ELECTRICAL ....125

# FLOAT PART SALES DEPARTMENT OPERATIONS

**Parts Sales:**

Wipaire, Inc.

1700 Henry Avenue – Fleming Field

South St. Paul, MN 55075

Telephone: (651) 306-0459

Fax: (651)-306-0666

Website: www.wipaire.com

Email: customerservice@wipaire.com

**Parts Ordering**

Purchase orders should include:

1. Purchase order number
2. Name of person placing order
3. Invoicing information:
    a. Customer name - company or individual
    b. Address
    c. Phone and fax number
4. Shipping information:
    a. Address (if different from invoice address)
    b. Method of shipment/preferred carrier
5. Aircraft model, float model, and serial numbers
6. Wipaire part number; name; type, e.g. left or right; quantity
7. Payment method: VISA, MasterCard, C.O.D. (Collect on Delivery) (U.S. customers only), pre-payment by check or wire transfer, open account (see Credit Policy)

**Note:** Any information not found in this manual for strut package parts and other installation items refer to the installation drawing package provided with the STC at the time of float installation. Additional drawing copies are available for purchase through the Wipaire Customer Service Department.

# INTRODUCTION

All references in this manual to LEFT and RIGHT are from the perspective of the pilot's seat with the floats fully installed and ready for floatplane operation.

The following is a list of abbreviations that may appear in the description nomenclature fields of this manual:

| | | | |
|---|---|---|---|
| AB | Afterbody | Inbd. | Inboard |
| Amphib. | Amphibious | Lg. | Large |
| AR | As Required | Lt. | Left |
| Assy. | Assembly | Lwr. | Lower |
| Brkt. | Bracket | Opt. | Optional |
| Btm. | Bottom | Otbd. | Outboard |
| Bulk. | Bulkhead | Reinf. | Reinforcement |
| Ctr. | Center | Rr. | Rear |
| Cyl. | Cylinder | Rt. | Right |
| Ft. | Front | Sm. | Small |
| Ftg. | Fitting | SN | Serial Number |
| Fus. | Fuselage | Spr. | Spreader |
| Fwd | Forward | Upr. | Upper |
| Horiz. | Horizontal | Vert. | Vertical |
| Hyd. | Hydraulic | W.W. | Wheel Well |

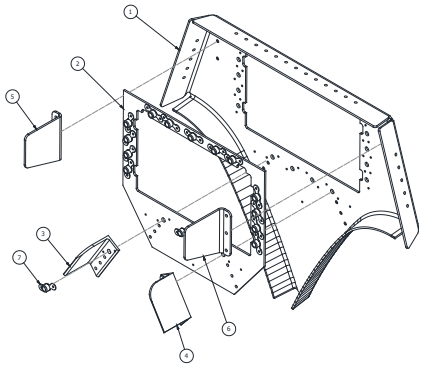
# USING THIS PARTS MANUAL

## COVERAGE

Parts information is provided in this manual for the hulls and all "deck down" parts. For information on strut package parts and other aircraft installation items, refer to the installation drawing package provided with the STC at the time of float installation. Additional drawing copies are available for purchase through Wipaire Customer Service Department.

Name of main part in the section. Example: This part is showing the components made up in Bulkhead #1.

### BULKHEAD #1



Main part image. If the image has numbers associated with it, then those numbers are item numbers shown in the table below.

Items with a (-) instead of a number represent the main part as an assembly. Other parts represent the parts included in the assembly.

| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| - | 1 | 1008815 | ASSEMBLY BULKHEAD #1, 10000 |
| 1 | 1 | 1008797 | PANEL, BULKHEAD #1 |
| 2 | 1 | 13A01156-085 | DOUBLER #1 BULKHEAD |
| 3 | 1 | 13A01357-049 | CLEAT, SISTER KEEL ATTACH #1 BULKHEAD |
| 4 | 1 | 13A01357-050 | CLEAT, SISTER KEEL ATTACH #1 BULKHEAD |
| 5 | 1 | 6A01156-054 | ANGLE – TOP RAIL |
| 6 | 1 | 6A01156-055 | ANGLE – TOP RAIL |
| 7 | 17 | MS21047L4 | NUT PLATE, SELF LOCKING |

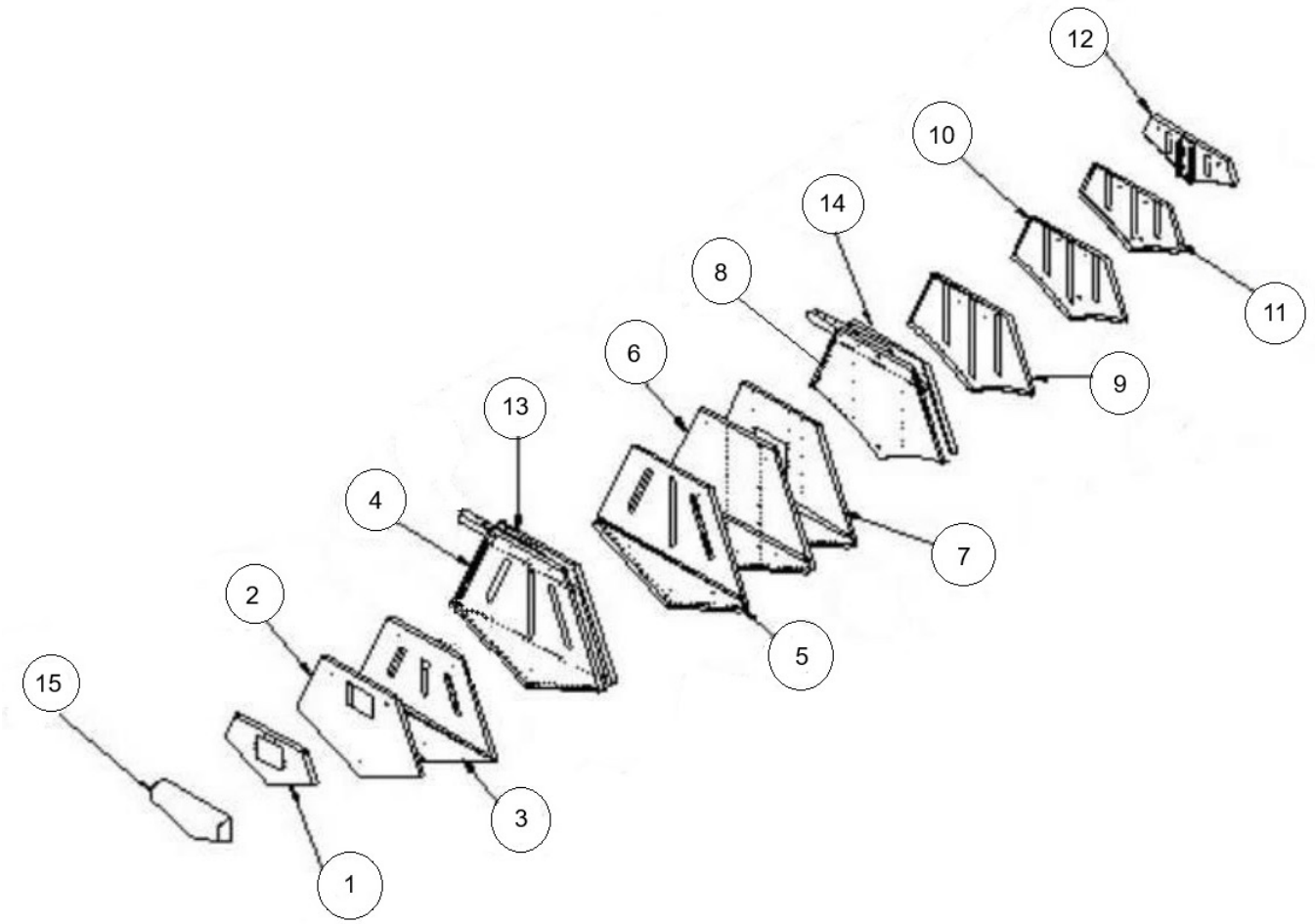
To order an individual part, order the part number associated with item number.

# SECTION 1
# HULL BULKHEAD ASSEMBLIES

## CONTENTS

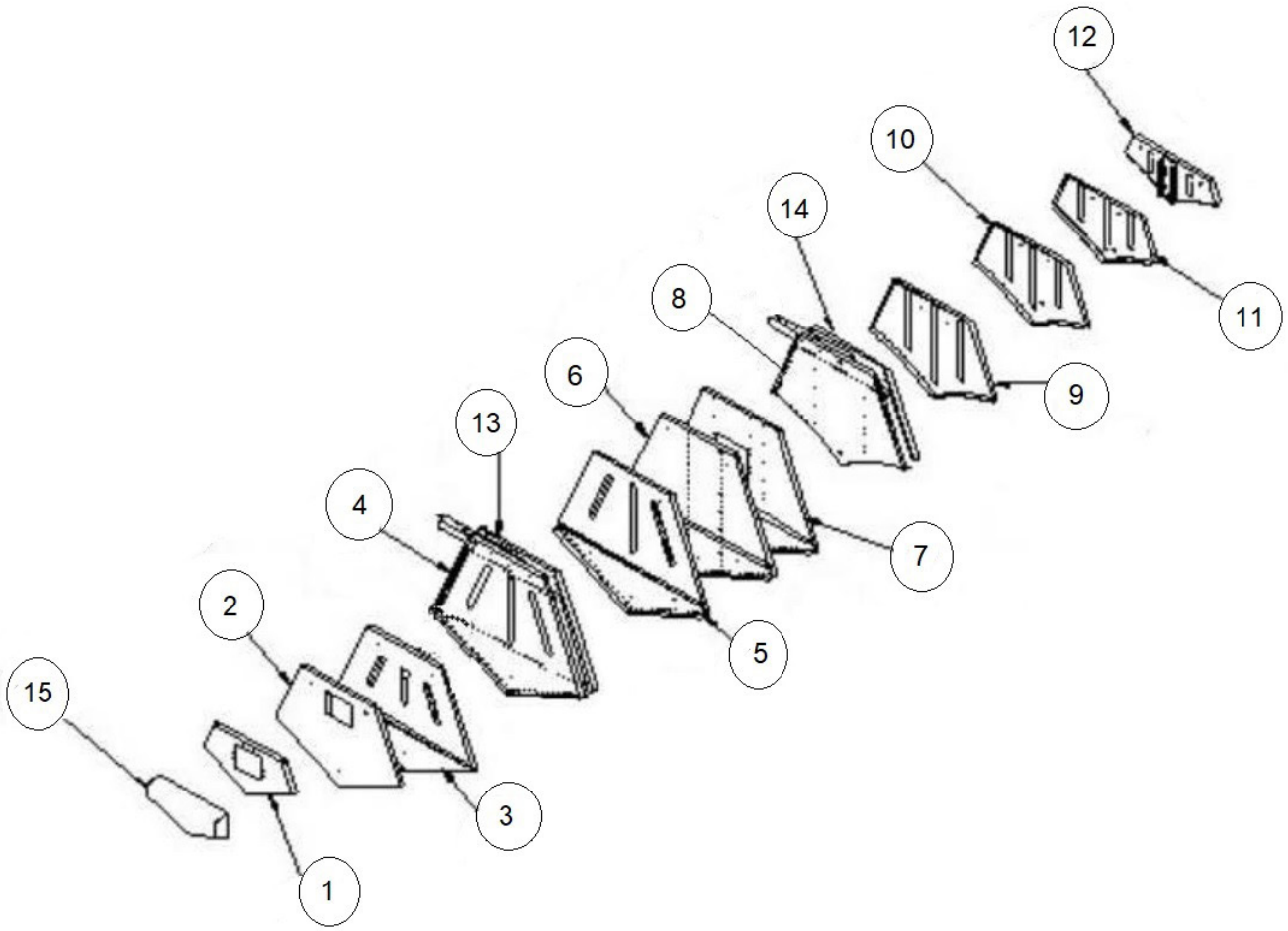
HULL ASSEMBLY - AMPHIBIAN ..... 10
HULL ASSEMBLY - SEAPLANE ..... 12
NOSE BUMPER - AMPHIBIAN ..... 15
BULKHEAD #1 ..... 16
BULKHEAD #3 ..... 17
BULKHEAD #4 ..... 18
BULKHEAD #5 ..... 19
BULKHEAD #6 ..... 20
BULKHEAD #7 LEFT FLOAT ..... 21
BULKHEAD #7 RIGHT FLOAT ..... 22
BULKHEAD #8 LEFT FLOAT ..... 23
BULKHEAD #8 RIGHT FLOAT ..... 24
BULKHEAD #10 ..... 25
BULKHEAD #11 ..... 26
BULKHEAD #12 ..... 27
BULKHEAD #13 ..... 28
BULKHEAD #14 ..... 29

# HULL ASSEMBLY - AMPHIBIAN



| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 1 | 1 | 21A01163-067 | ASSEMBLY, BULKHEAD #1 |
| 2 | 1 | 21A01000-265 | ASSEMBLY, BULKHEAD #3 |
| 3 | 1 | 21A01000-261 | ASSEMBLY, BULKHEAD #4 |
| 4 | 1 | 21A01000-253 | ASSEMBLY, BULKHEAD #5 |
| 5 | 1 | 21A01000-252 | ASSEMBLY, BULKHEAD #6 |
| 6 LT. | 1 | 21A01000-267 | ASSEMBLY, BULKHEAD #7, LH |
| 6 RT. | 1 | 21A01000-266 | ASSEMBLY, BULKHEAD #7, RH |
| 7 LT. | 1 | 21A01000-263 | ASSEMBLY, BULKHEAD #8, LH |
| 7 RT. | 1 | 21A01000-264 | ASSEMBLY, BULKHEAD #8, RH |
| 8 | 1 | 21A01000-262 | ASSEMBLY, BLKHD 10, COMP |
| 9 | 1 | 21A01000-395 | ASSEMBLY, BULKHEAD #11 |
| 10 | 1 | 21A01000-396 | ASSEMBLY, BULKHEAD #12 |
| 11 | 1 | 21A01000-397 | ASSEMBLY, BULKHEAD #13 |
| 12 | 1 | 21A01000-250 | ASSEMBLY, BULKHEAD #14 |
| 13 | 1 | 21A01000-260 | ASSY. SPR. BAR PANEL FWD |
| | 1 | 21A01163-065 | PANEL – SPR. BAR |
| | 1 | 21A01326-013 | ANGLE – SIDE L. |
| | 1 | 21A01326-014 | ANGLE – SIDE R. |
| | 1 | AN4-5A | BOLT, 1/4-28, 0.1875 GRIP, UNDRILLED, STEEL |
| | 1 | NAS1149F0463P | WASHER, 0.265 ID, 0.063 THK, STEEL |
| | 1 | MS21044N4 | NUT, LOCKING, REGULAR HEIGHT, 1/4-28 UNF |
| 14 | 1 | 21A01000-259 | ASSY. SPR. BAR PANEL AFT |
| | 1 | 21A01163-065 | PANEL – SPR. BAR |
| | 1 | 21A01326-009 | ANGLE – SIDE L. |
| | 1 | 21A01326-010 | ANGLE – SIDE R. |
| | 1 | AN4-5A | BOLT, 1/4-28, 0.1875 GRIP, UNDRILLED, STEEL |
| | 1 | NAS1149F0463P | WASHER, 0.265 ID, 0.063 THK, STEEL |
| | 1 | MS21044N4 | NUT, LOCKING, REGULAR HEIGHT, 1/4-28 UNF |
| 15 | 1 | 21A01000-295 | ASSEMBLY, NOSE BUMPER, 2100 |

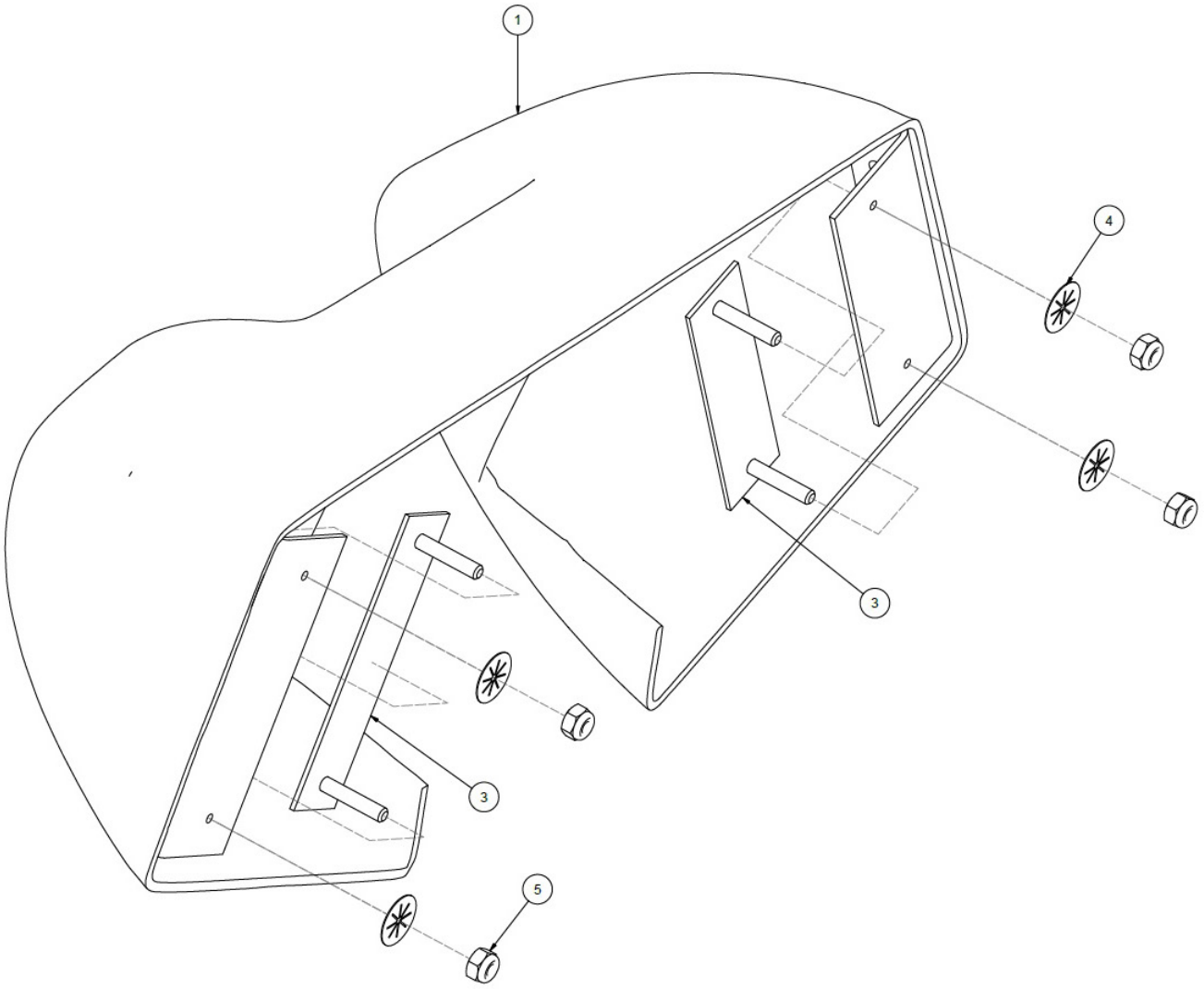
# HULL ASSEMBLY - SEAPLANE



| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 1 | 1 | 21A01163-067 | BULKHEAD #1 |
| | 1 | 21501000-366 | COVER ASS'Y. |
| | 1 | 21S01150-134 | COVER – NOSE GEAR OPENING |
| | A/R | MS21059L3 | PLATE NUT |
| 2 | 1 | 21A01000-265 | ASSY BULKHEAD #3 |
| | 1 | 21A01158-184 | PANEL, BULKHEAD 3 |
| | 1 | 21A01326-005 | ANGLE, SUPPORT, BULKHEAD 3 |
| | 1 | 21A01326-006 | ANGLE, SUPPORT, BULKHEAD 3 |
| | 2 | 94154A100 | WASHER, STAINLESS STEEL W/PVC PLASTIC, SEALING |
| | 2.5 IN | 9903-13-36 | TAPE, TINNERMAN, 1/2"X.005" |
| | 2 | AN526-632R6 | SCREW, MACHINE, TRUSS HEAD |
| | 2 | MS21047L06 | NUT PLATE, FIXED, STEEL, PLAIN, 6-32 |
| 3 | 1 | 21A01000-261 | ASSY BULKHEAD #4 |
| | 1 | 21A01158-174 | PANEL, BULKHEAD 4 |
| | 1 | 21A01158-175 | SUPPORT BULKHEAD 4 |
| | 1 | 3A01158-003 | CLAMP, PUMP OUT TUBE |
| | 2 | 94154A100 | WASHER, STAINLESS STEEL W/PVC PLASTIC, SEALING |
| | 2.5 IN | 9903-13-36 | TAPE, TINNERMAN, 1/2"X.005" |
| | 2 | AN526-632R6 | SCREW, MACHINE, TRUSS HEAD |
| | 2 | MS21047L06 | NUT PLATE, FIXED, STEEL, PLAIN, 6-32 |
| 4 | 1 | 21A01000-253 | ASSY BULKHEAD #5 |
| | 1 | 21A01158-178 | BULKHEAD - MAIN |
| | 1 | 21A01326-007 | ANGLE – SIDE L. |
| | 1 | 21A01326-008 | ANGLE – SIDE R. |
| | 1 | 21A01163-066 | PANEL – SPR. BAR |
| | 1 | 21A01158-175 | SUPPORT – BULKHEAD LOWER |
| | 1 | 3A01158-003 | CLAMP, PUMP OUT TUBE |
| 5 | 1 | 21A01000-252 | ASSY BULKHEAD #6 |
| | 1 | 21A01158-189 | BULKHEAD – MAIN |
| | 1 | 21A01158-177 | SUPPORT – BULKHEAD LOWER |
| | 1 | MS35489-19 | GROMMET |
| 6 | 1 | 21S01000-308 | ASSY BULKHEAD #7 |
| | 1 | 21A01158-189 | BULKHEAD - MAIN |
| | 1 | 21A01158-177 | SUPPORT – BULKHEAD LOWER |
| | 1 | 3A01158-003 | CLAMP, PUMP OUT TUBE |
| 7 | 1 | 21S01000-309 | ASSY BULKHEAD #8 |
| | 1 | 21A01158-189 | BULKHEAD – MAIN |
| | 1 | 21A01158-177 | SUPPORT – BULKHEAD LOWER |
| | 2 | 21S01158-203 | ANGLE – A.B. SKIN ATTACH |
| | 1 | 3A01158-003 | CLAMP, PUMP OUT TUBE |
| 8 | 1 | 21S01000-322 | ASSY. – BULKHEAD #10 |

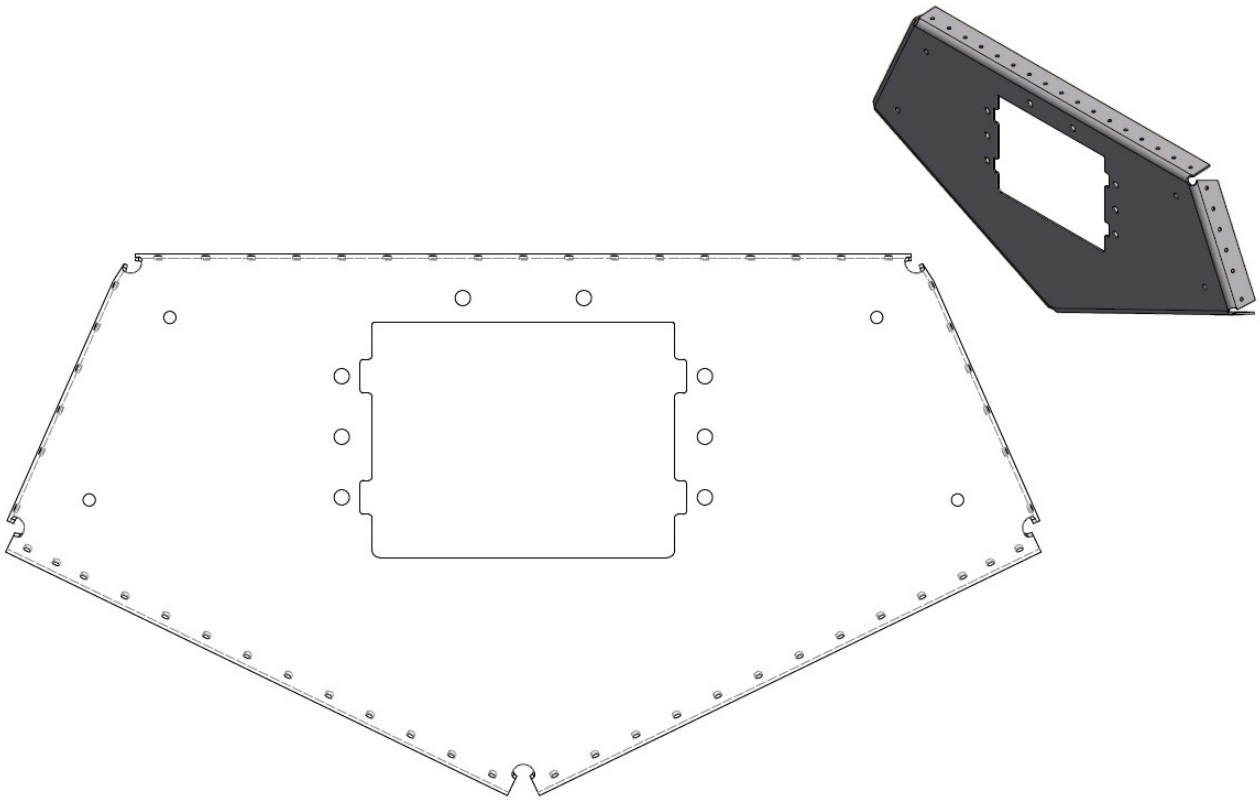
| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| | 1 | 21A01158-169 | BULKHEAD - MAIN |
| | 1 | 21A01326-011 | ANGLE SIDE L. |
| | 1 | 21A01326-012 | ANGLE SIDE R. |
| | 1 | 21A01163-066 | PANEL – SPR. BAR |
| | 2 | 21S01340-129 | ANGLE – VERTICAL |
| | 1 | 3A01158-003 | CLAMP, PUMP OUT TUBE |
| 9 | 1 | 21A01000-395 | BULKHEAD #11 |
| | 1 | 21A01158-168 | BULKHEAD PANEL |
| 10 | 1 | 21A01000-396 | BULKHEAD #12 |
| | 1 | 21A01158-167 | BULKHEAD PANEL |
| 11 | 1 | 21A01000-397 | BULKHEAD #13 |
| | 1 | 21A01158-166 | BULKHEAD PANEL |
| 12 | 1 | 21A01000-250 | ASSY. BULKHEAD #14 |
| | 1 | 21A01158-164 | BULKHEAD - MAIN |
| | 1 | 21A01158-165 | CHANNEL – REIN. |
| | 1 | 21A08156-130 | PLATE – WATER RUDDER STOP |
| 13 | 1 | 21A01000-260 | ASSY. SPR. BAR PANEL FWD |
| | 1 | 21A01163-065 | PANEL – SPR. BAR |
| | 1 | 21A01326-013 | ANGLE – SIDE L. |
| | 1 | 21A01326-014 | ANGLE – SIDE R. |
| | 1 | AN4-5A | BOLT, 1/4-28, 0.1875 GRIP, UNDRILLED, STEEL |
| | 1 | NAS1149F0463P | WASHER, 0.265 ID, 0.063 THK, STEEL |
| | 1 | MS21044N4 | NUT, LOCKING, REGULAR HEIGHT, 1/4-28 UNF |
| 14 | 1 | 21A01000-259 | ASSY. SPR. BAR PANEL AFT |
| | 1 | 21A01163-065 | PANEL – SPR. BAR |
| | 1 | 21A01326-009 | ANGLE – SIDE L. |
| | 1 | 21A01326-010 | ANGLE – SIDE R. |
| | 1 | AN4-5A | BOLT, 1/4-28, 0.1875 GRIP, UNDRILLED, STEEL |
| | 1 | NAS1149F0463P | WASHER, 0.265 ID, 0.063 THK, STEEL |
| | 1 | MS21044N4 | NUT, LOCKING, REGULAR HEIGHT, 1/4-28 UNF |
| 15 | 1 | 21S01738-001 | NOSE BUMPER |

# NOSE BUMPER - AMPHIBIAN



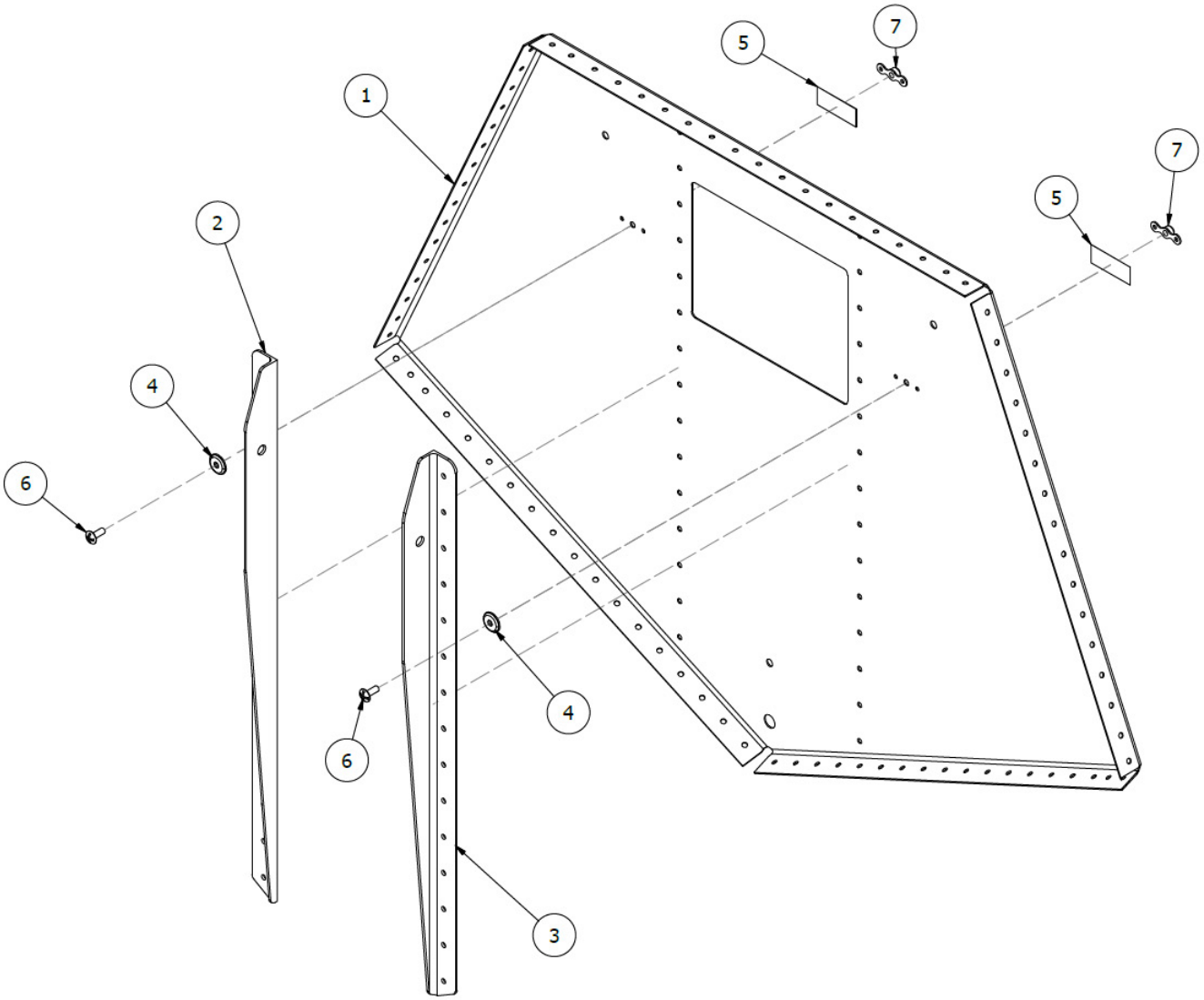

| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| - | 1 | 21A01000-295 | ASSEMBLY, NOSE BUMPER, 2100 |
| 1 | 1 | 21A01000-295-1 | NOSE BUMPER |
| 2 | 2 | 21A01000-295-2 | ANGLE, MOUNT, NOSE BUMPER |
| 3 | 2 | 21A01000-295-3 | PLATE, SCREW MOUNT, NOSE BUMPER |
| 4 | 4 | 4HFW3 | PUSH NUT WASHER |
| 5 | 4 | MS21044N3 | NUT, LOCKING, REGULAR HEIGHT, 10-32 UNF |
| 6 | 4 | MS51958-67 | SCREW, BUTTON HEAD |

# BULKHEAD #1



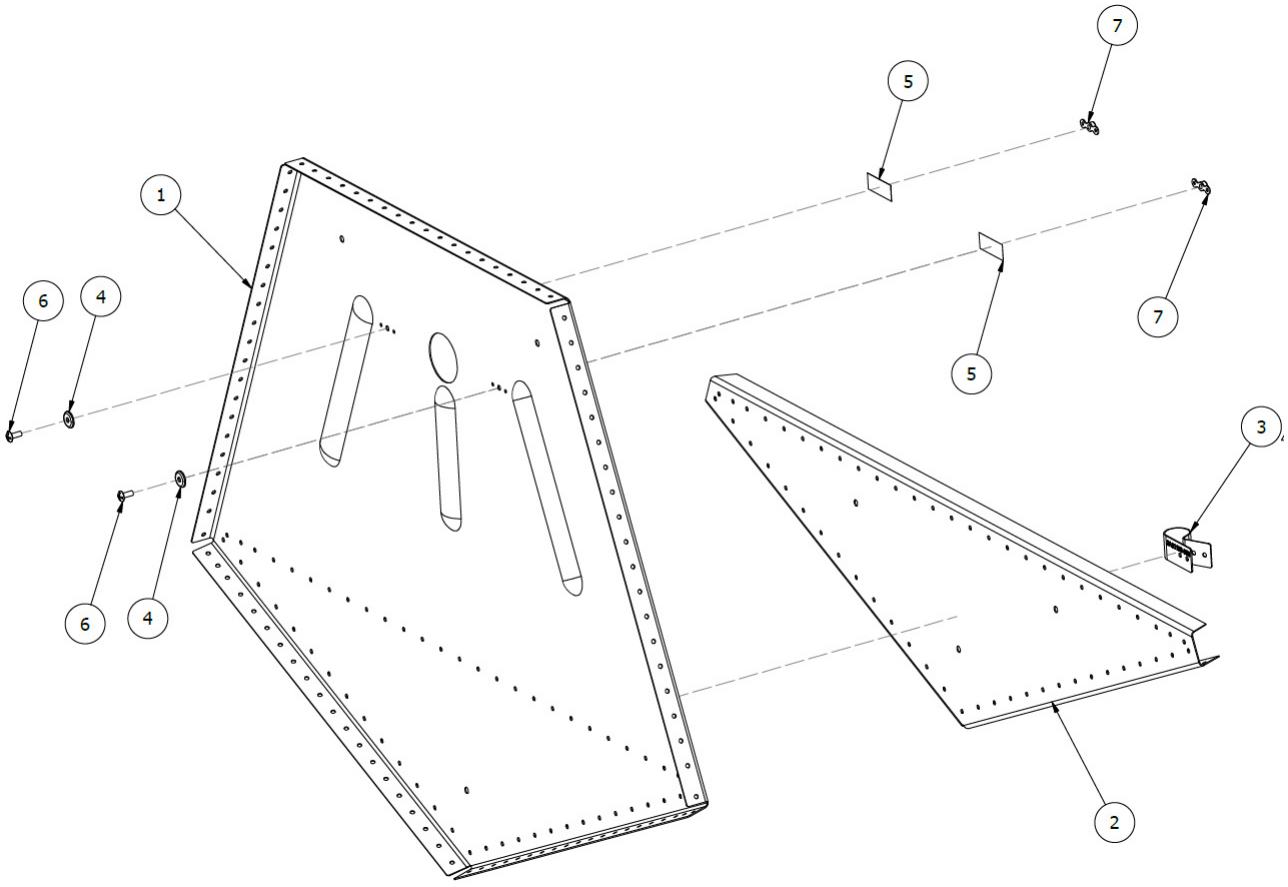
| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| - | 1 | 21A01163-067 | BULKHEAD #1 |

# BULKHEAD #3



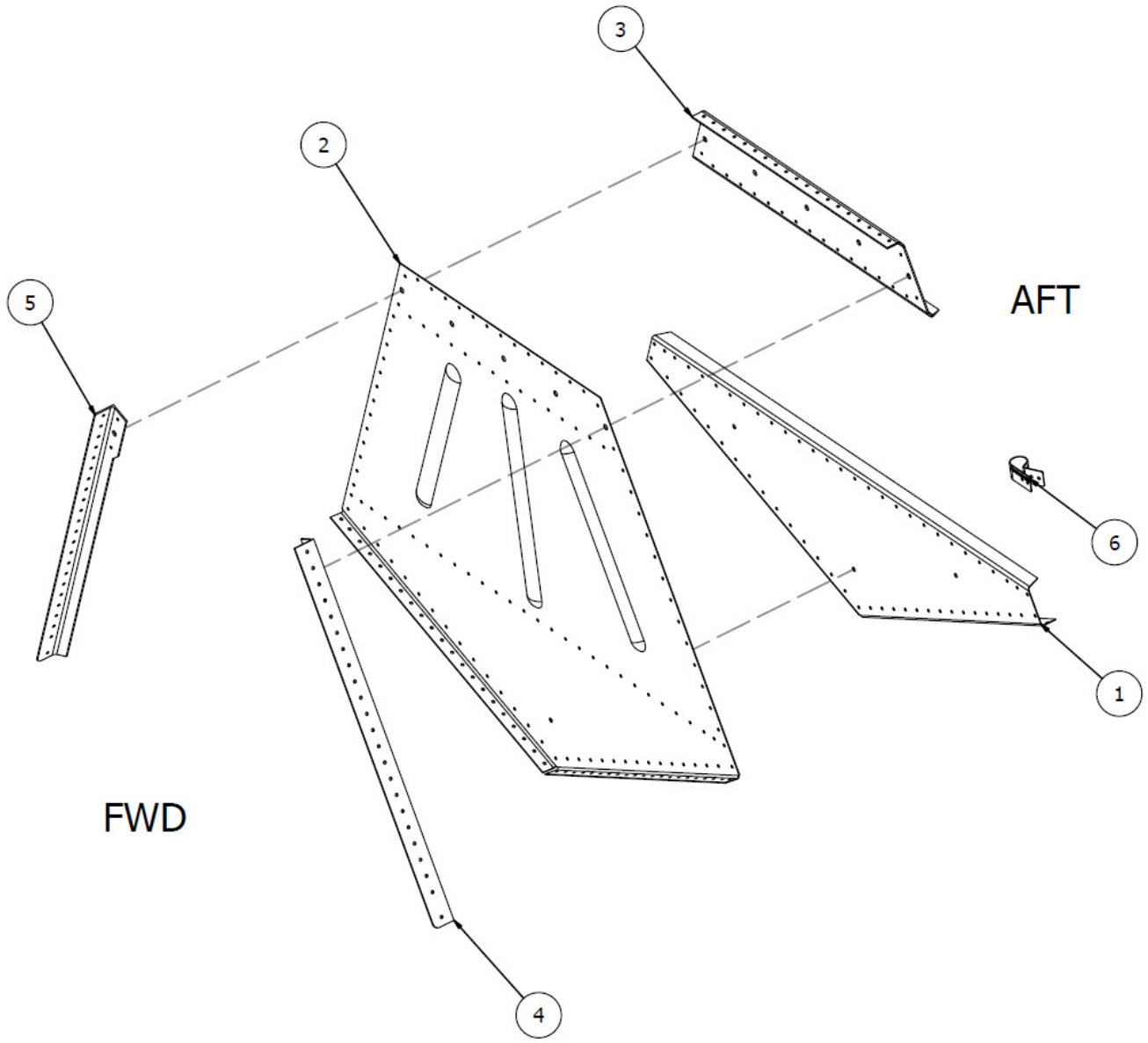

| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| - | 1 | 21A01000-265 | ASSEMBLY, BULKHEAD #3 |
| 1 | 1 | 21A01158-184 | PANEL, BULKHEAD 3 |
| 2 | 1 | 21A01326-005 | ANGLE, SUPPORT, BULKHEAD 3 |
| 3 | 1 | 21A01326-006 | ANGLE, SUPPORT, BULKHEAD 3 |
| 4 | 2 | 94154A100 | WASHER, STAINLESS STEEL W/PVC PLASTIC, SEALING |
| 5 | 2.5 IN | 9903-13-36 | TAPE, TINNERMAN, 1/2"X.005" |
| 6 | 2 | AN526-632R6 | SCREW, MACHINE, TRUSS HEAD |
| 7 | 2 | MS21047L06 | NUT PLATE, FIXED, STEEL, PLAIN, 6-32 |

# BULKHEAD #4



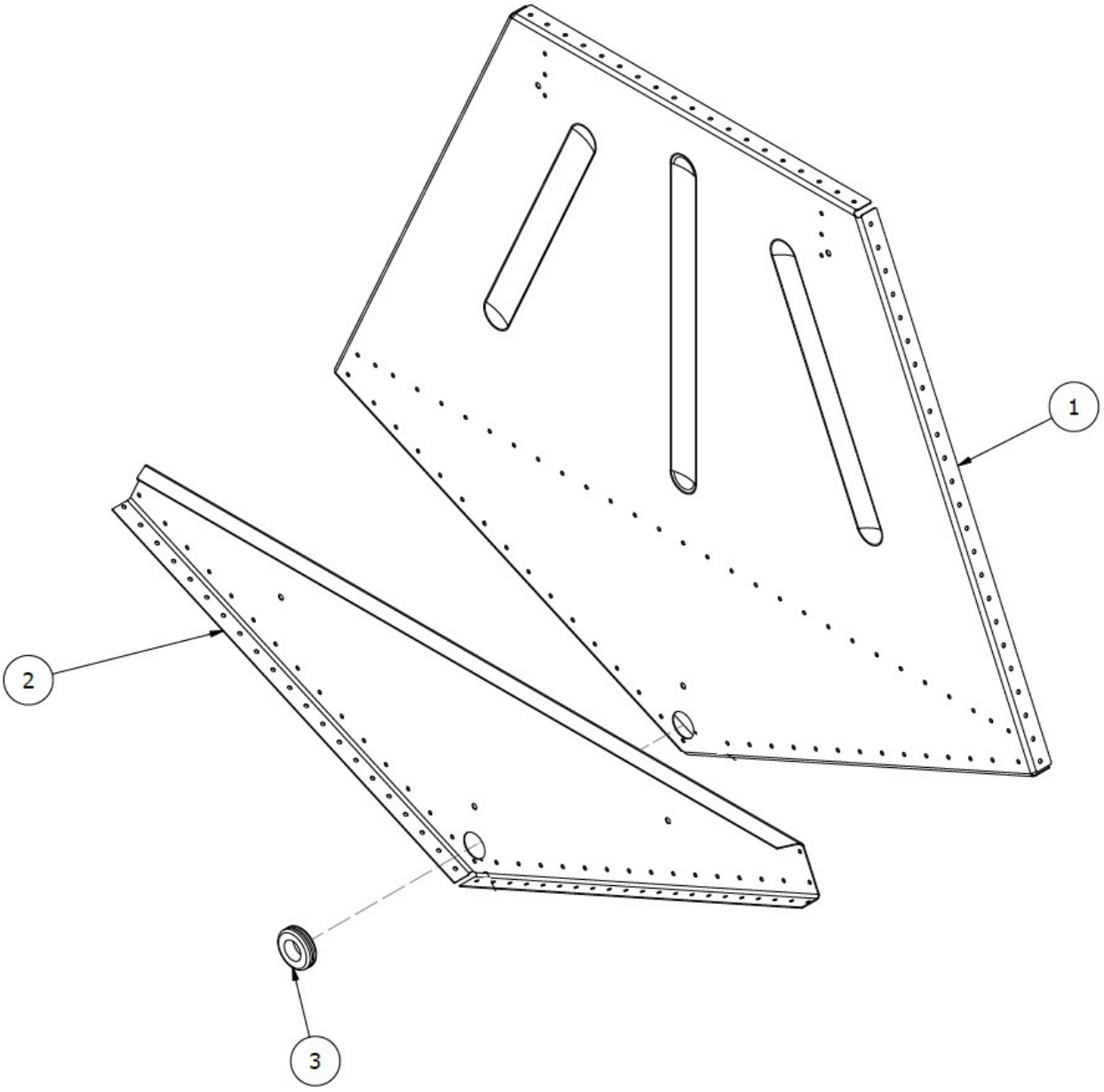

| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| - | 1 | 21A01000-261 | ASSEMBLY, BULKHEAD #4 |
| 1 | 1 | 21A01158-174 | PANEL, BULKHEAD 4 |
| 2 | 1 | 21A01158-175 | SUPPORT BULKHEAD 4 |
| 3 | 1 | 3A01158-003 | CLAMP, PUMP OUT TUBE |
| 4 | 2 | 94154A100 | WASHER, STAINLESS STEEL W/PVC PLASTIC, SEALING |
| 5 | 2.5 IN | 9903-13-36 | TAPE, TINNERMAN, 1/2"X.005" |
| 6 | 2 | AN526-632R6 | SCREW, MACHINE, TRUSS HEAD |
| 7 | 2 | MS21047L06 | NUT PLATE, FIXED, STEEL, PLAIN, 6-32 |

# BULKHEAD #5



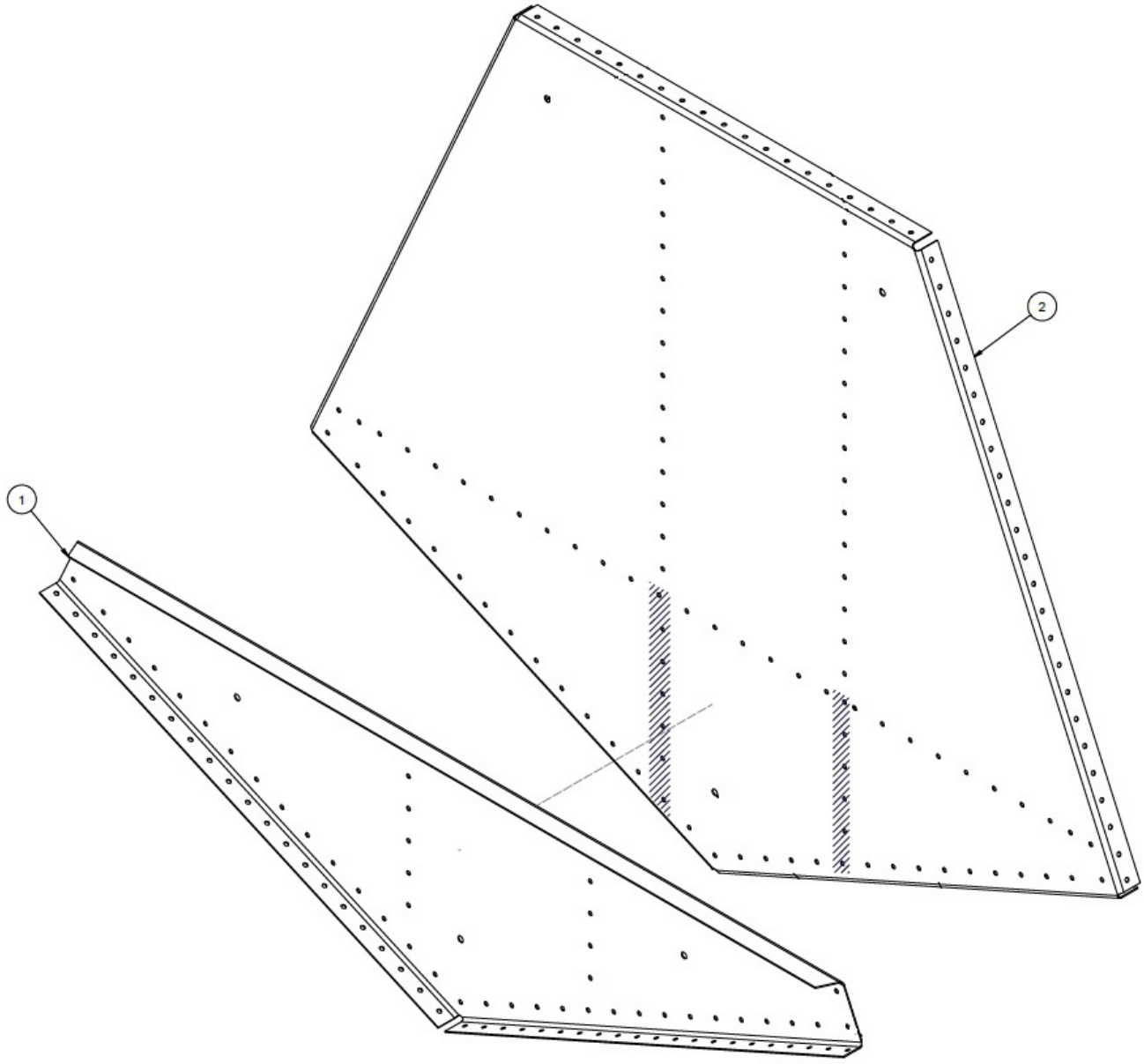

| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| - | 1 | 21A01000-253 | ASSEMBLY, BULKHEAD 5 |
| 1 | 1 | 21A01158-177 | SUPPORT, BULKHEAD #6 |
| 2 | 1 | 21A01158-178 | BULKHEAD #5 - FORMED |
| 3 | 1 | 21A01163-066 | SPREADER BAR PANEL |
| 4 | 1 | 21A01326-007 | ANGLE SUPPORT, LH, BULKHEAD #5 |
| 5 | 1 | 21A01326-008 | ANGLE SUPPORT, RH, BULKHEAD #5 |
| 6 | 1 | 3A01158-003 | CLAMP, PUMP OUT TUBE |

# BULKHEAD #6



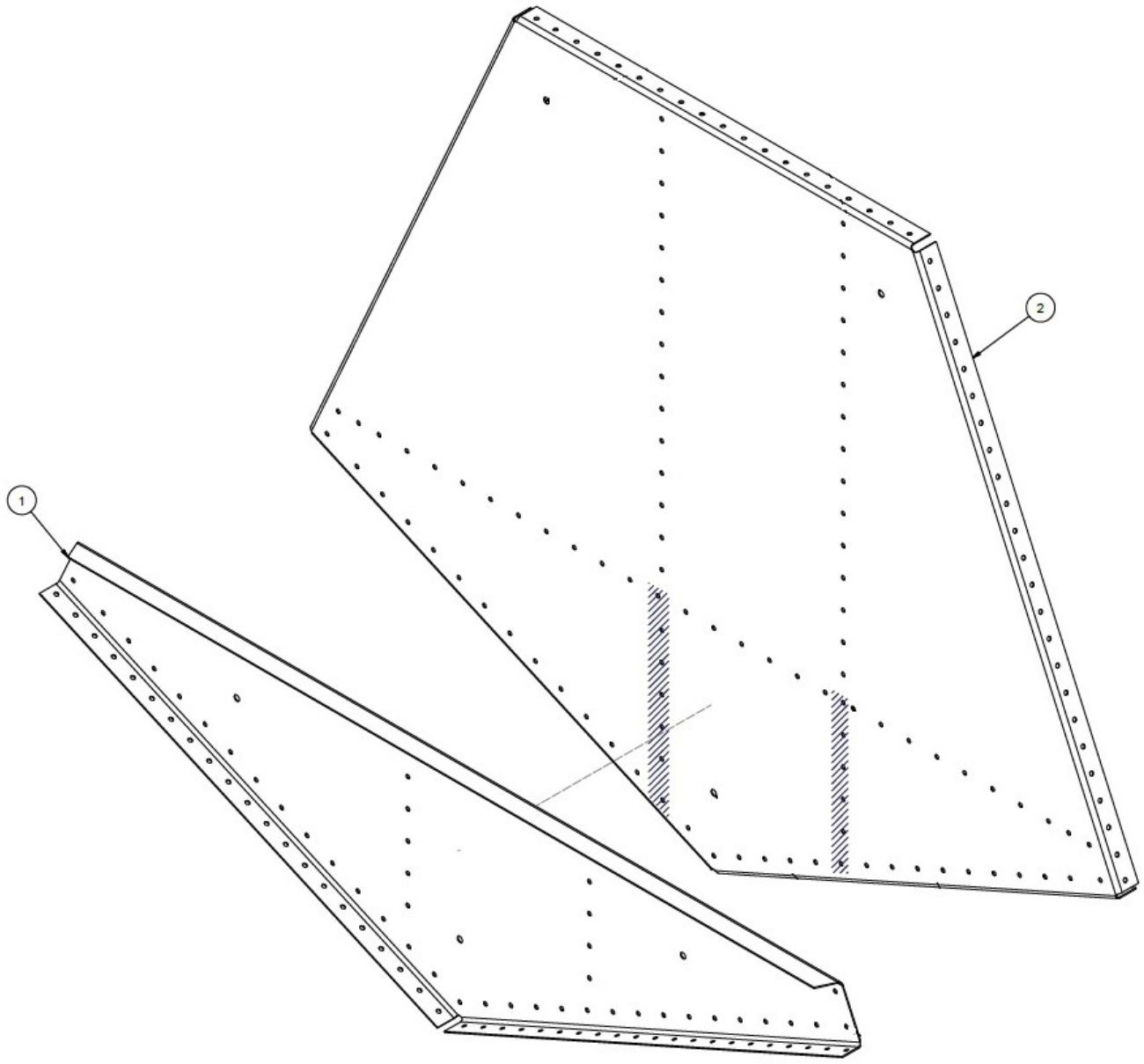

| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| - | 1 | 21A01000-252 | ASSEMBLY, BULKHEAD #6 |
| 1 | 1 | 21A01158-189 | BULKHEAD #6 |
| 2 | 1 | 21A01158-177 | SUPPORT, BULKHEAD #6 |
| 3 | 1 | MS35489-19 | GROMMET, RUBBER |

# BULKHEAD #7 LEFT FLOAT



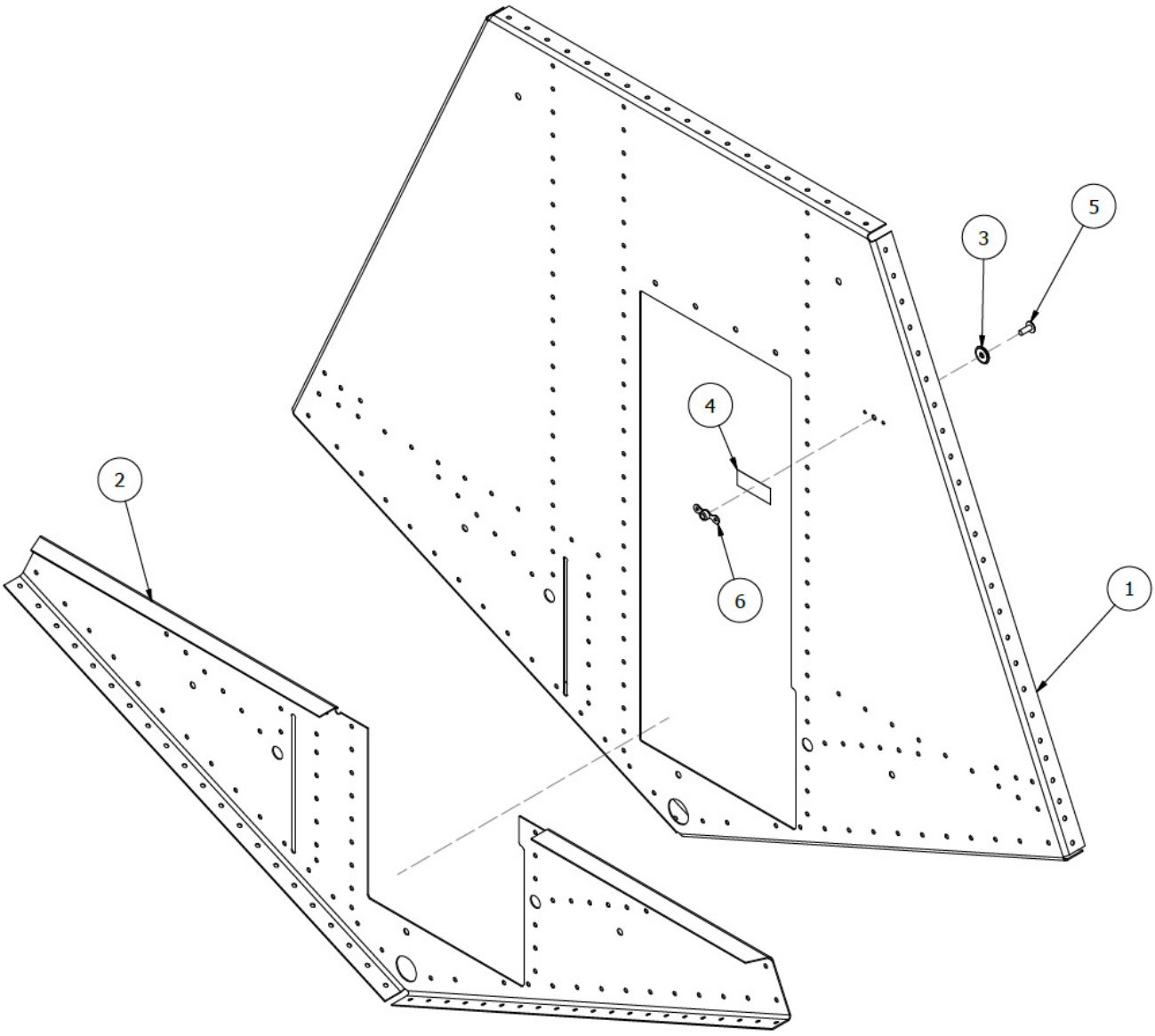

| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| - | 1 | 21A01000-267 | ASSEMBLY, BULKHEAD #7, LH |
| 1 | 1 | 21A01158-187 | SUPPORT, BLKHD 7, RH, 2100 |
| 2 | 1 | 21A01158-181 | BULKHEAD #7 - LH |

# BULKHEAD #7 RIGHT FLOAT



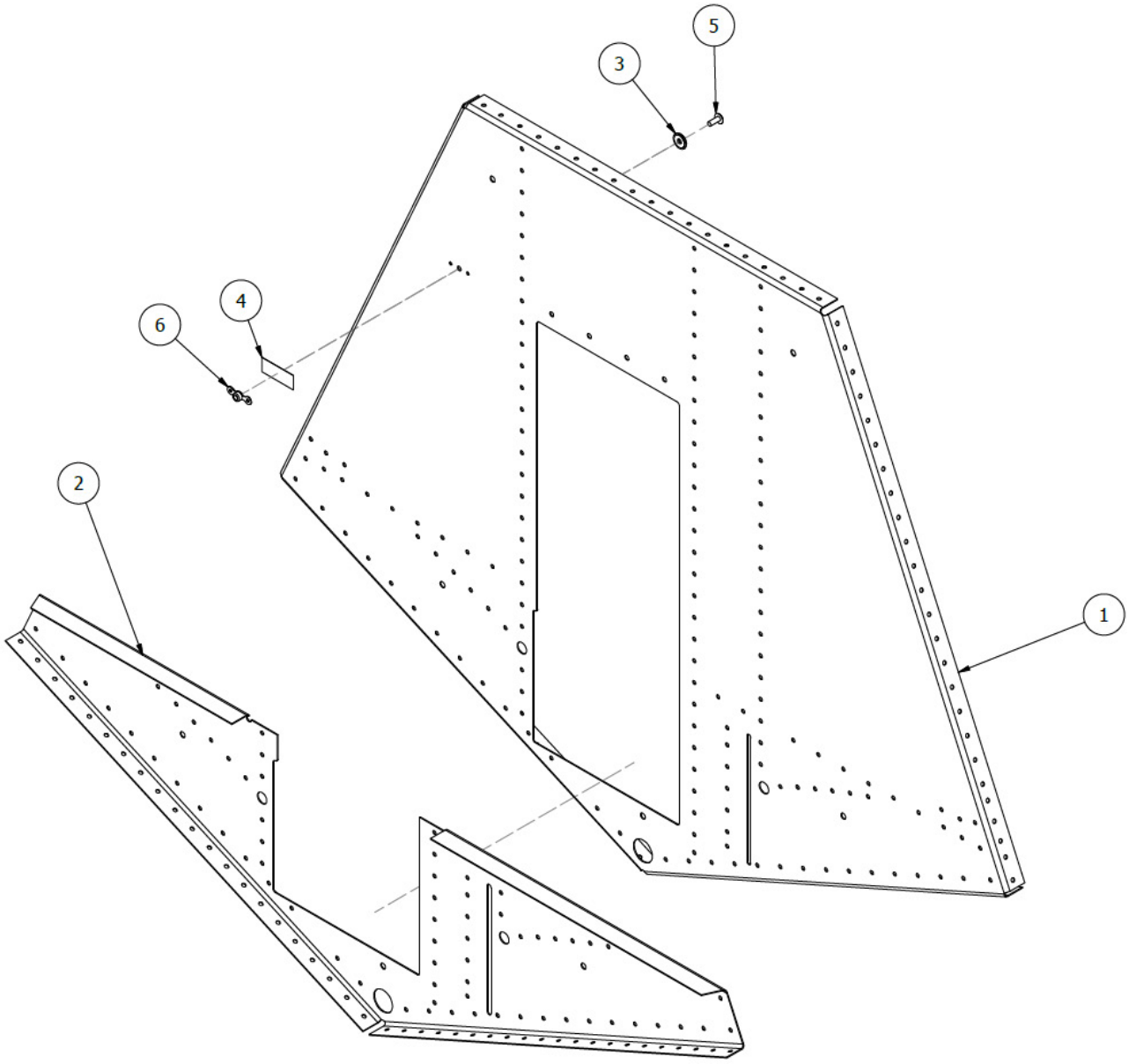

| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| - | 1 | 21A01000-266 | ASSEMBLY, BULKHEAD #7, RH |
| 1 | 1 | 21A01158-188 | SUPPORT, BLKHD 7, LH, 2100 |
| 2 | 1 | 21A01158-182 | BULKHEAD #7 - RH |

# BULKHEAD #8 LEFT FLOAT



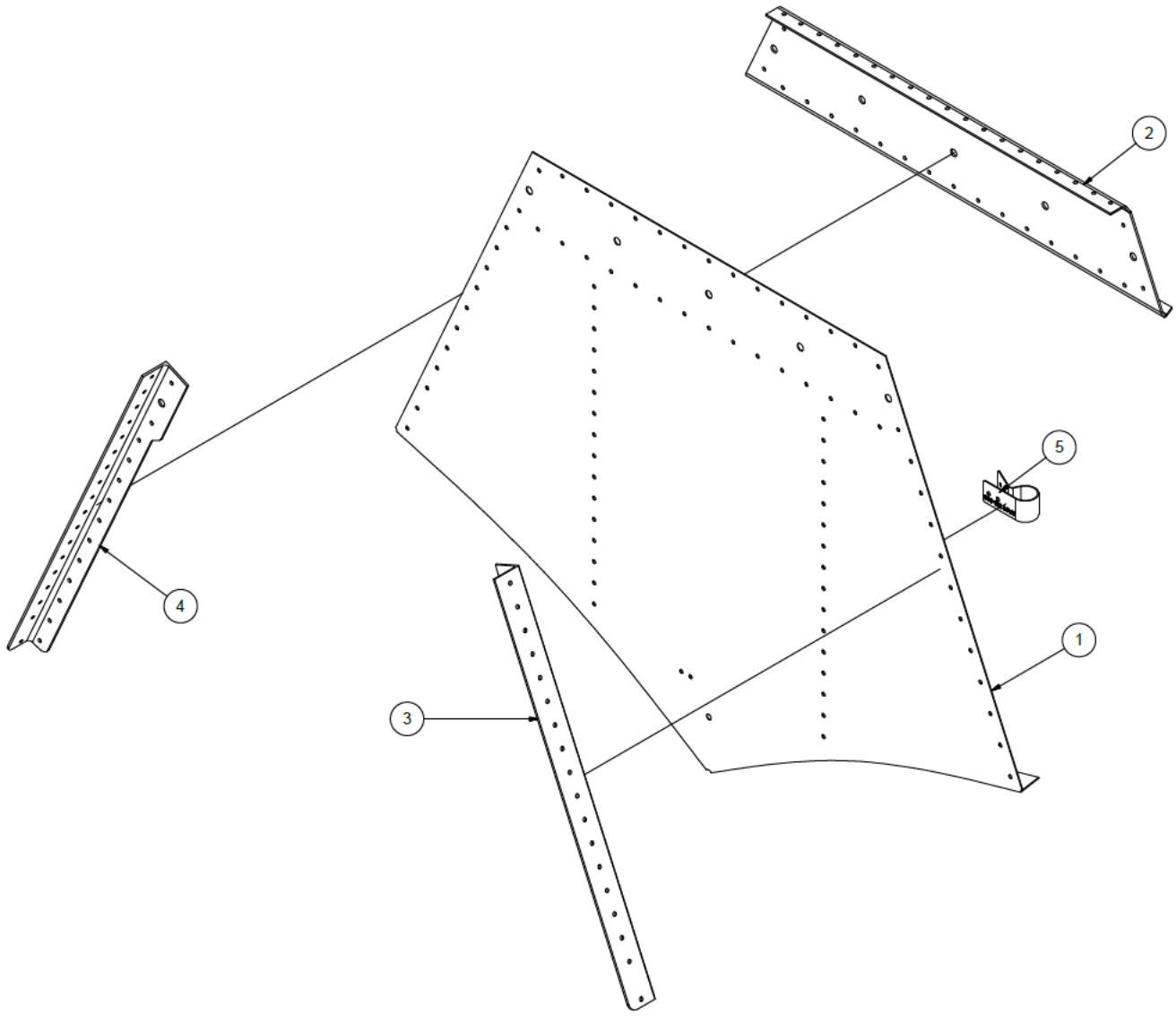

| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| - | 1 | 21A01000-263 | ASSY, BULKHEAD #8, LH |
| 1 | 1 | 21A01158-191 | PANEL, BULKHEAD 8, LH |
| 2 | 1 | 21A01158-193 | SUPPORT - LH - BULKHEAD #8 |
| 3 | 1 | 94154A100 | WASHER, STAINLESS STEEL W/PVC PLASTIC, SEALING |
| 4 | 1.25 IN | 9903-13-36 | TAPE, TINNERMAN, 1/2"X.005" |
| 5 | 1 | AN526-632R6 | SCREW, MACHINE, TRUSS HEAD |
| 6 | 1 | MS21047L06 | NUT PLATE, FIXED, STEEL, PLAIN, 6-32 |

# BULKHEAD #8 RIGHT FLOAT



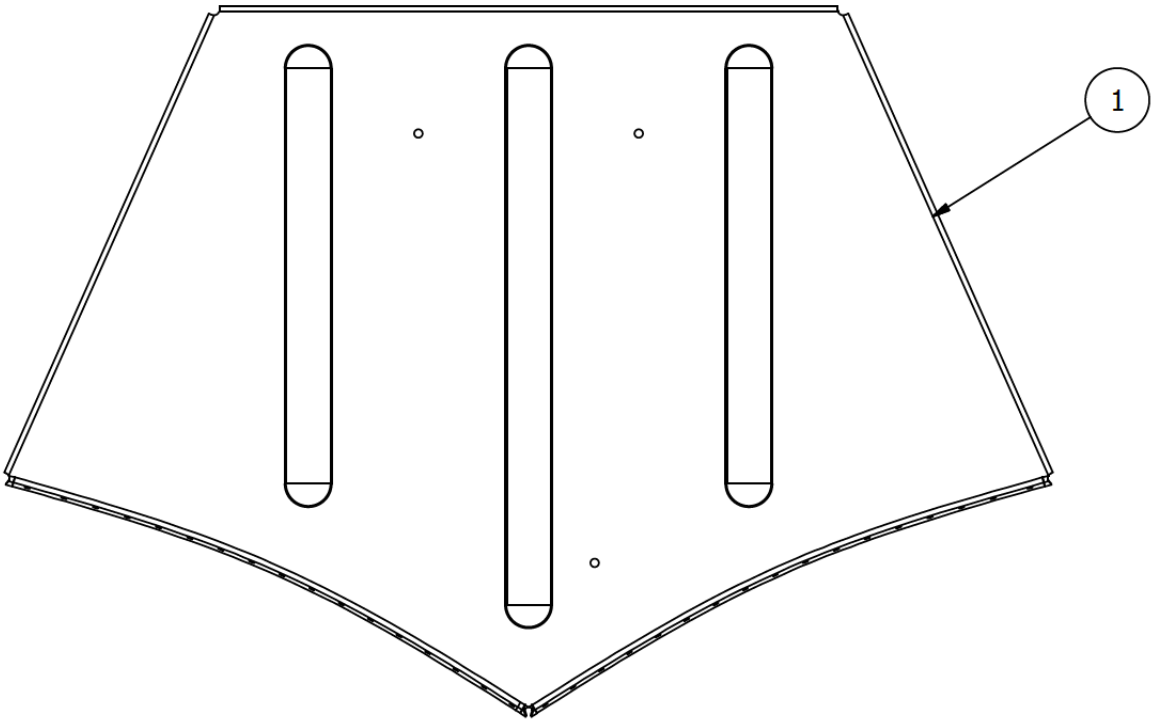

| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| - | 1 | 21A01000-264 | ASSY, BULKHEAD #8, RH |
| 1 | 1 | 21A01158-190 | PANEL, BULKHEAD 8, RH |
| 2 | 1 | 21A01158-192 | SUPPORT - RH - BULKHEAD #8 |
| 3 | 1 | 94154A100 | WASHER, STAINLESS STEEL W/PVC PLASTIC, SEALING |
| 4 | 1.25 IN | 9903-13-36 | TAPE, TINNERMAN, 1/2"X.005" |
| 5 | 1 | AN526-632R6 | SCREW, MACHINE, TRUSS HEAD |
| 6 | 1 | MS21047L06 | NUT PLATE, FIXED, STEEL, PLAIN, 6-32 |

# BULKHEAD #10



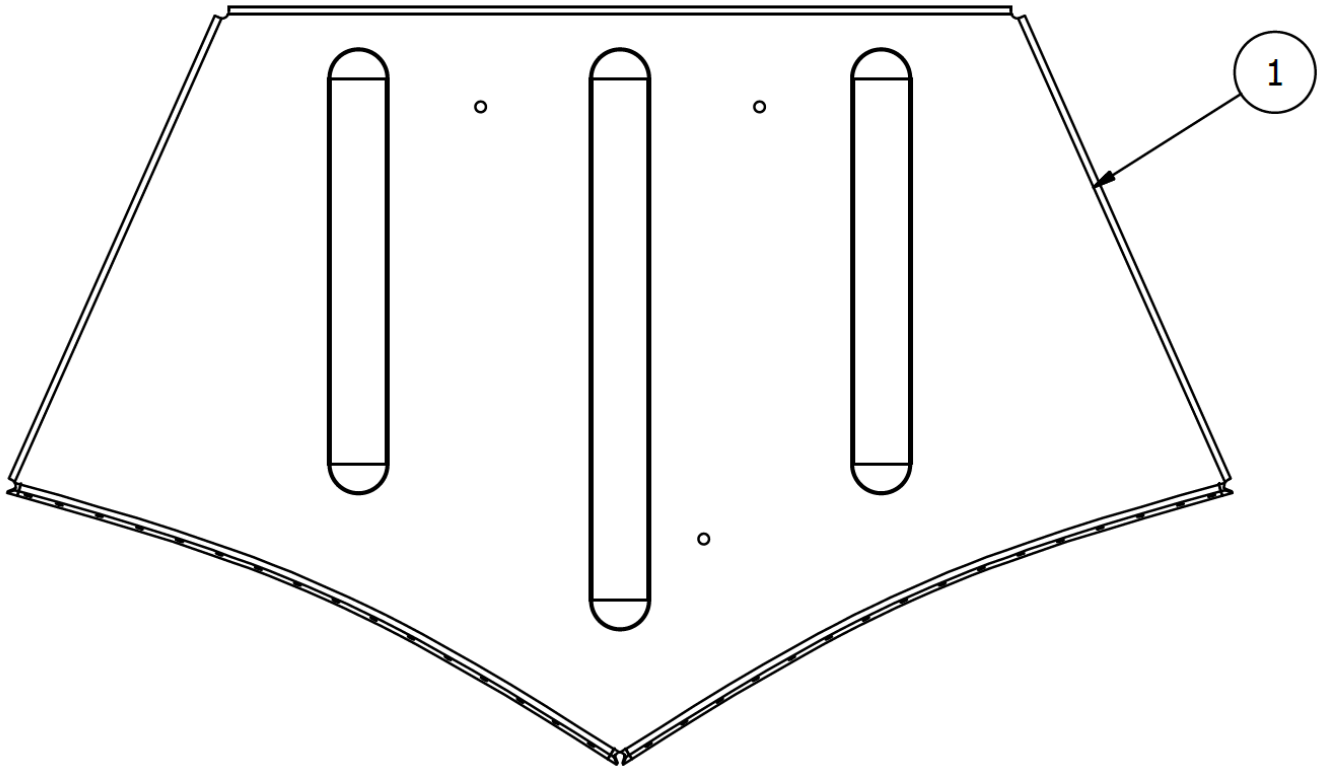

| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| - | 1 | 21A01000-262 | ASSY, BLKHD 10 |
| 1 | 1 | 21A01158-169 | BULKHEAD #10 - FORMED |
| 2 | 1 | 21A01163-066 | SPREADER BAR PANEL |
| 3 | 1 | 21A01326-011 | ANGLE, SIDE BAR, BULKHEAD #10, LF |
| 4 | 1 | 21A01326-012 | ANGLE, SIDE BAR, BULKHEAD #10, RT |
| 5 | 1 | 3A01158-003 | CLAMP, PUMP OUT TUBE |

# BULKHEAD #11



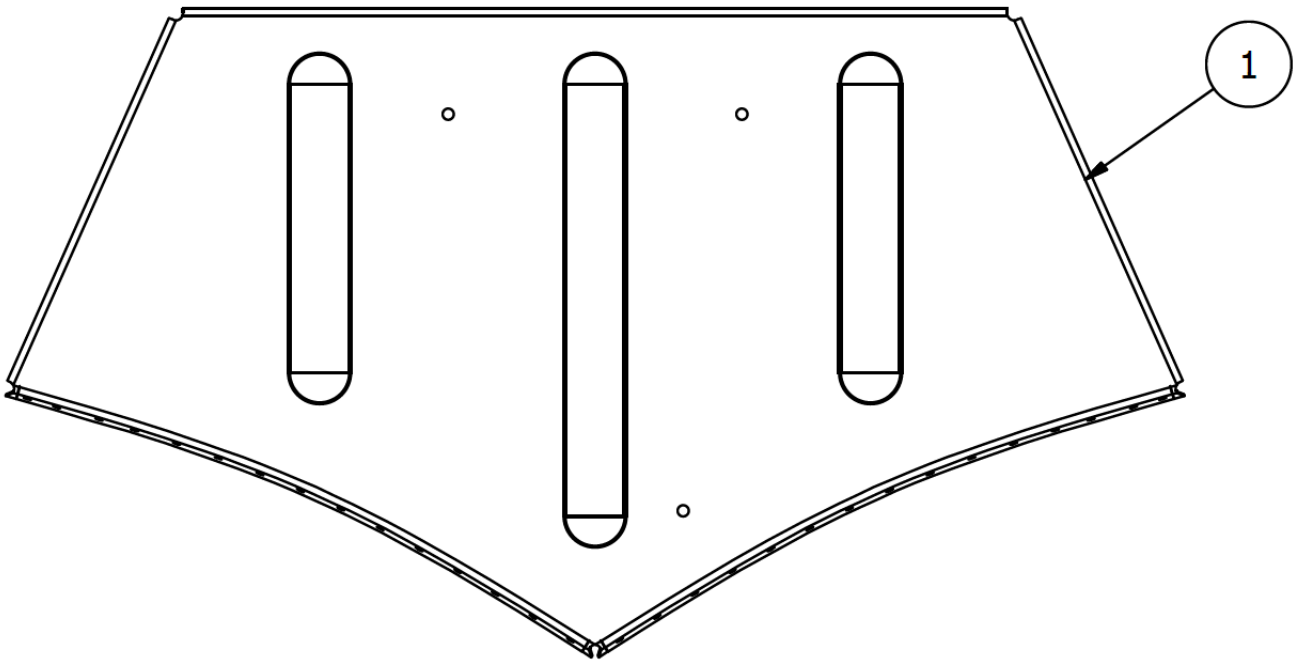

| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| - | 1 | 21A01000-395 | BULKHEAD STN. #11 ASSY |
| 1 | 1 | 21A01158-168 | BULKHEAD #11 - FORMED |

# BULKHEAD #12



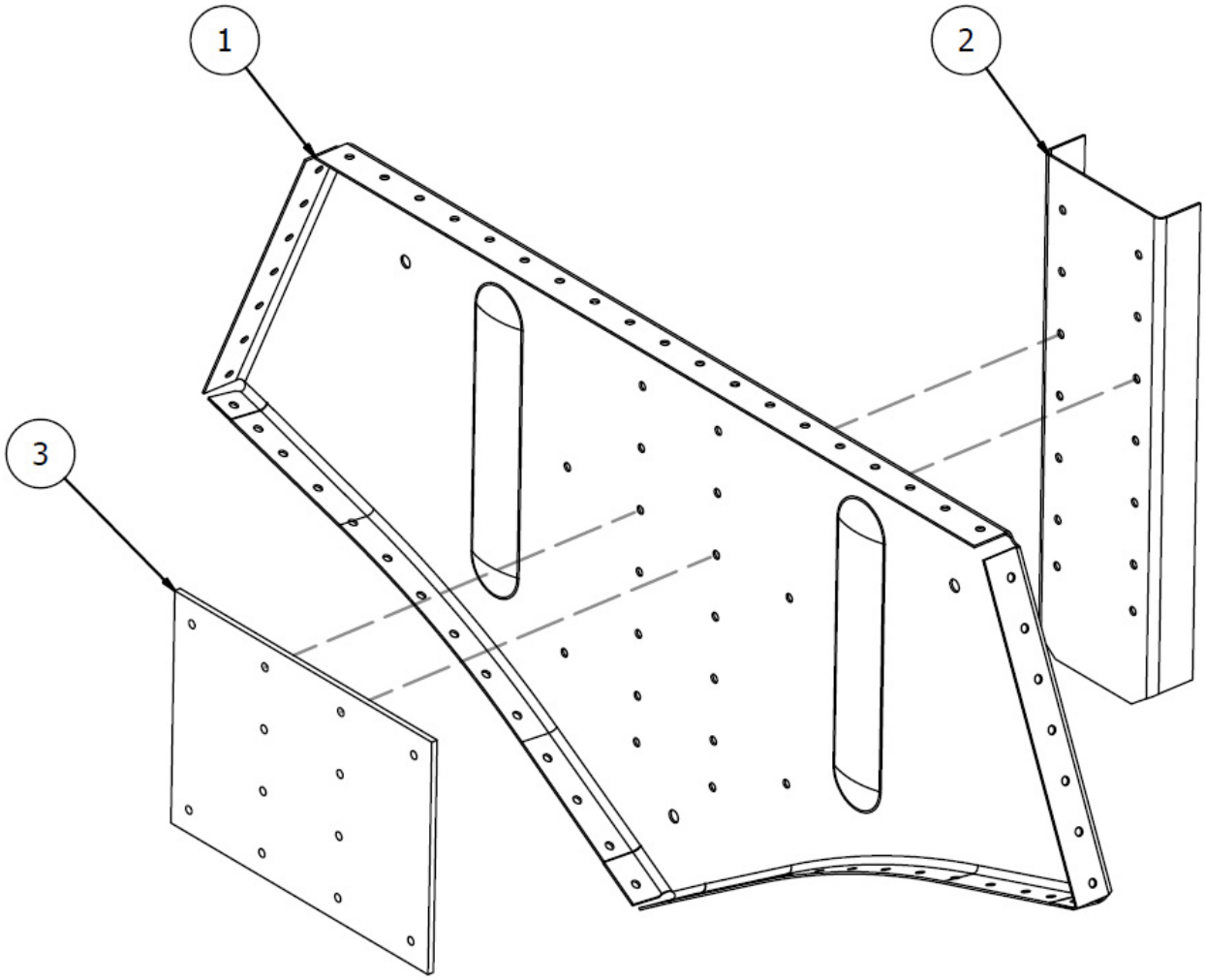

| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| - | 1 | 21A01000-396 | ASSY, BULKHEAD #12 |
| 1 | 1 | 21A01158-167 | BULKHEAD #12 - FORMED |

# BULKHEAD #13




| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| - | 1 | 21A01000-397 | ASSEMBLY, BULKHEAD #13 |
| 1 | 1 | 21A01158-166 | BULKHEAD #13 - FORMED |

# BULKHEAD #14




| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| - | 1 | 21A01000-250 | ASSEMBLY, BULKHEAD 14 |
| 1 | 1 | 21A01158-164 | PANEL, BULKHEAD 14, 2100 |
| 2 | 1 | 21A01158-165 | CHANNEL, BULKHEAD 14, 2100 |
| 3 | 1 | 21A08156-130 | PLATE - WATER RUDDER STOP |

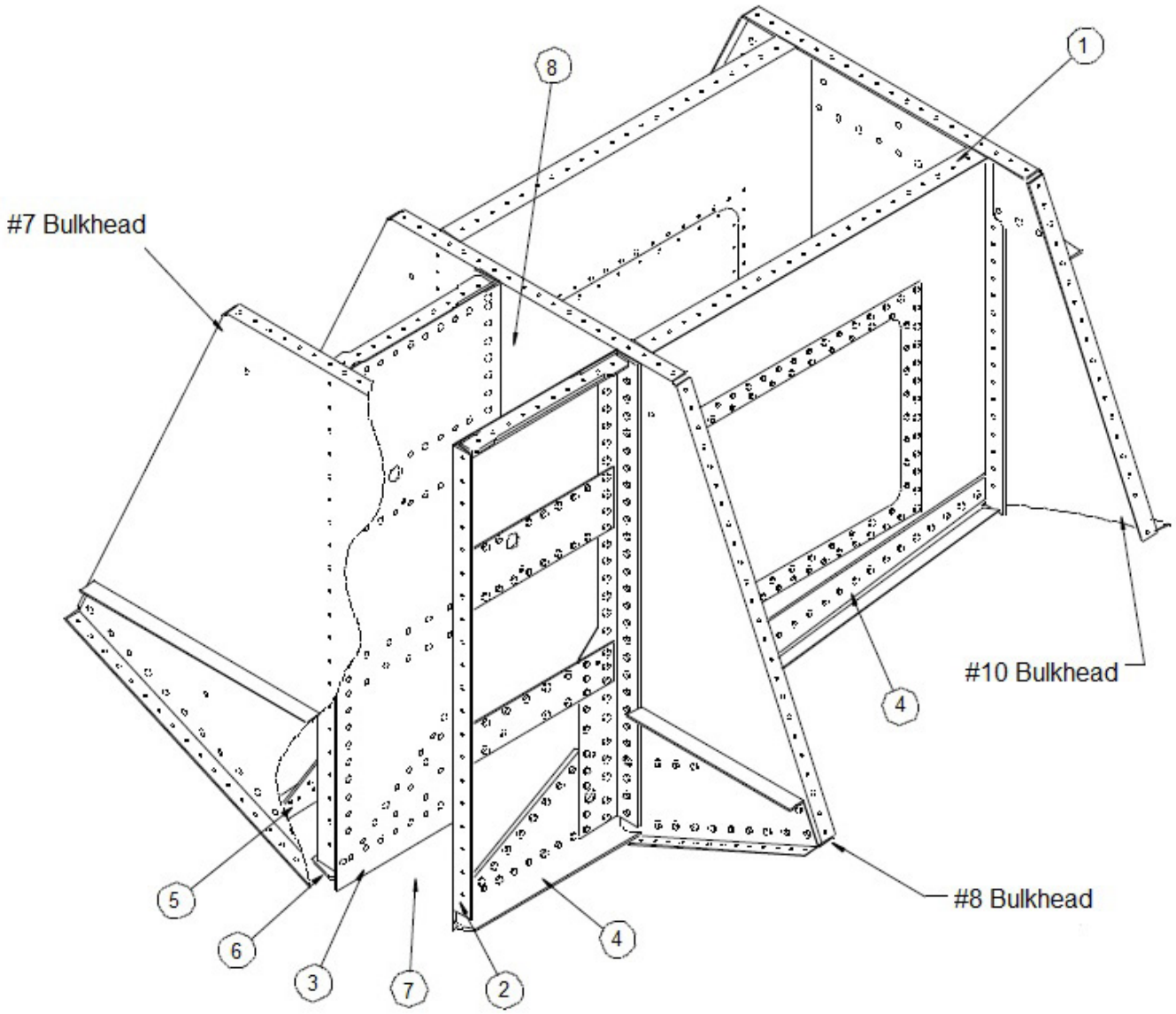
THIS PAGE INTENTIONALLY LEFT BLANK

# SECTION 2
# WHEEL WELL ASSEMBLY

## CONTENTS

WHEEL WELL ASSEMBLY - AMPHIBIAN .....32

# WHEEL WELL ASSEMBLY - AMPHIBIAN



| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 1 | 1 | 21A01000-289 | ASSY. – WHEEL WELL HALF L. |
| | 1 | 21A01158-185 | PANEL – FORMED L. |
| | 1 | 13A01156-124 | RING – COVER REINFORCEMENT |
| | 1 | 21A01158-163 | COVER, INSPECTION, WHEELWELL, LARGE |
| | 28 | AN526-632R6 | SCREW TRUSS HEAD, NON STRUCTURAL CAD 1 |
| | 1 | 21A01000-290 | ASSY. – WHEELWELL HALF R. |
| | 1 | 21A01158-186 | PANEL – FORMED R. |
| | 1 | 13A01156-124 | RING – COVER REINFORCEMENT |
| | 1 | 21A01158-163 | COVER, INSPECTION, WHEELWELL, LARGE |
| | 28 | AN526-632R6 | SCREW TRUSS HEAD, NON STRUCTURAL CAD 1 |
| 2 | 1 | 21A01000-257 | ASSY. – WHEEL WELL PANEL – OUTBR'D L. |
| | 1 | 21A01000-256 | ASSY. - WHEEL WELL PANEL – OUTBR'D R. |
| 3 | 1 | 21A01000-255 | ASSY. – WHEEL WELL PANEL – INBR'D L. |
| | 1 | 21A01000-254 | ASSY. - WHEEL WELL PANEL – INBR'D R. |
| 4 | 1 | 21A01017-005 | CARRY-THRU STRAP OUTBR'D L. |
| | 1 | 21A01017-004 | CARRY-THRU STRAP OUTBR'D R. |
| 5 | 1 | 21A01017-003 | CARRY-THRU STRAP INBR'D L. |
| | 1 | 21A01017-002 | CARRY-THRU STRAP INBR'D R. |
| 6 | 1 | 21A01017-007 | CARRY-THRU STRAP INBR'D L. |
| | 1 | 21A01017-006 | CARRY-THRU STRAP INBR'D R. |
| | 1 | 21A01156-131 | ANGLE – ATTACH AFT L. |
| | 1 | 21A01156-132 | ANGLE – ATTACH AFT R. |
| | 1 | 21A01156-125 | SPACER, CARRY THRU STRAP |
| | 2 | 21A01326-015 | ANGLE – ATTACH FWD |
| 7 | 1 | 21A01000-398 | SAND GUARD ASSY. (NOT SHOWN) |
| | 1 | 21A01150-136 | SAND GUARD (NOT SHOWN) |
| | 4 | AN526-1032R8 | SCREW, TRUSS HEAD, NON STRUCTURAL, CAD 1, STEAL |
| | 4 | MS21078-3 | NUT PLATE |
| 8 | 1 | 21A01569-001 | MUD FLAP (NOT SHOWN) |
| | 1 | 21A01150-135 | REINFORCEMENT |

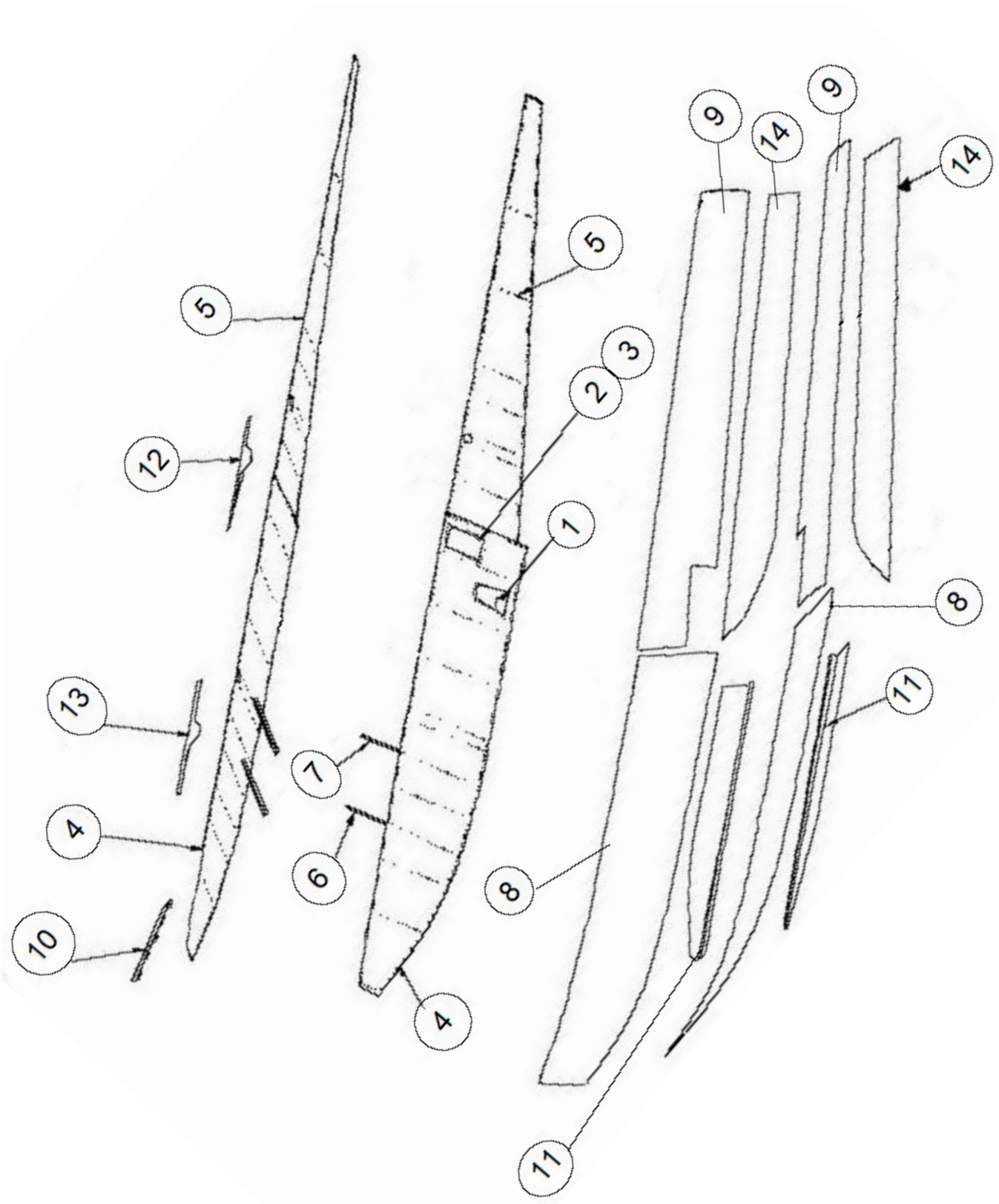
THIS PAGE INTENTIONALLY LEFT BLANK

# SECTION 3
# SKINS, STIFFENERS, & PADDLE

## CONTENTS

SKINS & STIFFENERS - AMPHIBIAN ..... 36
SKINS & STIFFENERS - SEAPLANE ..... 39
BOTTOM SKIN ASSEMBLIES ..... 41
LEFT BOTTOM SKIN & STIFFENERS ..... 42
RIGHT BOTTOM SKIN & STIFFENERS ..... 43
CANOE PADDLE ..... 44

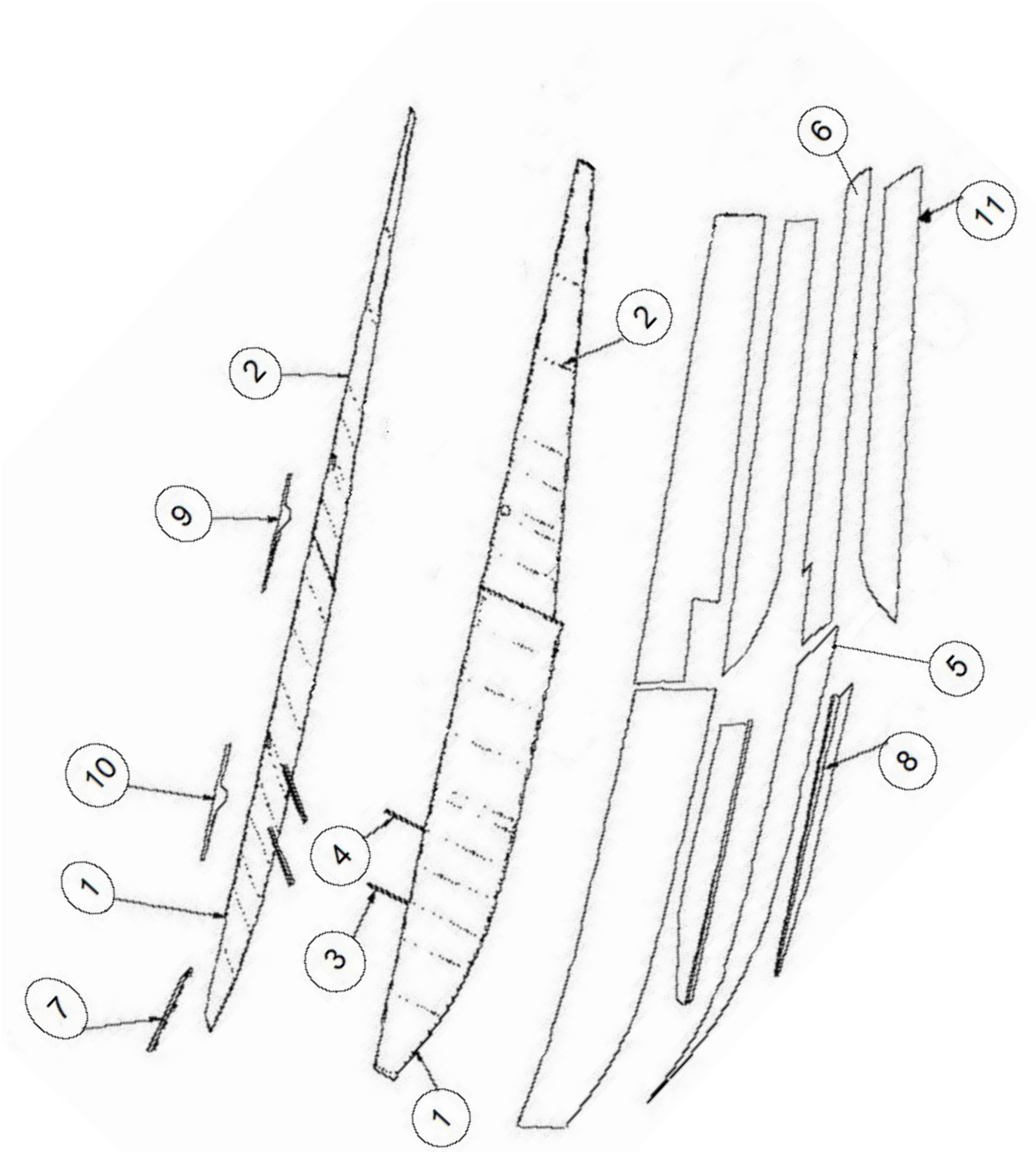
# SKINS & STIFFENERS - AMPHIBIAN



| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 1 | 1 | 3A01000-005 | STEP – BOARDING |
| 2 | 2 | 21A01156-126 | REINFORCEMENT – COVER |
| 3 | 2 | 21A01000-427 | CONVER – INSP. ASSY. |
| | 2 | 21A01004-101 | COVER – INSP. |
| | 2 | 21A01567-012 | GASKET |
| | 56 | AN526-632R6 | SCREW TRUSS HEAD, NON STRUCTURAL CAD 1 |
| 4 | 1 | 21A01004-093 | SIDE SKIN – STEP TO BOW L. OUTBR'D |
| | 1 | 21A01004-094 | SIDE SKIN – STEP TO BOW R. OUTBR'D |
| | 1 | 21A01004-095 | SIDE SKIN – STEP TO BOW L. INBR'D |
| | 1 | 21A01004-096 | SIDE SKIN – STEP TO BOW R. INBR'D |
| 5 | 1 | 21A01004-097 | SIDE SKIN – STEP TO STERN L. OUTBR'D |
| | 1 | 21A01004-098 | SIDE SKIN – STEP TO STERN R. OUTBR'D |
| | 1 | 21A01004-099 | SIDE SKIN – STEP TO STERN L. INBR'D |
| | 1 | 21A01004-100 | SIDE SKIN – STEP TO STERN R. INBR'D |
| 6 | 2 | 21A01340-105 | STIFFENER – SIDE SKIN |
| 7 | 2 | 21A01340-104 | STIFFENER – SIDE SKIN |
| 8 | 1 | 1011430 | ASSEMBLY, SKIN, BOTTOM, FWD, LEFT, 2100 |
| | 1 | 1011410 | SKIN, BOTTOM, LH, FWD 2100 |
| | 1 | 1011412 | STIFFENER, BOTTOM SKIN, FWD |
| | 1 | 1011413 | STIFFENER, BOTTOM SKIN, FWD |
| | 1 | 1011414 | STIFFENER, BOTTOM SKIN, FWD |
| | 1 | 1011416 | STIFFENER, BOTTOM SKIN, FWD |
| | 1 | 1011418 | STIFFENER, BOTTOM SKIN, FWD |
| | 3 | 1011420 | STIFFENER, BOTTOM SKIN, FWD |
| | 1 | 1011431 | ASSEMBLY, SKIN, BOTTOM, FWD, RIGHT, 2100 |
| | 1 | 1011411 | SKIN, BOTTOM, RH, FWD, 2100 |
| | 1 | 1011412 | STIFFENER, BOTTOM SKIN, FWD |
| | 1 | 1011413 | STIFFENER, BOTTOM SKIN, FWD |
| | 1 | 1011415 | STIFFENER, BOTTOM SKIN, FWD |
| | 1 | 1011417 | STIFFENER, BOTTOM SKIN, FWD |
| | 1 | 1011419 | STIFFENER, BOTTOM SKIN, FWD |
| | 3 | 1011421 | STIFFENER, BOTTOM SKIN, FWD |
| 9 | 1 | 21A01004-103 | BOTTOM SKIN AFTERBODY L. |
| | 1 | 21A01004-104 | BOTTOM SKIN AFTERBODY R. |
| 10 | 1 | 21A01000-275 | ASSY. SPRAY RAIL R. |
| | 1 | 21A01000-274 | ASSY. SPRAY RAIL L. |
| 11 | 1 | 21A01000-429 | BOOSTER – SISTER KEEL L. |
| | 1 | 21A01000-428 | BOOSTER – SISTER KEEL R. |
| 12 | 1 | 21A01162-033 | DOUBLER – GUNWALL AFT L. |
| | 1 | 21A01162-034 | DOUBLER – GUNWALL AFT R. |
| 13 | 1 | 21A01162-031 | DOUBLER – GUNWALL FWD L. |

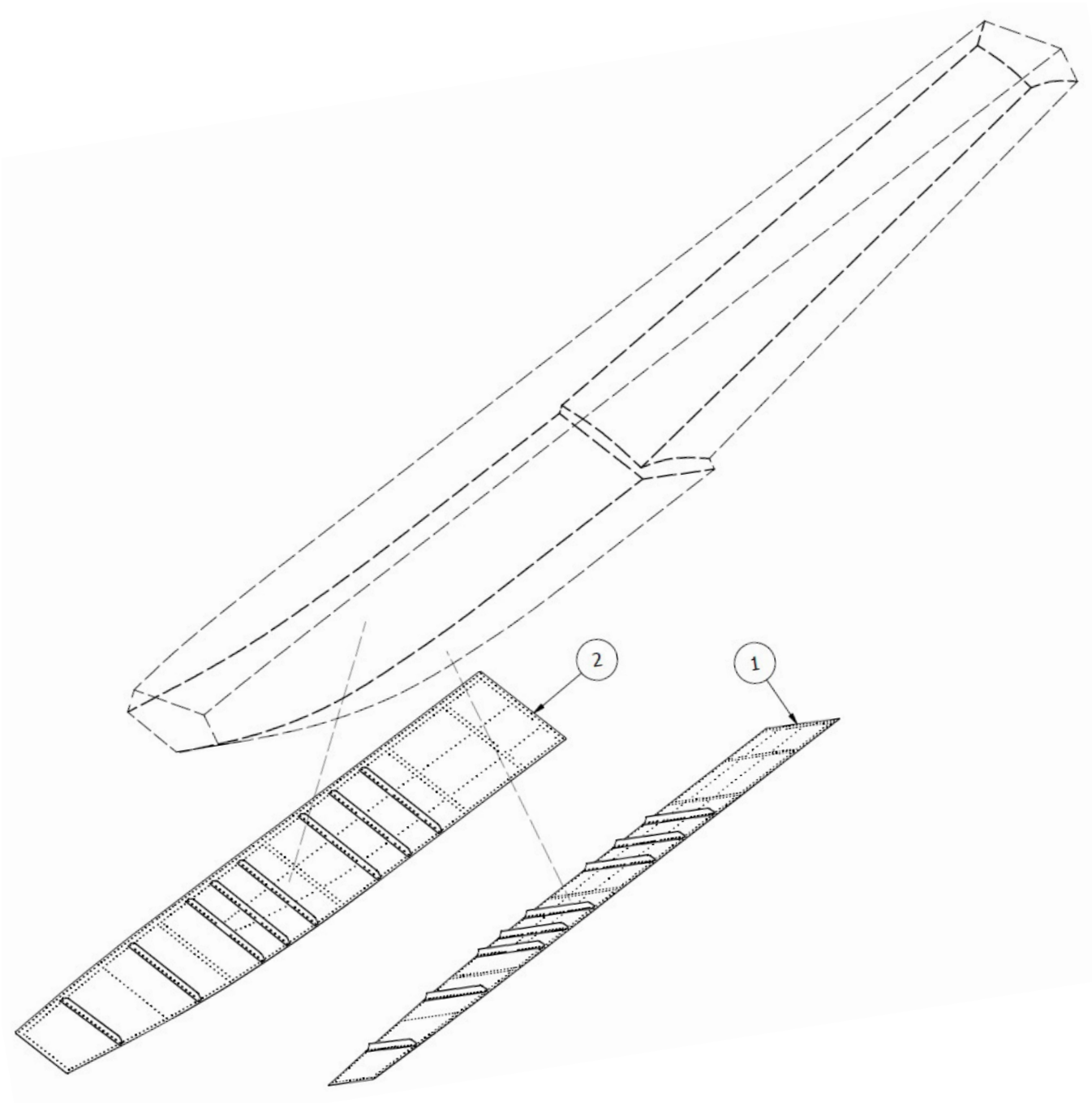
| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| | 1 | 21A01162-032 | DOUBLER – GUNWALL FWD R. |
| 14 | 1 | 1009422 | SCALLOP, FOAM, RIGHT, 2100 S/N 21977 AND LATER |
| | 1 | 1009424 | SCALLOP, FOAM, LEFT, 2100 S/N 21977 AND LATER |

# SKINS & STIFFENERS - SEAPLANE



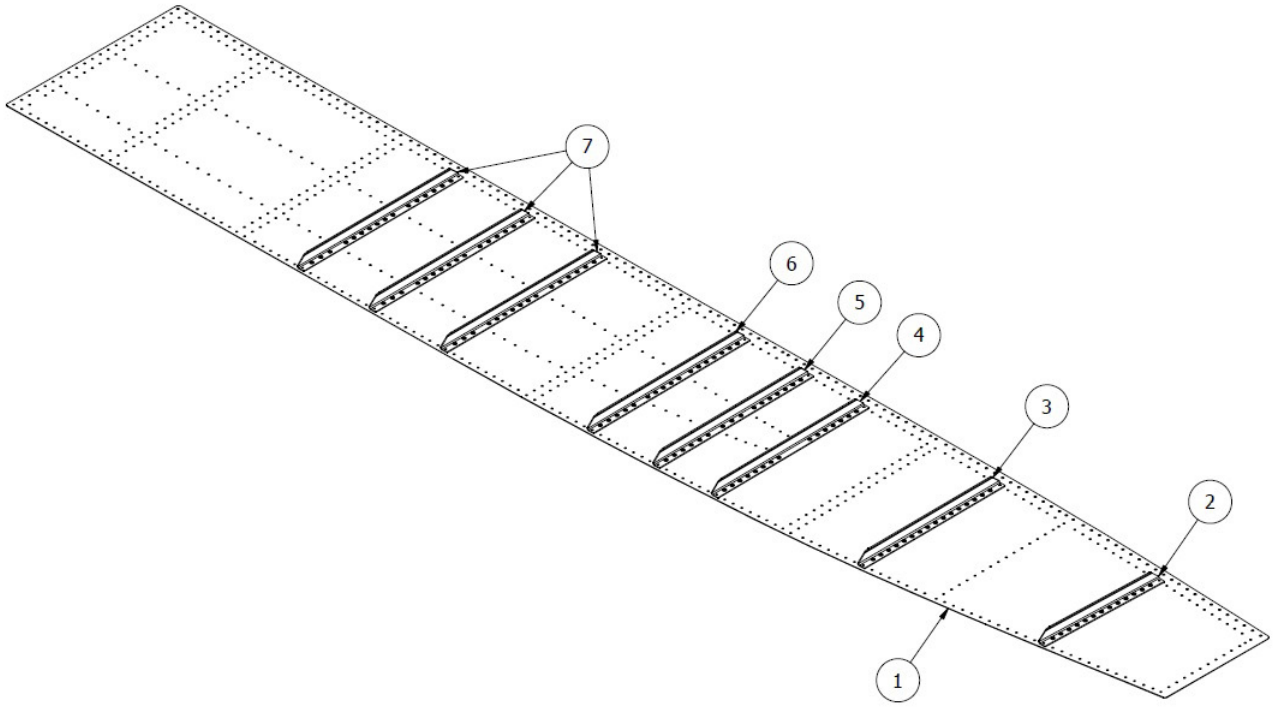
| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 1 | 1 | 21S01004-123 | SIDE SKIN – STEP TO BOW L. OUTBR'D |
| | 1 | 21S01004-122 | SIDE SKIN – STEP TO BOW R. OUTBR'D |
| | 1 | 21S01004-125 | SIDE SKIN – STEP TO BOW L. INBR'D |
| | 1 | 21S01004-124 | SIDE SKIN – STEP TO BOW R. INBR'D |
| 2 | 1 | 21A01004-097 | SIDE SKIN – STEP TO STERN L. OUTBR'D |
| | 1 | 21A01004-098 | SIDE SKIN – STEP TO STERN R. OUTBR'D |
| | 1 | 21A01004-099 | SIDE SKIN – STEP TO STERN L. INBR'D |
| | 1 | 21A01004-100 | SIDE SKIN – STEP TO STERN R. INBR'D |
| 3 | 2 | 21A01340-105 | STIFFENER – SIDE SKIN |
| 4 | 2 | 21A01340-104 | STIFFENER – SIDE SKIN |
| 5 | 1 | 1011430 | ASSEMBLY, SKIN, BOTTOM, FWD, LEFT, 2100 |
| | 1 | 1011410 | SKIN, BOTTOM, LH, FWD 2100 |
| | 1 | 1011412 | STIFFENER, BOTTOM SKIN, FWD |
| | 1 | 1011413 | STIFFENER, BOTTOM SKIN, FWD |
| | 1 | 1011414 | STIFFENER, BOTTOM SKIN, FWD |
| | 1 | 1011416 | STIFFENER, BOTTOM SKIN, FWD |
| | 1 | 1011418 | STIFFENER, BOTTOM SKIN, FWD |
| | 3 | 1011420 | STIFFENER, BOTTOM SKIN, FWD |
| | 1 | 1011431 | ASSEMBLY, SKIN, BOTTOM, FWD, RIGHT, 2100 |
| | 1 | 1011411 | SKIN, BOTTOM, RH, FWD, 2100 |
| | 1 | 1011412 | STIFFENER, BOTTOM SKIN, FWD |
| | 1 | 1011413 | STIFFENER, BOTTOM SKIN, FWD |
| | 1 | 1011415 | STIFFENER, BOTTOM SKIN, FWD |
| | 1 | 1011417 | STIFFENER, BOTTOM SKIN, FWD |
| | 1 | 1011419 | STIFFENER, BOTTOM SKIN, FWD |
| | 3 | 1011421 | STIFFENER, BOTTOM SKIN, FWD |
| 6 | 1 | 21S01004-131 | BOTTOM SKIN AFTERBODY L. |
| | 1 | 21S01004-130 | BOTTOM SKIN AFTERBODY R. |
| 7 | 1 | 21A01000-275 | ASSY. SPRAY RAIL R. |
| | 1 | 21A01000-274 | ASSY. SPRAY RAIL L. |
| 8 | 1 | 21A01000-429 | BOOSTER – SISTER KEEL L. |
| | 1 | 21A01000-428 | BOOSTER – SISTER KEEL R. |
| 9 | 1 | 21A01162-033 | DOUBLER – GUNWALL AFT L. |
| | 1 | 21A01162-034 | DOUBLER – GUNWALL AFT R. |
| 10 | 1 | 21A01162-031 | DOUBLER – GUNWALL FWD L. |
| | 1 | 21A01162-032 | DOUBLER – GUNWALL FWD R. |
| 11 | 1 | 1009422 | SCALLOP, FOAM, RIGHT, 2100 S/N 21977 AND LATER |
| | 1 | 1009424 | SCALLOP, FOAM, LEFT, 2100 S/N 21977 AND LATER |

# BOTTOM SKIN ASSEMBLIES



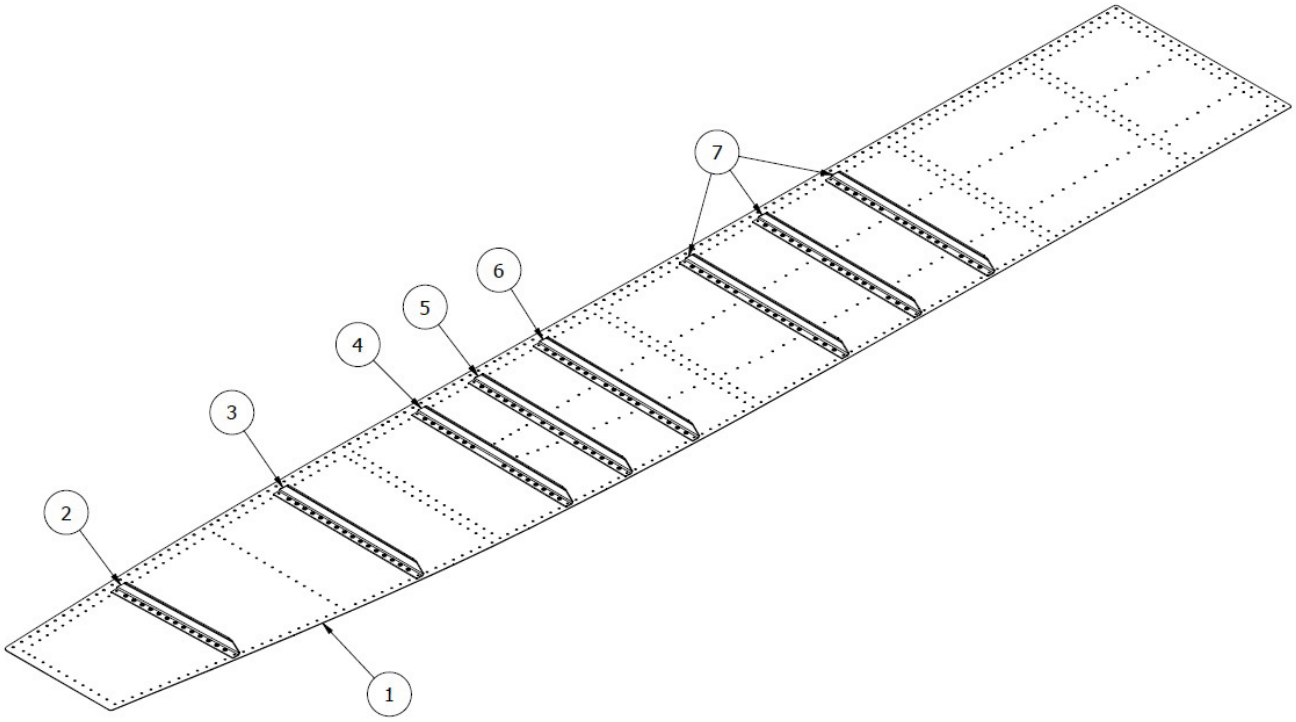

| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 1 | 1 | 1011430 | ASSEMBLY, SKIN, BOTTOM, FWD, LEFT, 2100 |
| 2 | 1 | 1011431 | ASSEMBLY, SKIN, BOTTOM, FWD, RIGHT, 2100 |

# LEFT BOTTOM SKIN & STIFFENERS



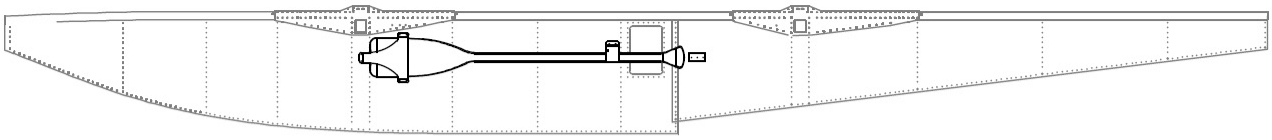

| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 1 | 1 | 1011410 | SKIN, BOTTOM, LH, FWD 2100 |
| 2 | 1 | 1011412 | STIFFENER, BOTTOM SKIN, FWD |
| 3 | 1 | 1011413 | STIFFENER, BOTTOM SKIN, FWD |
| 4 | 1 | 1011414 | STIFFENER, BOTTOM SKIN, FWD |
| 5 | 1 | 1011416 | STIFFENER, BOTTOM SKIN, FWD |
| 6 | 1 | 1011418 | STIFFENER, BOTTOM SKIN, FWD |
| 7 | 3 | 1011420 | STIFFENER, BOTTOM SKIN, FWD |

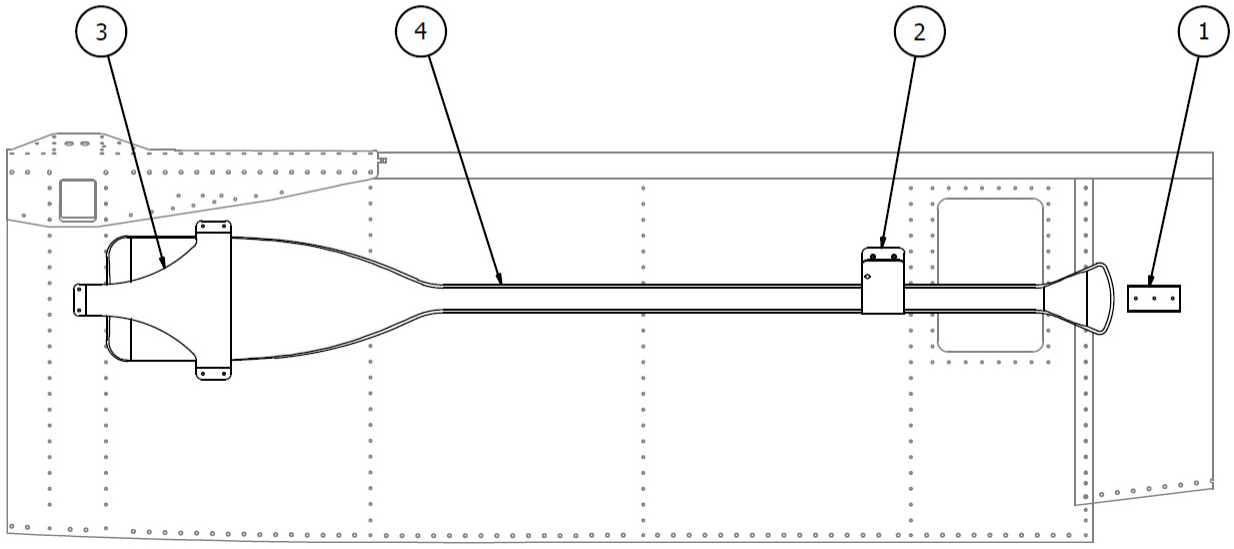
# RIGHT BOTTOM SKIN & STIFFENERS




| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 1 | 1 | 1011411 | SKIN, BOTTOM, RH, FWD, 2100 |
| 2 | 1 | 1011412 | STIFFENER, BOTTOM SKIN, FWD |
| 3 | 1 | 1011413 | STIFFENER, BOTTOM SKIN, FWD |
| 4 | 1 | 1011415 | STIFFENER, BOTTOM SKIN, FWD |
| 5 | 1 | 1011417 | STIFFENER, BOTTOM SKIN, FWD |
| 6 | 1 | 1011419 | STIFFENER, BOTTOM SKIN, FWD |
| 7 | 3 | 1011421 | STIFFENER, BOTTOM SKIN, FWD |

# CANOE PADDLE





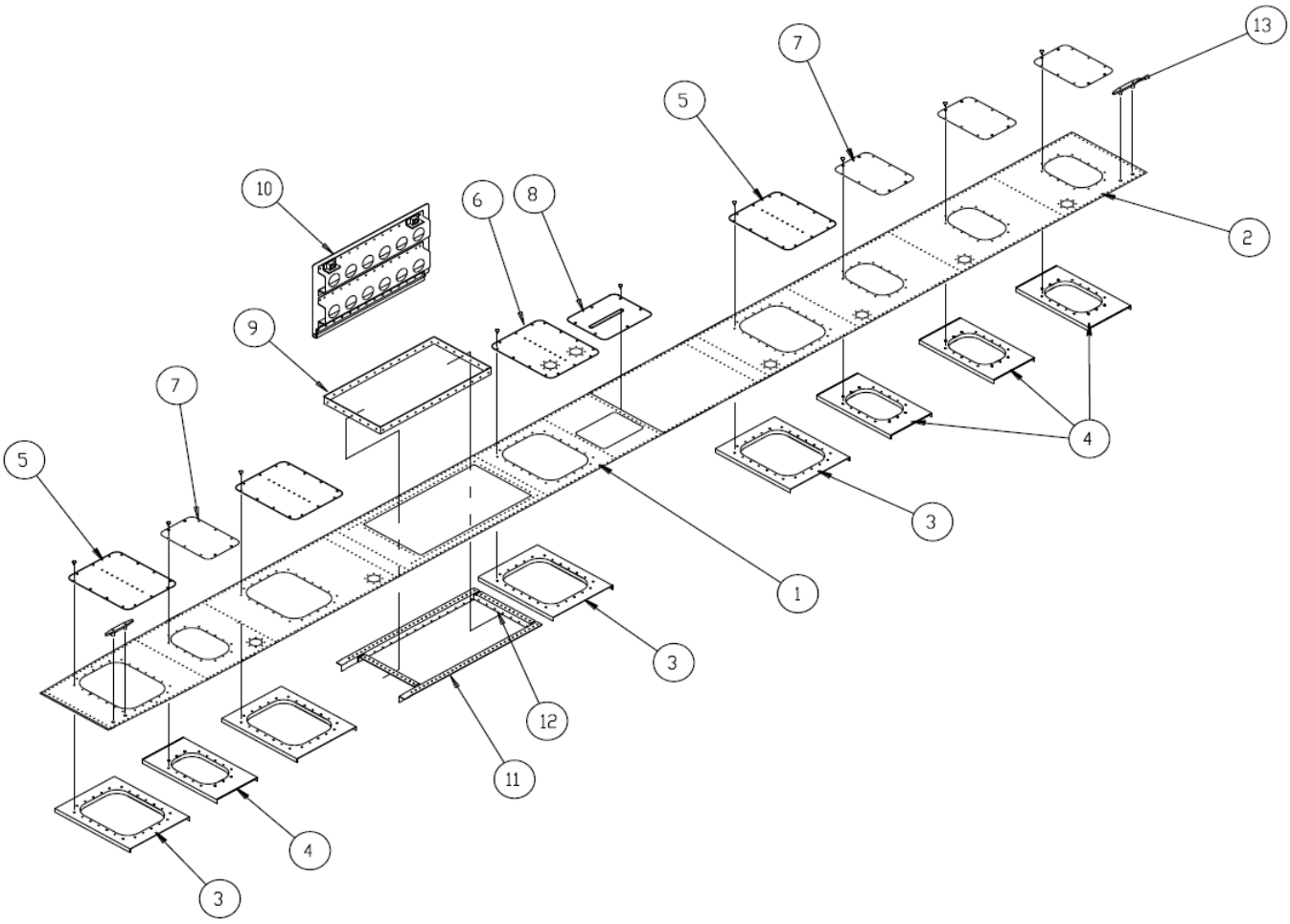

| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 1 | 1 | 1005676 | BRACKET, CANOE PADDLE STOP |
| 2 | 1 | 1005677 | CLIP, MOUNTING, CANOE PADDLE |
| 3 | 1 | 1005678 | BRACKET, CANOE PADDLE |
| 4 | 1 | 1012326 | CANOE PADDLE, 4.0 FT |

# SECTION 4
# TOP DECK ASSEMBLY

## CONTENTS

TOP DECK - AMPHIBIAN .....46
TOP DECK - SEAPLANE .....49

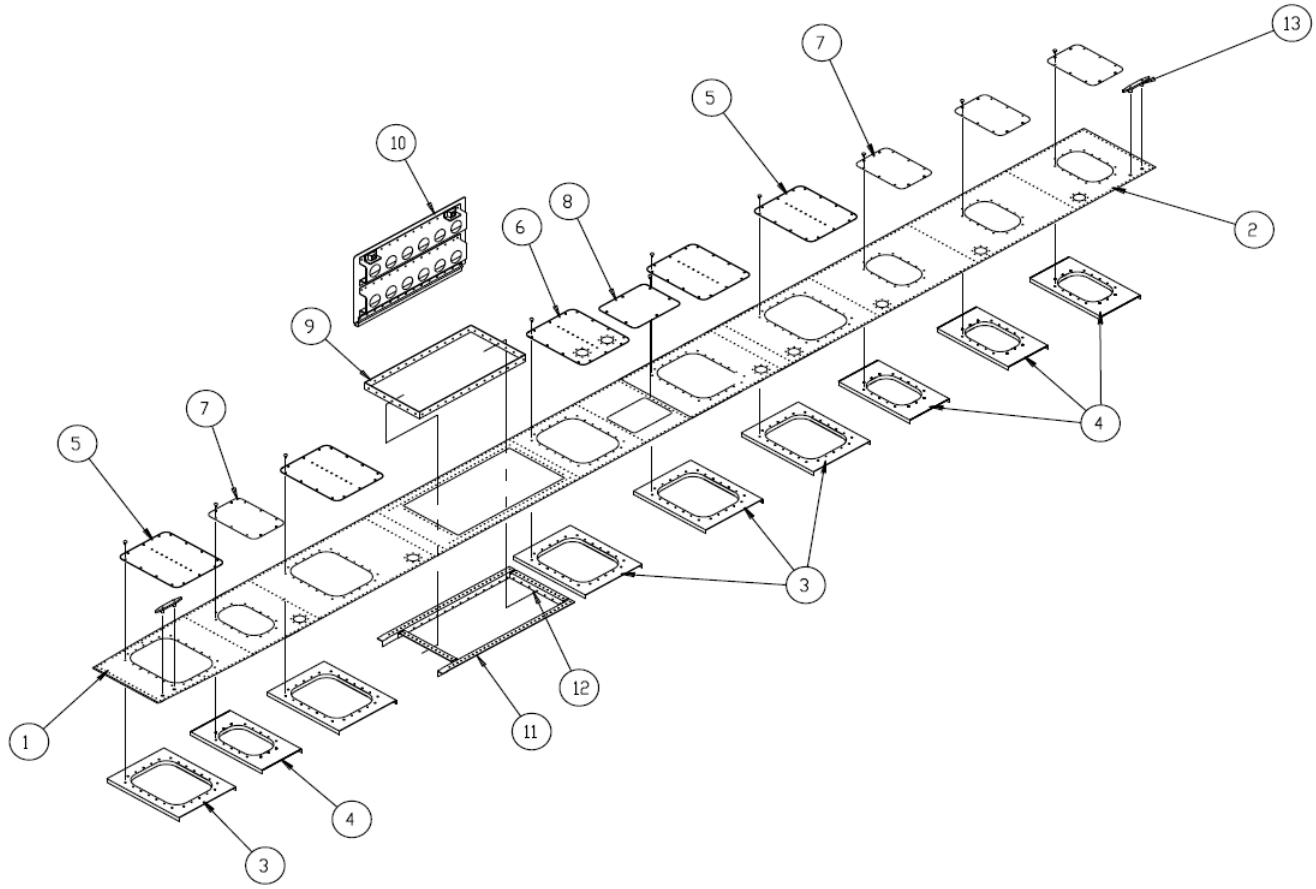
# TOP DECK - AMPHIBIAN



| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 1 | 1 | 21A01004-091 | SKIN – FWD SECTION L. |
| | 1 | 21A01004-092 | SKIN – FWD SECTION R. |
| 2 | 1 | 21A01004-089 | SKIN – AFT SECTION L. |
| | 1 | 21A01004-090 | SKIN – AFT SECTION R. |
| 3 | 4 | 21A01002-130 | SUPPORT – INSP. COVER - LARGE |
| | A/R | 1002481 | TINNERMAN WITH TAPE |
| 4 | 4 | 21A01002-131 | SUPPORT – INSP. COVER – SMALL |
| | A/R | 1002481 | TINNERMAN WITH TAPE |
| 5 | 3 | 21A01000-258 | INSP. COVER ASSY– LARGE – W/ ANGLE & GASKET |
| | A/R | SS TATP 8 X 5/8 | SCREW – ATTACH |
| | 3 | 1001437 | SEAL – GASKET ONLY (FORMED COVER) |
| | 3 | 21A01567-001 | SEAL – GASKET ONLY (FLAT COVER) |
| 6 | 1 | 21A01000-273 | INSP. COVER ASSY, LARGE,W/ ANGLE (2 CUPS) & GASKET |
| | A/R | SS TATP 8 X 5/8 | SCREW – ATTACH |
| | 1 | 1001437 | SEAL – GASKET ONLY (FORMED COVER) |
| | 1 | 21A01567-001 | SEAL – GASKET ONLY (FLAT COVER) |
| 7 | 4 | 21A01000-284 | INSP. COVER ASSY - SMALL |
| | A/R | SS TATP 8 X 5/8 | SCREW – ATTACH |
| | 4 | 1001728 | GASKET, ACCESS PANEL |
| | 4 | 21A01567-002 | SEAL – GASKET ONLY (FLAT COVER) |
| 8 | 1 | 1009202 | COVER, GEAR INDICATOR |
| | 1 | 1009122 | PLACARD, GEAR INDICATOR, RH |
| | 1 | 1009123 | PLACARD, GEAR INDICATOR, LH |
| | 2 | 2600-3 | SCREW – CAM - LOK |
| | 2 | 1126000-4 | STUD, PROTRUDING HEAD |
| | 2 | 1126000-5 | AIR LOC / CAMLOC STUD, PROTRUDING HEAD |
| | 6 | 212-12 | RECEPTACLE – CAM – LOK |
| 9 | 1 | 21A01150-131 | JAMB – BAGGAGE DOOR |
| | 1 | 1002067 | BAGGAGE JAMB, HINGE SIDE |
| 10 | 1 | 21A01000-268 | ASSY – BAGGAGE DOOR |
| | 1 | 21A01162-035 | COVER - SKIN |
| | 1 | 21A01740-008 | HINGE, BAGGAGE COVER, 1.5 |
| | 1 | 21A01741-004 | HINGE, BAGGAGE COVER, 3/4 |
| | 2 | 21A01010-012 | STIFFENER - DOOR |
| | 2 | 21A01004-106 | STIFFENER ENDS |
| | 2 | 3A01206-001 | RETAINER - LOCK |
| | 2 | 3A01273-004 | LOCK PIN |
| | 2 | 3A01702-001 | CATCH – LATCH |
| | 2 | 3A01525-003 | LOCK SPRING |
| | 2 | 1002663 | RING – OPENING |
| | 1 | 1001438 | SEAL – GASKET (NOT SHOWN) |

| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| | 1 | 1002186 | HINGE PIN |
| | 12 | 01692-0410 | RIVET POP |
| | 2 | 10/32 X ½ SS | BOLT |
| 11 | 1 | 21A01326-003 | TOP RAIL – BAGGAGE OPENING L. |
| | 1 | 21A01326-002 | TOP RAIL – BAGGAGE OPENING R. |
| 12 | 2 | 1013020 | CROSS TIE, TOPDECK, BAGGAGE |
| 13 | 2 | 21A01203-001 | CLEAT – TIE DOWN |
| | 4 | 21A01280-004 | BUSHING |
| | 4 | AN525-10R24 | SCREW, HEAD, 10-32 THREAD, 1-3/32" GRIP, 1-1/2" LENGTH |
| | 4 | MS21044N3 | NUT, LOCKING, REGULAR HEIGHT, 10-32 UNF |
| | 4 | NAS1149D0363J | WASHER, 0.203 ID, 0.063 THK, ALUMINUM |

# TOP DECK - SEAPLANE



| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 1 | 1 | 21S01004-135 | SKIN – FWD SECTION L. |
| | 1 | 21S01004-134 | SKIN – FWD SECTION R. |
| 2 | 1 | 21S01004-137 | SKIN – AFT SECTION L. |
| | 1 | 21S01004-136 | SKIN – AFT SECTION R. |
| 3 | 4 | 21A01002-130 | SUPPORT – INSP. COVER - LARGE |
| | A/R | 1002481 | TINNERMAN WITH TAPE |
| 4 | 5 | 21A01002-131 | SUPPORT – INSP. COVER – SMALL |
| | A/R | 1002481 | TINNERMAN WITH TAPE |
| 5 | 4 | 21A01000-258 | INSP. COVER ASSY – LARGE – W/ ANGLE & GASKET |
| | A/R | SS TATP 8 X 5/8 | SCREW – ATTACH |
| | 4 | 1001437 | SEAL – GASKET ONLY (FORMED COVER) |
| | 4 | 21A01567-001 | SEAL – GASKET ONLY (FLAT COVER) |
| 6 | 1 | 2A01000-273 | INSP. COVER – LARGE – ANGLE (2 CUPS) & GASKET |
| | A/R | SS TATP 8 X 5/8 | SCREW – ATTACH |
| | 1 | 1001437 | SEAL – GASKET ONLY (FORMED COVER) |
| | 1 | 21A01567-001 | SEAL – GASKET ONLY (FLAT COVER) |
| 7 | 4 | 21A01000-284 | INSP. COVER ASSY- SMALL & GASKET |
| | A/R | SS TATP 8 X 5/8 | SCREW – ATTACH |
| | 4 | 1001728 | SEAL – GASKET ONLY (FORMED COVER) |
| | 4 | 21A01567-002 | SEAL – GASKET ONLY (FLAT COVER) |
| 8 | 1 | 21S01000-399 | COVER ASSY & GASKET |
| | 1 | 1002110 | SEAL – GASKET ONLY |
| | A/R | SS TATP 8 X 5/8 | SCREW – ATTACH |
| | A/R | 9A3-671 | NUT – TINNERMAN |
| | 2 | 1013025 | CROSS TIE, TOPDECK |
| 9 | 1 | 21A01150-131 | JAMB – BAGGAGE DOOR |
| | 1 | 101438 | SEAL – GASKET (NOT SHOWN) |
| | 1 | 1002067 | JAMB – HINGE SIDE |
| 10 | 1 | 21A01000-268 | ASSY – BAGGAGE DOOR |
| | 1 | 21A01162-035 | COVER - SKIN |
| | 1 | 21A01741-004 | HINGE, BAGGAGE COVER, 3/4 |
| | 2 | 21A01010-012 | STIFFENER - DOOR |
| | 2 | 21A01004-106 | STIFFENER ENDS |
| | 2 | 3A01206-001 | RETAINER - LOCK |
| | 2 | 3A01273-004 | LOCK PIN |
| | 2 | 3A01702-001 | CATCH – LATCH |
| | 2 | 3A01525-003 | LOCK SPRING |
| | 2 | 9-0177A221 | RING – OPENING |
| | 1 | 101438 | SEAL – GASKET (NOT SHOWN) |
| 11 | 1 | 21A01326-003 | TOP RAIL – BAGGAGE OPENING L. |
| | 1 | 21A01326-002 | TOP RAIL – BAGGAGE OPENING R. |

| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 12 | 2 | 1013020 | CROSS TIE, TOPDECK, BAGGAGE |
| 13 | 2 | 21A01203-001 | CLEAT – TIE DOWN |
| | 4 | 21A01280-004 | BUSHING |
| | 4 | AN525-10R24 | SCREW, HEAD, 10-32 THREAD, 1-3/32" GRIP, 1-1/2" LENGTH |
| | 4 | MS21044N3 | NUT, LOCKING, REGULAR HEIGHT, 10-32 UNF |
| | 4 | NAS1149D0363J | WASHER, 0.203 ID, 0.063 THK, ALUMINUM |

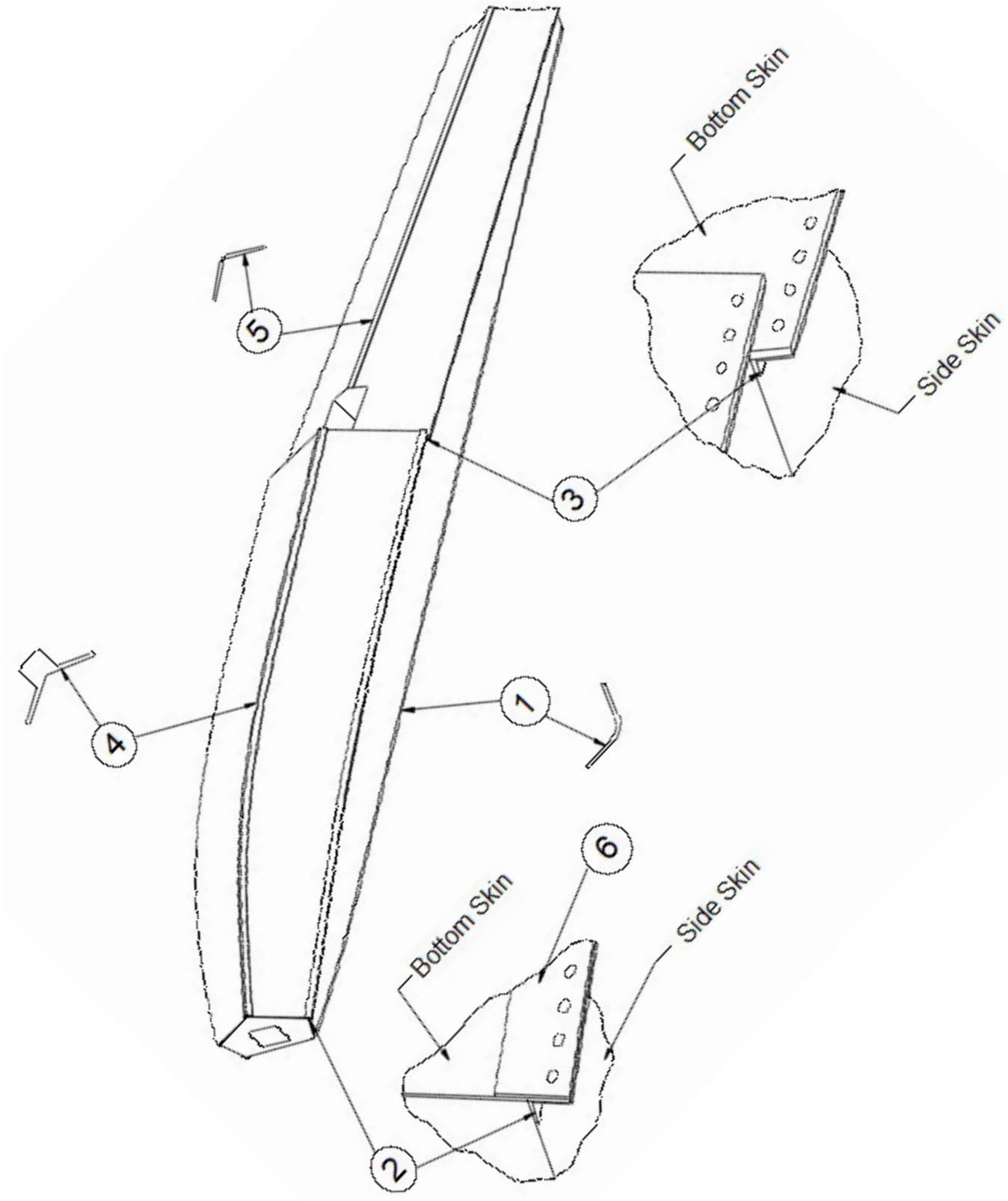
THIS PAGE INTENTIONALLY LEFT BLANK

# SECTION 5
# EXTRUSIONS

## CONTENTS

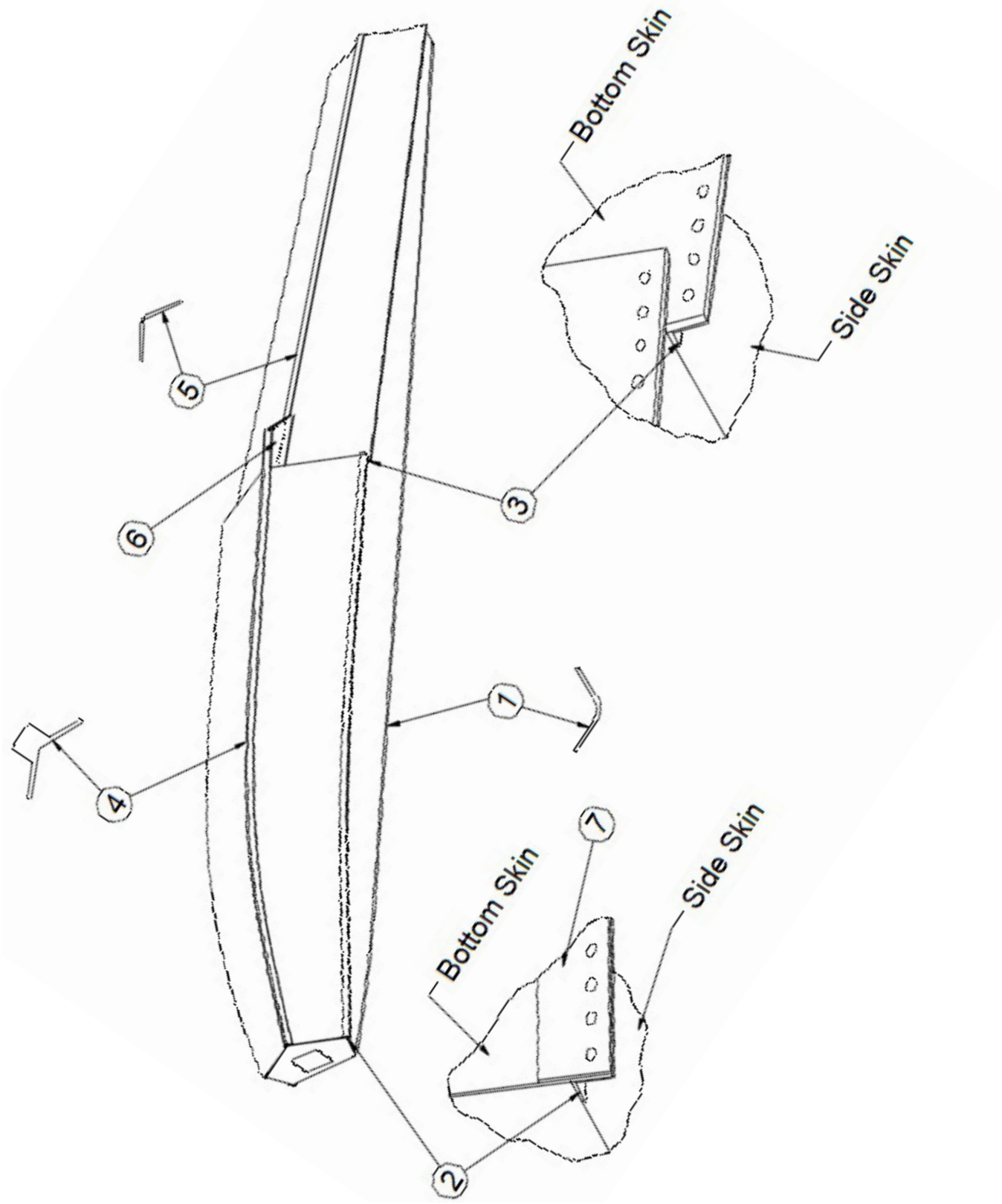
HULL EXTRUSIONS - AMPHIBIAN .....54
HULL EXTRUSIONS - SEAPLANE .....56

# HULL EXTRUSIONS - AMPHIBIAN



| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 1 | 1 | 21A01324-001 | GUNWALL – L. |
| | 1 | 21A01324-002 | GUNWALL – R. |
| 2 | 1 | 21A01340-109 | CHINE - FWD L. |
| | 1 | 21A01340-108 | CHINE – FWD R. |
| 3 | 1 | 21A01340-107 | CHINE – AFTERBODY L. |
| | 1 | 21A01340-106 | CHINE – AFTERBODY R. |
| 4 | 1 | 21A01321-001 | KEEL - MAIN |
| 5 | 1 | 21A01008-142 | KEEL - AFTERBODY |
| 6 | 1 | 21A01005-267 | STRAP, CHINE, L. |
| | 1 | 21A01005-268 | STRAP, CHINE, R. |

# HULL EXTRUSIONS - SEAPLANE



| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 1 | 1 | 21A01324-001 | GUNWALL – L. |
| | 1 | 21A01324-002 | GUNWALL – R. |
| 2 | 1 | 21A01340-109 | CHINE - FWD L. |
| | 1 | 21A01340-108 | CHINE – FWD R. |
| 3 | 1 | 21A01340-107 | CHINE – AFTERBODY L. |
| | 1 | 21A01340-106 | CHINE – AFTERBODY R. |
| 4 | 1 | 21S01321-004 | KEEL - MAIN |
| 5 | 1 | 21S01008-172 | KEEL - AFTERBODY |
| 6 | 1 | 1013018 | ASSEMBLY, GUSSET, AFTERBODY, RF |
| | | 1013019 | ASSEMBLY, GUSSET, AFTERBODY, LF |
| | 1 | 21S01163-037 | ANGLE SUPPORT – AFTERBODY L. |
| | 1 | 21S01163-038 | ANGLE SUPPORT – AFTERBODY R. |
| 7 | 1 | 21A01005-267 | STRAP, FORWARD BOTTOM, LEFT |
| | 1 | 21A01005-268 | STRAP, FORWARD BOTTOM, RIGHT |

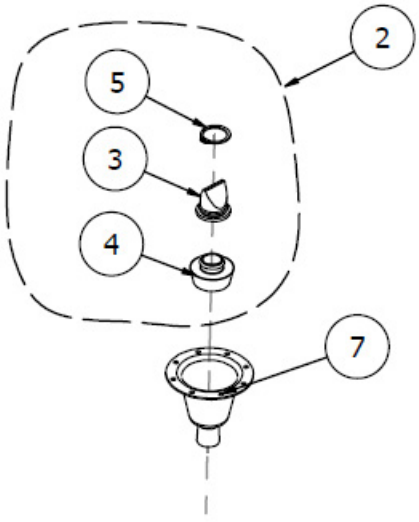
THIS PAGE INTENTIONALLY LEFT BLANK

# SECTION 6
# PUMPOUT CUP AND TUBE & FLOAT HAND PUMP

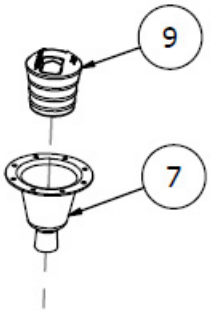
## CONTENTS

PUMPOUT CUP AND TUBE .....60
FLOAT HAND PUMP .....62

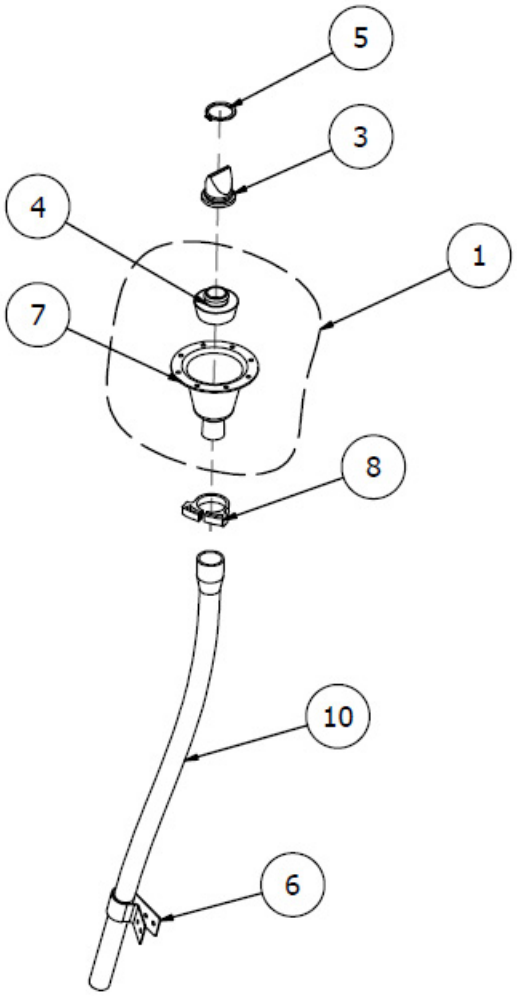
# PUMPOUT CUP AND TUBE




DUCKBILL VALVE
RETROFIT




STOPPER




CUP ASSEMBLY
& TUBE

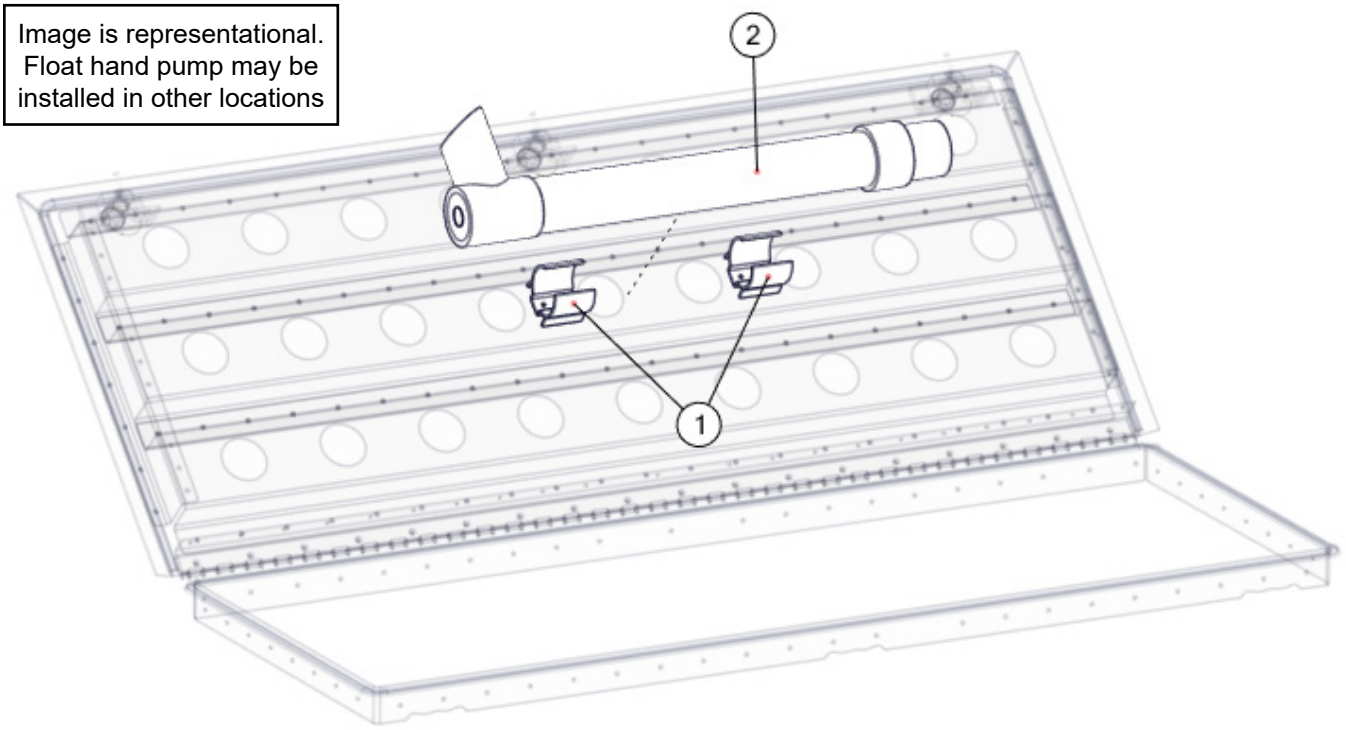
| ITEM | QTY | PART NO. | PART DESCRIPTION | NOTE |
|---|---|---|---|---|
| 1 | 1 | 1011004 | ASSEMBLY, CUP, PUMPOUT, DUCKBILL | |
| 2 | 1 | 1011075 | KIT, PUMPOUT PLUG, DUCKBILL | 1 |
| 3 | 1 | 1011870 | VALVE, DUCKBILL | |
| 4 | 1 | 1011808 | RETAINER, VALVE, DUCKBILL, PUMPOUT PLUG | |
| 5 | 1 | 91590A129 | RETAINING RING, EXTERNAL, 13/16 OD, STAINLESS | |
| 6 | 1 | 3A01158-003 | CLAMP, PUMPOUT TUBE | |
| 7 | 1 | 4A01749-001 | CUP, PUMPOUT | |
| 8 | 1 | 57134 | CLAMP | |
| 9 | 1 | 2111 | STOPPER, PUMPOUT, LAKE AND AIR | 2 |
| 10 | A/R | RM618 | TUBE, 5/8 OD, 1/2 ID | 3 |
| | 10.5 IN | RM618 | PUMPOUT TUBE | |
| | 12.5 IN | RM618 | PUMPOUT TUBE | |
| | 15 IN | RM618 | PUMPOUT TUBE | |
| | 17.5 IN | RM618 | PUMPOUT TUBE | |
| | 23 IN | RM618 | PUMPOUT TUBE | |
| | 21.5 IN | RM618 | PUMPOUT TUBE | |
| | 18.5 IN | RM618 | PUMPOUT TUBE | |

NOTES:

1. Parts kit that requires RTV adhesive, see service letter 240 for instructions.
2. Not compatible with 1011004.
3. Length in feet as required, see tube table for individual lengths.

# FLOAT HAND PUMP

Image is representational. Float hand pump may be installed in other locations



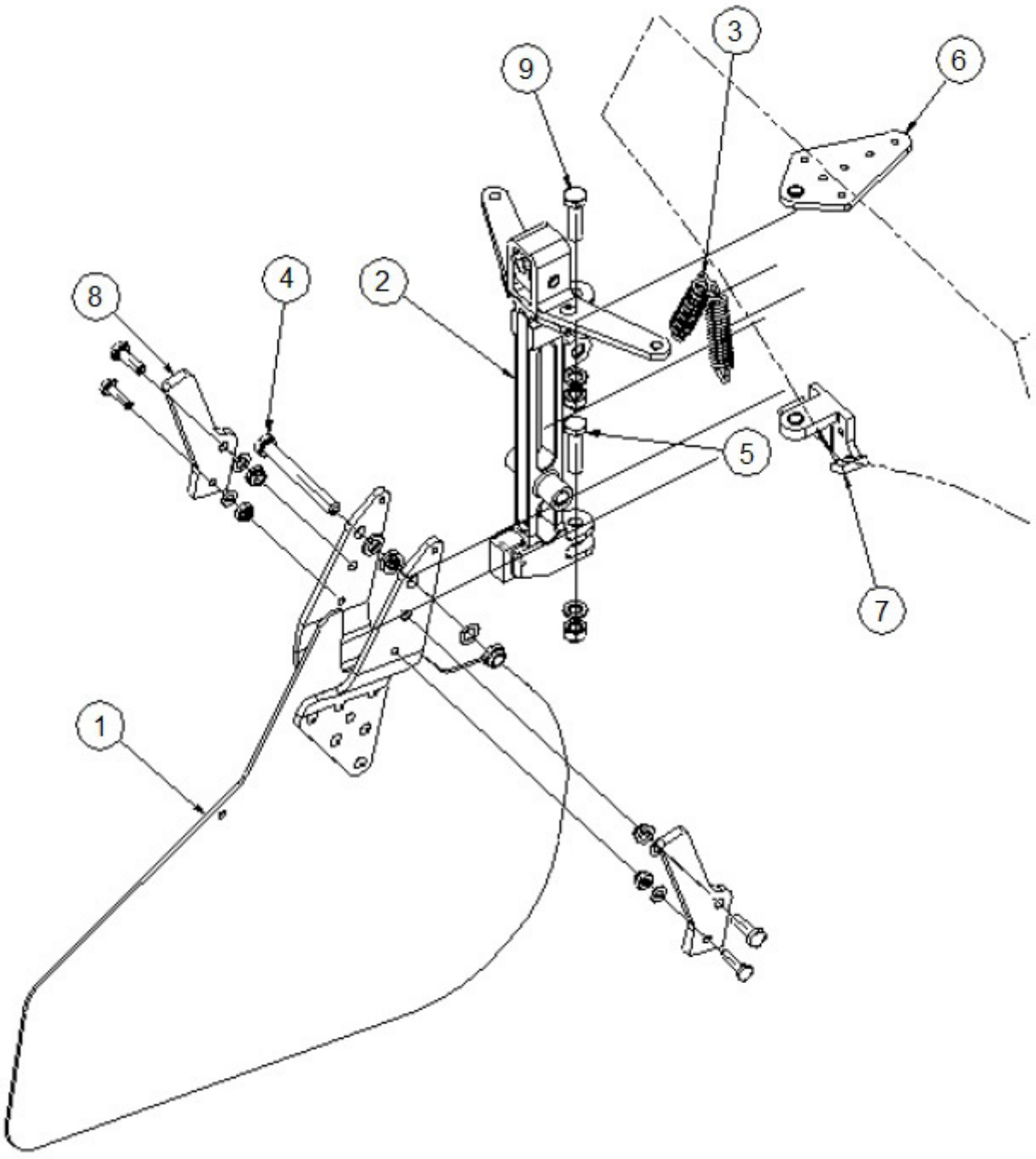

| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 1 | 2 | CM-2 | CLIP, PLASTIC, PUMPOUT (SCREWS INCLUDED, MAY BE RIVETED IN) |
| 2 | 1 | F15PX | PUMP, HAND, FLOAT, 15" |
| 2 (ALT) | 1 | F24PX | PUMP, HAND, FLOAT, 24" |
| 2 (ALT) | 1 | F36PX | PUMP, HAND, FLOAT, 36" |

# SECTION 7
# WATER RUDDER AND STEERING & RETRACT SYSTEM

## CONTENTS

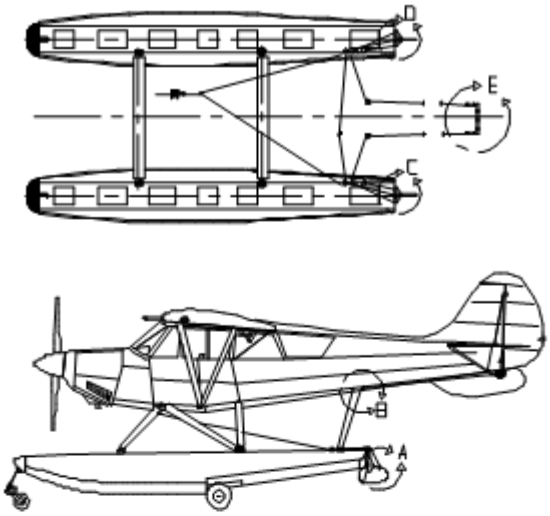
WATER RUDDER INSTALLATION.....64
STEERING & RETRACT SYSTEM INSTALLATION.....66

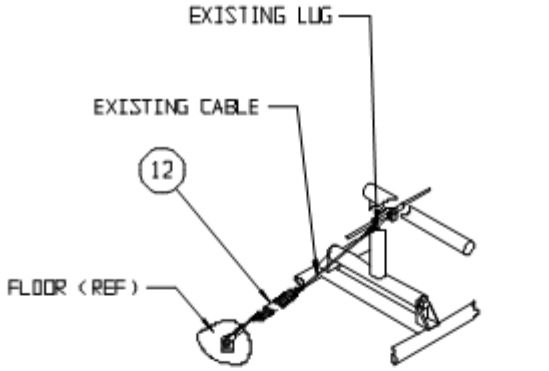
# WATER RUDDER INSTALLATION



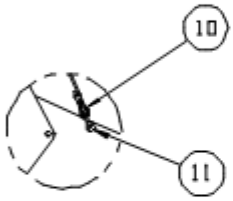
| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 1 | 1 | 21A08000-123 | ASSY. - BLADE |
| | 1 | 1002649 | BLADE |
| | 1 | 21A08019-001 | ARM L. |
| | 1 | 21A08019-002 | ARM R. |
| 2 | 1 | 1003858 | WATER RUDDER POST WITH BELLCRANK ASSEMBLY |
| | 1 | 1003854 | WATER RUDDER POST ASSEMBLY |
| | 1 | 1003267 | WATER RUDDER POST |
| | 2 | 05DU06 | BUSHING |
| | 1 | 1003853 | BELLCRANK, WATER RUDDER POST ASSEMBLY |
| | 1 | 1003274 | BELLCRANK, WATER RUDDER POST |
| | 2 | 03DU04 | BUSHING |
| | 1 | 21A08648-002 | BUMBER, DOWN STOP |
| | 1 | 1001457 | ROLL PIN |
| | 1 | 21A8602-009 | GUIDE, RETRACT |
| | 1 | 5/16 X 1 ½ INCHES | PIN ATTACH |
| 3 | 2 | 21A08525-006 | SPRING |
| 4 | 1 | AN5-25A | BOLT, 5/16-24, 2.1875 GRIP, UNDRILLED, STEEL |
| | 3 | NAS1149D0516J | WASHER, 0.328 ID, 0.016 THK, ALUMINUM |
| | 1 | NAS 1149D0563J | WASHER, 0.328 ID, 0.063 THK, ALUMINUM |
| | 1 | MS21083N5 | NUT, LOCKING, LOW HEIGHT, 5/16-24 UNF |
| 5 | 1 | AN5-11A | BOLT, 5/16-24 THREAD, 11/16" GRIP, 1-7/32" LENGTH |
| | A/R | NAS1149D0563J | WASHER, 0.328 ID, 0.063 THK, ALUMINUM |
| | 1 | MS21044N5 | NUT, LOCKING, REGULAR HEIGHT, 5/16-24 UNF |
| 6 | 1 | 21A01000-299 | ASSEMBLY – TOP BEARING |
| | 1 | 21A01019-003 | PLATE |
| | 1 | 21A01705-003 | BEARING |
| 7 | 1 | 21A08000-157 | ASSEMBLY – LOWER BEARING |
| | 1 | 21A08318-002 | BRACKET |
| | 1 | 05DU06 | BEARING |
| 8 | 2 | 21A08154-009 | STOP |
| | 2 | AN4-6A | BOLT, 1/4-28, 0.3125 GRIP, UNDRILLED, STEEL |
| | 2 | NAS1149D0416J | WASHER, 0.265 ID, 0.016 THK, ALUMINUM |
| | 2 | MS21083N4 | NUT, LOCKING, LOW HEIGHT, 1/4-28 UNF |
| | 2 | AN3-6A | BOLT, 10-32, 0.375 GRIP, UNDRILLED, STEEL |
| | 2 | NAS1149D0316J | WASHER, 0.203 ID, 0.016 THK, ALUMINUM |
| | 2 | MS21044N3 | NUT, LOCKING, REGULAR HEIGHT, 10-32 UNF |
| 9 | 1 | AN5-12A | BOLT SIZE 5/16-24, LENGTH 1/64 - 1-11/32, GRIP LENGTH 13/16 |
| | A/R | NAS1149D0563J | WASHER, 0.328 ID, 0.063 THK, ALUMINUM |
| | 1 | MS21044N5 | NUT, LOCKING, REGULAR HEIGHT, 5/16-24 UNF |

# STEERING & RETRACT SYSTEM INSTALLATION

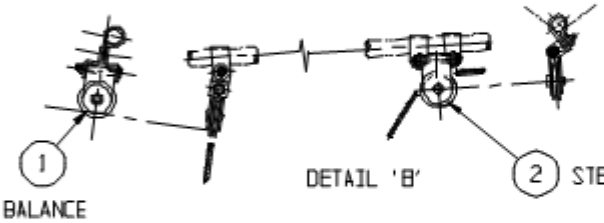



RIGHT REAR RUDDER PEDAL (SHOWN)



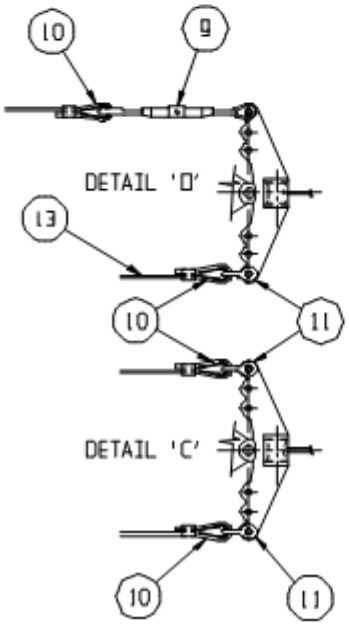

DETAIL 'A'

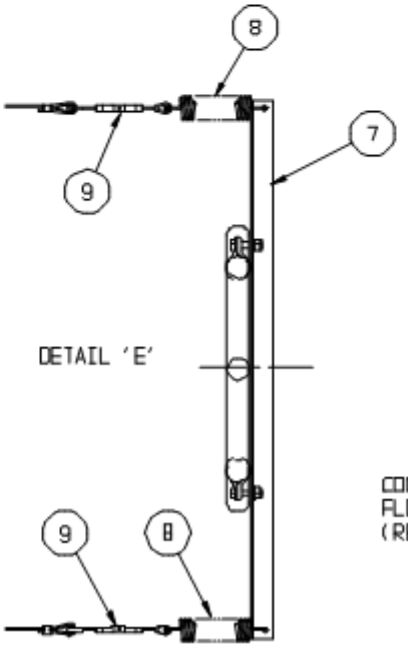


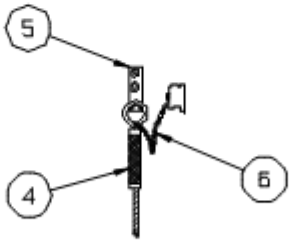

BALANCE

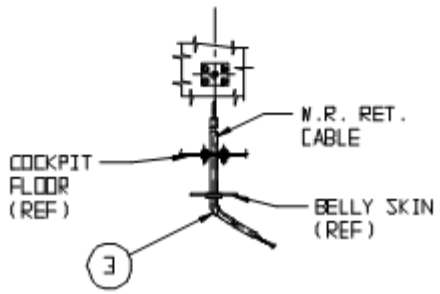
DETAIL 'B'

STEERING (2)



| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 1 | 1 | 21A08000-126 | ASS'Y., BALANCE PULLEY |
| | 1 | 21A08000-125 | ASS'Y., PULLEY BRACKET |
| | 1 | 21A08008-150 | BRACKET - PULLEY |
| | 1 | 21A08230-002 | SPACER, BLOCK |
| | 1 | MS20219-2 | PULLEY |
| | 1 | AN4-7A | BOLT, 1/4-28, 0.4375 GRIP, UNDRILLED, STEEL |
| | 1 | NAS1149D0463J | WASHER, 0.265 ID, 0.063 THK, ALUMINUM |
| | 1 | MS21083N4 | NUT, LOCKING, LOW HEIGHT, 1/4-28 UNF |
| | 2 | 21A08163-068 | BRACKET, "Z" |
| | 2 | AN742D12 | CLAMP, LOOP |
| | 1 | AN3-17A | BOLT, 10-32, 1.5 GRIP, UNDRILLED, STEEL |
| | 3 | AN3-5A | BOLT, 10-32, 0.25 GRIP, UNDRILLED, STEEL |
| | A/R | NAS1149D0363J | WASHER, 0.203 ID, 0.063 THK, ALUMINUM |
| | 4 | MS21044N3 | NUT, LOCKING, REGULAR HEIGHT, 10-32 UNF |
| | 2 | AN3-4A | BOLT, 10-32, 0.125 GRIP, UNDRILLED, STEEL |
| | 4 | NAS1149F0332P | WASHER, 0.203 ID, 0.032 THK, STEEL |
| | 1 | 1001957 | STRAP, SUPPORT, PULLEY, BALANCE |
| | 1 | NAS1149D0416J | WASHER, 0.265 ID, 0.016 THK, ALUMINUM |
| 2 | 2 | 21A08000-124 | ASS'Y., STEERING PULLEY |
| | 1 | 21A08000-125 | ASS'Y., PULLEY BRACKET |
| | 1 | 21A08008-150 | BRACKET |
| | 1 | 21A08230-002 | SPACER, BLOCK |
| | 1 | MS20219-2 | PULLEY |
| | 1 | AN4-7A | BOLT, 1/4-28, 0.4375 GRIP, UNDRILLED, STEEL |
| | 1 | NAS1149D0463J | WASHER, 0.265 ID, 0.063 THK, ALUMINUM |
| | 1 | MS21083N4 | NUT, LOCKING, LOW HEIGHT, 1/4-28 UNF |
| | 2 | AN742D12 | CLAMP, LOOP |
| | 2 | AN42B4A | BOLT EYE, 10-32 THREAD, #10 SIZE, 1/8" GRIP, 17/32" LENGTH |
| | 1 | AN3-17A | BOLT, 10-32, 1.5 GRIP, UNDRILLED, STEEL |
| | A/R | NAS1149D0363J | WASHER, 0.203 ID, 0.063 THK, ALUMINUM |
| | 3 | MS21044N3 | NUT, LOCKING, REGULAR HEIGHT, 10-32 UNF |
| | 2 | NAS1149D0316J | WASHER, 0.203 ID, 0.016 THK, ALUMINUM |
| | 1 | NAS1149D0416J | WASHER, 0.265 ID, 0.016 THK, ALUMINUM |
| 3 | 1 | 21A08000-129 | ASS'Y., RETRACT TUBE |
| | 1 | MS354489-11 | GROMMET, RUBBER |
| | 4 | AN5261032R12 | SCREW, ATTACH |
| | 4 | AN970-3 | WASHER, .203 ID, .875 OD, .063 THK |
| | 4 | MS21044N3 | NUT, LOCKING, REGULAR HEIGHT, 10-32 UNF |
| 4 | 1 | 21A08274-007 | HANDLE, RETRACT |
| | 1 | 33056 | COUPLING SET SCREW, 10/32 X 1/4, 3/16" DIA |
| 5 | 1 | 21A08487-001 | HOOK, RETAINER CLIP |

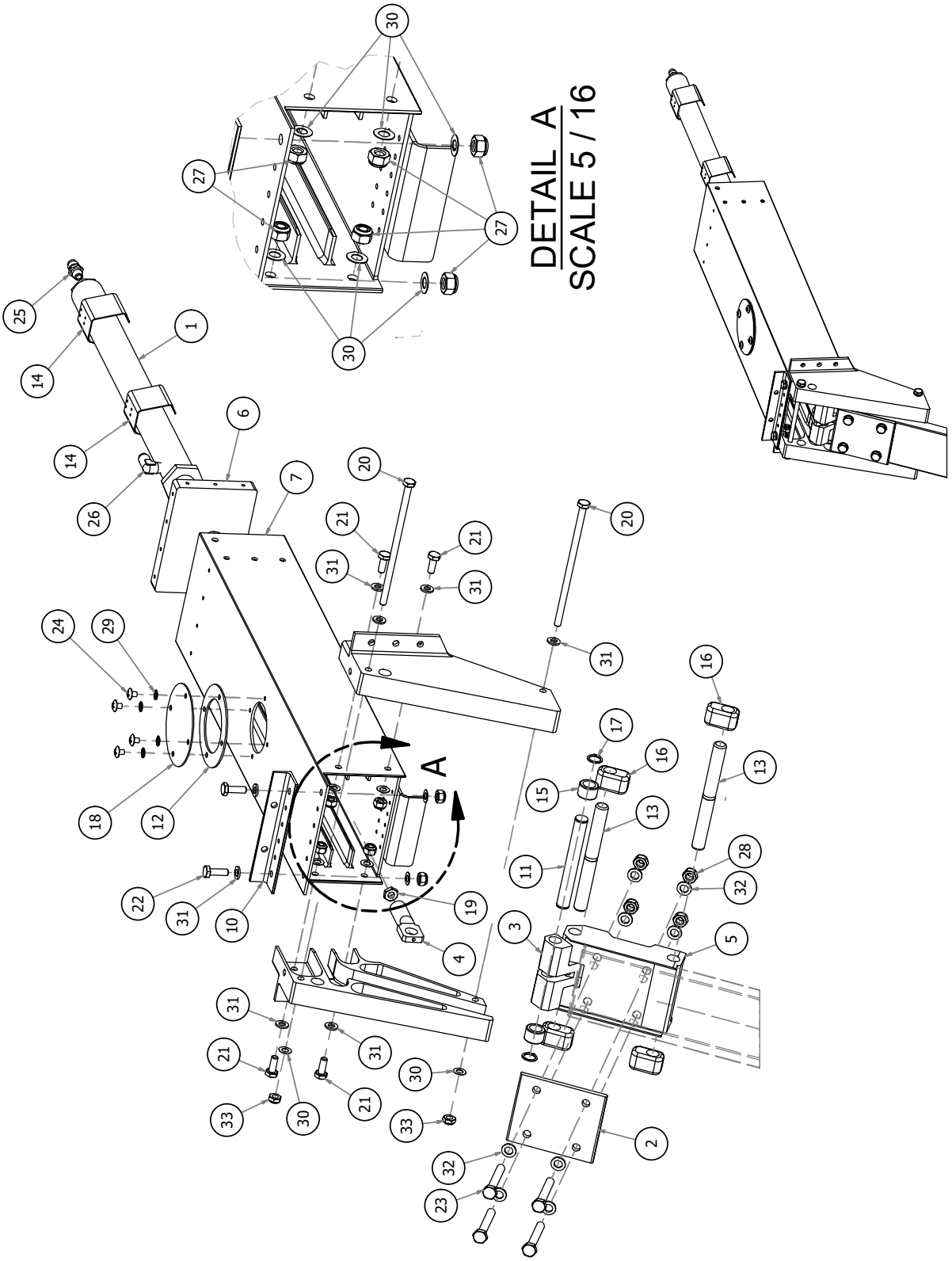
| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| | 2 | AN5261032R8 | SCREW, ATTACH |
| | 2 | MS21044N3 | NUT, LOCKING, REGULAR HEIGHT, 10-32 UNF |
| 6 | 1 | 21A08747-001 | CHAIN, RETRACT, 15 INCHES |
| 7 | 1 | 21A12359-202 | EXTENSION, RUDDER HORN |
| | 2 | AN742D10 | CLAMP, ATTACH |
| | 2 | AN4-6A | BOLT, 1/4-28, 0.3125 GRIP, UNDRILLED, STEEL |
| | 2 | NAS1149D0463J | WASHER, 0.265 ID, 0.063 THK, ALUMINUM |
| | 2 | MS21044N4 | NUT, LOCKING, REGULAR HEIGHT, 1/4-28 UNF |
| 8 | 2 | 21A08525-005 | SPRING |
| 9 | 3 | MS21251B3S | TURNBUCKLE, BARREL |
| | 3 | MS21255-3RS | FORK, TERMINAL |
| | 1 | MS20392-2C13 | PIN ATTACH |
| | 1 | MS24665-132 | PIN, COTTER |
| | 1 | NAS1149D0316J | WASHER, 0.203 ID, 0.016 THK, ALUMINUM |
| | 3 | MS21255-3LS | EYE, TERMINAL |
| 10 | 8 | AN100-3 | THIMBLE, CABLE |
| | 9 | MS51844-43 | NICOPRESS, CLAMP |
| 11 | 5 | MS20115-3 | SHACKLES |
| | 6 | MS20392-2C13 | PIN, ATTACH |
| | 5 | MS24665-132 | PIN, COTTER |
| 12 | A/R | RM690 | CABLE (REQUEST LENGTH) 3/32 X 7 |

# SECTION 8
# LANDING GEAR

## CONTENTS

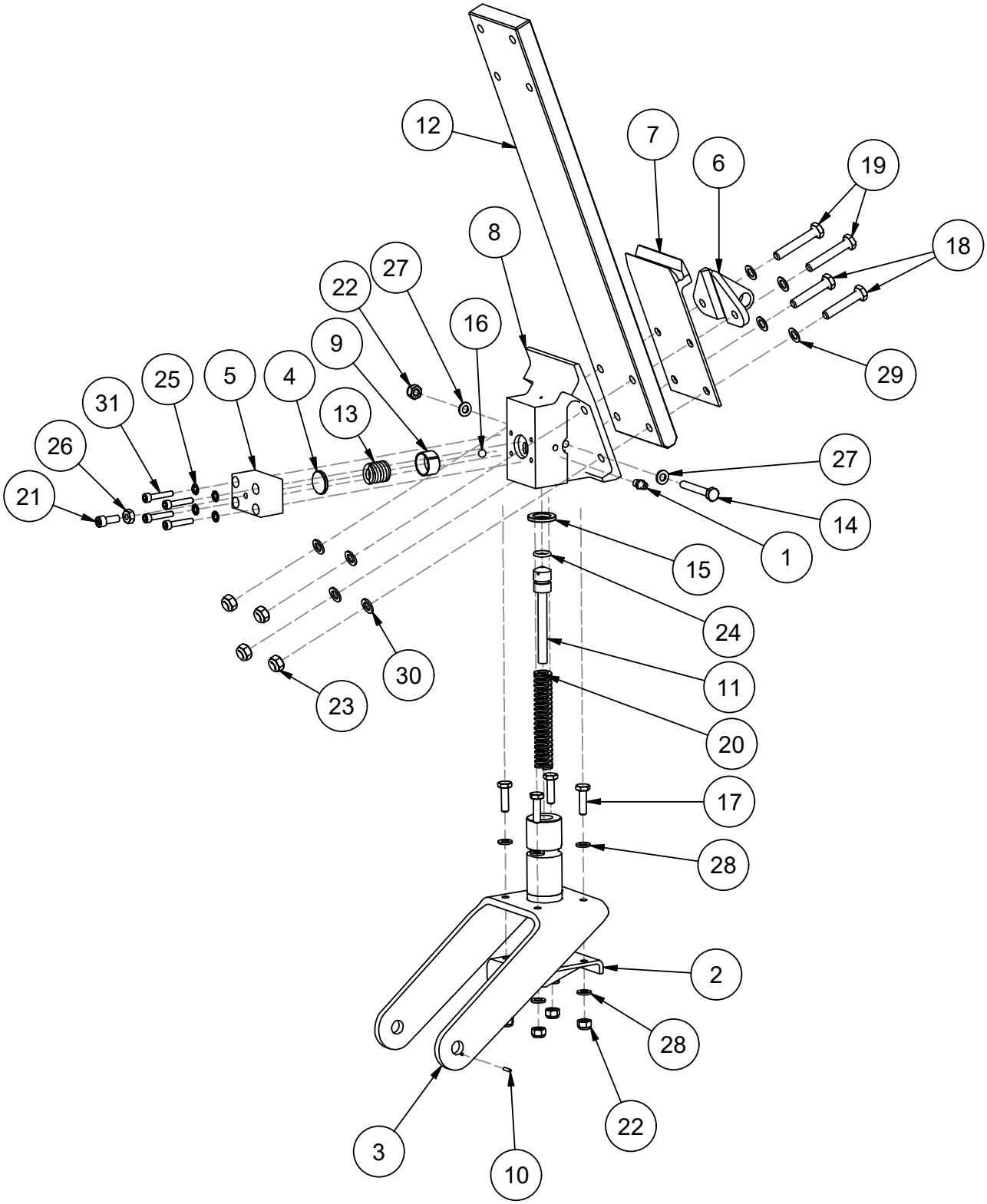
NOSE GEAR RETRACTION ASSEMBLY....70
NOSE GEAR LOWER ASSEMBLY....72
NOSE WHEEL ASSEMBLY (GROVE)....74
NOSE WHEEL ASSEMBLY (PARKER)....76
MAIN GEAR RETRACTION INSTALLATION....78
MAIN GEAR WHEEL GROVE / WIPAIRE ASSEMBLY....81
MAIN GEAR WHEEL CLEVLAND / PARKER ASSEMBLY....83

# NOSE GEAR RETRACTION ASSEMBLY



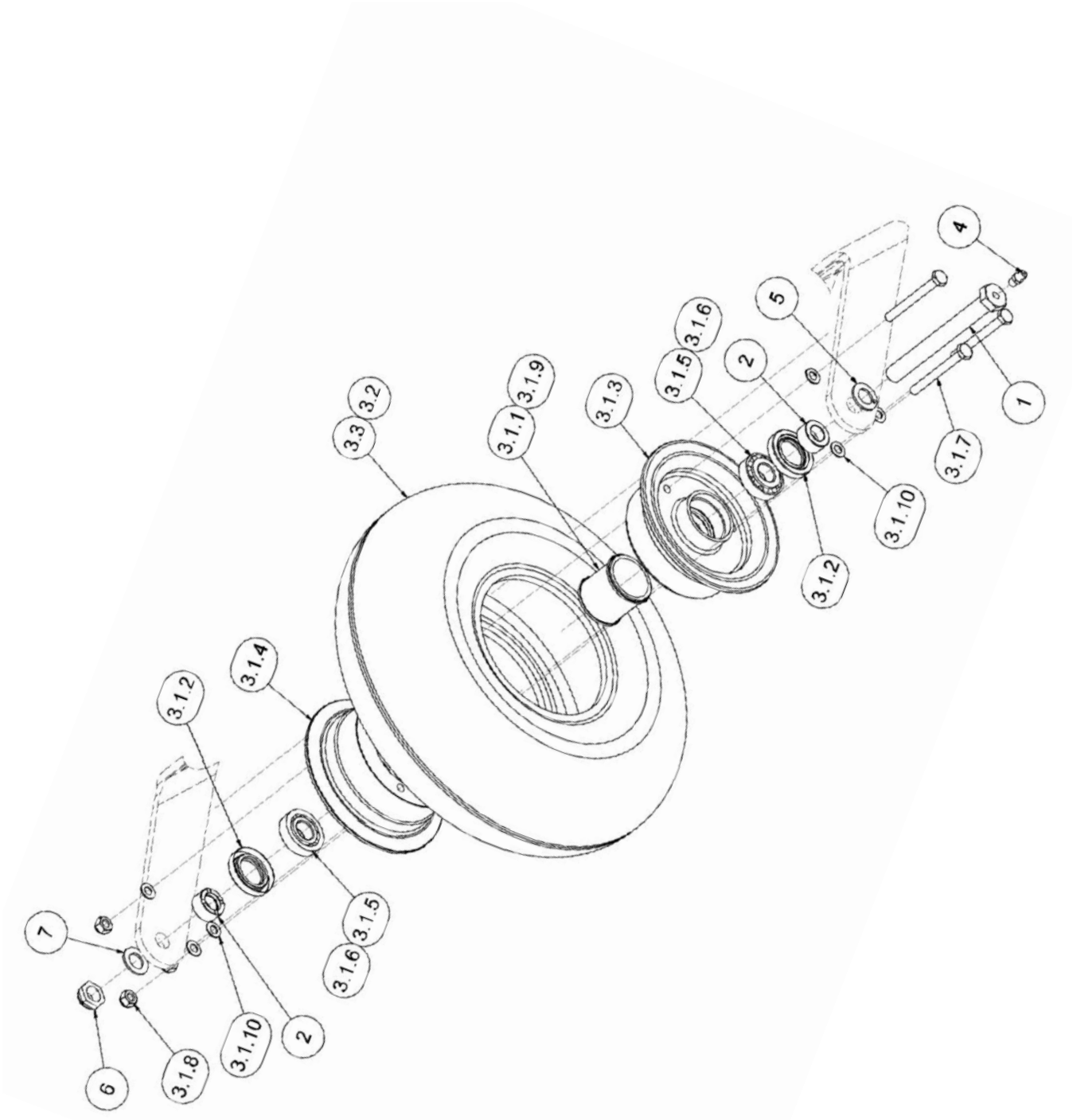
| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 1 | 1 | 1002571 | CYLINDER, NOSE GEAR, 2100/2350 |
| 2 | 1 | 21A06166-001 | PLATE - BEARING, NOSE SPRING |
| | 2 | 21A09005-262 | CLIP-MAGNETIC INDICATOR (NOT SHOWN) |
| | 2 | 5801 | PROXIMITY SWITCH (NOT SHOWN) |
| | 4 | MS24693-S6 | SCREW, COUNTERSUNK , 4-40 UNC, 0.5 LG (NOT SHOWN) |
| 3 | 1 | 21A07032-005 | LINK - TROLLEY, NOSE GEAR |
| 4 | 1 | 21A07094-002 | END - ROD, CYLINDER, NOSE GEAR |
| 5 | 1 | 21A07187-009 | TROLLEY - NOSE GEAR |
| 6 | 1 | 21A07237-002 | END CAP, NOSE BOX |
| 7 | 1 | 21A07323-001 | BOX, NOSE GEAR |
| 8 | 1 | 21A07349-003 | END, NOSE BOX, TRACK |
| 9 | 1 | 21A07349-004 | END, NOSE BOX, TRACK |
| 10 | 1 | 21A07359-194 | EXTRUSION, ANGLE |
| 11 | 1 | 21A07509-007 | AXLE, TROLLEY LINK |
| 12 | 1 | 30A07567-011 | GASKET, COVER, NOSE BOX, 2100 AND 3000 |
| 13 | 2 | 34A07509-008 | AXLE, TROLLEY |
| 14 | 2 | 3A07005-178 | CLIP, SWITCH, NOSE & MAIN |
| 15 | 2 | 3A07530-001 | BEARING - TROLLEY, NOSE GEAR |
| 16 | 4 | 3A07604-001 | BLOCK, SLIDE, TROLLEY, NOSE GEAR |
| 17 | 2 | 5100-46-H | SNAP RING |
| 18 | 1 | 8A01008-080 | COVER, BULKHEAD HYD CYL. HOLE |
| 19 | 1 | AN316-5R | NUT JAM, HEXAGON, 5/16-24 THREAD, RIGHT |
| 20 | 2 | AN4-53A | BOLT, 1/4-28, 4.9375197 GRIP, UNDRILLED, STEEL |
| 21 | 4 | AN4-5A | BOLT, 1/4-28, 0.1875 GRIP, UNDRILLED, STEEL |
| 22 | 2 | AN4-6A | BOLT, 1/4-28, 0.3125 GRIP, UNDRILLED, STEEL |
| 23 | 4 | AN5-20A | BOLT, 5/16-24, 1.5625 GRIP, UNDRILLED, STEEL |
| 24 | 4 | AN526-1032R4 | SCREW, MACHINE, TRUSS HEAD |
| 25 | 1 | AN816-4D | NIPPLE, FLARED TUBE AND PIPE THREAD |
| 26 | 1 | MS20822-4D | ELBOW |
| 27 | 6 | MS21044N4 | NUT, LOCKING, REGULAR HEIGHT, 1/4-28 UNF |
| 28 | 4 | MS21044N5 | NUT, LOCKING, REGULAR HEIGHT, 5/16-24 UNF |
| 29 | 4 | MS35333-39 | STAR WASHER |
| 30 | 8 | NAS1149D0416J | WASHER, 0.265 ID, 0.016 THK, ALUMINUM |
| 31 | 8 | NAS1149D0463J | WASHER, 0.265 ID, 0.063 THK, ALUMINUM |
| 32 | 8 | NAS1149F0563P | WASHER, 0.328 ID, 0.063 THK, STEEL |
| 33 | 2 | NAS679-A4W | KAYNAR NUT |

# NOSE GEAR LOWER ASSEMBLY



| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 1 | 1 | 1095K41 | COMMON GREASEZERK |
| 2 | 1 | 21A06000-020 | WELDMENT, PIVOT SHAFT, NOSE GEAR |
| 3 | 1 | 21A06020-001 | FORK, NOSE GEAR (2100) |
| 4 | 1 | 21A06160-053 | PRESSURE PLATE |
| 5 | 1 | 21A06194-005 | BLOCK - SPRING |
| 6 | 1 | 21A06213-006 | TOW HOOK NOSE GEAR |
| 7 | 1 | 21A06237-001 | BEARING PLATE, LOWER, NOSE GEAR |
| 8 | 1 | 21A06318-005 | BLOCK - PIVOT, NOSE GEAR |
| 9 | 1 | 21A06475-006 | FRICTION CUP |
| 10 | 1 | 21A06476-003 | PIN, ANTIROTATION |
| 11 | 1 | 21A06605-002 | PLUNGER- NOSE WHEEL, 21, 23, 3, 34 |
| 12 | 1 | 21A06653-001 | SPRING NOSE GEAR |
| 13 | 1 | 21A06705-005 | PRESSURE SPRING |
| 14 | 1 | 30A06702-016 | BOLT, MODIFIED, PIVOT BLOCK |
| 15 | 1 | 3A06602-001 | THRUST WASHER |
| 16 | 1 | 9528K15 | 1/4" CHROME BALL BEARING |
| 17 | 4 | AN4-7A | BOLT, 1/4-28, 0.4375 GRIP, UNDRILLED, STEEL |
| 18 | 2 | AN5-14A | BOLT, 5/16-24, 1.0625 GRIP, UNDRILLED, STEEL |
| 19 | 2 | AN5-16A | BOLT, 5/16-24, 1.3125 GRIP, UNDRILLED, STEEL |
| 20 | 1 | M62-350 | SPRING |
| 21 | 1 | MS16997-60 | SOCKET HEAD CAP SCREW |
| 22 | 5 | MS21044N4 | NUT, LOCKING, REGULAR HEIGHT, 1/4-28 UNF |
| 23 | 4 | MS21044N5 | NUT, LOCKING, REGULAR HEIGHT, 5/16-24 UNF |
| 24 | 1 | MS28775-111 | "O" RING, HYDRAULIC |
| 25 | 4 | MS35333-39 | STAR WASHER |
| 26 | 1 | MS35649-2252 | NUT, PLAIN, HEXAGON, 1/4-20 UNC, STEEL |
| 27 | 2 | NAS1149D0463J | WASHER, 0.265 ID, 0.063 THK, ALUMINUM |
| 28 | 8 | NAS1149F0463P | WASHER, 0.265 ID, 0.063 THK, STEEL |
| 29 | 4 | NAS1149F0532P | WASHER, 0.328 ID, 0.032 THK, STEEL |
| 30 | 4 | NAS1149F0563P | WASHER, 0.328 ID, 0.063 THK, STEEL |
| 31 | 4 | NAS1352-316P | SOCKET HEAD CAP SCREW |
| 32 | 1 | 21A06166-001 | PLATE – BEARING, NOSE SPRING (NOT SHOWN) |
|  | 4 | AN5-20A | BOLT, 5/16-24, 1.5625 GRIP, UNDRILLED, STEEL (NOT SHOWN) |
|  | 4 | NAS1149F0563P | WASHER, 0.328 ID, 0.063 THK, STEEL (NOT SHOWN) |
|  | 4 | MS21044N5 | NUT, LOCKING, REGULAR HEIGHT, 5/16-24 UNF (NOT SHOWN) |

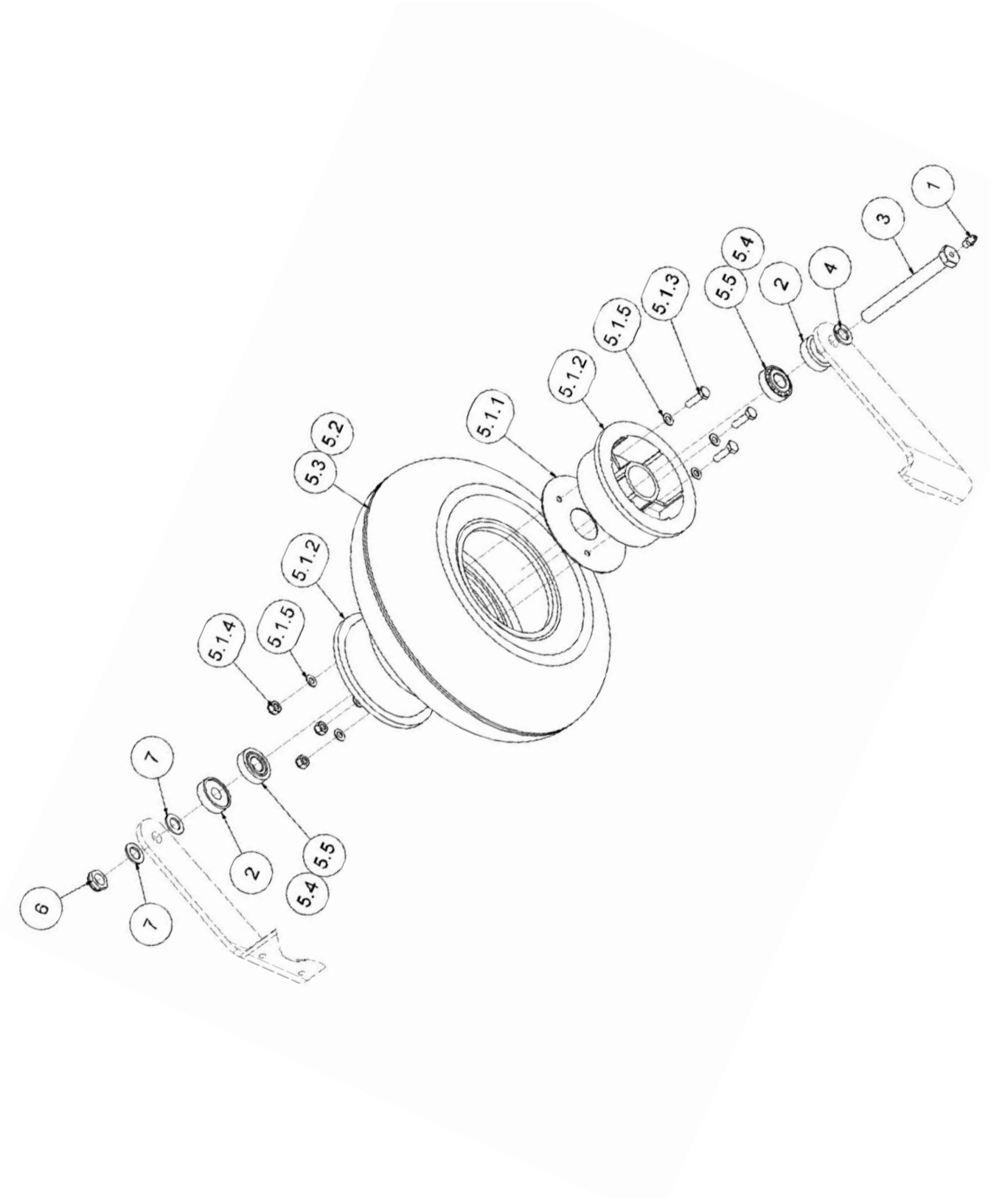
# NOSE WHEEL ASSEMBLY (GROVE)



| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 1 | 1 | 1005927 | BOLT, AXLE, NOSE GEAR |
| 2 | 2 | 1005929 | SPACER |
| 3 | 1 | 1005931 | ASSEMBLY, NOSE WHEEL |
| 3.1 | 1 | 49-12AF-001 | ASSEMBLY, WHEEL, GROVE |
| 3.1.1 | 1 | 010-019 | GREASE RETAINER |
| 3.1.2 | 2 | 471570 | SEAL, TIMKEN (EQUIVALENT TO GROVE OEM P/N 010-026) |
| 3.1.3 | 1 | 015-020A | WHEEL HALF INNER |
| 3.1.4 | 1 | 016-020AF | WHEEL HALF OUTER |
| 3.1.5 | 2 | A4050 | BEARING CORE |
| 3.1.6 | 2 | A4138 | BEARING CONE |
| 3.1.7 | 3 | AN4-23A | BOLT, 1/4-28, 1.9375 GRIP, UNDRILLED, STEEL |
| 3.1.8 | 3 | MS21044N4 | NUT, LOCKING, REGULAR HEIGHT, 1/4-28 UNF |
| 3.1.9 | 2 | MS28775-029 | O RING, I.D 1.489, O.D. 1.629. .070 THICK |
| 3.1.10 | 6 | NAS1149F0416 | WASHER, 0.265 ID, 0.016 THK, STEEL |
| 3.2 | 1 | XA1AA* | INNER TUBE, 2.80 X 4 |
| 3.3 | 1 | AD1A2* | TIRE, 2.50 / 2.80 - 4 |
| 4 | 1 | 1095K41 | COMMON GREASEZERK |
| 5 | 1 | 3A06702-003 | MODIFIED WASHER |
| 6 | 1 | MS21083N8 | NUT, SELFLOCKING, 1/2-20 THREAD, NYLON INSERT, 250 DEG. |
| 7 | 1 | NAS1149D0863J | WASHER, 0.515 ID, 0.063 THK, ALUMINUM |
| 8 | 1 | 21A06476-003 | PIN ANTI ROTATE AXLE |

* Any alternate tire (tube type) which is TSO-approved, matches the listed tire's dimensions, and meets its speed/load/ply ratings may be used. Equivalent tubes may also be used.

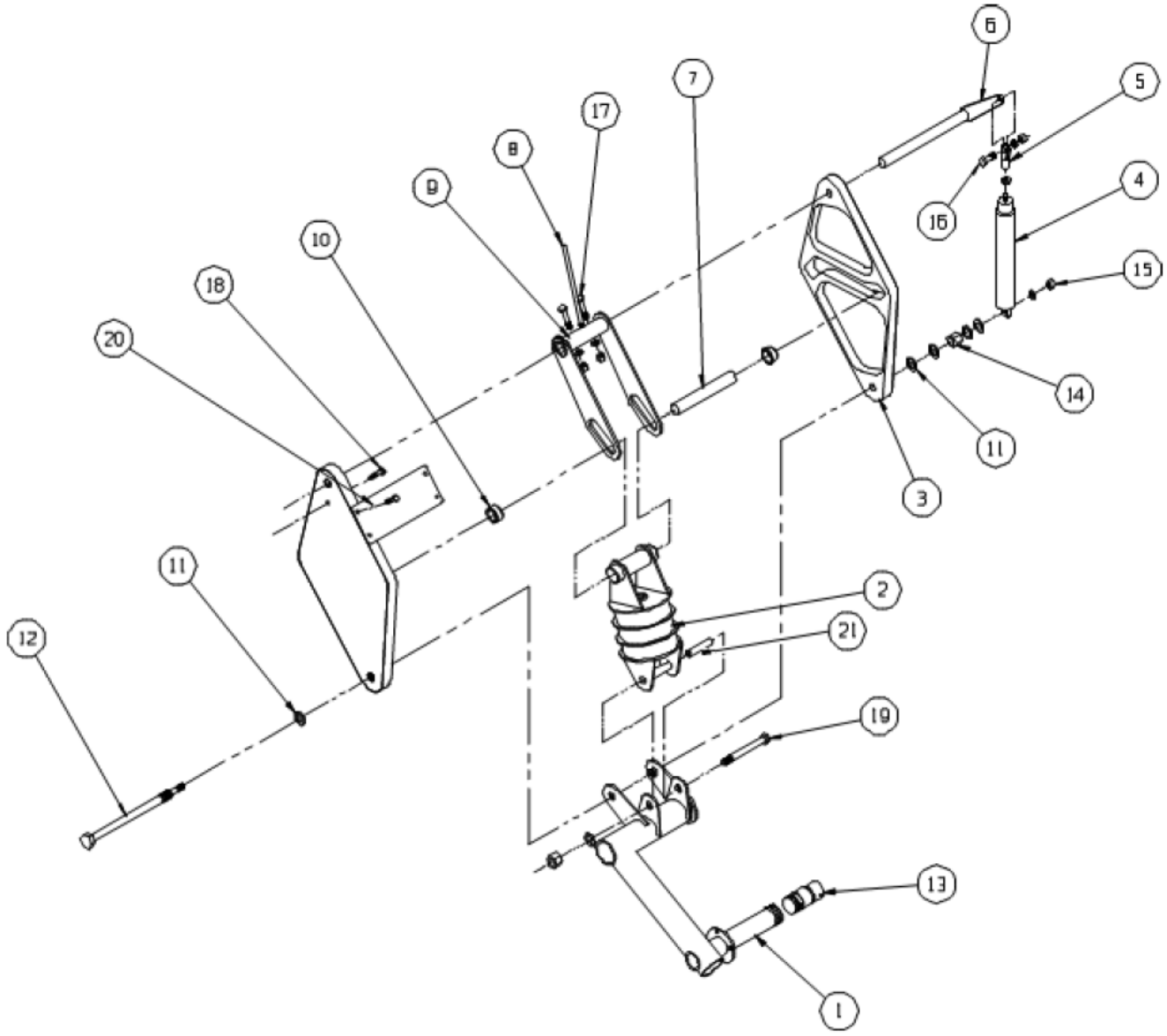
# NOSE WHEEL ASSEMBLY (PARKER)



| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 1 | 1 | 1095K41 | COMMON GREASEZERK |
| 2 | 2 | 3A06259-001 | SPACER |
| 3 | 1 | 3A06702-002 | BOLT, MODIFIED, AXLE, NOSE GEAR |
| 4 | 1 | 3A06702-003 | MODIFIED WASHER |
| 5 | 1 | 21A06000-021 | NOSE WHEEL ASSEMBLY |
| 5.1 | 1 | D-30380 | PARKER WHEEL ASSEMBLY |
| 5.1.1 | 1 | 068-30373 | GASKET |
| 5.1.2 | 2 | 161-30382 | WHEEL HALF |
| 5.1.3 | 3 | AN4-7A | BOLT, 1/4-28, 0.4375 GRIP, UNDRILLED, STEEL |
| 5.1.4 | 3 | MS21044N4 | NUT, LOCKING, REGULAR HEIGHT, 1/4-28 UNF |
| 5.1.5 | 6 | NAS1149F0432P | WASHER, 0.265 ID, 0.032 THK, STEEL |
| 5.2 | 1 | XA1AA* | INNER TUBE, 2.80 X 4 |
| 5.3 | 1 | AD1A2* | TIRE, 2.50 / 2.80 - 4 |
| 5.4 | 2 | A4050 | BEARING CORE |
| 5.5 | 2 | A4138 | BEARING CONE |
| 6 | 1 | MS21083N8 | NUT, SELFLOCKING, 1/2-20 THREAD, NYLON INSERT, 250 DEG. |
| 7 | 2 | NAS1149D0863J | WASHER, 0.515 ID, 0.063 THK, ALUMINUM |

* Any alternate tire (tube type) which is TSO-approved, matches the listed tire's dimensions, and meets its speed/load/ply ratings may be used. Equivalent tubes may also be used.

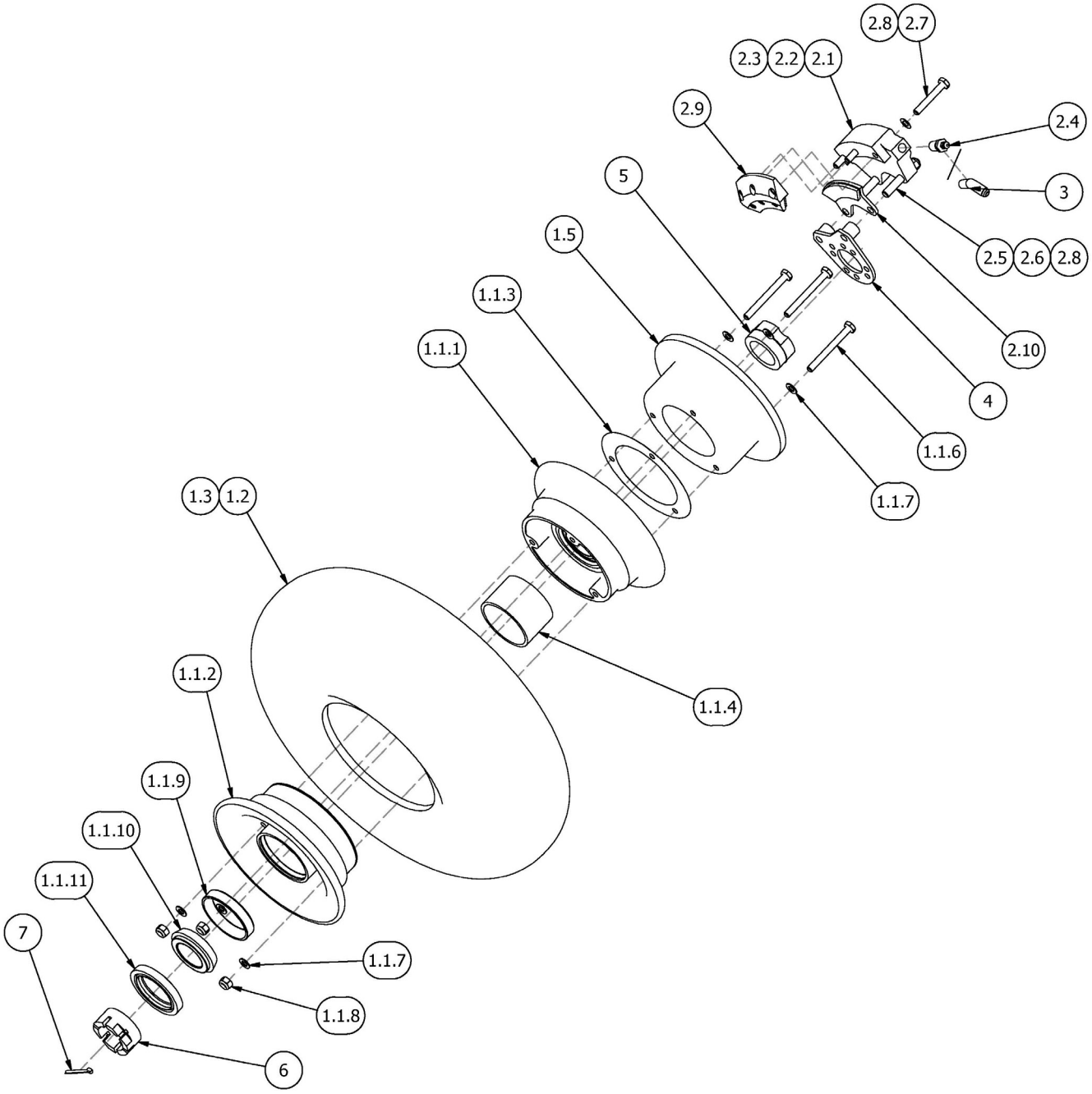
# MAIN GEAR RETRACTION INSTALLATION



| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 1 | 1 | 21A04000-077 | ASSY. – DRAG LINK L. |
| | 1 | 21A04000-076 | ASSY. – DRAG LINK R. |
| | 2 | 08FDU12 | BEARING |
| 2 | 1 | 21A04000-073 | ASSY. SHOCK STRUT |
| | 1 | 21A04000-074 | ASSY. - UPPER END |
| | 1 | 21A04000-075 | ASSY. – LOWER END |
| | 2 | 1095K41 | ZERK – GREASE |
| | 2 | NAS1149D0416J | WASHER, 0.265 ID, 0.016 THK, ALUMINUM |
| | 2 | NAS1149D0463J | WASHER, 0.265 ID, 0.063 THK, ALUMINUM |
| | 1 | 1002087 | DUAL BUSHING ASSEMBLY |
| | 1 | 1001100 | BUSHING ASSEMBLY |
| | 1 | 21A04503-004 | RETAINING PIN |
| | 1 | MS24665-151 | COTTER PIN |
| | 1 | 21A04585-002 | SLEEVES |
| 3 | 1 | 21A05114-005 | TRACK – MAIN GEAR L. |
| | 1 | 21A05114-006 | TRACK – MAIN GEAR R. |
| | 1 | 10DU12 | BEARING - UPPER |
| | 1 | 08DU12 | BEARING – LOWER |
| 4 | 1 | 1002574 | CYLINDER |
| | 2 | MS20822-4D | ELBOW 90 DEG, 7/16-20 TUBE THREAD, 5-44 PIPE THREAD |
| 5 | 1 | 21A05705-002 | ROD END |
| | 1 | AN316-5 | JAMB NUT |
| | 1 | 21A05260-005 | SPACER |
| | 1 | MS20002C6 | WASHER TO FIT DIA 3/8", COUNTERSUNK (CHAMFERED EDGE GOES AGAINST CYLINDER) |
| 6 | 1 | 21A05000-017 | ARM – RETRACT L. |
| | 1 | 21A05000-016 | ARM – RETRACT R. |
| 7 | 1 | 21A04454-006 | AXLE – SHOCK STRUT |
| 8 | 1 | 21A05000-022 | INDICTATOR ASSY. |
| 9 | 1 | 21A05000-018 | GEAR ACTUATOR |
| 10 | 2 | 21A05520-003 | ROLLER – TRACK |
| 11 | 2 | 93783A033 | WASHERS, PRESSURE SEALING, W/ ZINC PLATING, 1/2" DIA |
| 12 | 1 | 21A05000-019 | BOLT, MAIN GEAR |
| | 1 | 21A05735-001 | BOLT |
| | 1 | 21A05476-002 | STUD |
| 13 | 1 | 21A04263-007 | RETAINER - GREASE |
| | 2 | MS28775-210 | O RING, DIA 0.734 |
| | 1 | 1095K41 | ZERK – GREASE |
| 14 | 1 | MS21044N8 | NUT, LOCKING, REGULAR HEIGHT, 1/2-20 UNF |
| | 2 | NAS1149F0863P | WASHER, AIRFRAME, TO FIT DIA 1/2" |
| 15 | 1 | MS21083N5 | NUT, LOCKING, LOW HEIGHT, 5/16-24 UNF |

| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| | A/R | NAS1149F0563P | WASHER, 0.328 ID, 0.063 THK, STEEL |
| 16 | 1 | 1005875 | ASSEMBLY, PIN, CLEVIS, MAGNET HOLDER |
| | 2 | NAS1149F0563P | WASHER, 0.328 ID, 0.063 THK, STEEL |
| | 1 | MS21044N5 | NUT, LOCKING, REGULAR HEIGHT, 5/16-24 UNF |
| 17 | 2 | NAS6204-17 | BOLT, 1/4-28 THREAD, 1.432" LENGTH, 1.062" GRIP |
| | 4 | NAS1149D0416J | WASHER, 0.265 ID, 0.016 THK, ALUMINUM |
| | 2 | MS21044N4 | NUT, LOCKING, REGULAR HEIGHT, 1/4-28 UNF |
| 18 | 8 | AN3-6A | BOLT, 10-32, 0.375 GRIP, UNDRILLED, STEEL |
| | 8 | NAS1149D0316J | WASHER, 0.203 ID, 0.016 THK, ALUMINUM |
| | 8 | NAS1149D0363J | WASHER, 0.203 ID, 0.063 THK, ALUMINUM |
| | 8 | MS21044N3 | NUT, LOCKING, REGULAR HEIGHT, 10-32 UNF |
| 19 | 1 | AN8-33A | BOLT, 1/2-20 THREAD, 2-11/16" GRIP, 3-15/32" LENGTH |
| | 1 | NAS1149F0832P | WASHER, 0.515 ID, 0.032 THK, STEEL |
| | 1 | NAS1149F0863P | WASHER, AIRFRAME, TO FIT DIA 1/2" |
| | 1 | MS21044N8 | NUT, LOCKING, REGULAR HEIGHT, 1/2-20 UNF |
| 20 | 1 | 21A05003-079 | PLATE - SEPARATING |
| | 4 | AN3-5A | BOLT, 10-32, 0.25 GRIP, UNDRILLED, STEEL |
| | 8 | NAS1149D0316J | WASHER, 0.203 ID, 0.016 THK, ALUMINUM |
| | 4 | MS21044N3 | NUT, LOCKING, REGULAR HEIGHT, 10-32 UNF |
| 21 | 1 | 21A04547-004 | BUSHING, LOWER, SHOCK STRUT |
| | 2 | 21A09005-262 | CLIP, MAGNETIC INDICATOR (NOT SHOWN) |
| | 2 | 5801 | PROXIMITY SWITCH (NOT SHOWN) |
| | 4 | MS24693-S6 | SCREW, COUNTERSUNK , 4-40 UNC, 0.5 LG (NOT SHOWN) |

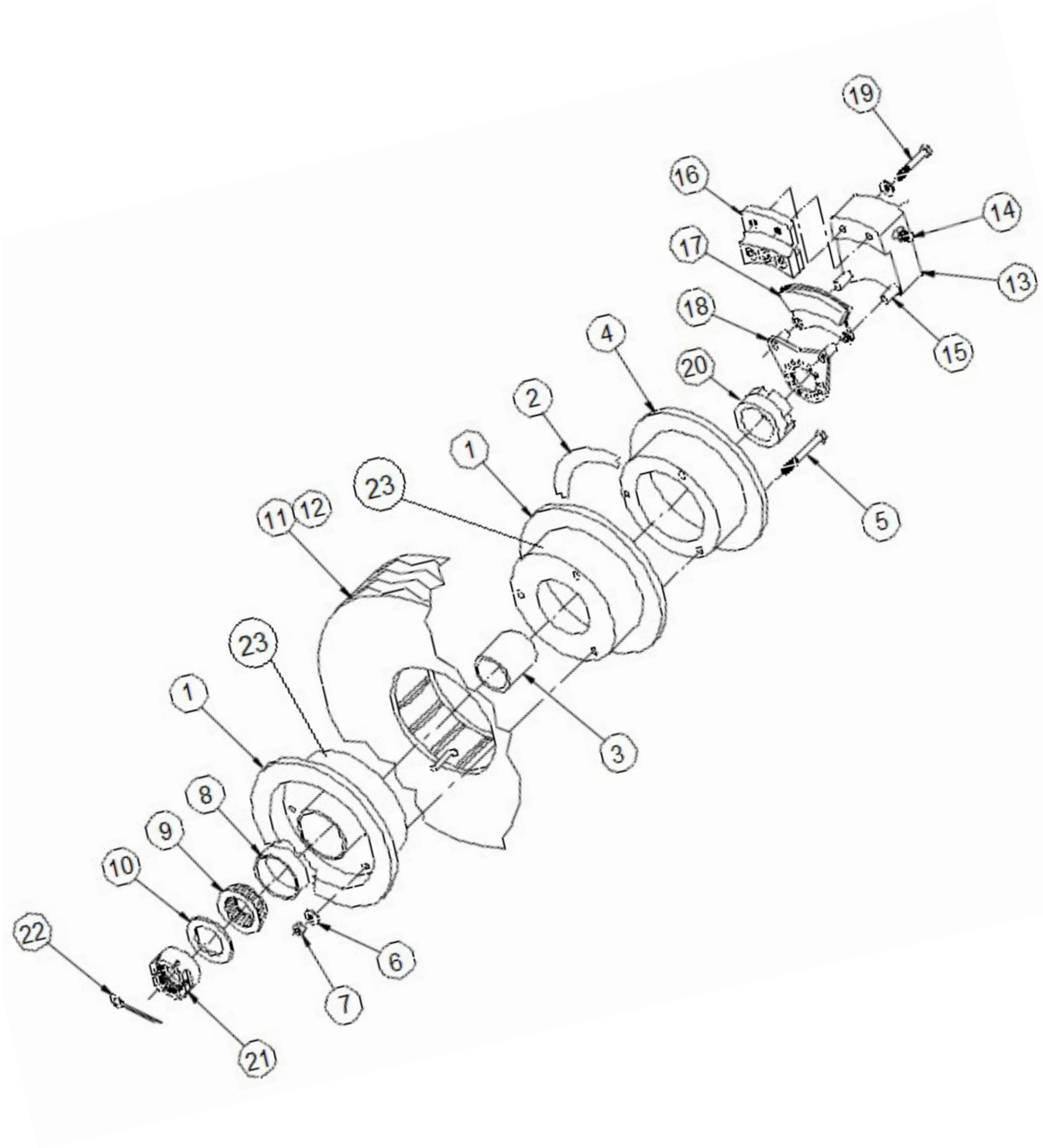
# MAIN GEAR WHEEL GROVE / WIPAIRE ASSEMBLY



| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 1 | 1 | 1002141 | ASSY, MAIN WHEEL, GROVE, 2100 (INCLUDES TIRE AND TUBE) |
| 1.1 | 1 | 1002142 | ASSY, RIM & BEARINGS, GROVE, 2100 |
| 1.1.1 | 1 | 015-002 | WHEEL HALF, INNER (REF) |
| 1.1.2 | 1 | 016-002 | WHEEL HALF, OUTER (REF) |
| 1.1.3 | 1 | 3A04620-001 | GASKET - TEFLON |
| 1.1.4 | 1 | 010-009 | GREASE RETAINER |
| 1.1.5 | 1 | 018-001 | BRAKE DISC (NOMINAL THICKNESS 0.190", MINIMUM 0.165") |
| 1.1.6 | 3 | AN4-23A | BOLT, 1/4-28, 1.9375 GRIP, UNDRILLED, STEEL |
| 1.1.7 | 6 | NAS1149F0432P | WASHER, 0.265 ID, 0.032 THK, STEEL |
| 1.1.8 | 3 | MS21044N4 | NUT, LOCKING, REGULAR HEIGHT, 1/4-28 UNF |
| 1.1.9 | 2 | 08231 | BEARING CUP |
| | - | 08231CP | BEARING CUP (CHROME, REF) |
| 1.1.10 | 2 | 08125 | BEARING CONE |
| | - | 08125CP | BEARING CONE (CHROME, REF) |
| 1.1.11 | 2 | 473237 | SEAL - INSIDE/OUTSIDE |
| 1.2 | 1 | AA1D4* | TIRE –TYPE III 5.00 X 5, 6 PLY |
| 1.3 | 1 | XA1AC* | TUBE 5.00 X 5 |
| 2 | 1 | 32-1 | BRAKE ASSEMBLY |
| 2.1 | 1 | 023-005 | CALIPER BODY (REF) |
| 2.2 | 2 | 017-003 | PISTON (REF) |
| 2.3 | 2 | MS28775-217 | O-RING, HYDRAULIC |
| 2.4 | 1 | 220-0063 | BLEEDER ASSEMBLY |
| 2.5 | 2 | 013-001 | TORQUE PIN (REF) |
| 2.6 | 2 | MS21044N4 | NUT, LOCKING, REGULAR HEIGHT, 1/4-28 UNF |
| 2.7 | 3 | AN4H-15A | BOLT |
| 2.8 | 5 | NAS1149F0416P | WASHER, 0.265 ID, 0.016 THK, STEEL |
| 2.9 | 1 | 10-3 | ASS'Y – BACK PLATE (REF) |
| 2.9.1 | 1 | RA66-111 | LINING (PAD) |
| 2.9.2 | 3 | 066-001 | RIVET |
| | A/R | 105-00200 (ALT) | RIVET (ALTERNATE PN) |
| 2.10 | 1 | 11-2 | ASS'Y – PRESSURE PLATE |
| 2.10.1 | 1 | RA66-111 | LINING (PAD) |
| 2.10.2 | 3 | 066-001 | RIVET |
| | 3 | 105-00200 (ALT) | RIVET (ALTERNATE PN) |
| 3 | 1 | MS20823-3D | FITTING 45˚ BRAKE LINE |
| 4 | 1 | 020-001 | BRAKE TORQUE PLATE |
| 5 | 1 | 3A04093-001 | SPACER |
| 6 | 1 | 3A04268-003 | NUT – AXLE |
| 7 | 1 | MS24665-351 | COTTER PIN |

* Any alternate tire (tube type) which is TSO-approved, matches the listed tire's dimensions, and meets its speed/load/ply ratings may be used. Equivalent tubes may also be used.

# MAIN GEAR WHEEL CLEVELAND / PARKER ASSEMBLY



| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 1 | 1 | 3A04000-002 | ASSY. – WHEEL (W/ TUBE & TIRE) |
| | 1 | 3A04000-060 | ASSY. - WHEEL |
| 2 | 1 | 3A04620-001 | GASKET - TEFLON |
| 3 | 1 | 3A04616-001 | GREASE RETAINER |
| 4 | 1 | 164-01700 | BRAKE DISC |
| 5 | 3 | AN4-22A | BOLT, 1/4-28, 1.8125 GRIP, UNDRILLED, STEEL |
| 6 | 3 | NAS1149F0432P | WASHER, 0.265 ID, 0.032 THK, STEEL |
| 7 | 3 | MS21044N4 | NUT, LOCKING, REGULAR HEIGHT, 1/4-28 UNF |
| 8 | 2 | 8231 | BEARING CUP |
| | 2 | 8231CP | BEARING CUP, CHROME (OPT.) |
| 9 | 2 | 8125 | BEARING CONE |
| | 2 | 8125CP | BEARING CONE, CHROME (OPT.) |
| 10 | 2 | 473237 | SEAL - INSIDE/OUTSIDE |
| 11 | 1 | AA1D4* | TIRE –TYPE III |
| 12 | 1 | XA1AC* | TUBE |
| | 1 | 075-00800 | ASSY. – BRAKE AND TORQUE PLATE |
| 13 | 1 | 21A04000-096 | ASSY. – CALIPER (RIGHT) |
| | 1 | 21A04000-097 | ASSY. – CALIPER (LEFT) |
| | 1 | 062-00300 | PISTON |
| | 1 | MS28775-218 | “O” RING |
| | 1 | MS20823-3D | FITTING - 45 DEGREES (BRAKE LINE) |
| 14 | 1 | 081-30619 | SEAT – BLEEDER |
| | 1 | 79-3 | SCREW – BLEEDER |
| | 1 | 183-1 | CAP – BLEEDER |
| 15 | 2 | 069-00400 | ANCHOR BOLT |
| | 2 | NAS1149F0463P | WASHER, 0.265 ID, 0.063 THK, STEEL |
| | 2 | MS21044N4 | NUT, LOCKING, REGULAR HEIGHT, 1/4-28 UNF |
| 16 | 1 | 074-02700 | ASSY. – BACK PLATE |
| | 1 | 064-00500 | PLATE – BACK |
| | 1 | 066-10600 | LINING |
| | 3 | 105-00200 | RIVET |
| 17 | 1 | 073-04800 | ASSY. – PRESSURE PLATE |
| | 1 | 063-00500 | PLATE - PRESSURE |
| | 1 | 066-10600 | LINING |
| | 3 | 105-00200 | RIVET |
| 18 | 1 | 3A04711-001 | BRAKE TORQUE PLATE - LEFT |
| | 1 | 3A04711-002 | BRAKE TORQUE PLATE – RIGHT |
| 19 | 1 | AN4H15A | BOLT, 1/4-28 THREAD, 1-3/16" GRIP, 1-21/32" LENGTH |
| | 1 | NAS1149F0432P | WASHER, 0.265 ID, 0.032 THK, STEEL |
| 20 | 1 | 3A04093-001 | SPACER |
| 21 | 1 | 3A04268-003 | NUT – AXLE |

| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 22 | 1 | MS24665-351 | COTTER PIN |
| 23 | 1 | 40-78A | WHEEL ASSEMBLY, EXTERNAL, 5.00 X 5 |

* Any alternate tire (tube type) which is TSO-approved, matches the listed tire's dimensions, and meets its speed/load/ply ratings may be used. Equivalent tubes may also be used.

THIS PAGE INTENTIONALLY LEFT BLANK

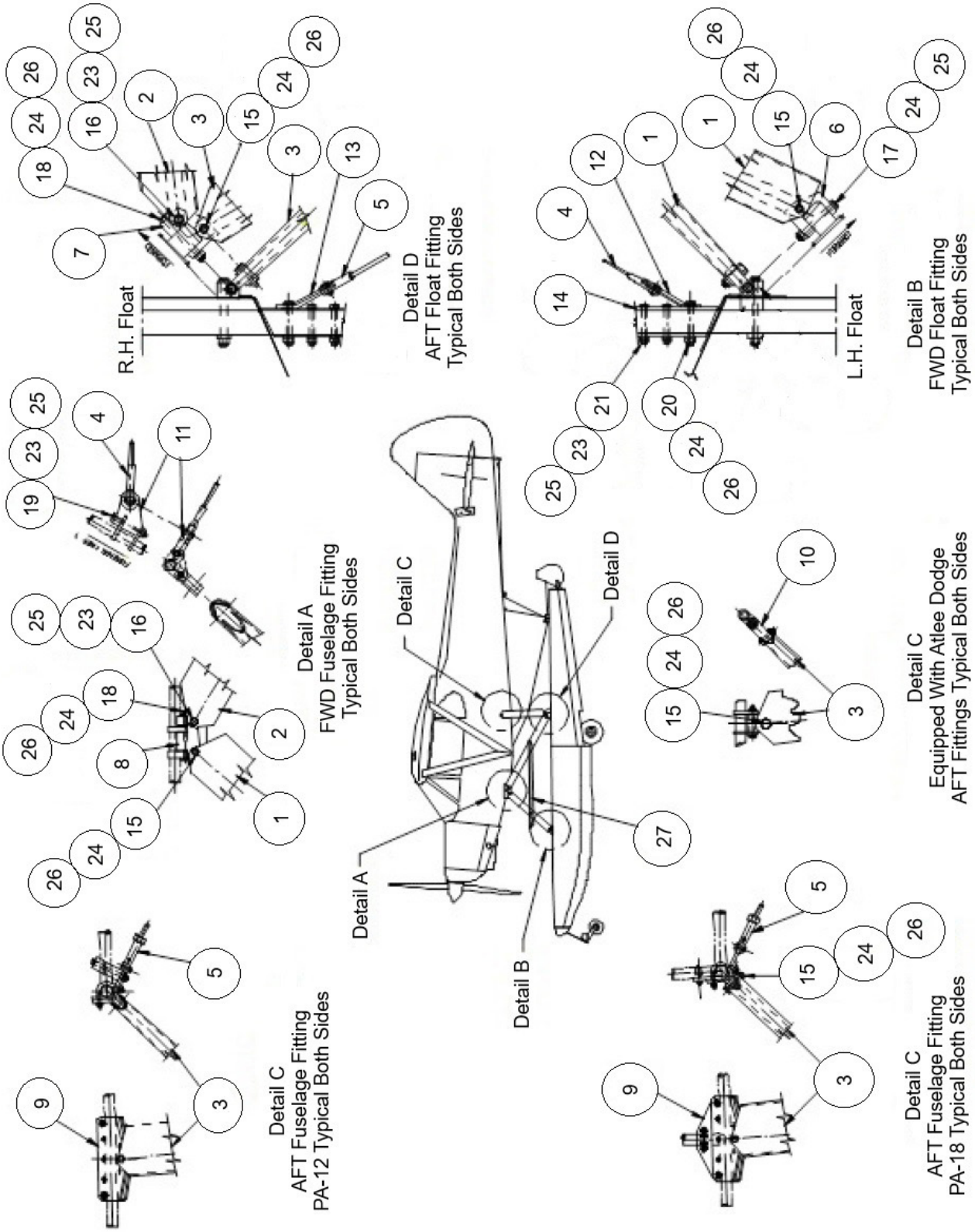
# SECTION 9

# STRUTS, WIRES AND SPREADER BARS

## CONTENTS

STRUTS, WIRES & SPREADER BARS .....88
FWD SPREADER BAR SUPPORT PANEL ASSEMBLY .....92
AFT SPREADER BAR SUPPORT PANEL ASSEMBLY.....93
SPREADER BAR TUBE MOUNTING .....94

# STRUTS, WIRES & SPREADER BARS

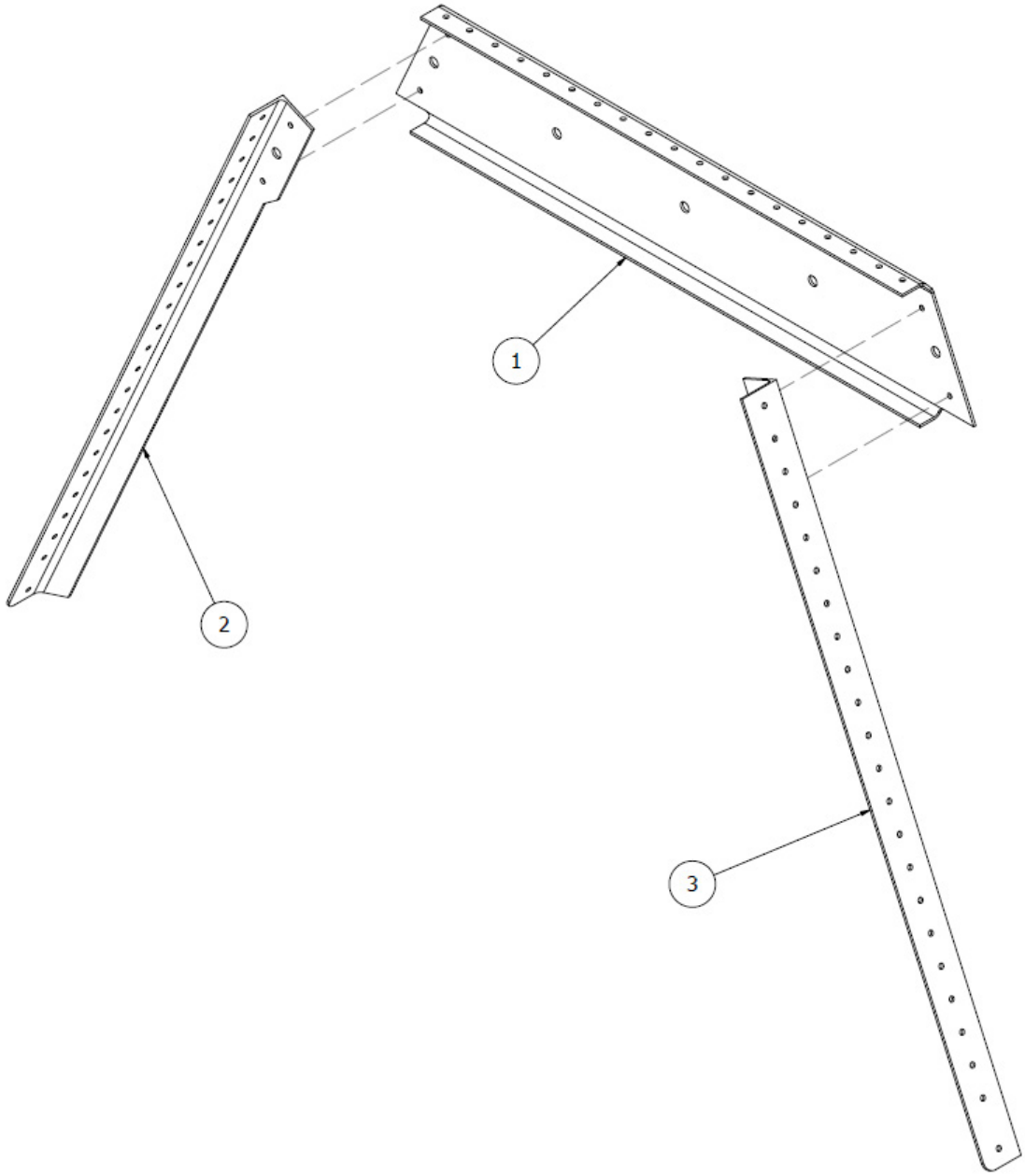


| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 1 | 2 | 21A02334-023 | STRUT, FRONT, PA-18 |
| 2 | 2 | 21A02334-024 | STRUT, CENTER, PA-18 |
| 3 | 2 | 21A02000-146 | ASS'Y., REAR STRUT, PA-18 |
| | 2 | 21A02000-179 | ASS'Y., REAR STRUT, PA-18 (ATLEE DODGE FITTING) (FLOAT S/N BELOW 257) |
| | 2 | 1001527 | ASS'Y., REAR STRUT, PA-18 (CUB CRAFTERS RT.) |
| | 2 | 1001533 | ASS'Y., REAR STRUT, PA-18 (CUB CRAFTERS LT.) |
| | 2 | 21A02000-162 | ASS'Y., REAR STRUT, PA-12 |
| | 2 | 21A02000-169 | ASS'Y., REAR STRUT, PA-12 (ATLEE DODGE FITTING) (FLOAT S/N BELOW 257) |
| 4 | 2 | 21A02000-139 | **ASS'Y., DRAG WIRE, FWD (PA-18)** |
| | 1 | AN705AC-4800 | WIRE |
| | 1 | AN665-46LS * | CLEVIS L. |
| | 1 | AN665-46RS * | CLEVIS R. |
| | 1 | AN316C5L | NUT CHECK L. |
| | 1 | AN316C5R | NUT CHECK R. |
| | 2 | MS20392-4C17 | PIN, CLEVIS |
| | 2 | MS24665-152 | PIN, COTTER |
| | 2 | 21A02000-134 | **ASS'Y., DRAG WIRE, FWD (PA-12)** |
| | 1 | AN705AC-5000 | WIRE |
| | 1 | AN665-46LS * | CLEVIS L. |
| | 1 | AN665-46RS * | CLEVIS R. |
| | 1 | AN316C5L | NUT CHECK L. |
| | 1 | AN316C5R | NUT CHECK R. |
| | 2 | MS20392-4C17 | PIN, CLEVIS |
| | 2 | MS24665-152 | PIN, COTTER |
| 5 | 2 | 21A02000-138 | ASS'Y., DRAG WIRE, AFT |
| | 1 | AN706AC-4525 | WIRE |
| | 1 | AN665-80LAS * | CLEVIS L. |
| | 1 | AN665-80RAS * | CLEVIS R. |
| | 1 | AN316C6L | NUT CHECK L. |
| | 1 | AN316C6R | NUT CHECK R. |
| | 2 | MS20392-5C21 | PIN, CLEVIS |
| | 2 | MS24665-301 | PIN, COTTER |
| 6 | 2 | 21A02055-004 | FTG, LOWER FRONT STRUT |
| 7 | 1 | 21A02055-005 | FTG, LOWER REAR STRUT L. |
| | 1 | 21A02055-006 | FTG, LOWER REAR STRUT R. |
| 8 | 1 | 21A02055-007 | FTG, UPPER FRONT STRUT L. |
| | 1 | 21A02055-008 | FTG, UPPER FRONT STRUT R. |
| 9 | 1 | 21A02000-147 | **ASS'Y., UPPER STRUT FITTING, REAR (PA-18)** |
| | 1 | 21A02455-001 | "U" BOLT, UPPER |

| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| | 2 | 21A02456-001 | “U” BOLT, LOWER |
| | 2 | 21A02487-002 | SADDLE, “U” BOLT |
| | 1 | 21A02019-004 | PLATE, MAIN BASE |
| | 1 | 21A02019-005 | PLATE, UPPER |
| | 1 | 21A02019-006 | PLATE, LOWER |
| | 1 | 21A02020-002 | SPACER, PLATE |
| | A/R | NAS1149D0416J | WASHER, 0.265 ID, 0.016 THK, ALUMINUM |
| | 2 | MS21044N3 | NUT |
| | A/R | NAS1149D0316J | WASHER |
| | 4 | MS21044N4 | NUT |
| | 1 | 21A02000-163 | **ASS’Y., UPPER STRUT FITTING, REAR (PA-12)** |
| | 1 | 21A02456-001 | “U” BOLT |
| | 1 | 21A02487-002 | SADDLE, “U” BOLT |
| | 1 | 21A02019-004 | PLATE- MAIN BASE |
| | 1 | 21A02019-005 | PLATE, UPPER |
| | 1 | 21A02019-006 | PLATE, LOWER |
| | 1 | 21A02020-002 | SPACER, PLATE |
| | 2 | AN3-10A | BOLT, PLATE ATTACH |
| | A/R | NAS1149D0416J | WASHER, 0.265 ID, 0.016 THK, ALUMINUM |
| | 2 | MS21044N3 | NUT, LOCKING, REGULAR HEIGHT, 10-32 UNF |
| | 1 | 21A02060-003 | BLOCK, TUBE SUPPORT |
| | 2 | AN3-25A | BOLT, 10-32 THREAD, 2-1/4" GRIP, 2-21/32" LENGTH |
| | A/R | NAS1149D0316J | WASHER, 0.203 ID, 0.016 THK, ALUMINUM |
| | 4 | MS21044N4 | NUT, LOCKING, REGULAR HEIGHT, 1/4-28 UNF |
| 10 | 2 | 21A02472-005 | FITTING, REAR STRUT (ATLEE DODGE) (FLOAT S/N BELOW 256) |
| | 2 | 21A02206-005 | FITTING, REAR STRUT (ATLEE DODGE) (FLOAT S/N 257 ON) |
| 11 | 2 | 21A02075-002 | WIRE PULL, FWD, UPPER |
| 12 | 2 | 21A02462-004 | WIRE PULL, FWD, LOWER (PA-18) |
| | 2 | 21A02519-007 | WIRE PULL, FWD, LOWER (PA-12) |
| 13 | 2 | 21A02462-005 | WIRE PULL, AFT, LOWER (PA-18) |
| | 2 | 21A02462-008 | WIRE PULL, AFT, LOWER (PA-12) |
| 14 | 2 | 21A03356-047 | SPREADER BAR |
| 15 | 6 | AN6-16A | BOLT, 3/8-24, 1.1875 GRIP, UNDRILLED, STEEL |
| 16 | 4 | AN5-15A | BOLT, 5/16-24, 1.1875 GRIP, UNDRILLED, STEEL |
| 17 | 2 | AN6-33A | BOLT, 3/8-24 THREAD, 2-13/16" GRIP, 3-29/64 LENGTH |
| 18 | 4 | AN6-34A | BOLT, 3/8-24, 2.9375 GRIP, UNDRILLED, STEEL |
| 19 | 2 | AN5-24A | BOLT, 5/16-24 THREAD, 2-1/16" GRIP, 2-19/32" LENGTH |
| 20 | 4 | AN6-26A | BOLT SIZE 3/8-24, LENGTH 1/64 - 2-53/64, GRIP LENGTH 2-3/16 |
| 21 | 8 | AN5-24A | BOLT, 5/16-24 THREAD, 2-1/16" GRIP, 2-19/32" LENGTH |
| 22 | 8 | AN6-41A | BOLT, 3/8-24, 3.5625 GRIP, UNDRILLED, STEEL |

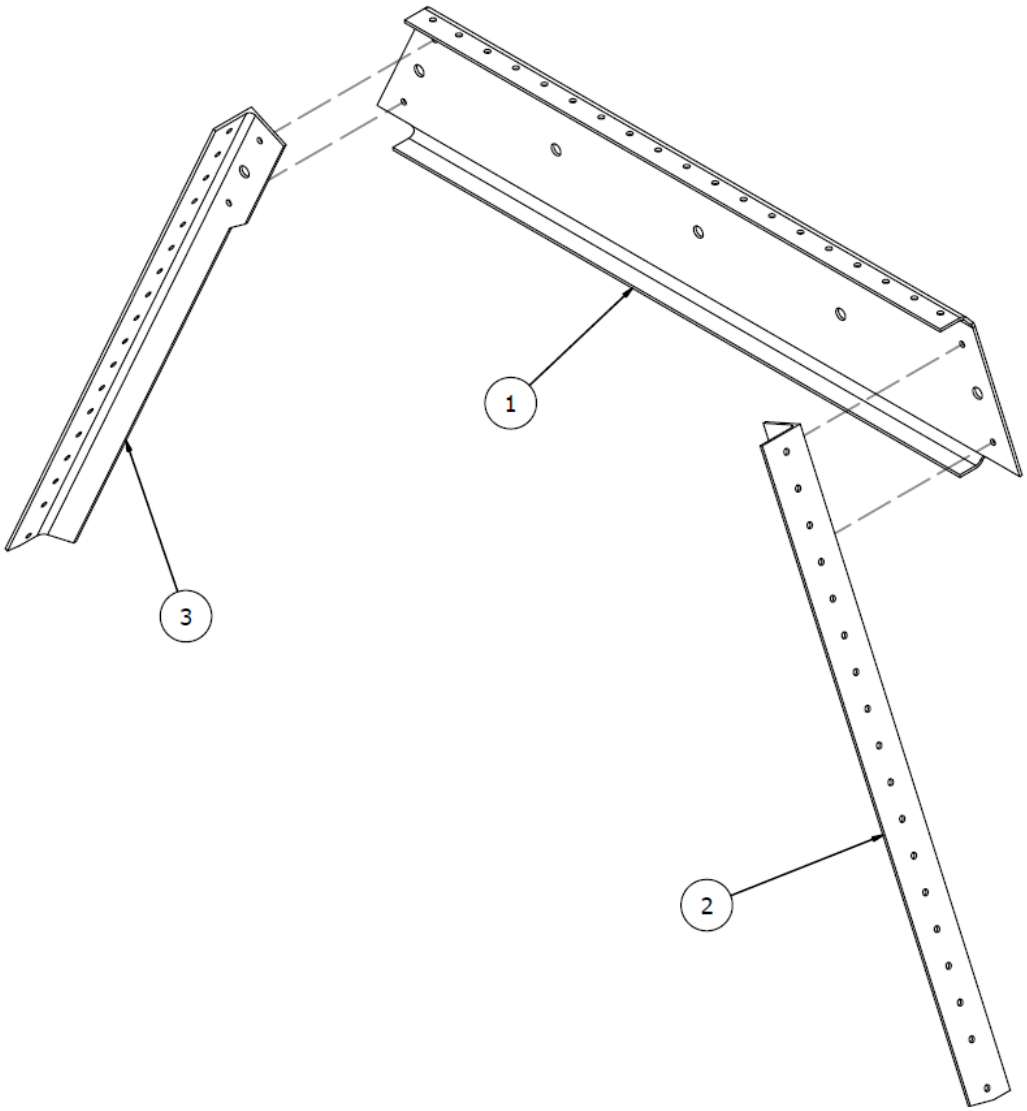
| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 23 | A/R | NAS1149D0563J | WASHER, 0.328 ID, 0.063 THK, ALUMINUM |
| 24 | A/R | NAS1149D0663J | WASHER, 0.39 ID, 0.063 THK, ALUMINUM |
| 25 | 16 | MS21044N5 | NUT, LOCKING, REGULAR HEIGHT, 5/16-24 UNF |
| 26 | 12 | MS21044N6 | NUT, LOCKING, REGULAR HEIGHT, 3/8-24 UNF |
| 27 | 1 | 21A02369-031 | STEP, LEFT SIDE |
| | 1 | 21A02369-032 | STEP, RIGHT SIDE |
| | 4 | AN3-20A | BOLT, 10-32, 1.625 GRIP, UNDRILLED, STEEL |
| | 1 | AN3-22A | BOLT, 10-32, 1.875 GRIP, UNDRILLED, STEEL |
| | 10 | NAS1149D0316J | WASHER, 0.203 ID, 0.016 THK, ALUMINUM |
| | 5 | MS21044N3 | NUT, LOCKING, REGULAR HEIGHT, 10-32 UNF |
| | 5 | BPF | HOLE PLUG 1 INCH |
| | 1 | 1002039 | STEP, BOARDING LEFT (OPTIONAL) |

# FWD SPREADER BAR SUPPORT PANEL ASSEMBLY



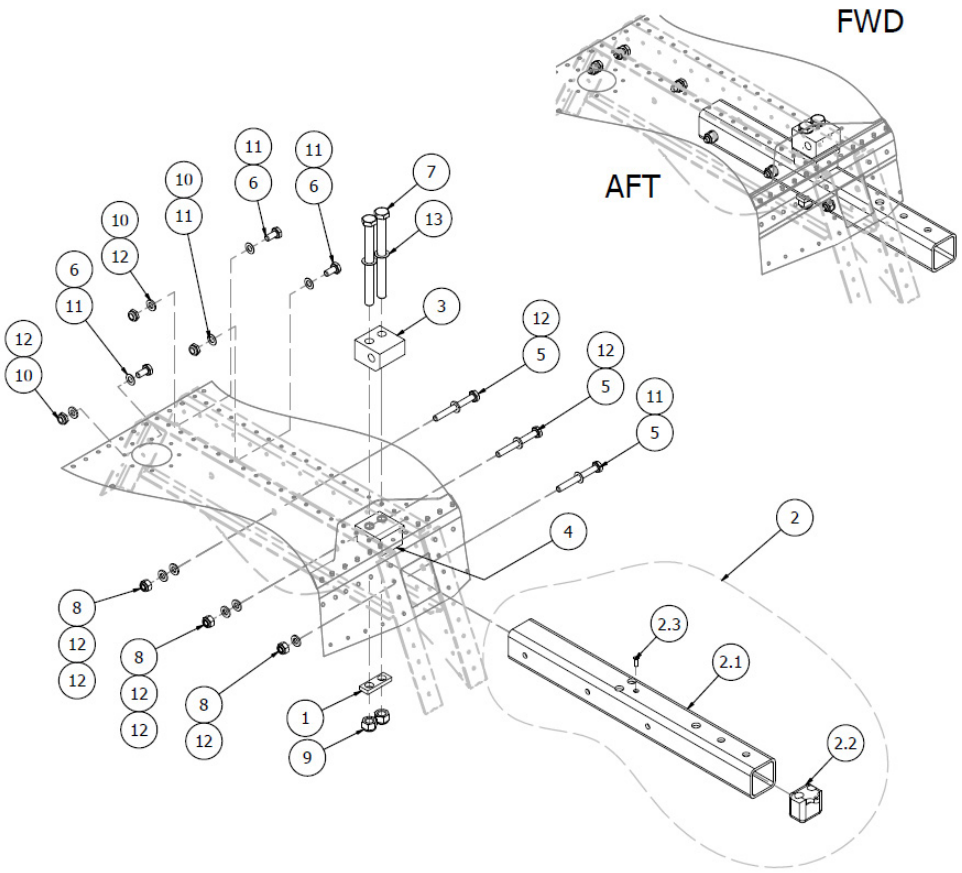

| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| - | 1 | 21A01000-260 | ASSEMBLY, SPREADER BAR SUPPORT PANEL, FWD, 2100 |
| 1 | 1 | 21A01163-065 | PANEL, SUPPORT, SPREADER BAR |
| 2 | 1 | 21A01326-013 | ANGLE, SPREADER BAR SUPPORT PANEL, LH |
| 3 | 1 | 21A01326-014 | ANGLE, SPREADER BAR SUPPORT PANEL, RH |

# AFT SPREADER BAR SUPPORT PANEL ASSEMBLY




| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| - | 1 | 21A01000-259 | ASSEMBLY, SPREADER BAR SUPPORT PANEL, AFT |
| 1 | 1 | 21A01163-065 | PANEL, SUPPORT, SPREADER BAR |
| 2 | 1 | 21A01326-009 | ANGLE, SPREADER BAR SUPPORT PANEL, RH |
| 3 | 1 | 21A01326-010 | ANGLE, SPREADER BAR SUPPORT PANEL, LH |

# SPREADER BAR TUBE MOUNTING




| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 1 | 1 | 1002009 | CLAMP BLOCK, SPREADER BAR |
| 2 | 1 | 1012630 | ASSEMBLY, TUBE, SPREADER BAR, MOUNTING |
| 2.1 | 1 | 21A03115-001 | TUBE, SPREADER BAR, MOUNTING |
| 2.2 | 1 | 1002012 | INSERT, TUBE REINFORCEMENT, SPREADER BAR |
| 2.3 | 1 | CR3212-4-5 | RIVET, CHERRY MAX, COUNTERSUNK, 1/8 DIA , 5/16 GRIP |
| 3 | 1 | 21A03032-006 | FITTING, DECK, STRUT |
| 4 | 1 | 21A03214-003 | SPACER |
| 5 | 3 | AN4-22A | BOLT, 1/4-28, 1.8125 GRIP, UNDRILLED, STEEL |
| 6 | 3 | AN4-4A | BOLT, 1/4-28, 0.0625 GRIP, UNDRILLED, STEEL |
| 7 | 2 | AN6-41A | BOLT, 3/8-24, 3.5625 GRIP, UNDRILLED, STEEL |
| 8 | 3 | MS21044N4 | NUT, LOCKING, REGULAR HEIGHT, 1/4-28 UNF |
| 9 | 2 | MS21044N6 | NUT, LOCKING, REGULAR HEIGHT, 3/8-24 UNF |
| 10 | 3 | MS21083N4 | NUT, LOCKING, LOW HEIGHT, 1/4-28 UNF |
| 11 | 5 | NAS1149D0416J | WASHER, 0.265 ID, 0.016 THK, ALUMINUM |
| 12 | 9 | NAS1149D0463J | WASHER, 0.265 ID, 0.063 THK, ALUMINUM |
| 13 | 2 | NAS1149F0616P | WASHER, 0.39 ID, 0.016 THK, STEEL |

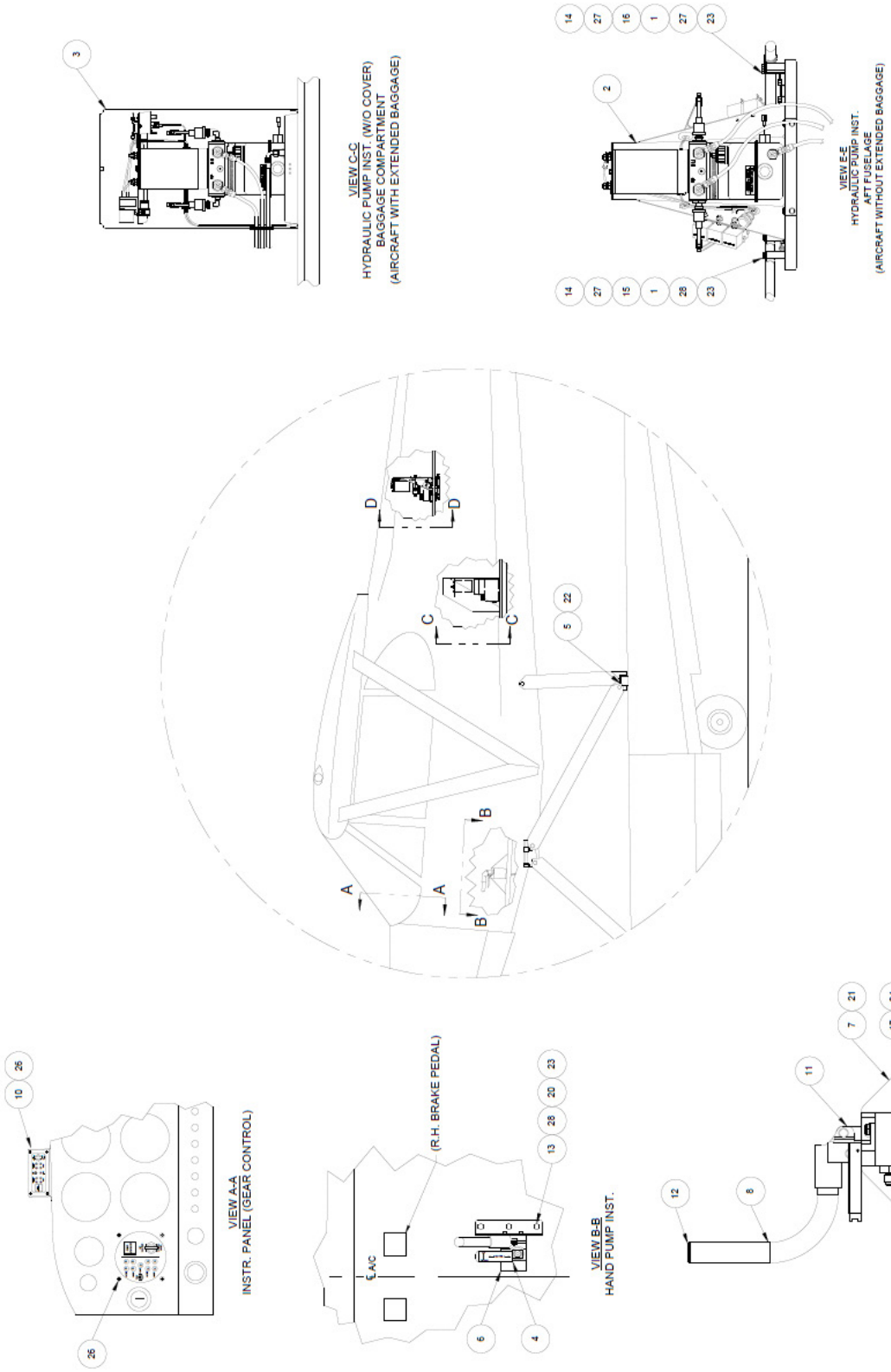
# SECTION 10
# HYDRAULIC SYSTEM

## CONTENTS

HYDRAULIC SYSTEM INSTALLATION FOR PA-18 POST SERVICE LETTER 225 ..... 96
HYDRAULIC SYSTEM INSTALLATION FOR PA-18 PRE SERVICE LETTER 225 ..... 98
HYDRAULIC SYSTEM INSTALLATION FOR PA-12 POST SERVICE LETTER 225 ..... 100
HYDRAULIC SYSTEM INSTALLATION FOR PA-12 PRE SERVICE LETTER 225 ..... 102
HYDRAULIC PUMP ASSEMBLY FOR PA-18 POST SERVICE LETTER 225 ..... 104
HYDRAULIC PUMP ASSEMBLY FOR PA-18 PRE SERVICE LETTER 225 ..... 108
HYDRAULIC PUMP ASSEMBLY FOR PA-12 POST SERVICE LETTER 225 ..... 111
HYDRAULIC PUMP ASSEMBLY FOR PA-12 PRE SERVICE LETTER 225 ..... 115
HYDRAULIC PUMP OVERVIEW POST SERVICE LETTER 225 ..... 118
HYDRAULIC PUMP OVERVIEW PRE SERVICE LETTER 225 ..... 120
HYDRAULIC SCHEMATIC ..... 122

# HYDRAULIC SYSTEM INSTALLATION FOR PA-18

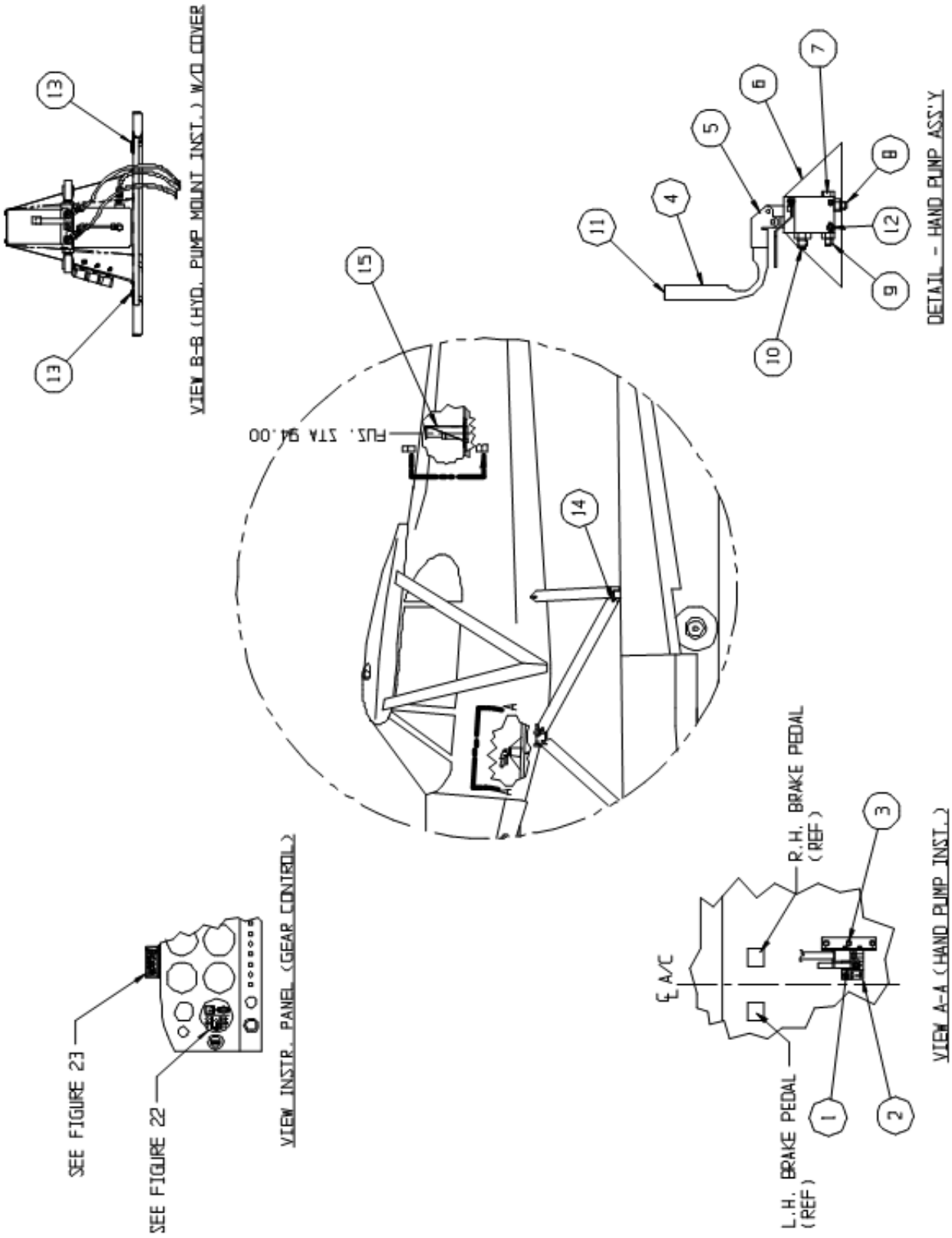
# POST SERVICE LETTER 225



| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 1 | 6 | 1011799 | SPACER |
| 2 | 1 | 1011805 | ASSEMBLY, HYDRAULIC POWER PACK, STANDARD BAGGAGE |
| 3 | 1 | 1011830 | ASSEMBLY, HYDRAULIC POWER PACK, EXTENDED BAGGAGE |
| 4 | 1 | 12A3-7379-1 | PLACARD, EMERGENCY HAND PUMP |
| 5 | 2 | 21A04000-080 | ASSEMBLY, BRAKE LINE (NOT SHOWN) |
| 6 | 1 | 21A09000-194 | ASSEMBLY, HAND PUMP AND BRACKET |
| 7 | 1 | 21A09156-129 | BRACKET, HAND PUMP ATTACH |
| 8 | 1 | 21A09396-001 | HANDLE |
| 9 | 1 | 21A09746-001 | UNION |
| 10 | 1 | 21A11158-194 | COVER, CONTROL HEAD (ABOVE DASH) |
| 11 | 1 | 642873 | HAND PUMP (ONLY) |
| 12 | 1 | 9283K13 | CAP PLUG |
| 13 | 3 | AN3-7A | BOLT, 10-32, 0.5 GRIP, UNDRILLED, STEEL |
| 14 | 6 | AN3-17A | BOLT, 10-32, 1.5 GRIP, UNDRILLED, STEEL |
| 15 | 3 | AN742D10 | CLAMP, PLAIN, ALUMINUM, TO FIT 5/8" DIA TUBE |
| 16 | 3 | AN724D12 | CLAMP, PLAIN, ALUMINUM, TO FIT 3/4" DIA TUBE |
| 17 | 1 | AN814-4D | PLUG |
| 18 | 1 | AN815-4D | UNION |
| 19 | 1 | AN919-6D | UNION |
| 20 | 3 | AN970-3 | WASHER, .203 ID, .875 OD, .063 THICK |
| 21 | 2 | MS16997-77 | SOCKET HEAD CAP SCREW, 5/16-18 THREAD |
| 22 | 2 | MS20823-3D | FITTING, 45 DEGREE, TO BOOSTER |
| 23 | 9 | MS21044N3 | NUT, LOCKING, REGULAR HEIGHT, 10-32 UNF |
| 24 | 3 | MS28775-012 | O-RING, HYDRAULIC PACK, .364 ID |
| 25 | 1 | MS28775-014 | O-RING, HYDRAULIC PACK, .489 ID |
| 26 | 4 | MS35214-42 | SCREW, 8-32, 0.5 LENGTH |
| 27 | 9 | NAS1149F0332P | WASHER, 0.203 ID, 0.032 THK, STEEL |
| 28 | 6 | NAS1149F0363P | WASHER, 0.203 ID, 0.063 THK, STEEL |

# HYDRAULIC SYSTEM INSTALLATION FOR PA-18

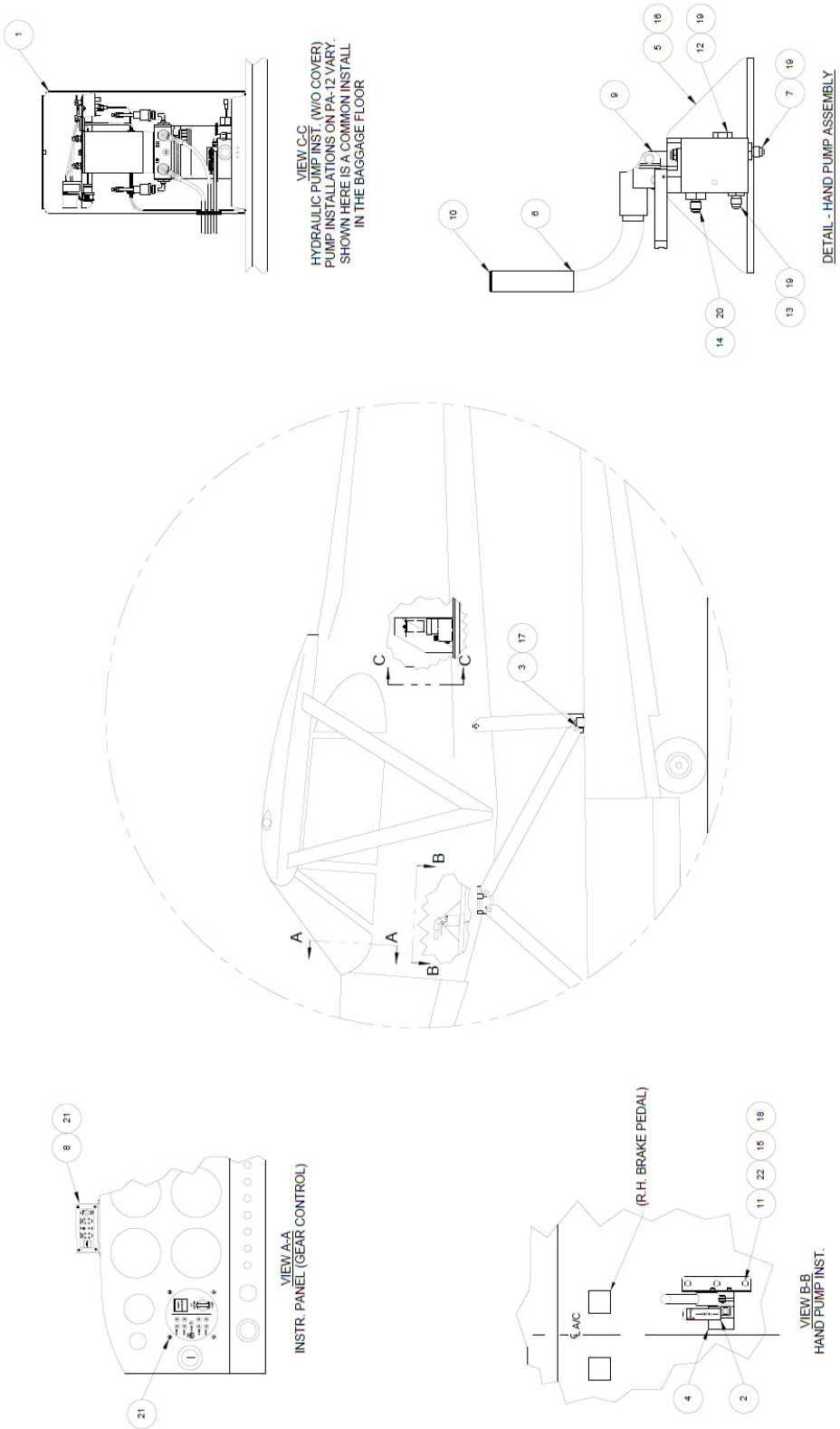
## PRE SERVICE LETTER 225



| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 1 | 1 | 21A09000-194 | ASS'Y., HAND PUMP |
| 2 | 1 | 12A3-7379-1 | PLACARD |
| 3 | 3 | AN3-7A | BOLT, 10-32, 0.5 GRIP, UNDRILLED, STEEL |
| | 3 | AN970-3 | WASHER, .203 ID, .875 OD, .063 THK |
| | 3 | NAS1149F0363P | WASHER, 0.203 ID, 0.063 THK, STEEL |
| | 3 | MS21044N3 | NUT, LOCKING, REGULAR HEIGHT, 10-32 UNF |
| 4 | 1 | 21A09396-001 | HANDLE |
| 5 | 1 | 642873 | HAND PUMP (ONLY) |
| 6 | 1 | 21A09156-129 | BRACKET, PUMP ATTACH |
| 7 | 1 | AN814-4D | PLUG |
| | 1 | MS28775-012 | O RING, HYDRAULIC PACKING, .364 ID |
| 8 | 1 | 21A09746-001 | UNION |
| | 1 | MS28775-012 | O RING, HYDRAULIC PACKING, .364 ID |
| 9 | 1 | AN815-4D | UNION |
| | 1 | MS28775-012 | O RING, HYDRAULIC PACKING, .364 ID |
| 10 | 1 | AN919-6D | UNION |
| | 1 | MS28775-014 | "O" RING, HYDRAULIC |
| 11 | 1 | 9283K13 | CAP PLUG |
| 12 | 2 | MS16997-77 | SOCKET HEAD CAP SCREW |
| | 2 | NAS1149F0563P | WASHER, 0.328 ID, 0.063 THK, STEEL |
| 13 | 2 | AN742D10 | CLAMP, MOUNTING |
| | 2 | AN742D12 | CLAMP, MOUNTING |
| | 4 | AN3-3A | BOLT, 10-32, 0.0625 GRIP, UNDRILLED, STEEL |
| | 8 | NAS1149D0316J | WASHER, 0.203 ID, 0.016 THK, ALUMINUM |
| | 4 | MS21044N3 | NUT, LOCKING, REGULAR HEIGHT, 10-32 UNF |
| 14 | 2 | 21A04000-080 | ASS'Y., BRAKE LINE (NOT SHOWN) |
| | 2 | 63-190600-3 | FITTING |
| | 2 | MS20823-3D | FITTING 45 DEGREES TO BOOSTER |
| 15 | 1 | 21A09000-210 | ASSEMBLY, HYDRAULIC POWER PACK, 12V |

# HYDRAULIC SYSTEM INSTALLATION FOR PA-12

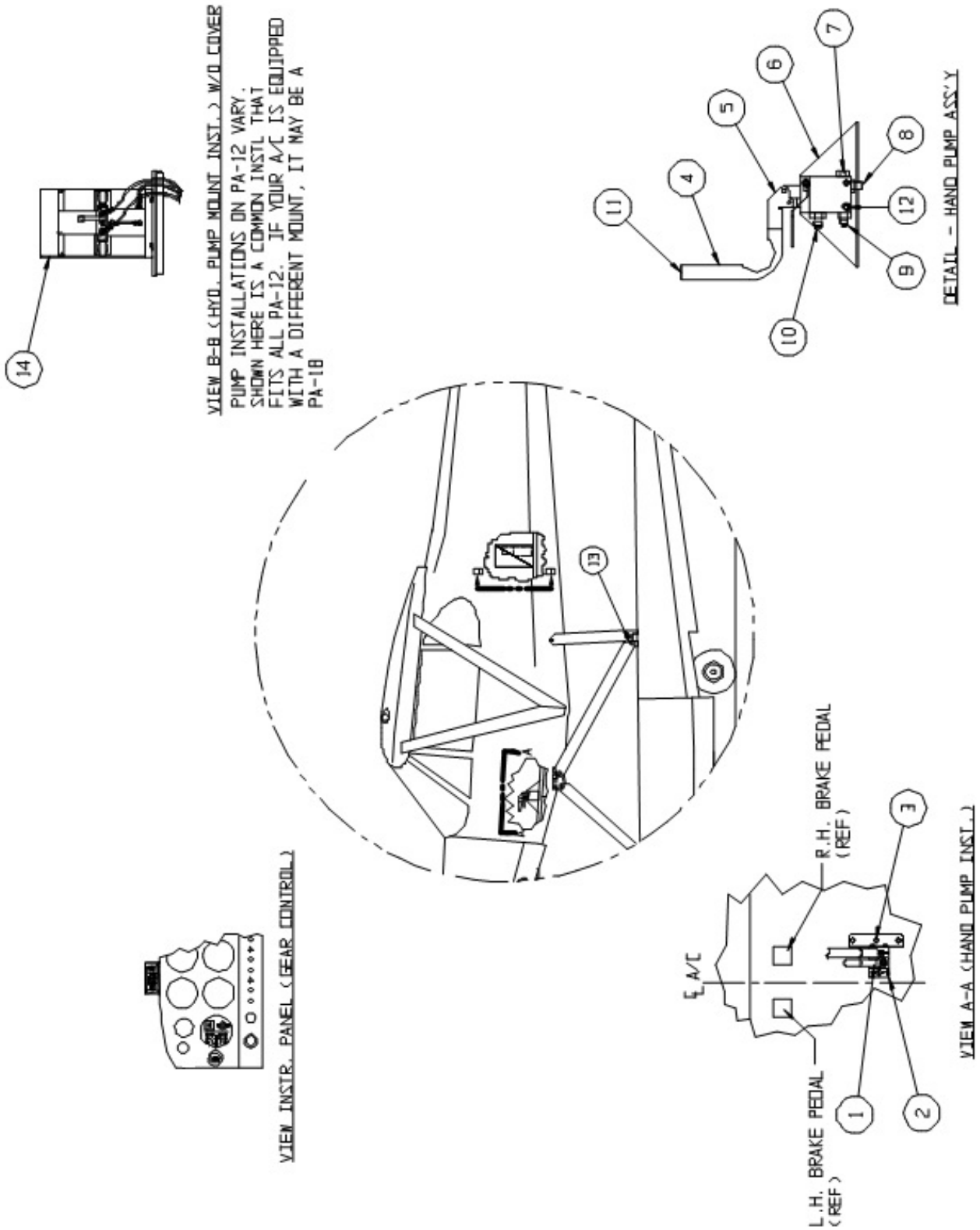
# POST SERVICE LETTER 225



| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 1 | 1 | 1011830 | ASSEMBLY, HYDRAULIC POWER PACK |
| 2 | 1 | 12A3-7379-1 | PLACARD, EMERGENCY HAND PUMP |
| 3 | 2 | 21A04000-080 | ASSEMBLY, BRAKE LINE (NOT SHOWN) |
| 4 | 1 | 21A09000-194 | ASSEMBLY, HAND PUMP AND BRACKET |
| 5 | 1 | 21A09156-129 | BRACKET, HAND PUMP ATTACH |
| 6 | 1 | 21A09396-001 | HANDLE |
| 7 | 1 | 21A09746-001 | UNION |
| 8 | 1 | 21A11158-194 | COVER, CONTROL HEAD (ABOVE DASH) |
| 9 | 1 | 642873 | HAND PUMP (ONLY) |
| 10 | 1 | 9283K13 | CAP PLUG |
| 11 | 3 | AN3-7A | BOLT, 10-32, 0.5 GRIP, UNDRILLED, STEEL |
| 12 | 1 | AN814-4D | PLUG |
| 13 | 1 | AN815-4D | UNION |
| 14 | 1 | AN919-6D | UNION |
| 15 | 3 | AN970-3 | WASHER, .203 ID, .875 OD, .063 THICK |
| 16 | 2 | MS16997-77 | SOCKET HEAD CAP SCREW, 5/16-18 THREAD |
| 17 | 2 | MS20823-3D | FITTING, 45 DEGREE, TO BOOSTER |
| 18 | 3 | MS21044N3 | NUT, LOCKING, REGULAR HEIGHT, 10-32 UNF |
| 19 | 3 | MS28775-012 | O-RING, HYDRAULIC PACK, .364 ID |
| 20 | 1 | MS28775-014 | O-RING, HYDRAULIC PACK, .489 ID |
| 21 | 4 | MS35214-42 | SCREW, 8-32, 0.5 LENGTH |
| 22 | 3 | NAS1149F0363P | WASHER, 0.203 ID, 0.63 THK, STEEL |

# HYDRAULIC SYSTEM INSTALLATION FOR PA-12

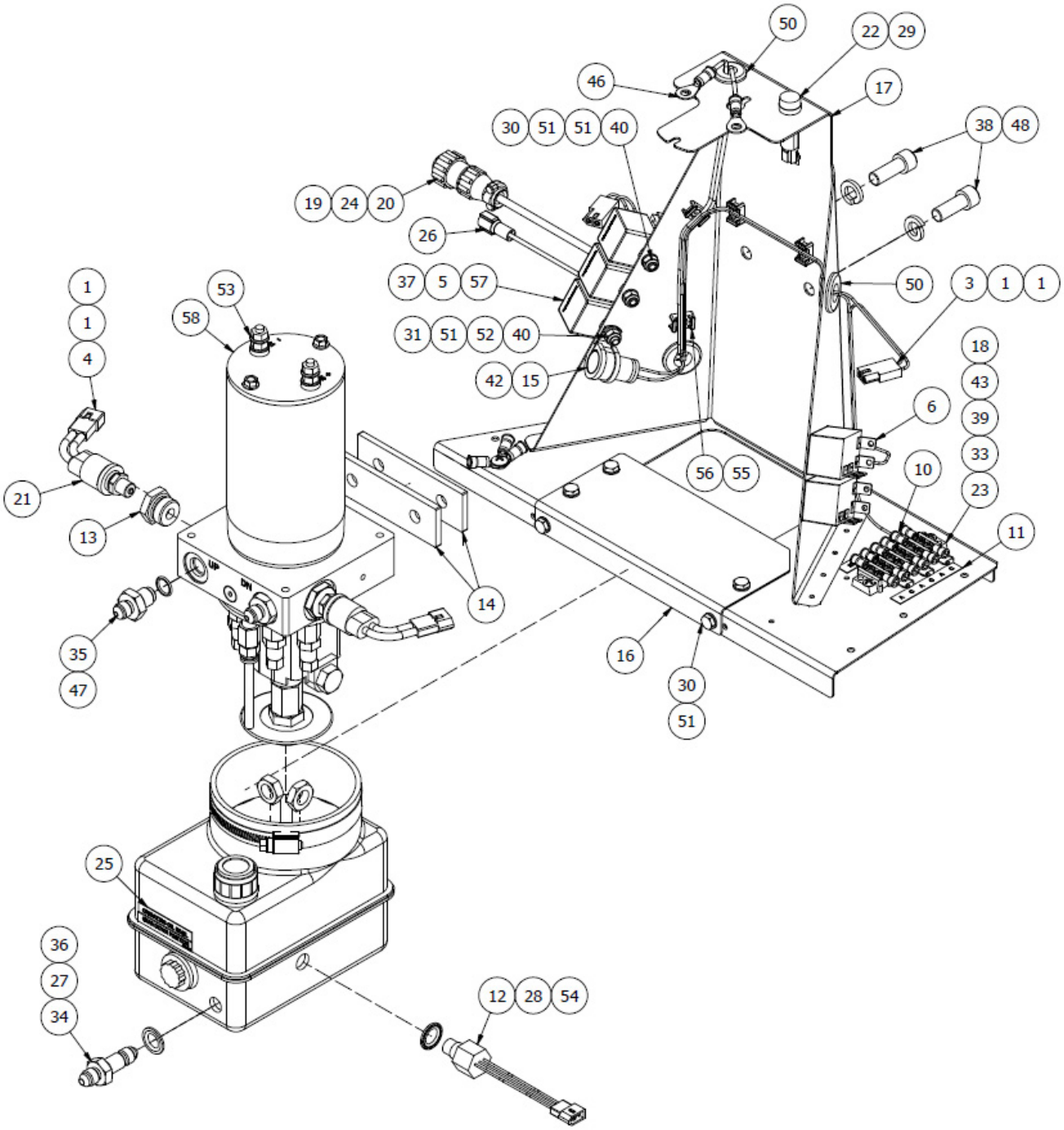
## PRE SERVICE LETTER 225

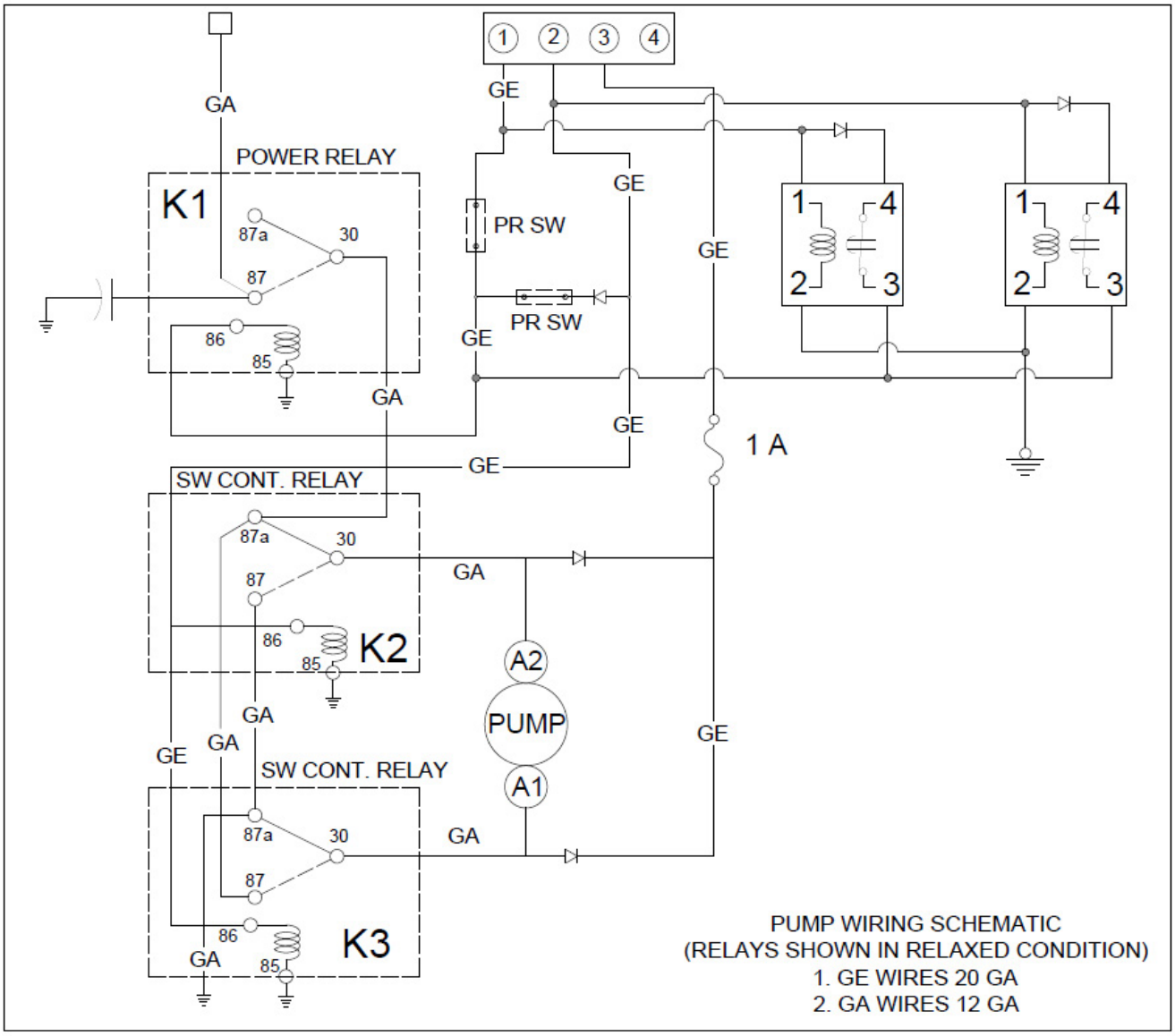


| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 1 | 1 | 21A09000-194 | ASS'Y HAND PUMP & BRACKET |
| 2 | 1 | 12A3-7379-1 | PLACARD |
| 3 | 3 | AN3-7A | BOLT, 10-32, 0.5 GRIP, UNDRILLED, STEEL |
| | 3 | AN970-3 | WASHER, .203 ID, .875 OD, .063 THK |
| | 3 | NAS1149F0363P | WASHER, 0.203 ID, 0.063 THK, STEEL |
| | 3 | MS21044N3 | NUT, LOCKING, REGULAR HEIGHT, 10-32 UNF |
| 4 | 1 | 21A09396-001 | HANDLE |
| 5 | 1 | 642873 | HAND PUMP (ONLY) |
| 6 | 1 | 21A09156-129 | BRACKET, PUMP ATTACH |
| 7 | 1 | AN814-4D | PLUG |
| | 1 | MS28775-012 | O RING, HYDRAULIC PACKING, .364 ID |
| 8 | 1 | 21A09746-001 | UNION |
| | 1 | MS28775-012 | O RING, HYDRAULIC PACKING, .364 ID |
| 9 | 1 | AN815-4D | UNION |
| | 1 | MS28775-012 | O RING, HYDRAULIC PACKING, .364 ID |
| 10 | 1 | AN919-6D | UNION |
| | 1 | MS28775-014 | "O" RING, HYDRAULIC |
| 11 | 1 | 9283K13 | CAP PLUG |
| 12 | 2 | MS16997-77 | SOCKET HEAD CAP SCREW |
| | 2 | NAS1149F0563P | WASHER, 0.328 ID, 0.063 THK, STEEL |
| 13 | 2 | 21A04000-080 | ASS'Y., BRAKE LINE (NOT SHOWN) |
| | 2 | 63-190600-3 | FITTING, AERO QUIP HOSE #3 |
| | 2 | MS20823-3D | FTG. 45 DEGREES TO BOOSTER |
| 14 | 1 | 21A09000-210 | ASSEMBLY, HYDRAULIC POWER PACK, 12V |

# HYDRAULIC PUMP ASSEMBLY FOR PA-18

# POST SERVICE LETTER 225





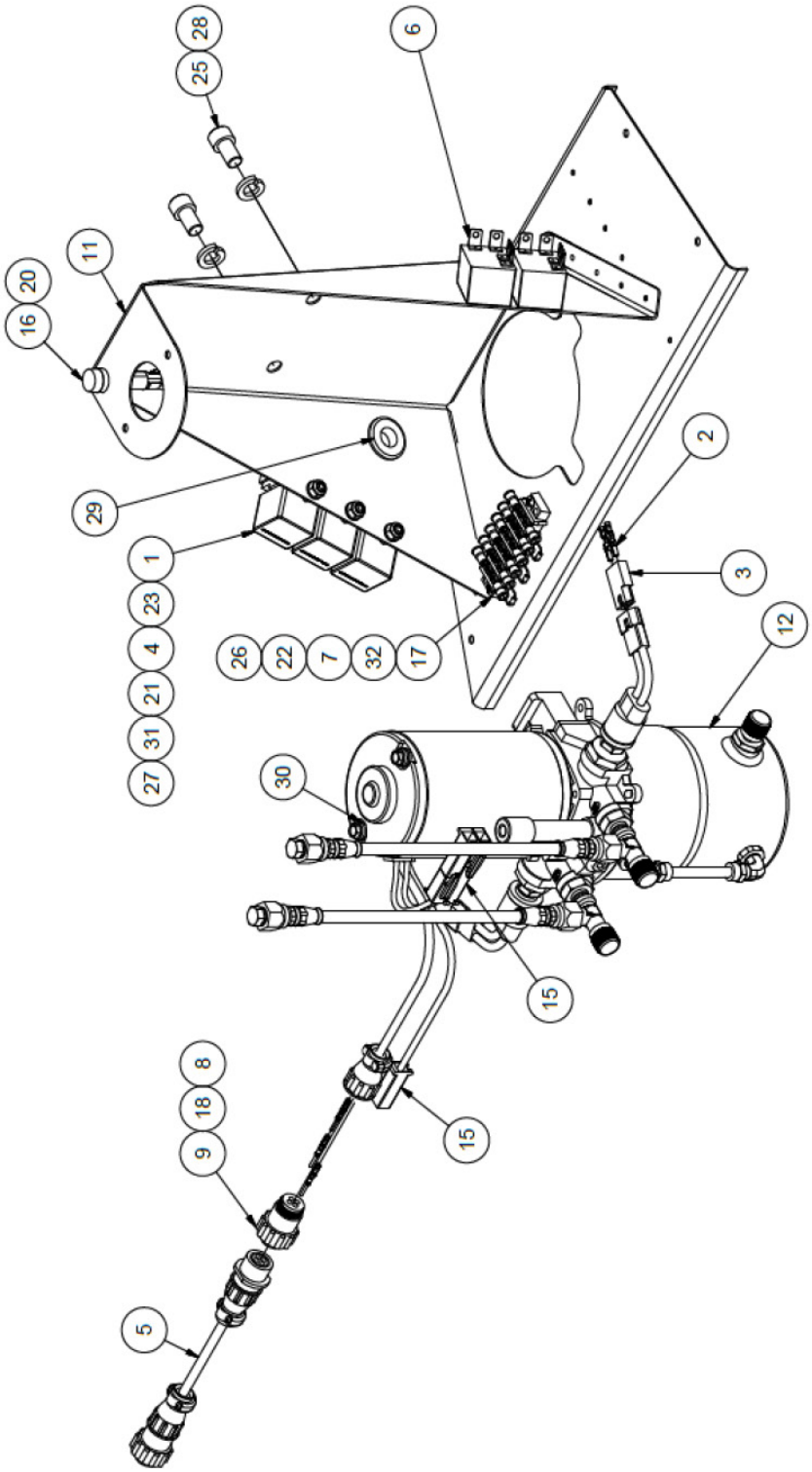

| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| - | 1 | 1011805 | ASSEMBLY, HYDRAULIC POWER PACK, 12V |
| 1 | 4 | 02-09-1104 | PIN, CRIMP FEMALE, 1/8" DIA |
| 2 | 4 | 02-09-2118 | PIN, CRIMP MALE, 1/8" DIA |
| 3 | 2 | 03-09-1022 | CONNECTOR PLUG, MALE, 2 CONN. |
| 4 | 2 | 03-09-2022 | CONNECTOR PLUG, FEMALE |
| 5 | 14 | 1-901-355-917 | TERMINAL |
| 6 | 1 | 1012411 | ASSEMBLY, RELAY, TIME DELAY RELEASE, 6-48 VDC |
| 7 | 1 | 1009143-01 | PLACARD, K1 INDICATOR (NOT SHOWN) |
| 8 | 1 | 1009143-02 | PLACARD, K2 INDICATOR (NOT SHOWN) |
| 9 | 1 | 1009143-03 | PLACARD, K3 INDICATOR (NOT SHOWN) |

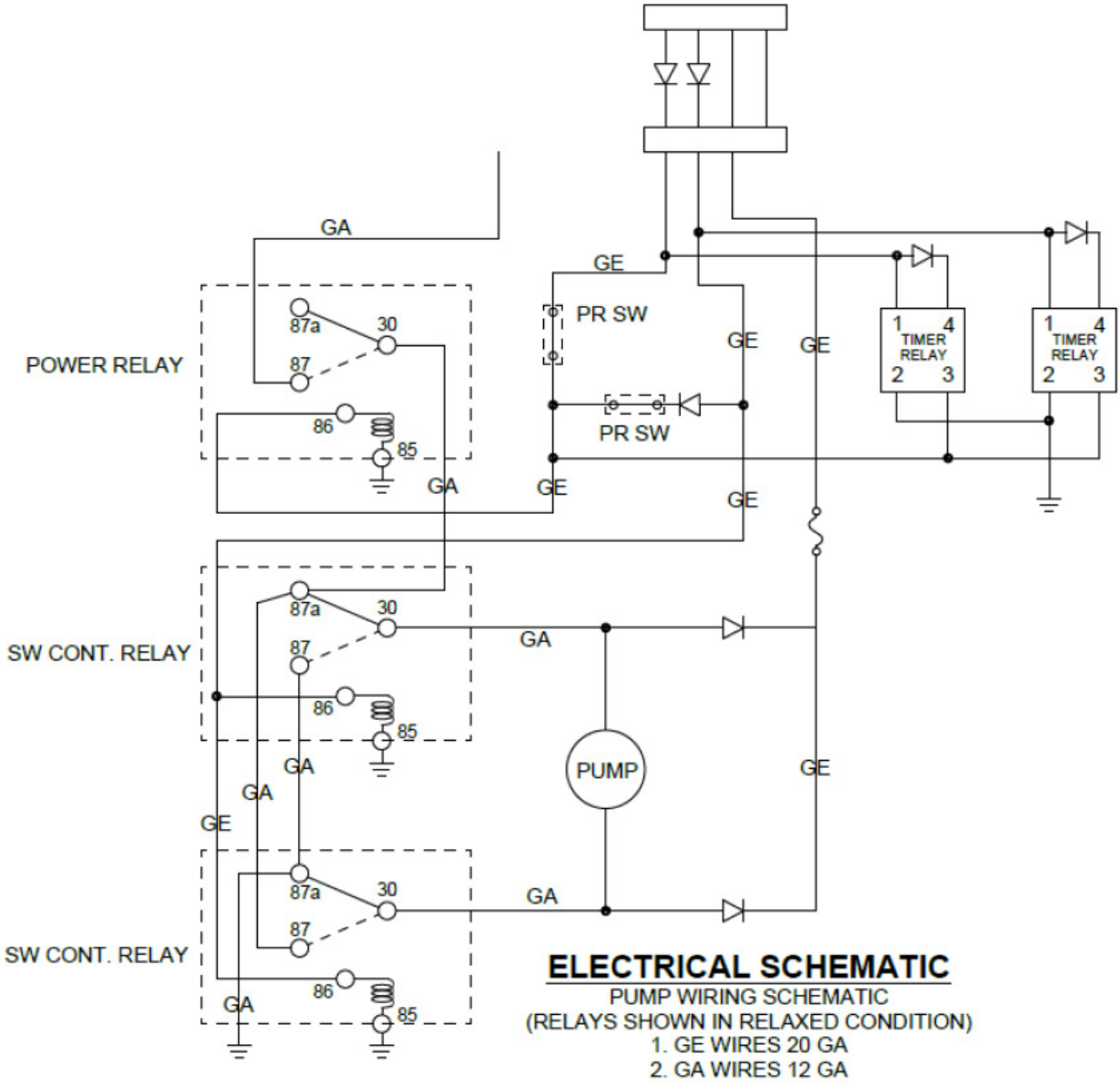
| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 10 | 1 | 1009144-01 | PLACARD, CR INDICATOR |
| 11 | 1 | 1009144-02 | PLACARD, AC INDICATOR |
| 12 | 1 | 1009428 | ASSEMBLY, SENSOR, FLUID LEVEL |
| 13 | 2 | 1011062 | ASSEMBLY, PLUG, PRESSURE SWITCH PORT |
| 14 | 2 | 1011624 | SPACER, HYDRAULIC PUMP |
| 15 | 1 | 1011798 | ASSEMBLY, CAPACITOR |
| 16 | 1 | 1011800 | REMOVABLE PLATE, HYDRAULIC PUMP ASSEMBLY, PA-18 |
| 17 | 1 | 1011803 | ASSEMBLY, HYDRAULIC PUMP BRACKET, PA-18 |
| 18 | 3 | 1N4004 | DIODE |
| 19 | 1 | 206062-3 | CLAMP, CABLE, CPC SIZE 11 |
| 20 | 1 | 206429-1 | PLUG, MALE, CPC SIZE 1, 4 PIN |
| 21 | 2 | 20PS001EB 700W500W | PRESSURE SWITCH |
| 22 | 1 | 3453LF2A | FUSE HOLDER |
| 23 | 1 | 6-140 | TERMINAL BLOCK, 6 CONNECTOR |
| 24 | 3 | 66103-4 | PIN, CRIMP SOCKET, 24-20G |
| 25 | 1 | 6A3-2199 | PLACARD, OIL LEVEL |
| 26 | 1 | 73M-250-32-NL | CONNECTOR, MALE, 10-12 AWG, FULLY INSULATED |
| 27 | 1 | 93783A032 | SEALING WASHER |
| 28 | 1 | 93786A200 | PRESSURE-SEALING WASHER, M12 |
| 29 | 1 | AGC-1 | FUSE, 250V, (S2565-1) |
| 30 | 7 | AN3-3A | BOLT, 10-32, 0.0625 GRIP, UNDRILLED, STEEL |
| 31 | 1 | AN3-5A | BOLT, 10-32, 0.25 GRIP, UNDRILLED, STEEL |
| 32 | 1 | AN526C1032R8 | SCREW, MACHINE, TRUSS HEAD |
| 33 | 2 | AN526C632R8 | SCREW, MACHINE, TRUSS HEAD |
| 34 | 1 | AN832-4D | UNION-4D |
| 35 | 2 | AN919-3D | FITTING, REDUCER |
| 36 | 1 | AN924-4D | JAM NUT |
| 37 | 3 | BR05-FW | SOCKET, 5 PRONG, PLASTIC |
| 38 | 2 | MS16997-99 | SCREW, CAP, SOCKET HEAD |
| 39 | 2 | MS21044N06 | NUT, LOCKING, REGULAR HEIGHT, 6-32 UNC |
| 40 | 3 | MS21044N3 | NUT, LOCKING, REGULAR HEIGHT, 10-32 UNF |
| 41 | 1 | MS21045-3 | NUT, SELF LOCKING |
| 42 | 1 | MS21919WDG10 | CLAMP, LOOP, CUSHIONED, 5/8 TUBE OD |
| 43 | 12 | MS25036-102 | RING TERMINAL, #6 STUD, 16-22 AWG, RED |
| 44 | 1 | MS25036-103 | RING TERMINAL, #10 STUD, 22-16 AWG, RED |
| 45 | 2 | MS25036-112 | RING TERMINAL, #10 STUD, 10-12 AWG, YELLOW |
| 46 | 2 | MS25036-157 | RING TERMINAL, 1/4 STUD, 10-12 AWG, YELLOW |
| 47 | 2 | MS28775-013 | "O" RING, HYDRAULIC |
| 48 | 2 | MS35338-46 | WASHER, SPLIT |
| 49 | 1 | MS35489-11 | GROMMET, RUBBER |

| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 50 | 2 | MS35489-14 | GROMMET, RUBBER |
| 51 | 10 | NAS1149F0332P | WASHER, 0.203 ID, 0.032 THK, STEEL |
| 52 | 1 | NAS1149F0363P | WASHER, 0.203 ID, 0.063 THK, STEEL |
| 53 | 2 | NAS1149F0432P | WASHER, 0.265 ID, 0.032 THK, STEEL |
| 54 | 1 | NJAM12X1.0CLZ | NUT, JAM, M12X1.0, ZINC |
| 55 | 4 | S2230-1 | RIVET |
| 56 | 4 | TM2S6-M | CABLE TIE MOUNT |
| 57 | 3 | V23234-A0001-X032 | RELAY, 12V, 5 PRONG |
| 58 | 1 | YBZS-C0.63W1T100K/UVZOT2 | HYDRAULIC POWER PACK, 12VDC, .64 PUMP |

# HYDRAULIC PUMP ASSEMBLY FOR PA-18

## PRE SERVICE LETTER 225



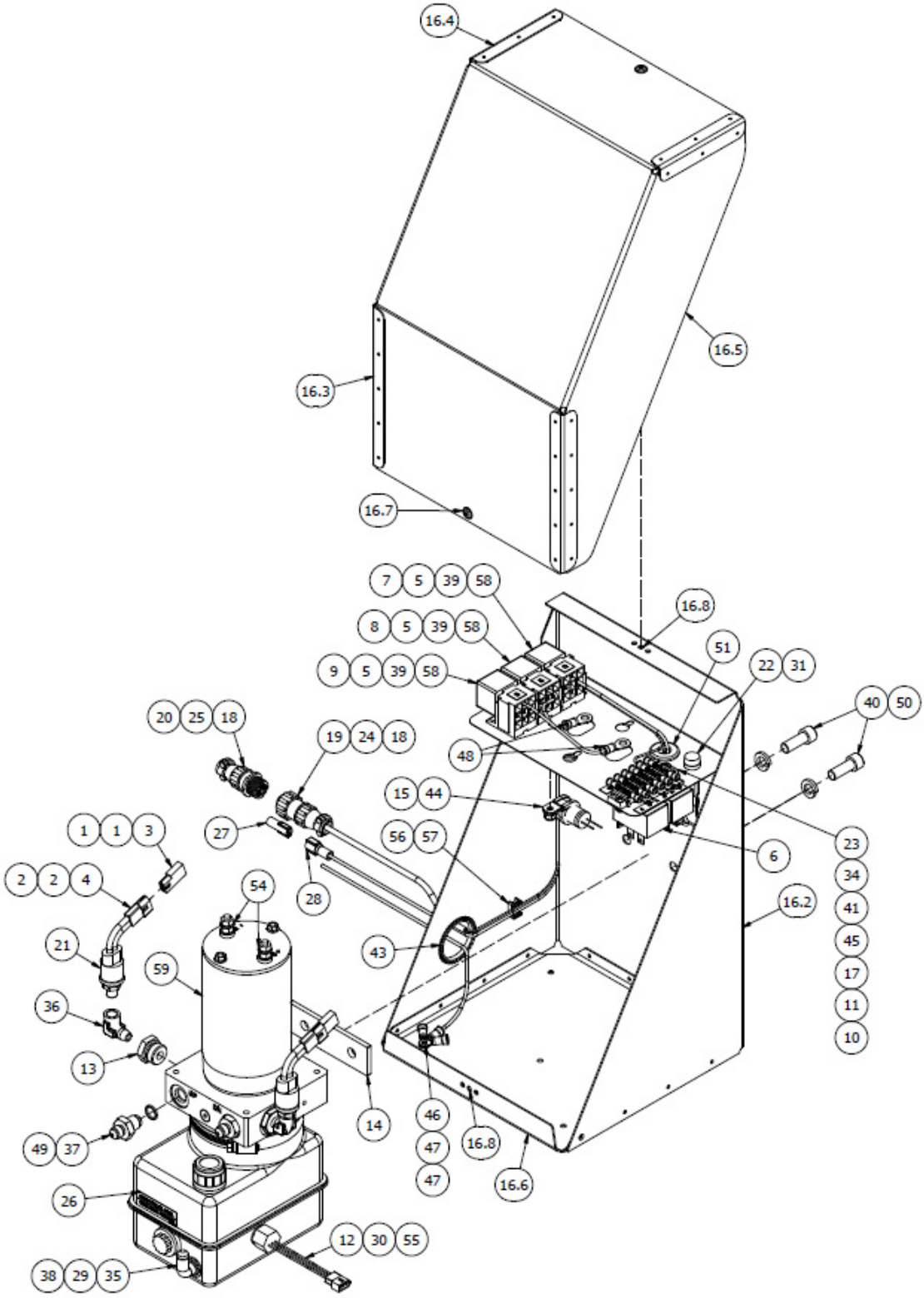


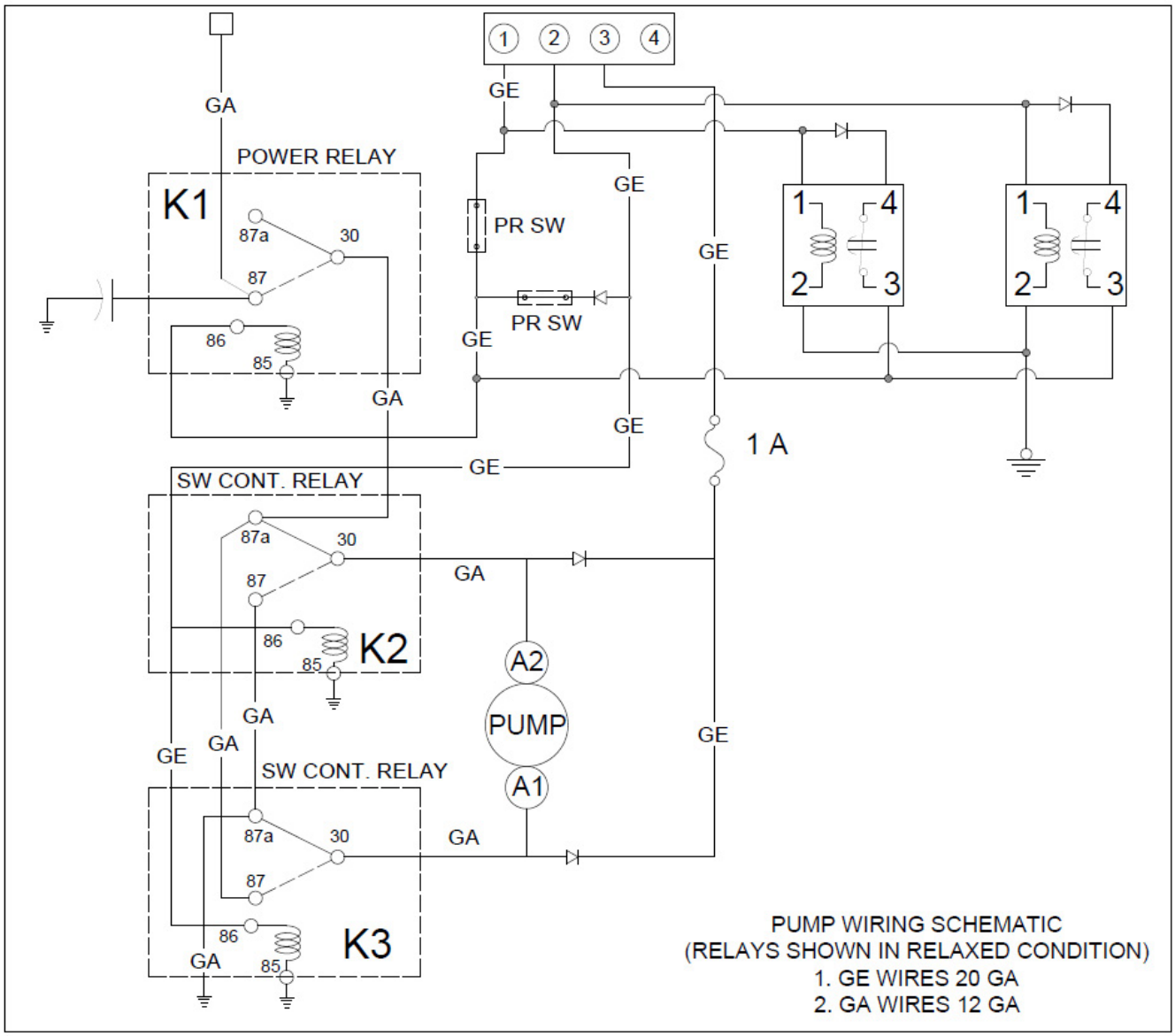

| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 1 | 3 | 0-332-209-137 | RELAY, 12V, 5 PRONG |
| 2 | 4 | 02-09-1104 | PIN, CRIMP FEMALE, 1/8" DIA |
| 3 | 2 | 03-09-1022 | CONNECTOR PLUG, MALE, 2 CONN. |
| 4 | 14 | 1-901-355-917 | TERMINAL |
| 5 | 1 | 1004949 | CABLE, DIODE ADAPTOR |
| 6 | 1 | 1012411 | ASSEMBLY, RELAY, TIME DELAY RELEASE, 6-48 VDC |
| 7 | 3 | 1N4004 | DIODE, 2-1/2" |
| 8 | 2 | 206062-3 | CLAMP, CABLE, CPC SIZE 11 |
| 9 | 1 | 206429-1 | PLUG, MALE, CPC SIZE 1, 4 PIN |
| 10 | 1 | 206430-2 | CPC FREE HANG, 4 PIN, FEMALE |

| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 11 | 1 | 21A09000-209 | ASSEMBLY, HYD. PUMP BRACKET, (PA-18) |
| 12 | 1 | 21A09000-215 | ASSEMBLY, HYDRAULIC PUMP, 12V |
| 13 | 6 FT | 22759-16-12-9 | WIRE, 12 AWG, WHITE |
| 14 | 10.1 FT | 22759-16-20-9 | WIRE, 20 AWG, WHITE |
| 15 | 1 | 73F-250-32-NL | CONNECTOR, FEMALE, 10-12 AWG |
|  | 1 | 73M-250-32-NL | CONNECTOR, MALE, 10-12 AWG |
| 16 | 1 | 3453LF2A | FUSE HOLDER |
| 17 | 1 | 6-140 | TERMINAL BLOCK, 6 CONNECTOR |
| 18 | 3 | 66103-4 | PIN, CRIMP SOCKET, 24-20G |
| 19 | 3 | 66105-4 | CRIMP SOCKET, FEMALE |
| 20 | 1 | AGC-1 | FUSE, 250V |
| 21 | 3 | AN3-3A | BOLT, 10-32, 0.0625 GRIP, UNDRILLED, STEEL |
| 22 | 2 | AN526-632R8 | SCREW, MACHINE, TRUSS HEAD |
| 23 | 3 | BR05FW | SOCKET, 5 PRONG, PLASTIC |
| 24 | 1.5 FT | HS105-3/16-0 | HEAT SHRINK, TUBING, BLACK |
| 25 | 2 | MS16997-96 | SOCKET HEAD CAP SCREW |
| 26 | 2 | MS21044N06 | NUT, LOCKING, REGULAR HEIGHT, 6-32 UNC |
| 27 | 3 | MS21044N3 | NUT, LOCKING, REGULAR HEIGHT, 10-32 UNF |
| 28 | 2 | MS35338-46 | WASHER, SPLIT, CARBON STEEL |
| 29 | 1 | MS35489-14 | GROMMET, RUBBER |
| 30 | 4 | NAS1149D0363J | WASHER, 0.203 ID, 0.063 THK, ALUMINUM |
| 31 | 6 | NAS1149F0332P | WASHER, 0.203 ID, 0.032 THK, STEEL |
| 32 | 12 | MS25036-102 | RING TERMINAL, #6 STUD, 16-22 AWG, RED |

# HYDRAULIC PUMP ASSEMBLY FOR PA-12

# POST SERVICE LETTER 225





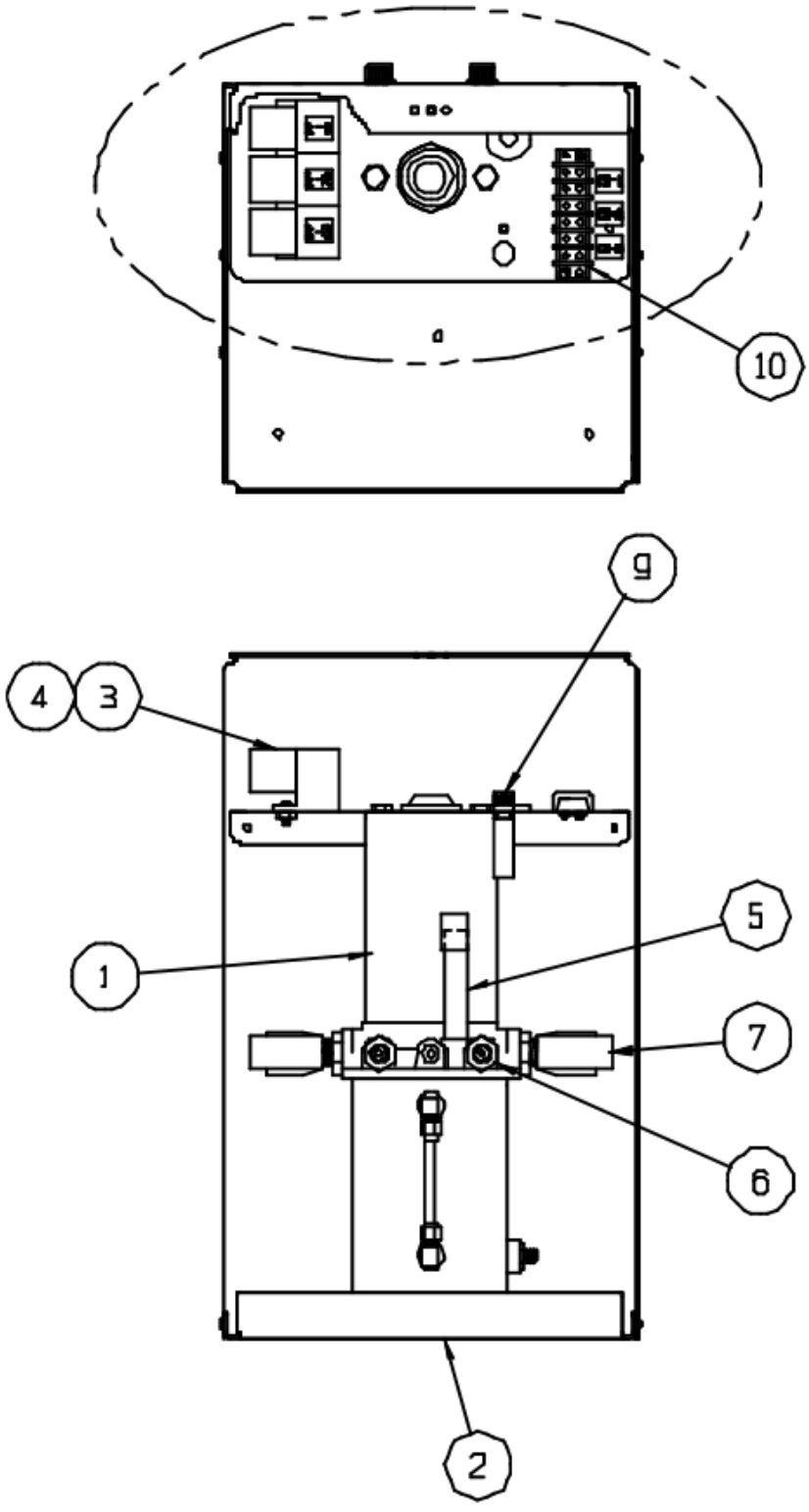

| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| - | 1 | 1011830 | ASSEMBLY, HYDRAULIC POWER PACK |
| 1 | 4 | 02-09-1104 | PIN, CRIMP FEMALE, 1/8" DIA |
| 2 | 4 | 02-09-2118 | PIN, CRIMP MALE, 1/8" DIA |
| 3 | 2 | 03-09-1022 | CONNECTOR PLUG, MALE, 2 CONN. |
| 4 | 2 | 03-09-2022 | CONNECTOR PLUG, FEMALE |
| 5 | 14 | 1-901-355-917 | TERMINAL |
| 6 | 1 | 1012411 | ASSEMBLY, RELAY, TIME DELAY RELEASE, 6-48 VDC |
| 7 | 1 | 1009143-01 | PLACARD, K1 INDICATOR |
| 8 | 1 | 1009143-02 | PLACARD, K2 INDICATOR |
| 9 | 1 | 1009143-03 | PLACARD, K3 INDICATOR |

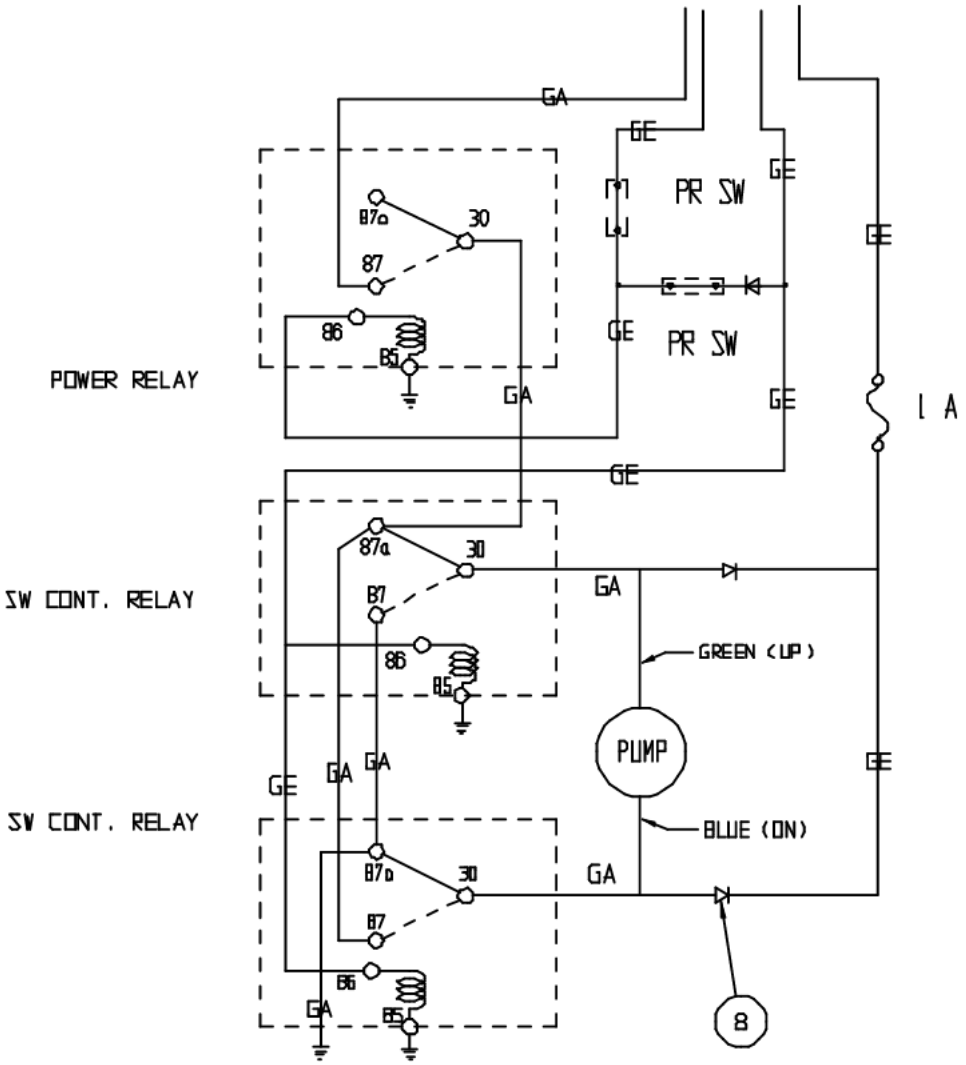
| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 10 | 1 | 1009144-01 | PLACARD, CR INDICATOR |
| 11 | 1 | 1009144-02 | PLACARD, AC INDICATOR |
| 12 | 1 | 1009428 | ASSEMBLY, SENSOR, FLUID LEVEL |
| 13 | 2 | 1011062 | ASSEMBLY, PLUG, PRESSURE SWITCH PORT |
| 14 | 1 | 1011624 | SPACER, HYDRAULIC PUMP |
| 15 | 1 | 1011798 | ASSEMBLY, CAPACITOR |
| 16 | 1 | 1011829 | ASSEMBLY, BRACKET, HYDRAULIC PUMP |
| 16.1 | 1 | 1011620 | TOP PLATE, HYDRAULIC PUMP |
| 16.2 | 1 | 1011806 | BRACKET, HYDRAULIC PUMP |
| 16.3 | 2 | 1011807 | LOWER ANGLE, BRACKET, HYDRAULIC PUMP |
| 16.4 | 2 | 1011826 | UPPER ANGLE, BRACKET, HYDRAULIC PUMP |
| 16.5 | 1 | 1011828 | COVER, BRACKET, HYDRAULIC PUMP |
| 16.6 | 1 | 21A09162-061 | BOTTOM PLATE, BRACKET, HYDRAULIC PUMP |
| 16.7 | 2 | AN525-10R7 | SCREW, WASHER HEAD, 10-32 |
| 16.8 | 2 | MS21047L3 | NUT PLATE, FIXED, STEEL, PLAIN, 10-32 |
| 17 | 3 | 1N4004 | DIODE, 2-1/2" |
| 18 | 2 | 206062-3 | CLAMP, CABLE, CPC SIZE 11 |
| 19 | 1 | 206429-1 | PLUG, MAL, CPC SIZE 1, 4 PIN |
| 20 | 1 | 206430-2 | CPC FREE HANG, 4 PIN, FEMALE |
| 21 | 2 | 20PS001EB<br>700W500W | PRESSURE SWITCH |
| 22 | 1 | 3453LF2A | FUSE HOLDER |
| 23 | 1 | 6-140 | TERMINAL BLOCK, 6 CONNECTOR |
| 24 | 3 | 66103-4 | PIN, CRIMP SOCKET, 24-20G |
| 25 | 3 | 66105-4 | CRIMP SOCKET, FEMALE |
| 26 | 1 | 6A3-2199 | PLACARD, OIL LEVEL |
| 27 | 1 | 73F-250-32-NL | CONNECTOR, FEMALE, 10-12 AWG, FULLY INSULATED |
| 28 | 1 | 73M-250-32-NL | CONNECTOR, MALE, 10-12 AWG, FULLY INSULATED |
| 29 | 1 | 93783A032 | SEALING WASHER |
| 30 | 1 | 93786A200 | PRESSURE-SEALING WASHER, M12 |
| 31 | 1 | AGC-1 | FUSE, 250V, (S2565-1) |
| 32 | 2 | AN3-3A | BOLT, 10-32, 0.0625 GRIP, UNDRILLED, STEEL |
| 33 | 1 | AN3-5A | BOLT, 10-32, 0.25 GRIP, UNDRILLED, STEEL |
| 34 | 2 | AN526C632R8 | SCREW, MACHINE, TRUSS HEAD |
| 35 | 1 | AN833-4D | FITTING, HYDRAULIC, 90 DEGREES ELBOW |
| 36 | 2 | AN914-1D | ELBOW,90 DEGREES, INTERNAL EXTERNAL PIPE |
| 37 | 2 | AN919-3D | FITTING, REDUCER |
| 38 | 1 | AN924-4D | JAM NUT |
| 39 | 3 | BR05-FW | SOCKET, 5 PRONG, PLASTIC |
| 40 | 2 | MS16997-99 | SCREW, CAP, SOCKET HEAD |
| 41 | 2 | MS21044N06 | NUT, LOCKING, REGULAR HEIGHT, 6-32 UNC |

| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 42 | 3 | MS21044N3 | NUT, LOCKING, REGULAR HEIGHT, 10-32 UNF |
| 43 | 1 | MS21266-2N | CATERPILLAR GROMMET |
| 44 | 1 | MS21919WDG10 | CLAMP, LOOP, CUSHIONED, 5/8 TUBE OD |
| 45 | 12 | MS25036-102 | RING TERMINAL, #6 STUD, 16-22 AWG, RED |
| 46 | 1 | MS25036-103 | RING TERMINAL, #10 STUD, 22-16 AWG, RED |
| 47 | 2 | MS25036-112 | RING TERMINAL, #10 STUD, 10-12 AWG, YELLOW |
| 48 | 2 | MS25036-157 | RING TERMINAL, 1/4 STUD, 10-12 AWG, YELLOW |
| 49 | 2 | MS28775-013 | "O" RING, HYDRAULIC |
| 50 | 2 | MS35338-46 | WASHER, SPLIT |
| 51 | 1 | MS35489-14 | GROMMET, RUBBER |
| 52 | 5 | NAS1149F0332P | WASHER, 0.203 ID, 0.032 THK, STEEL |
| 53 | 1 | NAS1149F0363P | WASHER, 0.203 ID, 0.063 THK, STEEL |
| 54 | 2 | NAS1149F0432P | WASHER, 0.265 ID, 0.032 THK, STEEL |
| 55 | 1 | NJAM12X1.0CLZ | NUT, JAM, M12X1.0, ZINC |
| 56 | 3 | S2230-1 | RIVET, POP |
| 57 | 3 | TM2S6-M | CABLE TIE MOUNT |
| 58 | 3 | V23234-A0001-X032 | RELAY, 12V, 5 PRONG |
| 59 | 1 | YBZS-C0.63W1T100K/UVZOT2 | HYDRAULIC POWER PACK, 12VDC, .64 PUMP |

# HYDRAULIC PUMP ASSEMBLY FOR PA-12

## PRE SERVICE LETTER 225






## ELECTRICAL SCHEMATIC

PUMP WIRING SCHEMATIC
(RELAYS SHOWN IN RELAXED CONDITION)

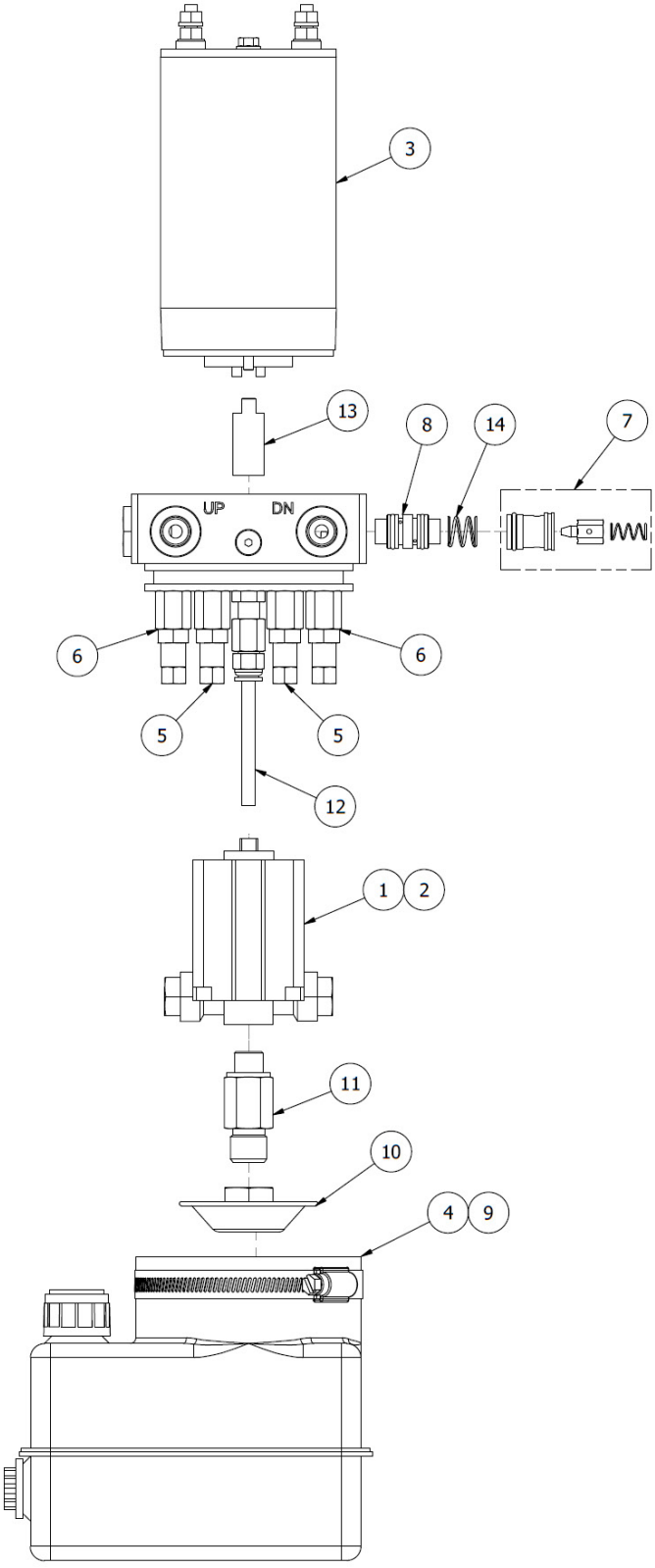
1. GE WIRES 20 GA
2. GA WIRES 12 GA
3. FOR WIRING REF DWG. 10C1-6028

| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| - | 1 | 21A09000-233 | HYD. PUMP COMPLETE WITH MOUNT |
| 1 | 1 | 21A09000-215 | HYD. PUMP 12V (COMPLETE) |
| 2 | 1 | 21A09000-232 | ASS'Y., MOUNT WITH COVER |
| | 2 | MS16997-96 | CAP, SCREW ATTACH TO PUMP |
| | 2 | MS353338-46 | LOCK WASHER |
| 3 | 3 | 0-332-209-137 | RELAY |

| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 4 | 3 | BR05FW | SOCKET, RELAY |
| | 15 | 1-901-355-917 | TERMINAL |
| | 1 | AN3-4A | BOLT, 10-32, 0.125 GRIP, UNDRILLED, STEEL |
| | 2 | AN3-3A | BOLT, 10-32, 0.0625 GRIP, UNDRILLED, STEEL |
| | 6 | NAS1149F0332P | WASHER, 0.203 ID, 0.032 THK, STEEL |
| | 3 | MS21044N3 | NUT, LOCKING, REGULAR HEIGHT, 10-32 UNF |
| 5 | 1 | 21A09274-006 | STAND PIPE |
| | 1 | MS28775-011 | "O" RING, HYDRAULIC |
| | 1 | 6A09706-001 | FILTER, HYDRAULIC PIPE |
| 6 | 2 | AN804-4D | TEE FITTING |
| | 2 | MS28775-012 | O RING, HYDRAULIC PACKING, .364 ID |
| | 1 | AN815-4D | UNION |
| 7 | 2 | 20PS001EB<br>700W500W | PRESSURE, SWITCH |
| 8 | 3 | IN4004 | DIODE |
| 9 | 1 | AGC-1 | FUSE |
| 10 | 1 | 6-140 | TERMINAL STRIP |
| | 2 | AN520-6R8 | SCREW |
| | 2 | MS21044N06 | NUT, LOCKING, REGULAR HEIGHT, 6-32 UNC |

# HYDRAULIC PUMP OVERVIEW

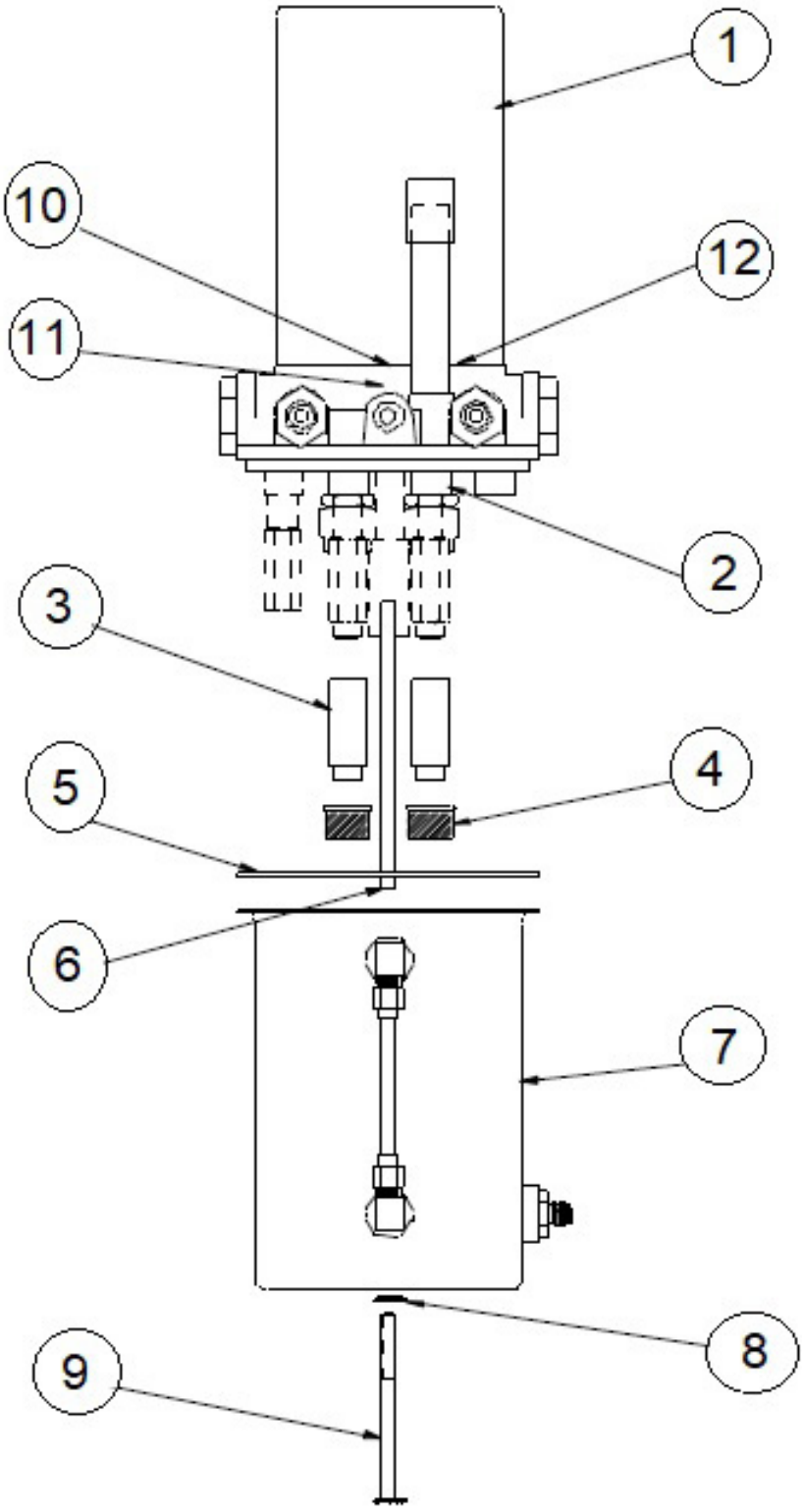
## POST SERVICE LETTER 225



| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 1 | 1 | 202-0003 | BI-DIRECTIONAL PUMP, 0.64 ML/R |
| 2 | 1 | 299-0008 | SEAL KIT, BI-DIRECTIONAL GEAR PUMP |
| 3 | 1 | 610-0010 | DC MOTOR, 12V, .8KW |
| 4 | 1 | 622-0016 | RESERVOIR, 1 QT. |
| 5 | 2 | 631-0005 | PRESSURE RELIEF VALVE |
| 6 | 2 | 631-0006 | THERMAL RELIEF VALVE |
| 7 | 2 | 632-0004 | ASSEMBLY, PILOT OPERATED CHECK VALVE |
| 8 | 1 | 637-0024 | SHUTTLE VALVE |
| 9 | 1 | 681-0050 | CLAMP, HOSE, 1 LITER PLASTIC RESERVOIR |
| 10 | 1 | 682-0019 | FILTER, PICKUP TUBE, HYDRAULIC PUMP |
| 11 | 1 | 682-0055 | SUCTION HEX TUBE |
| 12 | 1 | 682-0056 | RETURN TUBE |
| 13 | 1 | 683-0011 | COUPLING, MOTOR TO PUMP |
| 14 | 2 | 685-0012 | SPRING, SHUTTLE VALVE |
| 15 | 1 | 687-0001 | SEAL KIT, RESERVIOR O-RING, PILOT OPERATED RELIEF VALVE O-RING, THERMAL AND PRESSURE RELIEF VALVE O-RING (NOT SHOWN) |

# HYDRAULIC PUMP OVERVIEW

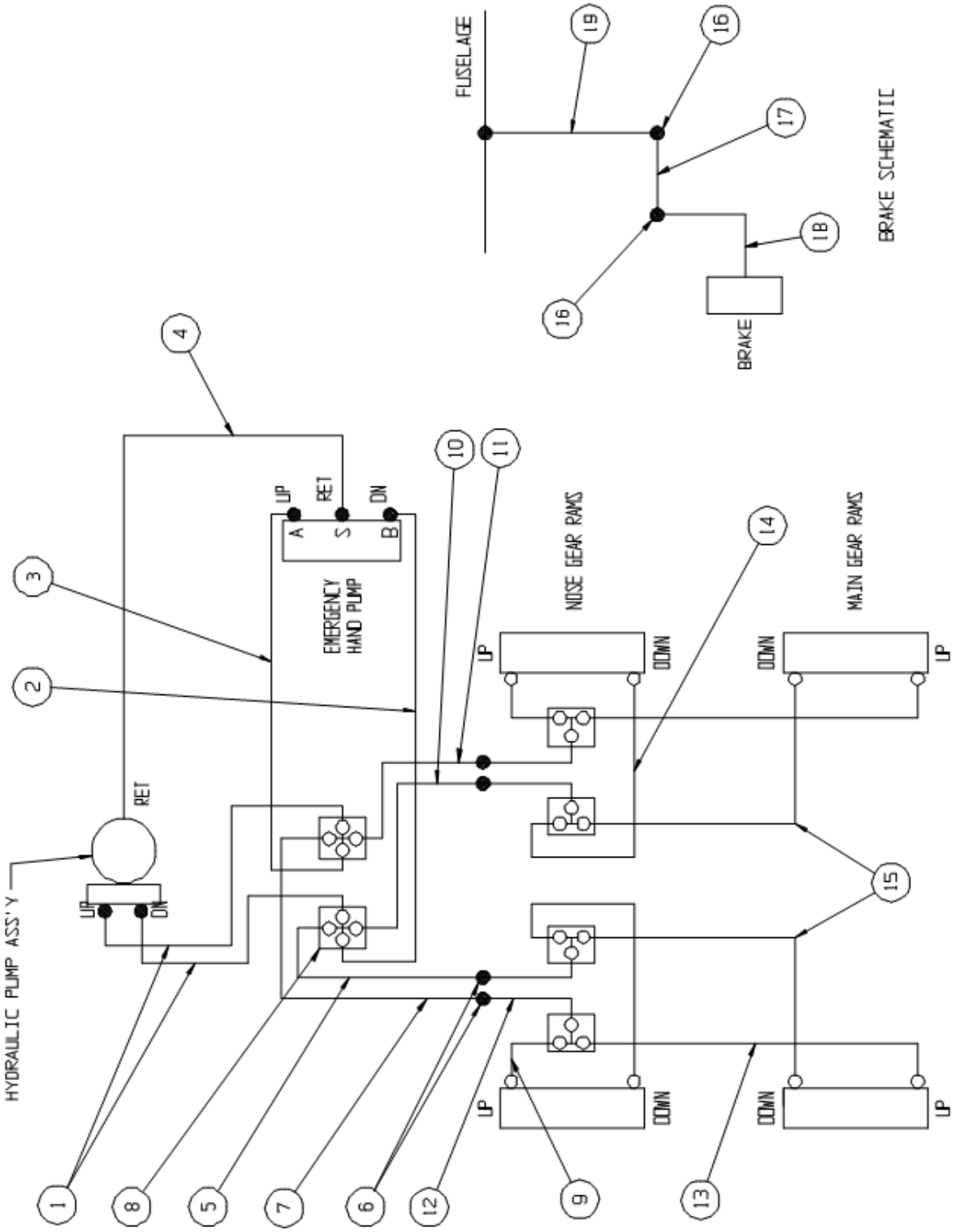
## PRE SERVICE LETTER 225



| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 1 | 1 | 21A09000-215 | HYDRAULIC PUMP ASSY. (12V) |
| | 1 | 410497* | MOTOR (12V) |
| 2 | 1 | 634873 | BASIC PUMP |
| 3 | 2 | 362136 | TUBE EXTENSIONS |
| 4 | 2 | 410521* | FILTER |
| 5 | 1 | 410578* | SEAL RESERVIOR |
| 6 | 1 | 365047 | RETURN TUBE |
| 7 | 1 | 775260 | RESERVIOR – GAUGE ASSY. |
| 8 | 1 | 415067 | SEAL THREAD |
| 9 | 1 | 409715* | SCREW – RESERVIOR ATTACH |
| 10 | 1 | 361183* | COUPLING – MOTOR TO PUMP |
| 11 | 1 | 410512 | SEAL – PUMP SHAFT |
| 12 | 1 | 405673 | O-RING, BI-DIRECTIONAL MOTOR TO ADAPTOR |

* Reference Wipaire drawing 1011065 for alternate part numbers.

# HYDRAULIC SCHEMATIC



| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 1 | 2 | 21A09000-204 | ASSEMBLY, HOSE – PUMP TO 4 WAY TO TEE |
| 2 | 1 | 21A09000-223 | ASSEMBLY, HOSE – 4 WAY TEE L. TO H. PUMP |
| 3 | 1 | 21A09000-207 | ASSEMBLY, HOSE – 4 WAY TEE R. TO H. PUMP |
| 4 | 1 | 21A09000-208 | ASS'Y HOSE-PUMP TANK TO HAND PUMP |
| 5 | 1 | 21A09000-206 | ASSEMBLY, HOSE – 4 WAY TEE R. FLOAT |
| 6 | 4 | AN833-4D | FITTING, ELBOW (DECK FITTING) |
| | 4 | AN924-4D | NUT, TUBE, 7/16-20 THREAD |
| | 4 | NAS1149D0763J | WASHER, 0.453 ID, 0.063 THK, ALUMINUM |
| 7 | 1 | 21A09000-205 | ASSEMBLY, HOSE – 4 WAY TEE TO L. FLOAT |
| 8 | 2 | AN827-4D | CROSS FITTING, FLARED TUBE, 1/4" TUBE, 7/16-20 THREAD |
| 9 | 2 | 21A09000-218 | ASSEMBLY, HOSE – NOSE UP TO TEE |
| 10 | 1 | 21A09000-205 | ASSEMBLY, HOSE – 4 WAY TEE TO L. FLOAT |
| 11 | 1 | 21A09000-206 | ASSEMBLY, HOSE – 4 WAY TEE R. FLOAT |
| 12 | 4 | 21A09000-222 | ASSEMBLY, HOSE – TEE TO TOP UP – DN |
| 13 | 2 | 21A09000-220 | ASSEMBLY, HOSE – MAIN UP TO TEE |
| 14 | 2 | 21A09000-219 | ASSEMBLY, HOSE – NOSE DN TO TEE |
| 15 | 2 | 21A09000-221 | ASSEMBLY, HOSE – MAIN DN TO TEE |
| 16 | 2 | AN833-3D | FITTING, HYDRAULIC, 90° ELBOW |
| | 4 | NAS1149D0663J | WASHER, 0.39 ID, 0.063 THK, ALUMINUM |
| | 2 | AN924-3D | NUT, TUBE, 3/8-24 THREAD |
| 17 | 1 | 21A04000-079 | ALUM BRAKE LINE |
| 18 | 1 | 21A04000-078 | HYD. LINE ASSY. WHEEL WELL BRAKE LINE |
| 19 | 2 | 21A04000-080 | ASS'Y., BRAKE LINE (FUSELAGE TO DECK) |

THIS PAGE INTENTIONALLY LEFT BLANK

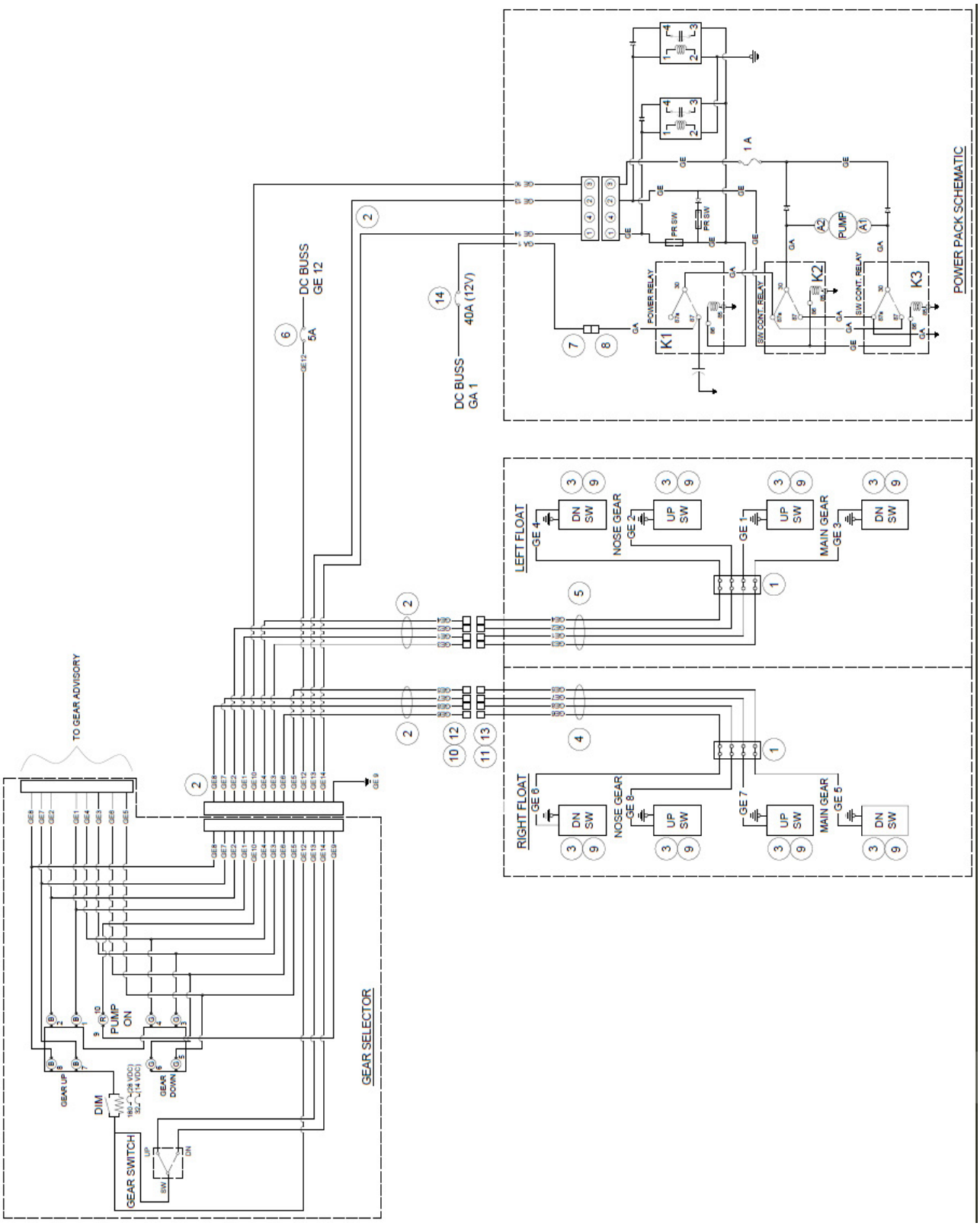
# SECTION 11
# ELECTRICAL

## CONTENTS

ELECTRICAL SCHEMATIC POST SERVICE LETTER 225 ..... 126
ELECTRICAL SCHEMATIC PRE SERVICE LETTER 225 ..... 128
GEAR CONTROL (ROUND) ..... 130
GEAR CONTROL (RECTANGLE) ..... 133

# ELECTRICAL SCHEMATIC

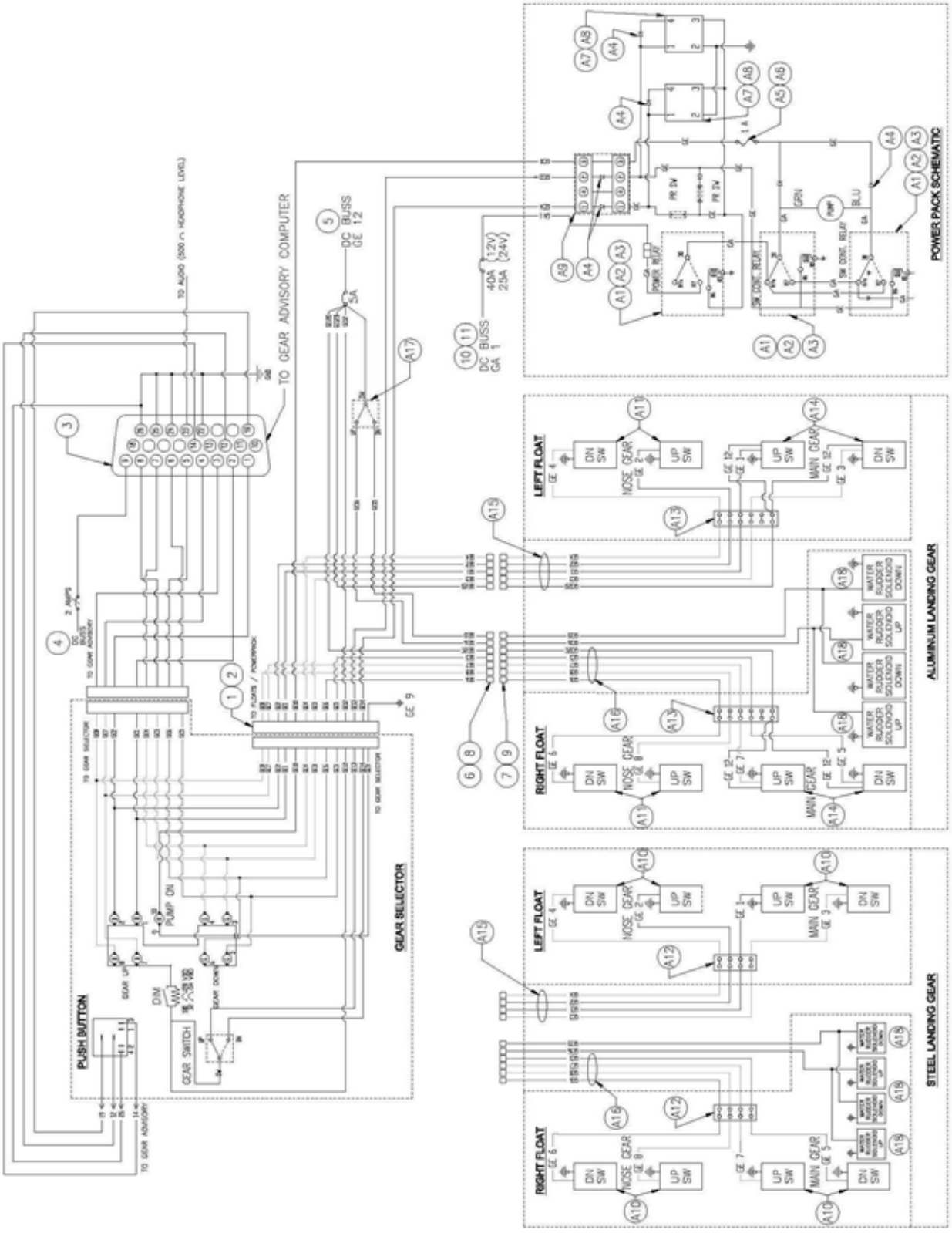
# POST SERVICE LETTER 225



| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 1 | 2 | 4-140 | TERMINAL BLOCK, 4 POSITION |
| 2 | 1 | 4A11000-011 | WIRE HARNESS, GEAR SELECTOR, FLOATS, HYD. PUMP |
| 3 | 8 | 5801 | GEAR POSITION SWITCH, PROXIMITY, MAGNETIC |
| 4 | 1 | 6A10000-004 | WIRE HARNESS, LEFT FLOAT |
| 5 | 1 | 6A10000-005 | WIRE HARNESS, RIGHT FLOAT |
| 6 | 1 | 7277-2-5 | CIRCUIT BREAKER, 5 AMP |
| 7 | 1 | 73F-250-32-NL | CONNECTOR, FEMALE, 12-10 AWG |
| 8 | 1 | 73M-250-32-NL | CONNECTOR, MALE, 12-10 AWG |
| 9 | 8 | 21A09005-262 | CLIP, GEAR POSITION SWITCH HOLDER |
| 10 | 8 | S1635-1 | PIN |
| 11 | 8 | S1636-1 | SOCKET |
| 12 | 8 | S1637-1 | HOUSING |
| 13 | 8 | S1637-2 | HOUSING |
| 14 | 1 | W23-X1A1G-40 | CIRCUIT BREAKER, 40 AMP, 12VDC |

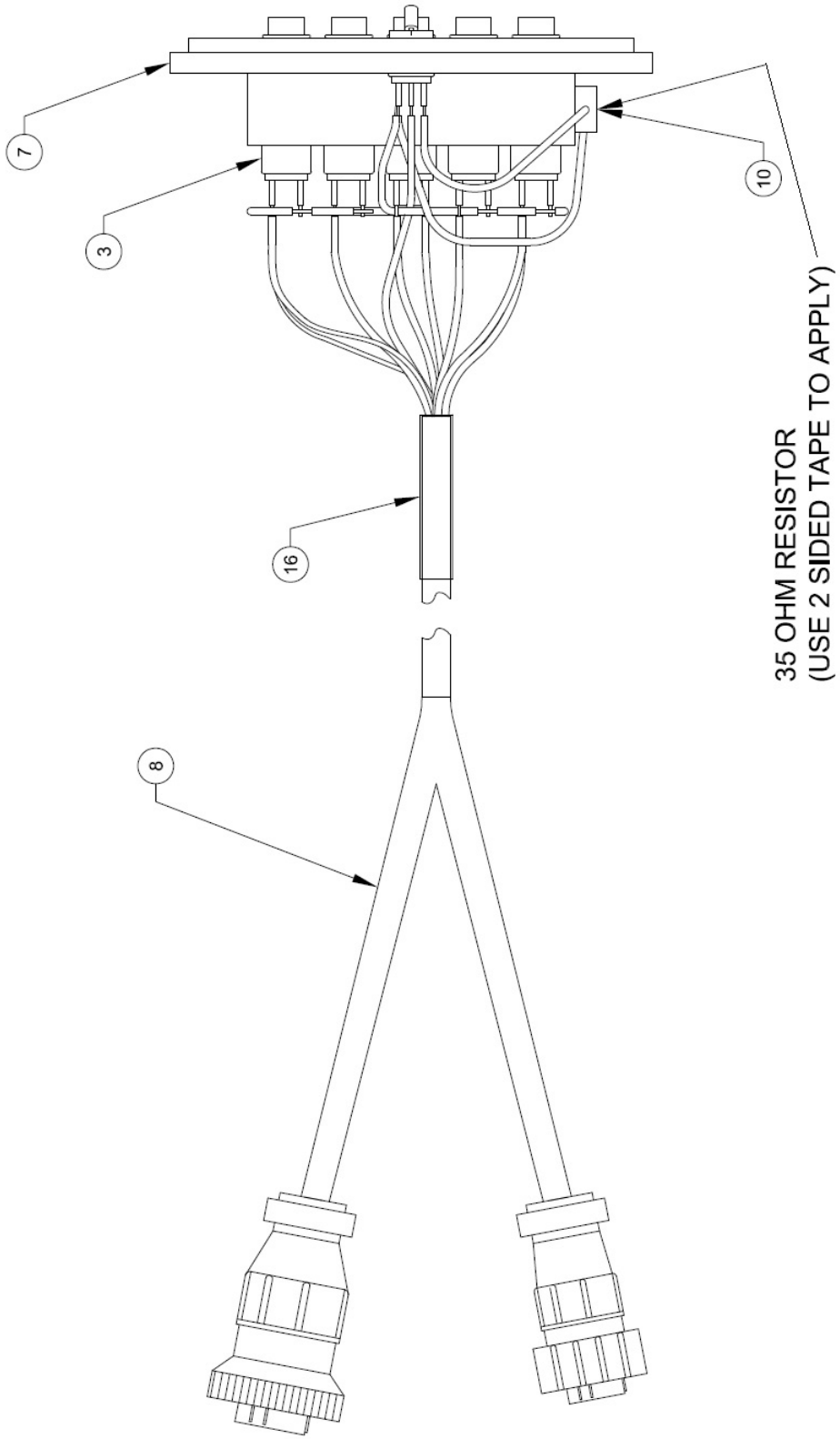
# ELECTRICAL SCHEMATIC

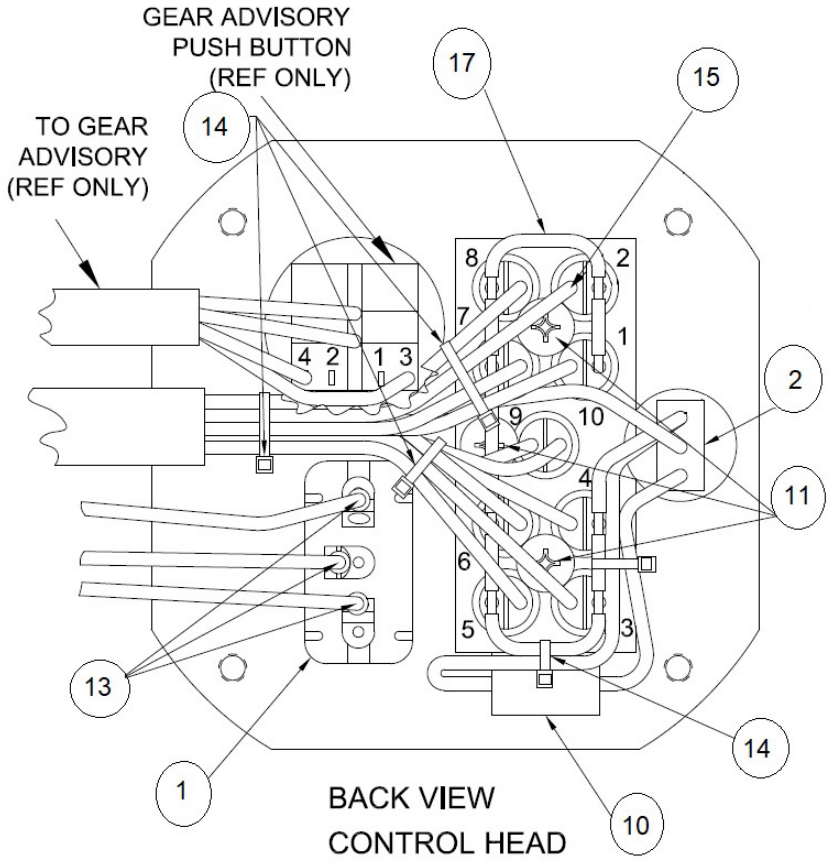
# PRE SERVICE LETTER 225

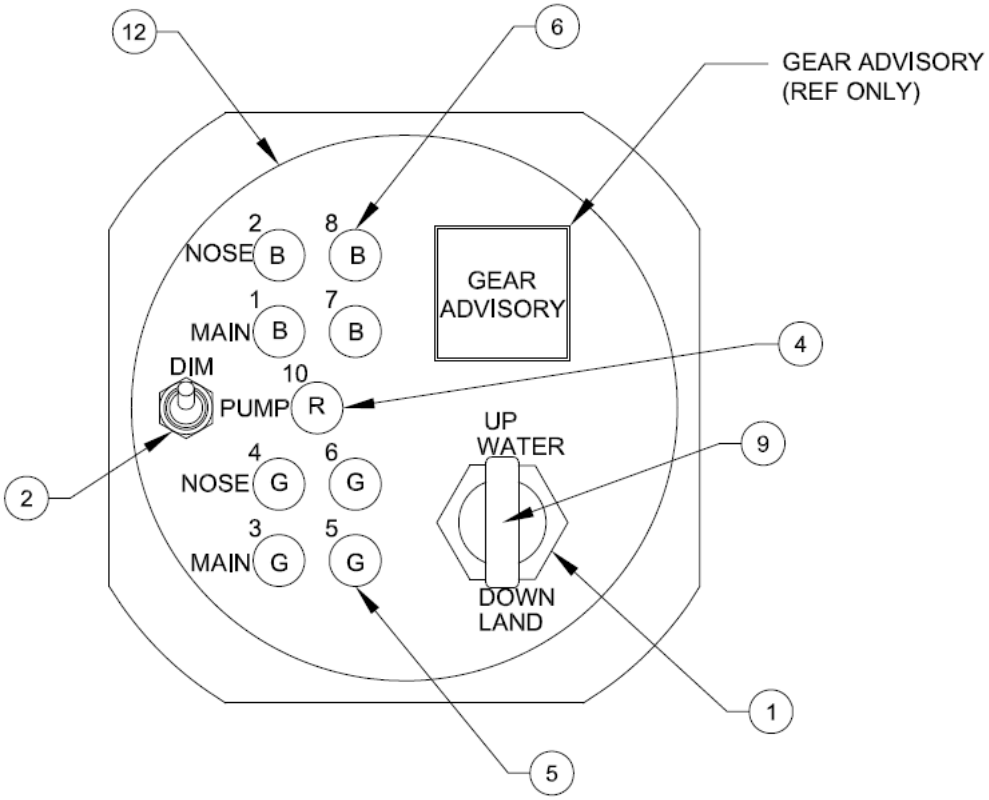


| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| 1 | 1 | 4A11000-011 | ASSEMBLY, GEAR SELECTOR WIRING HARNESS |
| 3 | 1 | 4A11000-014 | ASSEMBLY, WIRING HARNESS, GEAR ADVISORY |
| 4 | 1 | 7277-2-2 | KLIXON CIRCUIT BREAKER, 2 AMP |
| 5 | 1 | 7277-2-5 | KLIXON CIRCUIT BREAKER, 5 AMP |
| 6 | 8 | S1635-1SF | PIN |
| 7 | 8 | S1636-1 | SOCKET |
| 8 | 8 | S1637-1 | HOUSING |
| 9 | 8 | S1637-2 | HOUSING |
| 11 | 1 | W-23-X1A1G-40 | BREAKER, CIRCUIT, 40AMP |
| A1 | 3 | 0-332-209-211 | RELAY, 24V, 5 PRONG |
| A3 | 3 | BR05FW | SOCKET, 5 PRONG, PLASTIC |
| A4 | 7 | 1N4004 | DIODE, 2-1/2" |
| A5 | 1 | AGC-1 | FUSE, 250V, (S2565-1) |
| A6 | 1 | 3453LF2A | FUSE HOLDER |
| A7 | 2 | 1012411 | ASSEMBLY, RELAY, TIME DELAY RELEASE, 6-48 VDC |
| A9 | 1 | 1004949 | CABLE, DIODE ADAPTER |
| A10 | 8 | 5801 | SWITCH, SENSOR |
| A12 | 2 | 4-140 | 4 LUG TERMINAL BLOCK |
| A15 | 1 | 6A10000-004 | ASSEMBLY, WIRE HARNESS, LEFT FLOAT |
| A16 | 1 | 6A10000-005 | ASSEMBLY, WIRE HARNESS, RIGHT FLOAT |

# GEAR CONTROL (ROUND)

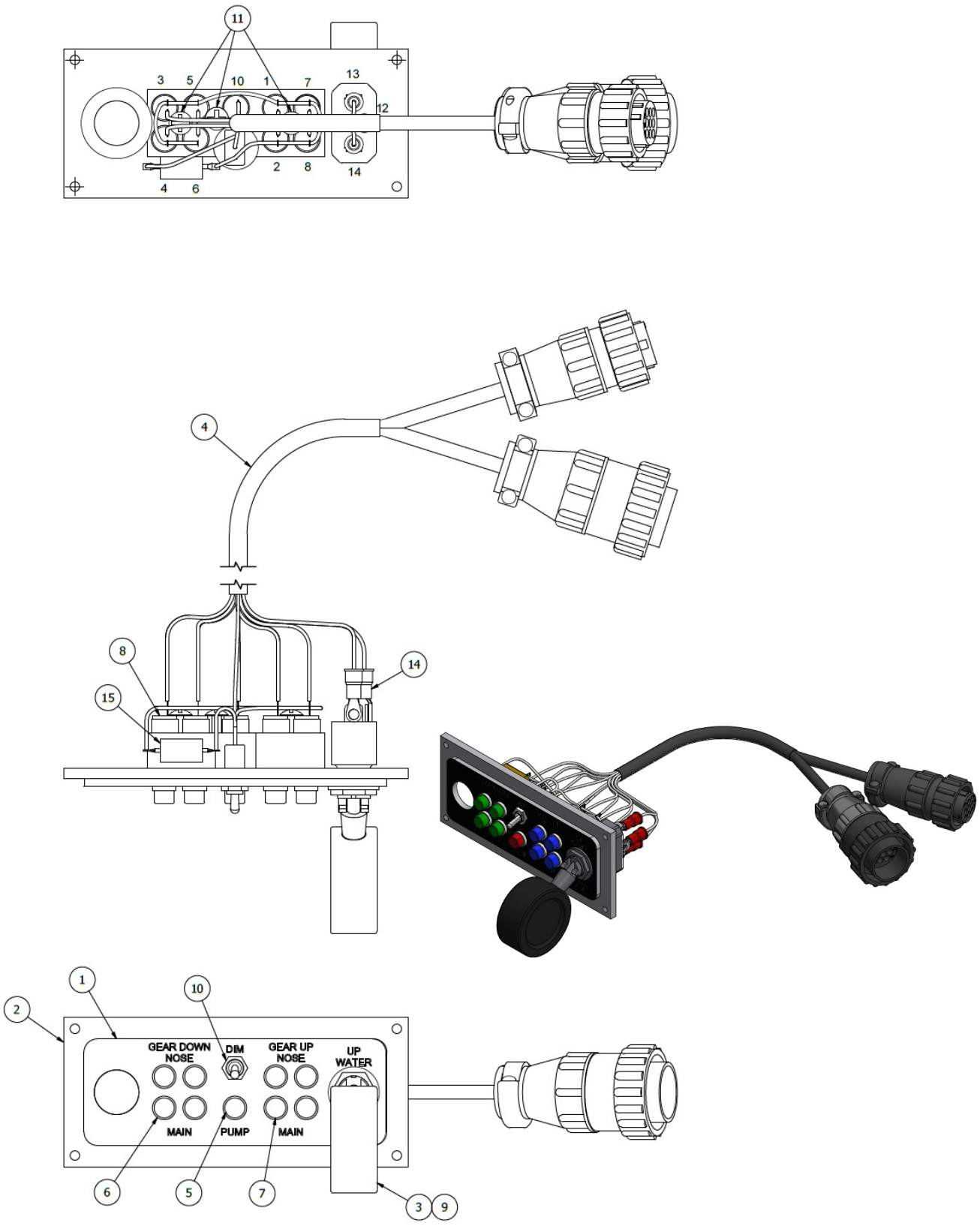



GEAR ADVISORY
PUSH BUTTON
(REF ONLY)
TO GEAR
ADVISORY
(REF ONLY)
14
17
15
8
2
7
1
4 2
1 3
2
9
10
4
11
6
5
3
13
14
1
10
BACK VIEW
CONTROL HEAD


12
6
GEAR ADVISORY
(REF ONLY)
2
NOSE
B
8
B
GEAR
ADVISORY
1
MAIN
B
7
B
4
DIM
10
PUMP
R
UP
WATER
9
2
4
NOSE
G
6
G
3
MAIN
G
5
G
DOWN
LAND
1
5

| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| - | 1 | 21A11000-009 | GEAR SELECTOR ASSY. ROUND (12V) |
| 1 | 1 | 8857K44 | SWITCH |
| 2 | 1 | A101SYCB | TOGGLE SWITCH, SPDT, ON-ON |
| 3 | 9 | 515-0012 | SOCKET |
| 4 | 1 | 507-3914-1431-600F | INDICATOR LAMP, 14V, RED |
| 5 | 4 | 507-3914-1432-600F | INICATOR LAMP, 14V, GREEN |
| 6 | 4 | 507-3914-1434-600F | INDICATOR LAMP, 14V, BLUE |
| 7 | 1 | 21A11179-001 | BLOCK, GEAR CONTROL |
| 8 | 1 | 4A11000-008 | HARNESS ASSEMBLY, GEAR SELECTOR |
| 9 | 1 | 21A11259-003 | GEAR SWITCH KNOB |
| 10 | 1 | RH-5-35 | RESISTOR, 14V, DALE RH5 5W |
| 11 | 3 | AN526-632R8 | SCREW, TRUSS HEAD, 6-32 |
| 12 | 1 | 10B3-6202 | PLACARD, ROUND 2100 GEAR SELECTOR |
| 13 | 3 | MS25036-102 | RING CONNECTOR, #6, 20 AWG, RED |
| 14 | 5 | PLT1M-M | CABLE TIE |
| 15 | 16 IN | HIXR-3/16 | SHRINK WRAP, 3/16, WHITE |
| 16 | 3 IN | HS105-1/2-0 | HEAT SHRINK TUBING |
| 17 | 6 IN | 22759-16-20-9 | WIRE, 20 AWG, WHITE |

# GEAR CONTROL (RECTANGLE)



| ITEM | QTY | PART NO. | PART DESCRIPTION |
|---|---|---|---|
| - | 1 | 21A11000-010 | ASSEMBLY, INDICATOR, GEAR CONTROL, SQUARE, 12V |
| 1 | 1 | 10B3-6277 | PLACARD, GEAR CONTROL SQUARE |
| 2 | 1 | 21A11179-002 | BLOCK GEAR CONTROL SQUARE |
| 3 | 1 | 21A11259-003 | GEAR SWITCH KNOB |
| 4 | 1 | 4A11000-008 | WIRING HARNESS ASSY. SELECTOR |
| | 3 IN | HS105-1/2-0 | HEAT SHRINK TUBING |
| 5 | 1 | 507-3914-1431-600F | LAMP LIGHT, RED 14V |
| 6 | 4 | 507-3914-1432-600F | LAMP LIGHT, GREEN 14V |
| 7 | 4 | 507-3914-1434-600F | LAMP LIGHT, BLUE, 14V |
| 8 | 9 | 515-0012 | SOCKET |
| 9 | 1 | 8857K44 | SWITCH |
| 10 | 1 | A101SYCB | TOGGLE SWITCH |
| 11 | 3 | AN526-632R8 | SCREW, TRUSS HEAD MACHINE, 6-32 THREAD, 1/2" LENGTH |
| 12 | 12" | HS105-3/32-0 | HEAT SHRINK, TUBING - BLACK |
| 13 | 3 | PLT1M-M | CABLE TIE, NYLON, WHITE, 4" (SMALL) |
| 14 | 3 | MS25036-102 | TERMINAL, RING #6 STUD, 16-22 AWG, RED |
| 15 | 1 | RH-5-35 | RESISTOR, 14V, DALE RH5 5W |
| 16 | 6 IN | 22759-16-20-9 | WIRE, 20AWG, WHITE (NOT SHOWN) |
| 17 | 16 IN | HIXR-3/16 | SHRINK WRAP, 3/16, WHITE (NOT SHOWN) |