

MODEL 2462 PARTS CATALOG

StraightLine Directional Drilling System

Manual Number 9010019



Manufacturer of Directional Drilling Equipment
WWW.STRAIGHTLINEHDD.COM

STRAIGHTLINE ®

1450 South Spencer Road - Newton, Kansas 67114 - 316-283-5511 - 800-654-3484 - Fax 316-283-2783

rev. 4.10.00

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STRAIGHTLINE PARTS ORDERING INFORMATION

Quality

StraightLine Manufacturing, Inc. is dedicated to providing quality products and services to satisfy our customers' needs. Quality is the responsibility of every StraightLine employee. Our focus is on continuously improving and innovating quality products.

How To Order

Contact your local StraightLine Dealer or call:

StraightLine Manufacturing, Inc
1450 South Spencer Road,
P.O. Box 388
Newton, Kansas 67114 / USA

1-888-367-8564 (parts dept. only, Toll Free)
1-316-283-6666 (parts department Fax)
1-800-654-3484 (StraightLine - Toll Free)
1-316-283-5511 (StraightLine switchboard)

Please have the drill's and/or mud skid's serial number and use StraightLine part numbers when ordering. All customer orders will be invoiced through the respective StraightLine Dealer when applicable. Credit card orders are welcome.

Conditions of Sale -- Terms and Delivery

With approved credit, 30 day terms will be granted. A 2% discount is available for payments postmarked by the 10th day of invoice date. No discounts are allowed on freight.

Claims and Returns

In all cases, risk of loss and damage to goods in transit shall fall upon the purchaser. It is the purchasers' responsibility to file any loss or damage with the carrier. Inspect all shipments for damage upon receipt. If any damage is noticed with packaging or carton, do not sign for or accept it without the driver making a notation on the freight bill or receipt. After receiving the shipment, remove the goods and thoroughly inspect immediately. If any concealed damage is discovered, notify the delivering carrier immediately in writing. Do not move damaged merchandise until further inspection has been made. Save the carton and packing material for inspection. Do not attempt to return any goods to our factory without making prior arrangements with StraightLine Manufacturing, Inc. Claims for shortages or inaccurate filling of orders must be made within 15 days after receipt of goods.

All returns must have a returned goods authorization number (RGA number) regardless of the reason for

return. Please contact the StraightLine parts department for an RGA number. This number must appear on the outside of the box as well as on a tag attached to the individual part. There will be a restocking charge applied on any items returned for credit or exchange when the error is not ours. Goods must be in new and original condition.

Packaging

Returned goods must be properly and securely packed to avoid damage in shipment. Goods damaged in shipment due to poor or improper packaging will not be warranted. Proper storage and shipment of warranty parts is a customer responsibility. If any components are damaged by rain, mud, rust, poor packaging, etc., the purchaser will be charged for the part.

Inspection Charge

Goods returned for warranty consideration, inspection, and/or testing, and found to be in acceptable working condition, or if the cause of failure is determined not to be a valid warranty issue, will be subject to a minimum \$25.00 inspection and handling charge for each item.

Replacement Part Warranty

Warranty allowance on service parts is based on 90 days from the purchase date to the original purchaser. There is no warranty on ground engaging tools. Warranty credit will be based on invoice price.

Genuine StraightLine parts that are replaced under this warranty and installed by an authorized StraightLine Dealer, StraightLine Service Center, or StraightLine Service Representative will be repaired or replaced, with a new or remanufactured part as StraightLine elects, if a defect in materials or workmanship appears during the period of coverage. No allowance will be made for labor to remove or install the part during the 90 day warranty period.

SPECIFIC POLICIES AND PROCEDURES FOR THE OPERATION OF THIS WARRANTY ARE SET FORTH IN STRAIGHTLINE'S NEW EQUIPMENT "WARRANTY POLICY" AND IN STRAIGHTLINE'S DEALER WARRANTY SERVICE - "POLICIES & PROCEDURES MANUAL".

STRAIGHTLINE WARRANTY INFORMATION SUMMARY

New Equipment Warranty

StraightLine Manufacturing, Inc. (Herein referred to as "StraightLine") warrants to the original owner each item of new equipment of its own manufacture against defective workmanship and material, under normal use and service, but not against damage of any kind resulting from misuse, neglect, abuse, improper use or maintenance. Units which have been used for demonstration purposes for less than 100 hours are "new" for this purpose.

Warranty Period

The warranty period to the original retail purchaser is twelve (12) months or 1,000 hours after date of delivery, whichever expires first. Ninety days on Service Parts (See the StraightLine Policies and Procedures Manual and the StraightLine New Equipment Warranty Policy for complete warranty information). This warranty is made to the original owner of new StraightLine equipment and is not transferable.

ALERT: StraightLine warranties are activated by receipt of the New Product Warranty Registration form which is sent with each new product. Registration forms on all new equipment must be completed and on file at StraightLine Manufacturing within fifteen (15) days of the date of delivery to the first purchaser. Failure to file will result in no warranty reimbursements.

Coverage

All parts which are defective in material or workmanship except component parts separately warranted by the original manufacturer will be repaired or replaced, at StraightLine's option. StraightLine will pay the cost of labor deemed reasonably necessary by StraightLine, to install any repaired or replaced part provided under this warranty, when labor is performed by authorized StraightLine personnel. The remedies set forth in this paragraph are exclusive and correction by StraightLine of product non-conformities in the manner provided above shall constitute fulfillment of all liabilities and obligations of StraightLine to those entitled to the benefit of this warranty. Warranty will not apply if failure is due to normal wear, exposure, accident, neglect, or improper protection, improper maintenance, improper winterizing and storage, or improper use.

Exclusions

This warranty shall not apply to general maintenance services or expendable replacement items. In addition, this warranty shall not apply to equipment not manufactured by StraightLine which is covered only by the warranty, if any, of its manufacturer. StraightLine reserves the right to discontinue models or options at any time or to change specifications, materials, or designs without notice and without incurring obligation.

Owner Responsibility

The owner is responsible for proper maintenance of the product. Any improper use, including failure to provide proper maintenance, operation after discovery of defective or worn parts, or operation beyond rated capacity shall void this warranty. This warranty shall not apply to any equipment which has been tampered with or altered after leaving our control, including but not limited to: foreign materials in the fluid system, pressure and speed in excess of published and recommended maximum, and damages resulting from repair by anyone except authorized StraightLine personnel. Charges for pick up, delivery, mileage, hauling, overtime, and service calls are not covered by this warranty.

Remedies Exclusive

The only remedies purchaser has in connection with the breach or performance of any warranty on StraightLine equipment are the remedies set forth above. StraightLine will not be responsible for any duty, taxes or other changes or liable for incidental or consequential damages, including, but not limited to, loss of profits, rental of substitute equipment, delay or other commercial loss. StraightLine's liability in all events is limited to the value of the product involved.

No Modification of Warranty

No StraightLine employee, representative or dealer is authorized to modify or change this warranty in any way or grant any other warranty unless the modification or change is made in writing and signed by an officer of StraightLine.

Drilling Fluid Circuit

All components of the drilling fluid circuit such as, but not limited to: The drilling fluid swivel, drilling fluid mixing/circulating pump, drilling fluid pressure pump, and related couplers, valves, seats, packings, seals, relief valves, bearings, shafts, housings, jets, etc., come in contact with an abrasive media when using Bentonite. These components are unquestionably wear items and are not covered under warranty.

Expendable Wear Items

Repair or replacement of expendable and normal wear items such as, but not limited to: Drill stem, ground engaging tools, bits, stakes, augers, saver subs, wrench jaws, cogs, and bodies, loose electrical wires, electrical umbilical cords and connectors, couplers, engine oil and filters, fuel filters, drill fluid strainers or filters, hydraulic oil and filters, drill fluid hoses and couplers, O-rings, roller chains and connector or repair links, sprockets, etc. will not be covered under this warranty. Warranty will not apply if failure is due to normal wear, exposure, accident, neglect, abuse, or improper protection, improper maintenance, improper winterization and storage, or improper use.

Limitations of Warranties and Applicable Law

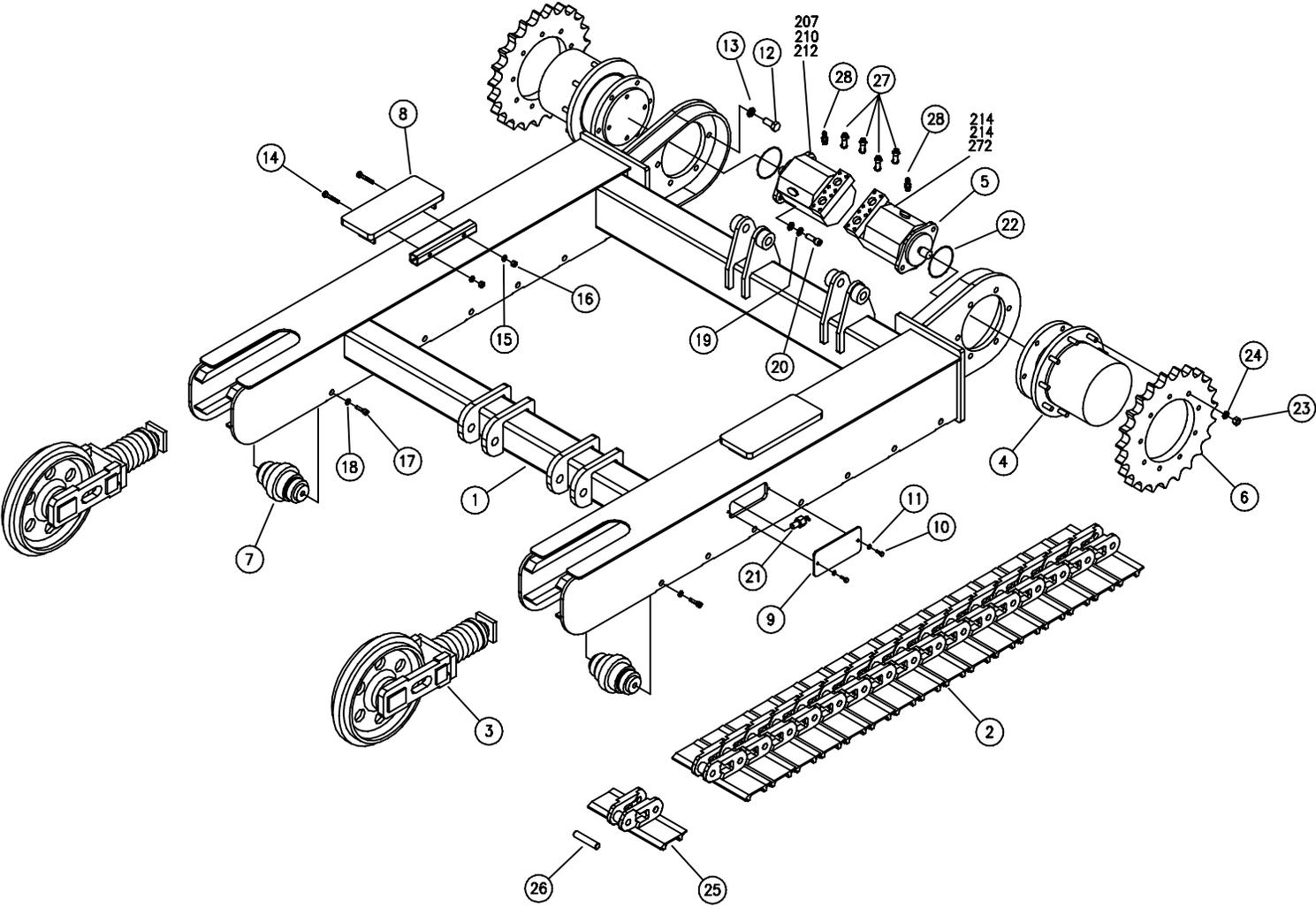
Where permitted by law, StraightLine's warranty is expressly limited to the conditions as stated in this warranty. There are no warranties which extend beyond the description on the face of this warranty and/or StraightLine's New Equipment Warranty Policy. This warranty is issued by StraightLine at Newton Kansas and shall be governed by and interpreted in accordance with the laws of the state of Kansas.

FOR COMPLETE AND SPECIFIC WARRANTY INFORMATION REGARDING NEW STRAIGHTLINE EQUIPMENT, SEE THE "NEW EQUIPMENT WARRANTY POLICY" THAT IS FURNISHED WITH EACH PIECE OF NEW STRAIGHTLINE EQUIPMENT WHEN IT IS DELIVERED TO THE ORIGINAL PURCHASER. THIS PAGE IS BASICALLY A SUMMARY OF THAT POLICY.

SPECIFIC POLICIES AND PROCEDURES FOR THE OPERATION OF THIS WARRANTY ARE SET FORTH IN STRAIGHTLINE'S DEALER WARRANTY SERVICE "POLICIES AND PROCEDURES MANUAL".

IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS ARE EXPRESSLY EXCLUDED BY STRAIGHTLINE.

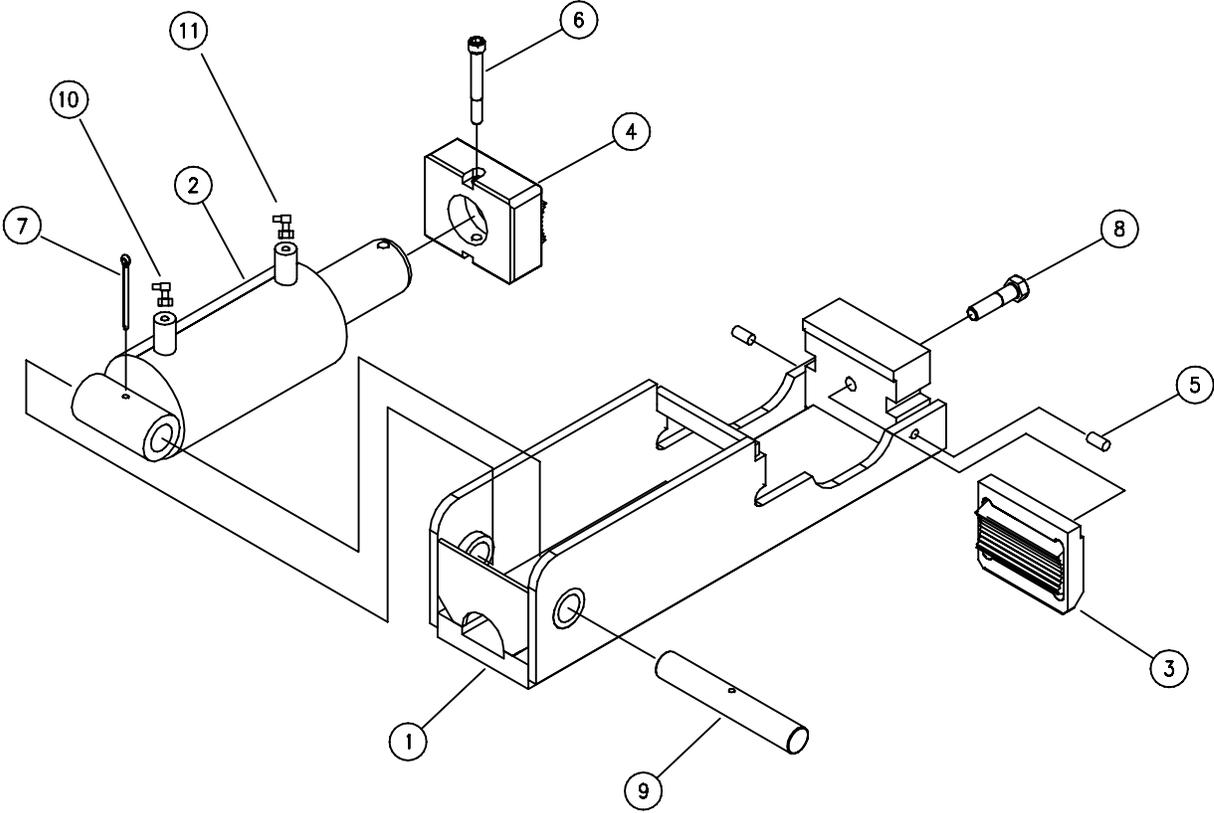
Track Frame



Track Frame Parts List

Item	Part Number	Description	Qty
1	470585	Track Frame Weldment	1
2	120762	Steel Track Chain – 46 Links	2
2a	120763	Rubber Track Chain – 46 Links	OPT
3	120766	Track Idler With Tensioner	2
4	221221	Track Drive Planetary Gearbox	2
5	221027	Track Drive Hydraulic Motor	2
6	310056	Track Drive Sprocket	2
7	120764	Lower Track Roller	14
8	270476	Upper Track Carrier/Guide	2
9	162263	Tensioner Valve Access Door	2
10	1420X34HB	Hex Bolt – 1/4-20 X 3/4	4
11	14LW	Lock Washer – 1/4	4
12	5811X112HB	Hex Bolt – 5/8-11 X 1 1/2	12
13	58LW	Lock Washer – 5/8	12
14	3816X2HB	Hex Bolt – 3/8-16 X 2	4
15	38LW	Lock Washer – 3/8	4
16	3816HN	Hex Nut – 3/8-16	4
17	14MMX35MMSHCS	Socket Head Cap Screw – 14mm X 35mm	28
18	14MMLW	Lock Washer – 14mm	28
19	120943	Disc Lock Washer – 1/2	8
20	1213X112SHCS	Socket Head Cap Screw – 1/2-13 X 1 1/2	4
21	120768	Grease Valve for Track Tensioner	2
22	121108	Rubber O-Ring _ 0.103 X 3.737 ID Nitrile	2
23	1220HN	Hex Nut – 1/2-20 NF	18
24	12LW	Lock Washer – 1/2	18
25	121276	Grouser Link – Steel	Ref
25a	121277	Grouser Link – Rubber	Ref
26	121321	Track Pin	Ref
27	12FLH12MJ90	3/4" 90° Elbow Adapter – Code 62 Flange to JIC M	4
28	10MB8MJ	Fitting Adapter – 5/8" to 1/2"	2
	280295	Track Pin Installation Tool (Not Shown)	Ref
	Reference Page 52	Hose #207 (Not Shown)	1
	Reference Page 52	Hose #210 (Not Shown)	1
	Reference Page 52	Hose #214 (Not Shown)	2
	Reference Page 52	Hose #212 (Not Shown)	2

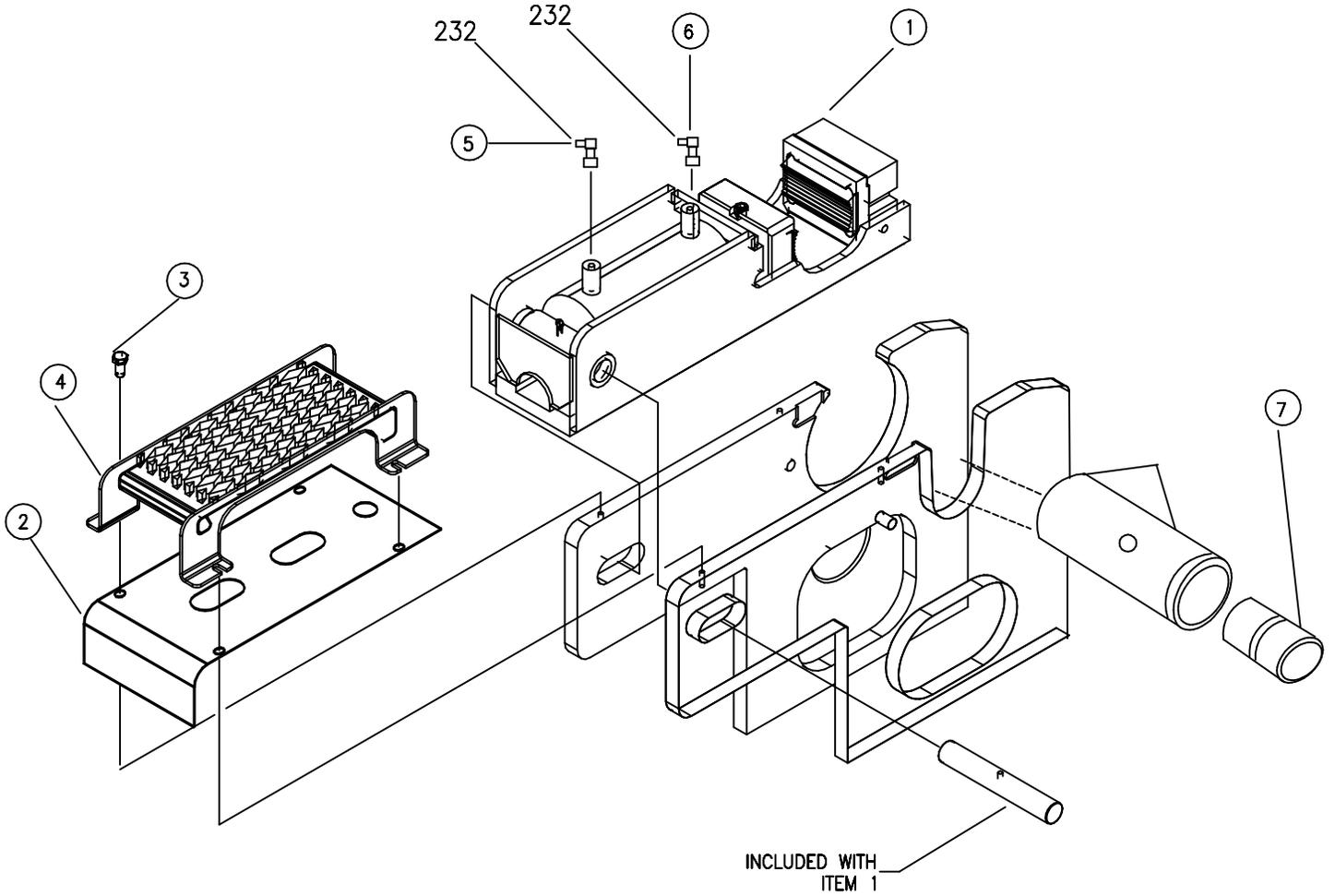
Inner Wrench Frame



Inner Wrench Frame Parts List

Item	Part Number	Description	Qty
1	470587	Weldment, Frame – Inner Wrench	1
2	320483	Hydraulic Cylinder – 3.50 X 2.00	1
3	270467	Wrench Jaw (Fixed)	1
4	270466	Wrench Jaw	1
5	121190	Dowel Pin – 0.375 X 0.750 Long	2
6	51618X3SHCS	Shear Pin	1
7	120507	Cotter Pin – 3/16 X 2.50	1
8	71614X2HB	Hex Bolt – 7/16-14 X 2	1
9	161660	Cylinder Pin – 1.00 X 6.375 Long	1
10	110028	1/4" 90° Elbow With 0.063 Orifice	1
11	4MB4MJ90	1/4" 90° Elbow	1

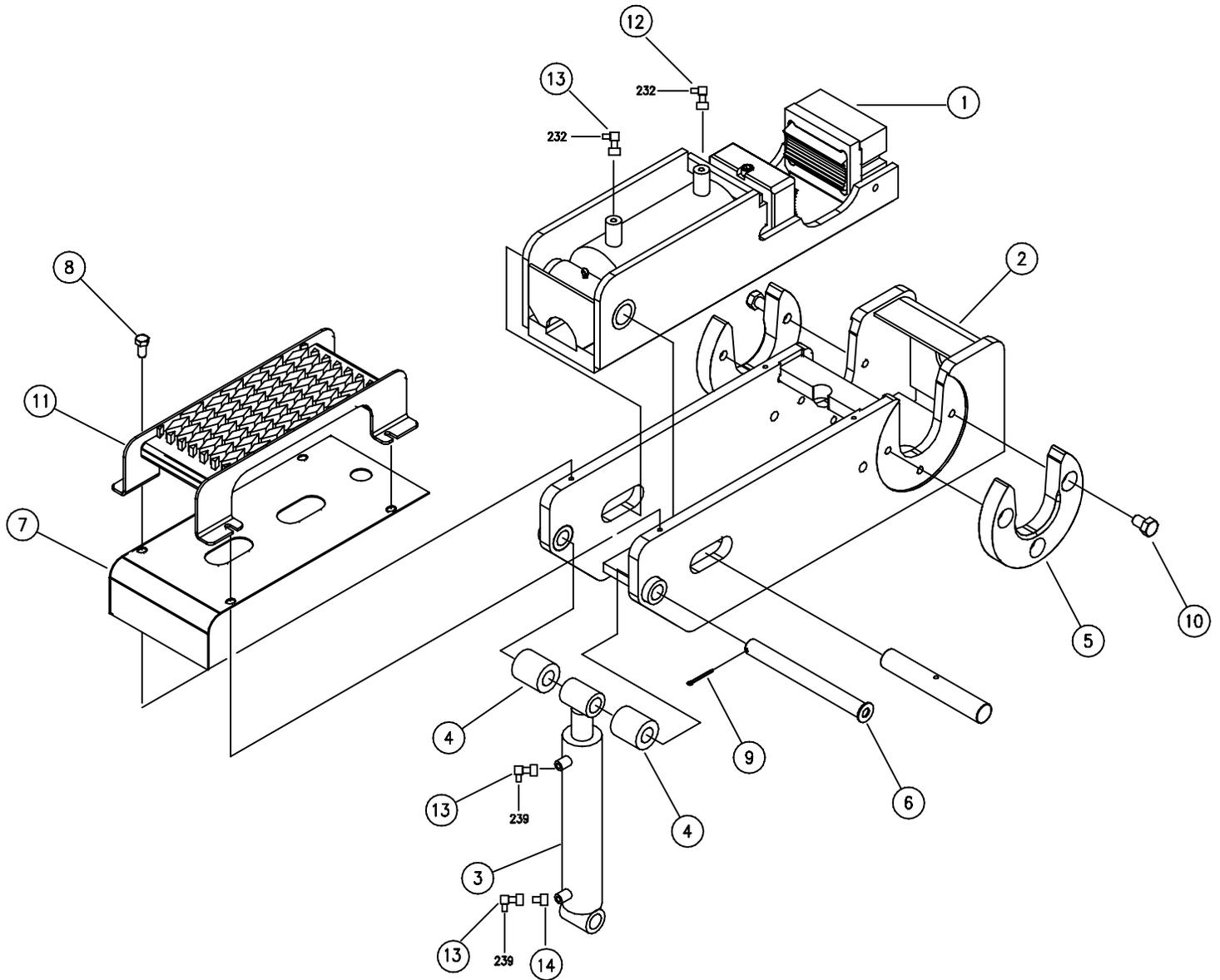
Front Wrench



Front (Make Up) Wrench Parts List

Item	Part Number	Description	Qty
1	480146	Inner Wrench Frame Assembly	1
2	261655	Front Wrench Cover	1
3	1420X58WHB	Hex Whiz Bolt – 1/4-20X 5/8	4
4	370616	Front Step	1
5	110028	1/4" 90° Elbow With 0.063 Orifice	1
6	4MB4Mj90	1/4" 90° Elbow	1
7	261662	Pipeguide Insert	1

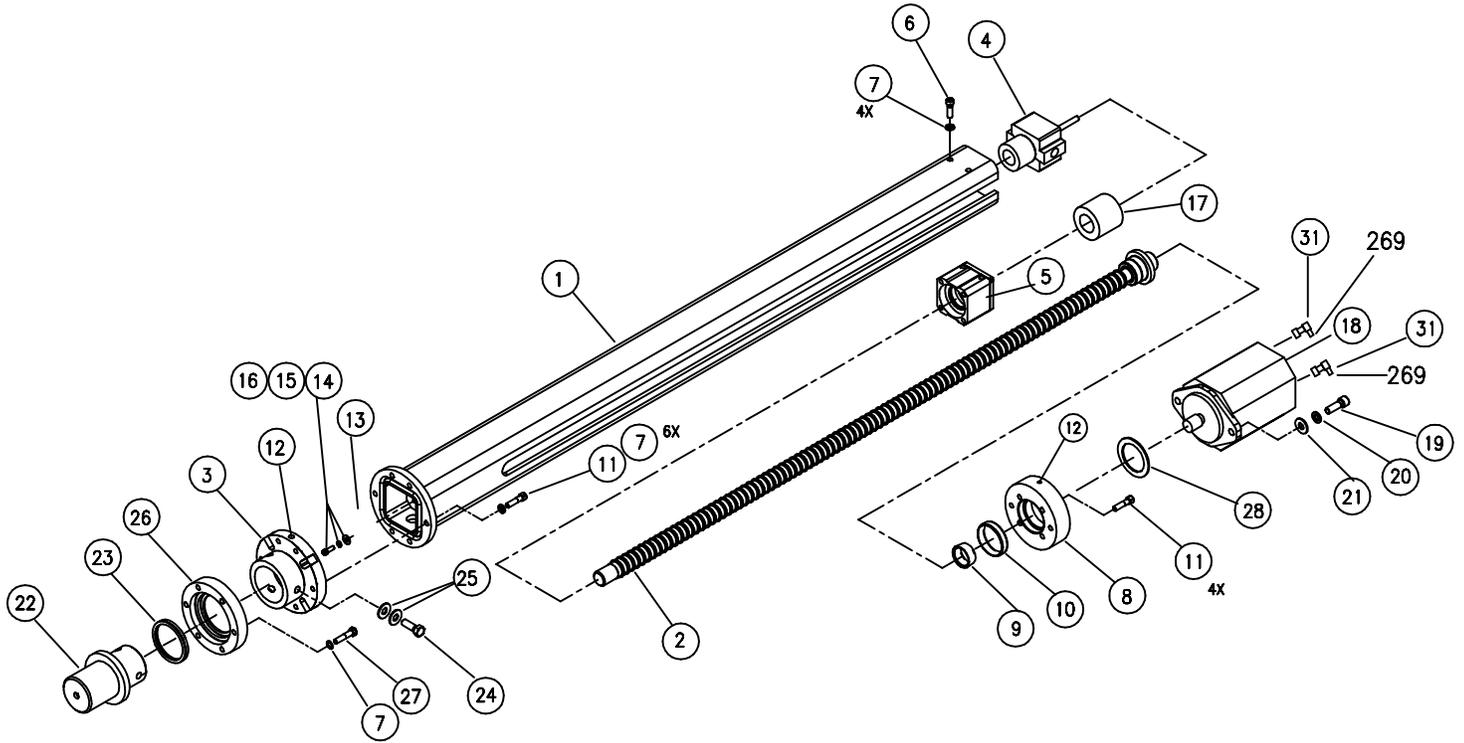
Break Out Assembly



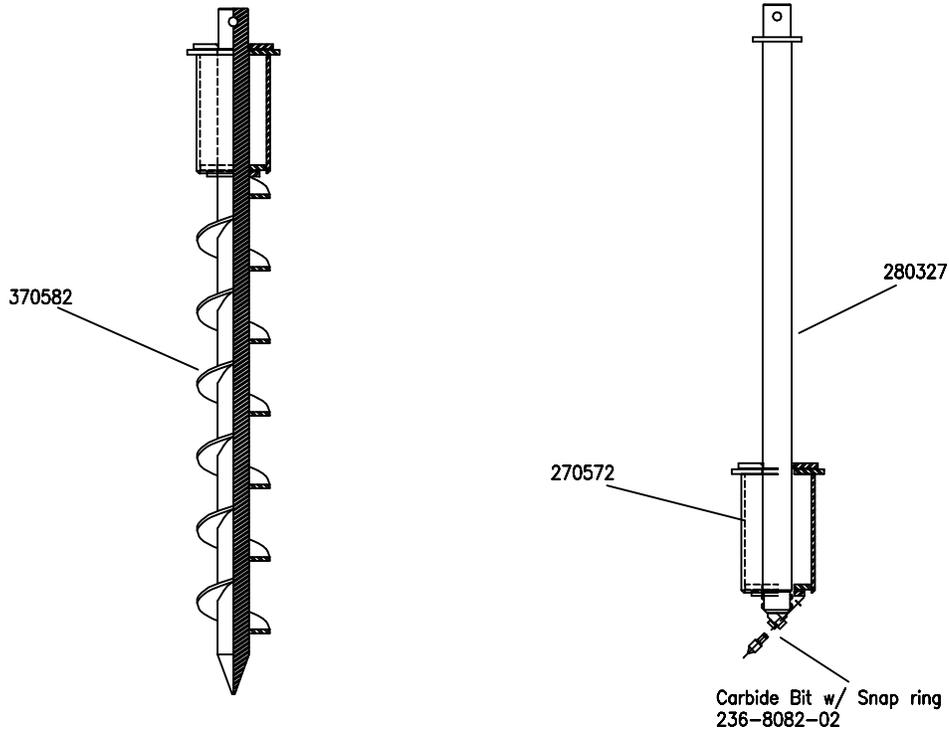
Breakout Wrench Parts List

Item	Part Number	Description	Qty
1	480146	Inner Wrench Assembly	1
2	470332	Outer Wrench Frame	1
3	220484	Hydraulic Cylinder – 1.50 X 4.00	1
4	161616	Cylinder Spacer	2
5	261612	Wrench Guide, Open Top	2
6	170331	Pin – 0.750 X 7.06 Long	1
7	261623	Breakout Wrench Cover	1
8	1420X58WHB	Hex Whiz Bolt – 1/4-20 X 5/8	4
9	236-2978-02	Cotter Pin – 1/8 X 1.25 Long	1
10	71614X34HB	Hex Bolt – 7/16-14 X 3/4	6
11	370512	Breakout Wrench Step	1
12	110028	1/4" 90° Elbow With 0.063 Orifice	1
13	4MB4MJ90	1/4" 90° Elbow	1
14	110029	1/4" Fitting With 0.042 Orifice	2
	Reference Page 52	Hose # 236 (Not Shown)	2
	Reference Page 52	Hose # 239 (Not Shown)	2

Anchor Mast



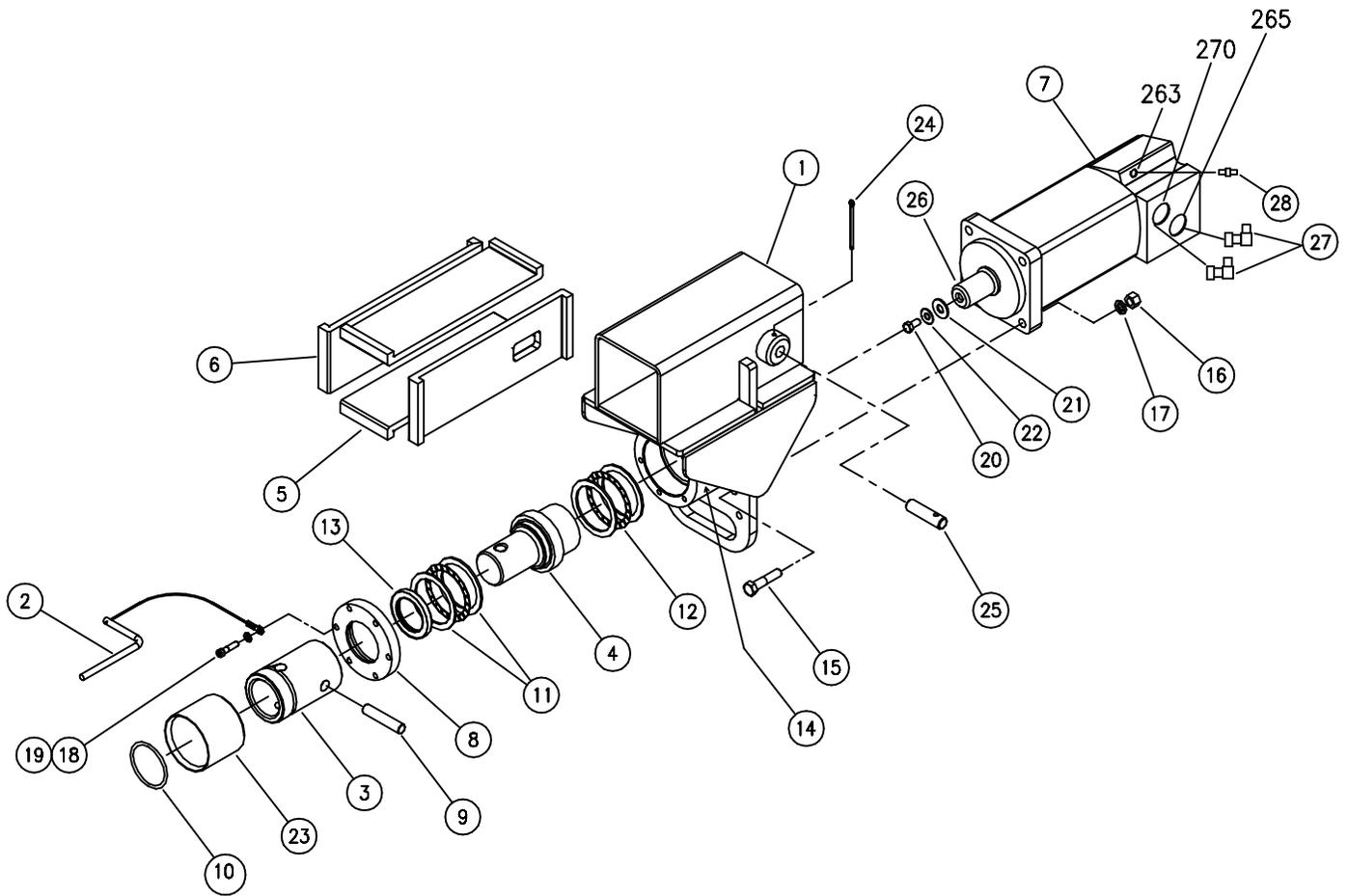
Anchor Stakes



Auger Mast Parts List

Item	Part Number	Description	Qty
1	470573	Mast	1
2	370574	Screw	1
3	270575	Pivot	1
4	280326	Nut Assembly	1
5	280324	Flange Assembly	1
6	701-214-02	Socket Head Cap Screw – 3/8-16 X 1	4
7	38LW	Lock Washer – 3/8	16
8	362671	Adapter Plate	1
9	121188	Bearing Cone	1
10	121189	Bearing Cup	1
11	3816X112SHCS	Socket Head Cap Screw – 3/8-16 X 1 1/2	10
12	236-2198-02	Grease Zerk	2
13	262673	Poly Bushing	1
14	1420X1SHCS	Socket Head Cap Screw – 1/4-20 X 1	2
15	14FW	Flat Washer – 1/4	2
16	14LW	Lock Washer – 1/4	2
17	121191	Urethane Spring	1
18	236-8704-02	Hydraulic Motor – White HB04	1
*18a	121429	Hydraulic Motor- Ross	
19	1213X112SHCS	Socket Head Cap Screw – 1/2-13 X 1 1/2	2
20	12LW	Lock Washer – 1/2	2
21	12FW	Flat Washer – 1/2	2
22	362674	Pivot Base	1
23	121193	V-Ring	1
24	110057	Alteration Bolt – 1/2-13 X 1 1/2	3
25	120943	Disc Lock Washer	6
26	362675	Retainer	1
27	3816X134HB	Hex Bolt – 3/8-16 X 1 3/4	6
28	162877	Cork Gasket	1
29	162797	Hose Protector – 88" Long (Not Shown)	1
30	162798	Hose Protector – 110" Long (Not Shown)	1
31	10MB6MJ90	Fitting Adapter	2
	Reference Page 51	Hose #269 (Not Shown)	2
	* after series # 2462050		

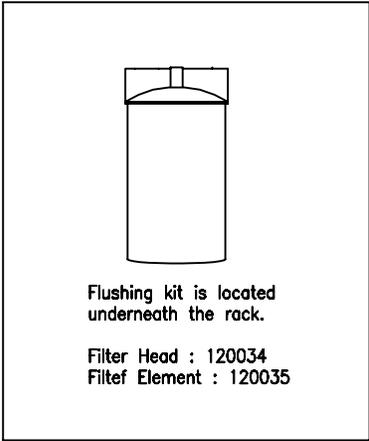
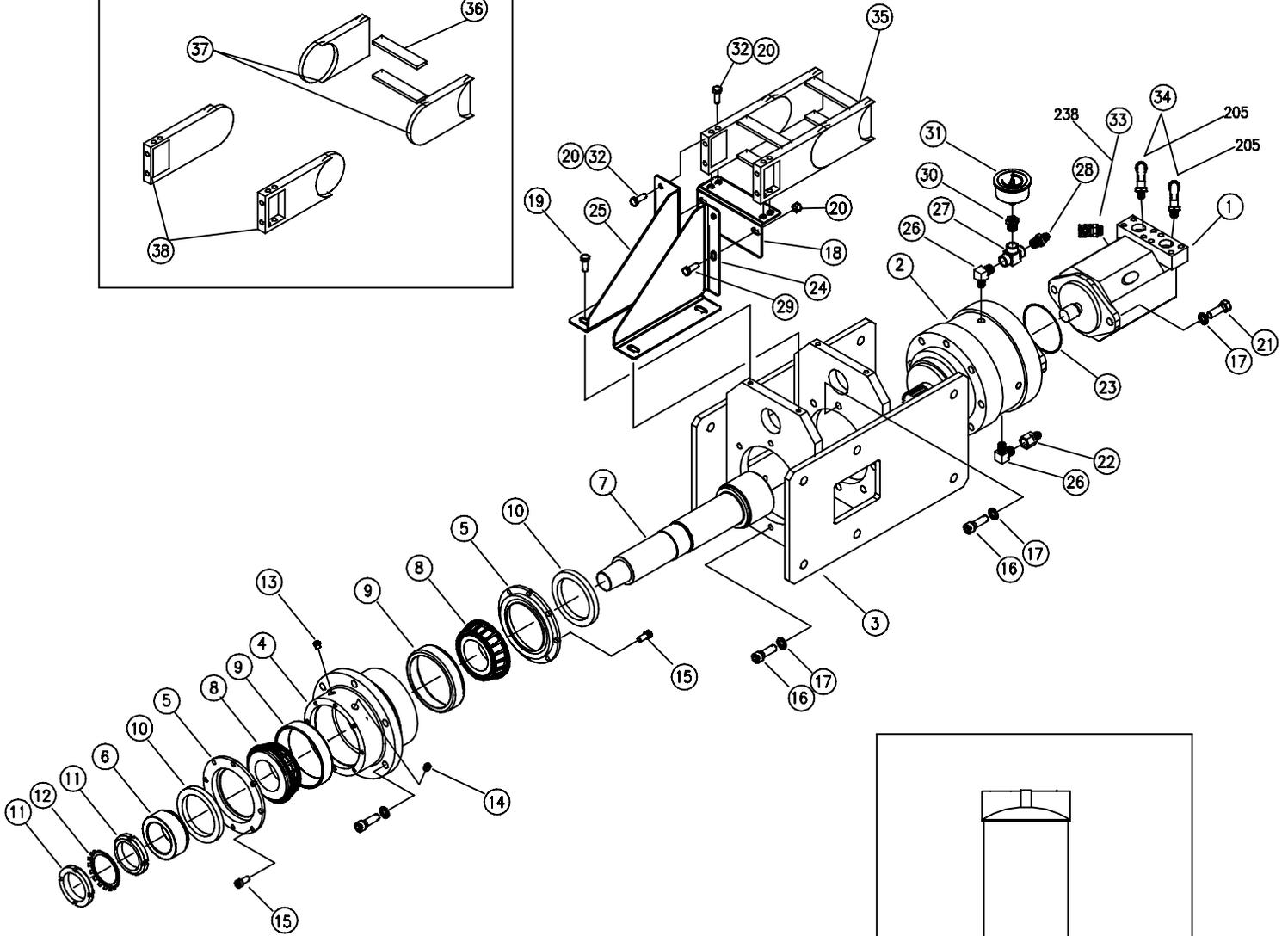
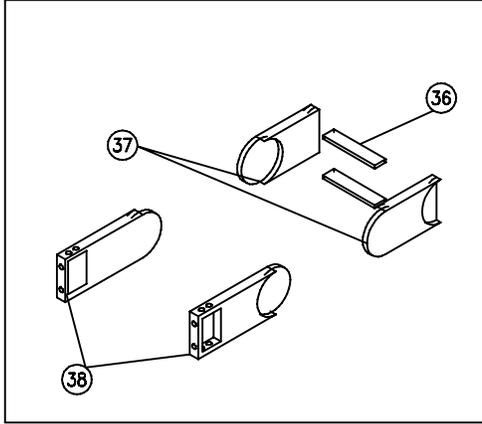
Anchor Carriage



Anchor Carriage

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
1	370578	Carriage	1
2	270586	Auger Pin Tool	1
3	362873	Auger Pivot	1
4	362696	Motor Coupler	1
5	262698	Carriage Guide – Poly / Side	2
6	262697	Carriage Guide – Poly / Front and Rear	2
7	221230	Hydraulic Motor – Charlynn 60 cu. In.	1
7a	236-8207-02	Hydraulic Motor – White DT6606 (Optional)	Opt.
8	262699	Bearing Cap	1
9	162700	Auger Pin	2
10	121195	Rubber O-Ring – 3.10 X 0.210 Thick	1
11	121196	Thrust Washer	4
12	121197	Thrust Bearing	2
13	121198	Oil Seal	1
14	236-2198-02	Grease Zerk	1
15	91612X214HB	Hex Bolt – 9/16-12 X 2 1/4	4
16	91612HN	Hex Nut – 9/16-12	4
17	916LW	Lock Washer – 9/16	4
18	51618X112SHCS	Socket Head Cap Screw – 5/16-18 X 1 1/2	6
19	516LW	Lock Washer – 5/16	6
20	3816X34HB	Hex Bolt – 3/8-16 X 3/4	1
21	12FW	Flat Washer -1/2	1
22	38FW	Flat Washer - 3/8	1
23	262874	Retainer Sleeve	1
24	121229	Cotter Pin - 3/16 X 3.00 Long	2
25	162672	Nut Pin	2
26	236-950-02	Key, Motor Shaft	1
27	12MB6MJ	Fitting Adapter	2
28	4MB4MJ	Fitting	1
	Reference Page 51	Hose #263 (Not Shown)	1
	Reference Page 51	Hose #270 (Not Shown)	1
	Reference Page 51	Hose #265 (Not Shown)	1

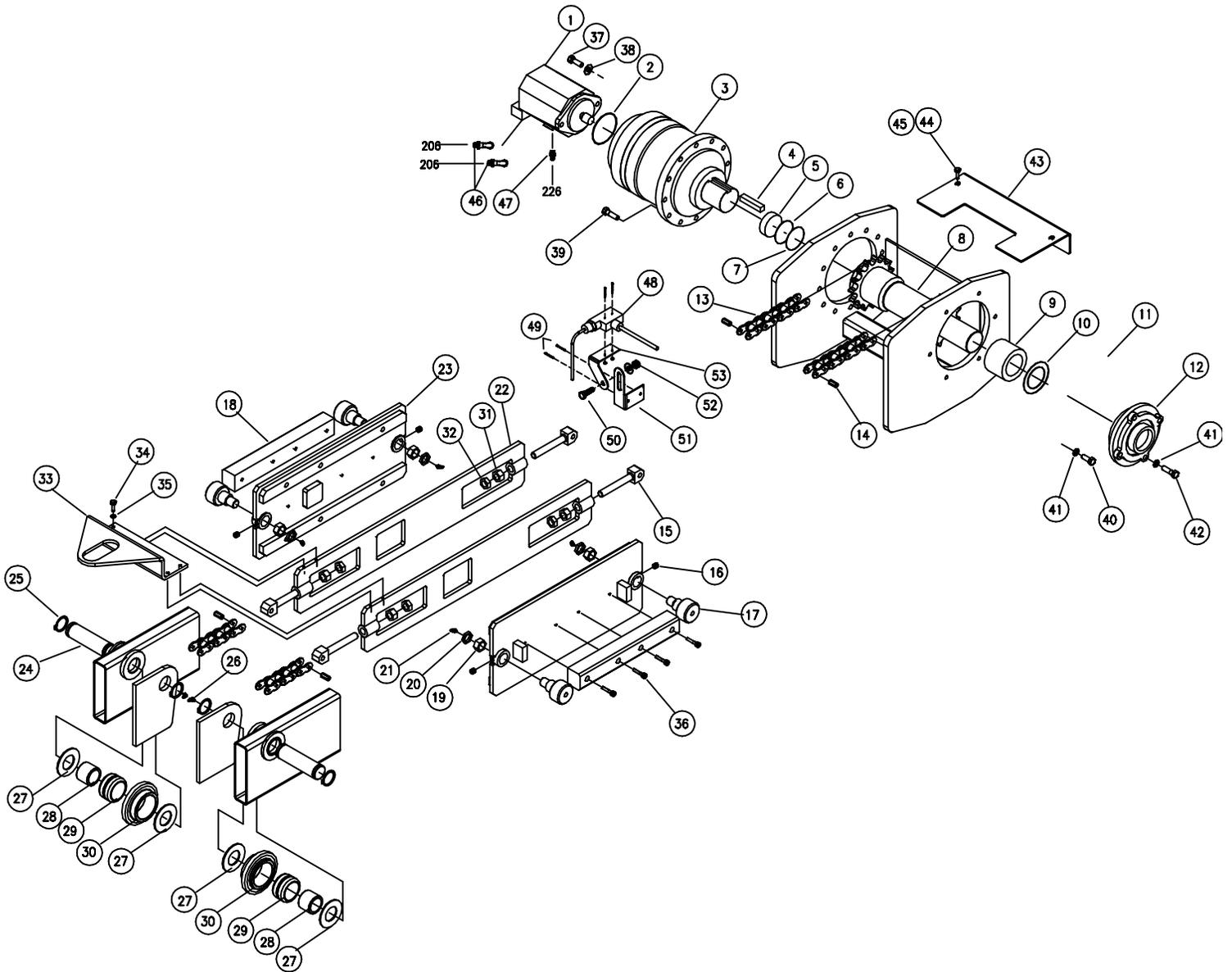
Carriage



Carriage Parts List

Item	Part Number	Description	Qty
1	221027	Hydraulic Rotation Motor	1
1a	120202	Hydraulic Rotation Motor (Some Models)	Opt
2	120201	Rotation Planetary Gearbox	1
3	470562	Carriage Weldment	1
4	360018	Rotary Shaft Housing	1
5	260028	Seal Plate	2
6	260039	Seal Spacer (Ring Wear)	1
7	360047	Rotary Shaft	1
8	120469	Bearing Cone	2
9	120470	Bearing Cup	2
10	120471	Shaft Seal	2
11	120472	Lock Nut	2
12	120473	Lock Washer	1
13	236-3726-02	Grease Relief Valve	1
14	236-2198-02	Grease Zerk – 1/4 NF	1
15	701-110-02	Socket Head Cap Screw – 5/16-18 X 3/4	16
16	1213X112SHCS	Socket Head Cap Screw – 1/2-13 X 1 1/2	14
17	12LW	Lock Washer – 1/2	16
18	262665	Energy Chain Bracket Cross Brace	1
19	3816X34WHB	Hex Whiz Bolt – 3/8-16 X 3/4	4
20	51618WHN	Hex Whiz Nut – 5/16-18	8
21	1213X112HB	Hex Bolt – 1/2-13 X 1 1/2	2
22	6MJ6FP	Fitting – 3/8	1
23	121108	Rubber O-Ring – 0.103 X 3.737 ID Nitrile	1
24	262663	Left Energy Chain Bracket	1
25	262664	Right Energy Chain Bracket	1
26	4MP6MP90	90° Elbow Adapter – 1/4" Pipe to 3/8" Pipe	1
27	6FP6FP6FPT	Tee Fitting – 3/8" Female Pipe	1
28	6MP6MJ	Fitting – 3/8	1
29	51618X34WHB	Hex Whiz Bolt – 5/16-18 X 3/4	2
30	6MP2FP	Fitting Adapter – 3/8" to 1/8" NPT	1
31	236-8417-02	Filter Gauge	1
32	51618X1WHB	Hex Whiz Bolt – 5/16-18 X 1	6
33	10MB8MJ90	90° Elbow Adapter – 5/8" to 1/2"	1
34	12FLH12MJ90	3/4" 90° Elbow Adapter – Code 62 Flange to JIC M	2
35	221178	Energy Chain (Gore Track)	1
36	121338	Energy Chain Link Separator	Ref
37	221179	Energy Chain Repair Link	Ref
38	121337	Energy Chain Mounting Bracket	Ref
	Reference Page 52	Hose #205 (Not Shown)	2
	Reference Page 52	Hose #238 (Not Shown)	1

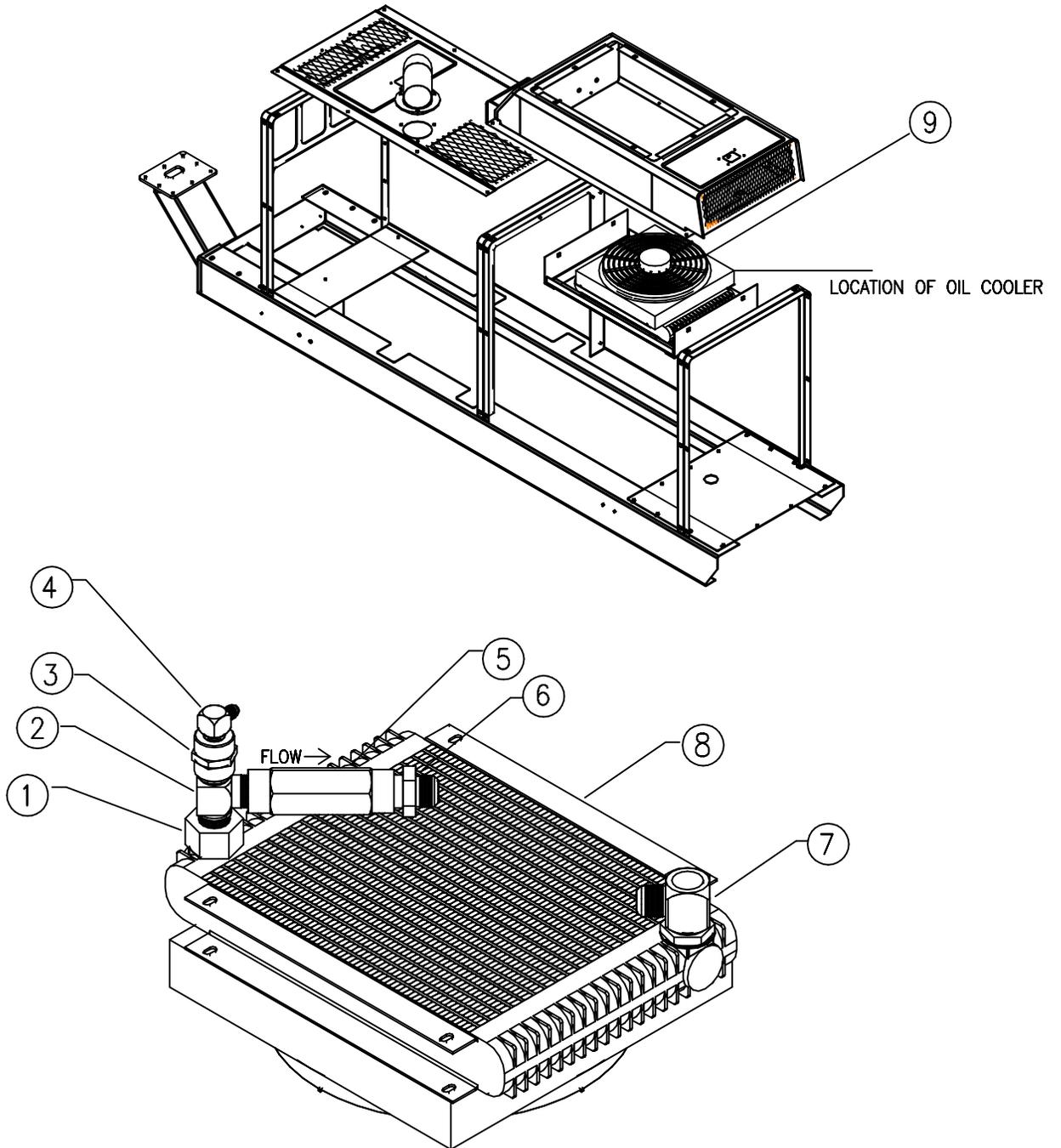
Thrust Assembly



Thrust Assembly Parts List

Item	Part Number	Description	Qty
1	221027	Hydraulic Motor	1
2	121108	Rubber O-Ring – 0.103 X 3.737 I.D. X Nitrile	1
3	120199	Planetary Gearbox	1
4	120565	Key – 0.625 X 3.25 Long	1
5	162659	Shaft Spacer – 2.75 X 0.843	1
6	162620	14 Gauge Shim	X
7	162621	16 Gauge Shim	X
8	270558	Thrust Shaft	1
9	162568	Spacer – 4 X 2.69 ID X 2.119 Long	1
10	162618	14 Gauge Shim	X
11	262627	Bearing Flange	1
12	120468	Pillowblock Bearing	1
13	120897	Thrust Chain – 100H ASA X 271 P	2
14	236-8824-02	Anchor Bushing	4
15	160033	Chain Anchor	4
16	236-3439-02	Set Screw – 1/2-13 X 1/2	4
17	120026	Roller Bearing	4
18	262639	Wear Block	2
*18a	262401 – (Not Shown)	Shim – Additional shims required with maintenance	4
19	114HJN	Hex Jam Nut – 1-14	4
20	110021	Alteration Hex Jam Nut	4
21	236-7797-02	Grease Zerk - 65° / 3/16 Drive In	4
22	270325	Chain Anchor Plate	2
23	270563	Carriage Guide	2
24	262613	Idler Shaft	2
25	236-2885-02	Retaining Ring – 1 3/4	4
26	701-126-02	Grease Zerk – 1/8 NPT / 90°	2
27	121174	Flat Washer – 1.813 ID X 3.500 X 0.140 Thick	4
28	236-2713-02	Inner Race	2
29	236-2712-02	Outer Bearing	2
30	262612	Idler Sprocket	2
31	3410HN	Hex Nut – 3/4-10	4
32	3410JN	Hex Jam Nut – 3/4-10	4
33	262638	Mud Swivel Cross Plate	1
34	51618X1HB	Hex Bolt – 5/16-18 X 1	4
35	516LW	Lock Washer – 5/16	4
36	121004	Socket Head Shoulder Screw	8
37	1213X112HB	Hex Bolt – 1/2-13 X 1 1/2	2
38	12FW	Flat Washer – 1/2	2
39	5811X134HB	Hex Bolt – 5/8-11 X 1 3/4	12
40	1213X134HB	Hex Bolt – 1/2-13 X 1 3/4	6
41	12LW	Lock Washer – 1/2	10
42	1213X114HB	Hex Bolt – 1/2-13 X 1 1/4	4
43	270440	Thrust Shaft Cover	1
44	3816X1WHB	Hex Whiz Bolt – 3/8-16 X 1	2
45	3816WHN	Hex Whiz Nut – 3/8	2
46	12FLH12MJ90	3/4" 90° Elbow Adapter – Code 62 Flange to JIC M	2
47	10MB8MJ	Fitting Adapter – 5/8" to 1/2"	1
48	121354	Carriage Travel Limit Switch	2
49	14X12WHB	Hex Whiz Bolt – 1/4-20 X 1/2	2
50	51618X1WHZ	Hex Whiz Bolt – 5/16-18 X 1	1
51	262795	Mounting Bracket- Limit Switch	1
52	162786	Pivot Bracket – Limit Switch	1
53	51618WHN	Hex Whiz Nut – 5/16-18	1
	Reference Page 50	Hose # 206 (Not Shown)	2
	Reference Page 50	Hose # 226 (Not Shown)	1

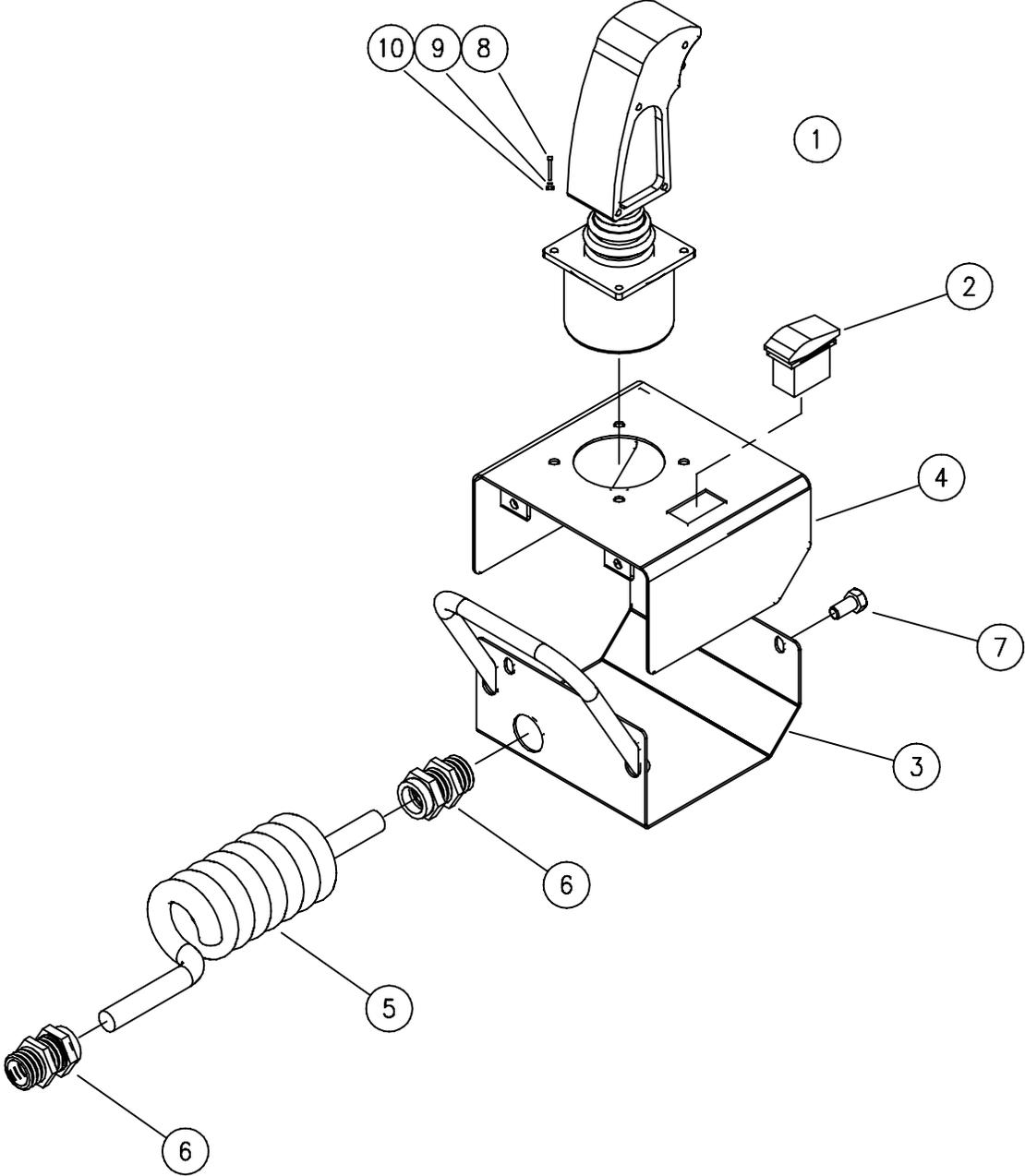
OIL COOLER



Oil Cooler Parts List

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Qty.</u>
1	20MB16FP	Fitting Adapter – 1 ¼" to 1"	1
2	16MP16MP216MPT	Tee Fitting – 1" Male Pipe	1
3	16FP8FP	Reducer Fitting – 1" FPT to ½" FPT	1
4	110066	Adapter Fitting – ½" to 3/8" with 0125 Orifice	1
5	121286	5psi Hydraulic Check Valve	1
6	16MP16MJ	1" Fitting	1
7	20MB16MJ	Fitting Adapter – 1 ¼" to 1"	1
8	221050	Hydraulic Oil Cooler – with Fan	1
9	121311	Replacement Cooler Motor and Fan	1
REF	236-9489-02	Cooler Fan Sensor Switch	REF

REAR JOYSTICK



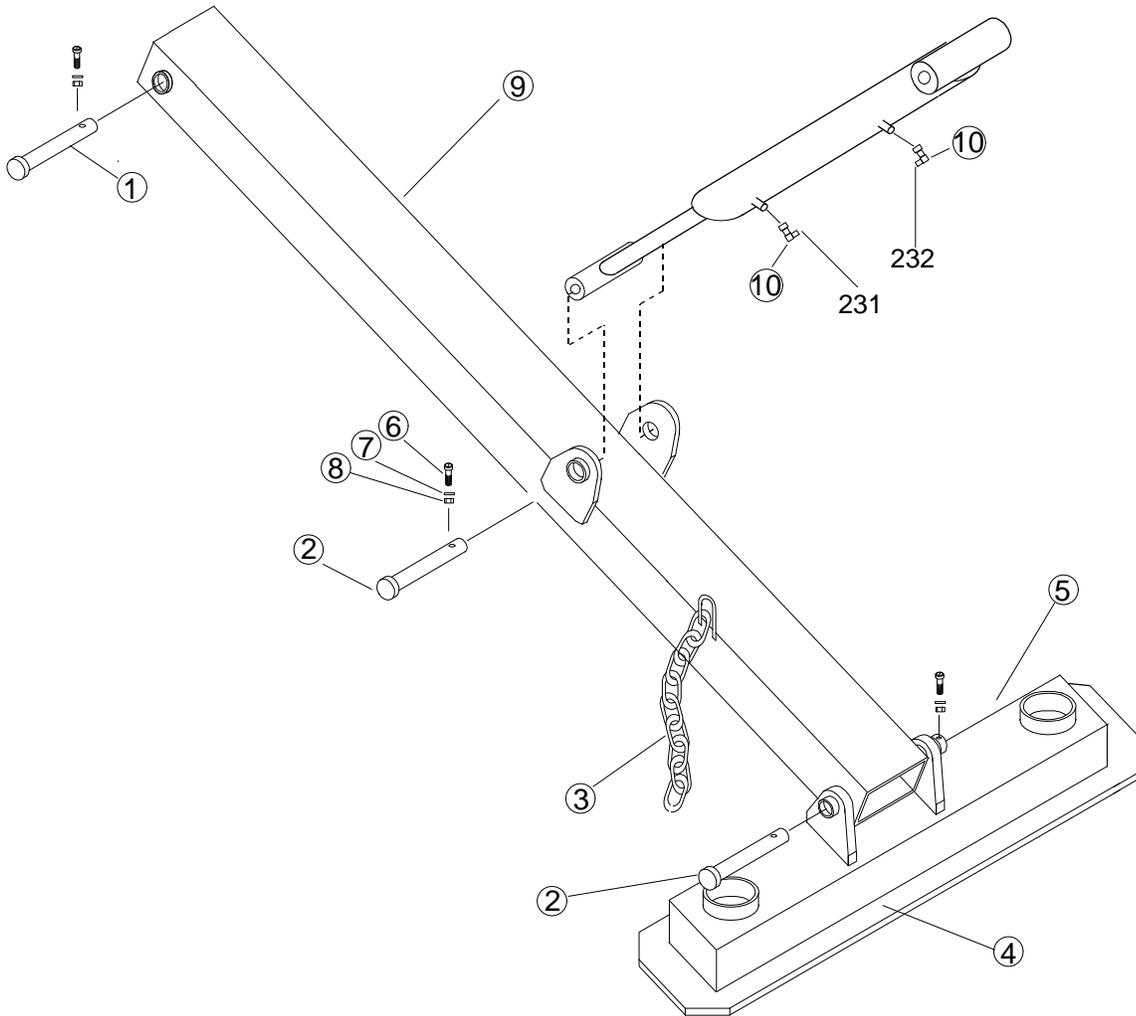
Rear Joystick Parts List

Item	Part Number	Description	Qty
1	221033	Joystick Controller	1
2	120185	Rocker Switch – DPDT On MOM/Off/On MOM	1
3	270534	Frame Weldment, Tram Control	1
4	270535	Cover, Tram Control	1
5	210023	Cord Alteration – 8 Conductor X 24"	1
6	120495	Connector, Cable – Strain Relief	2
7	1420X12WHB	Whiz Bolt – 1/4-20 X 1/2	4
8	120692	Machine Screw – 10/32 X 1 Hex Washer Head	4
9	10LW	Lock Washer - #10	4
10	1032HN	Hex Nut – 10/32	1

Cowlings Parts List

Item	Part Number	Description	Qty
1	470278	Front	1
2	470277	Rear	1
3	370269	Top Panel	1
4	470271	Cooler Shroud	1
5	470103	Front Inside	1
6	370327	Rear Inside	1
7	261294	Front Edge	1
8	261295	Rear Edge	1
9	270549	Front Door	1
10	270554	Rear Door	1
11	236-8705-02	Latch, Flush – Sliding (Large)	2
12	3816X1HB	Hex Bolt – 3/8-16 X 1	3
13	3816HN	Hex Nut – 3/8-16	3
14	120103	Latch, Flush – Sliding (Small)	2
15	370522	Oil Cooler Mount	1
16	51618WHN	Hex Whiz Nut – 5/16-18	18
17	270524	Exhaust Elbow	1
18	51618X34WHB	Hex Whiz Bolt – 5/16-18 X 3/4	64
19	120749	Cage Nut – 5/16-18	10
20	262586	Door Hinge – Heavy Duty	2
21	262601	Engine Door Prop Rod	2
22	236-2978-02	Cotter Pin – 1/8 X 1 1/4 Long	2
23	51618X34SSBHCS	Button Head Cap Screw – 5/16-18 X 3/4 / SS	10
24	270588	Cooler Shroud Panel	1

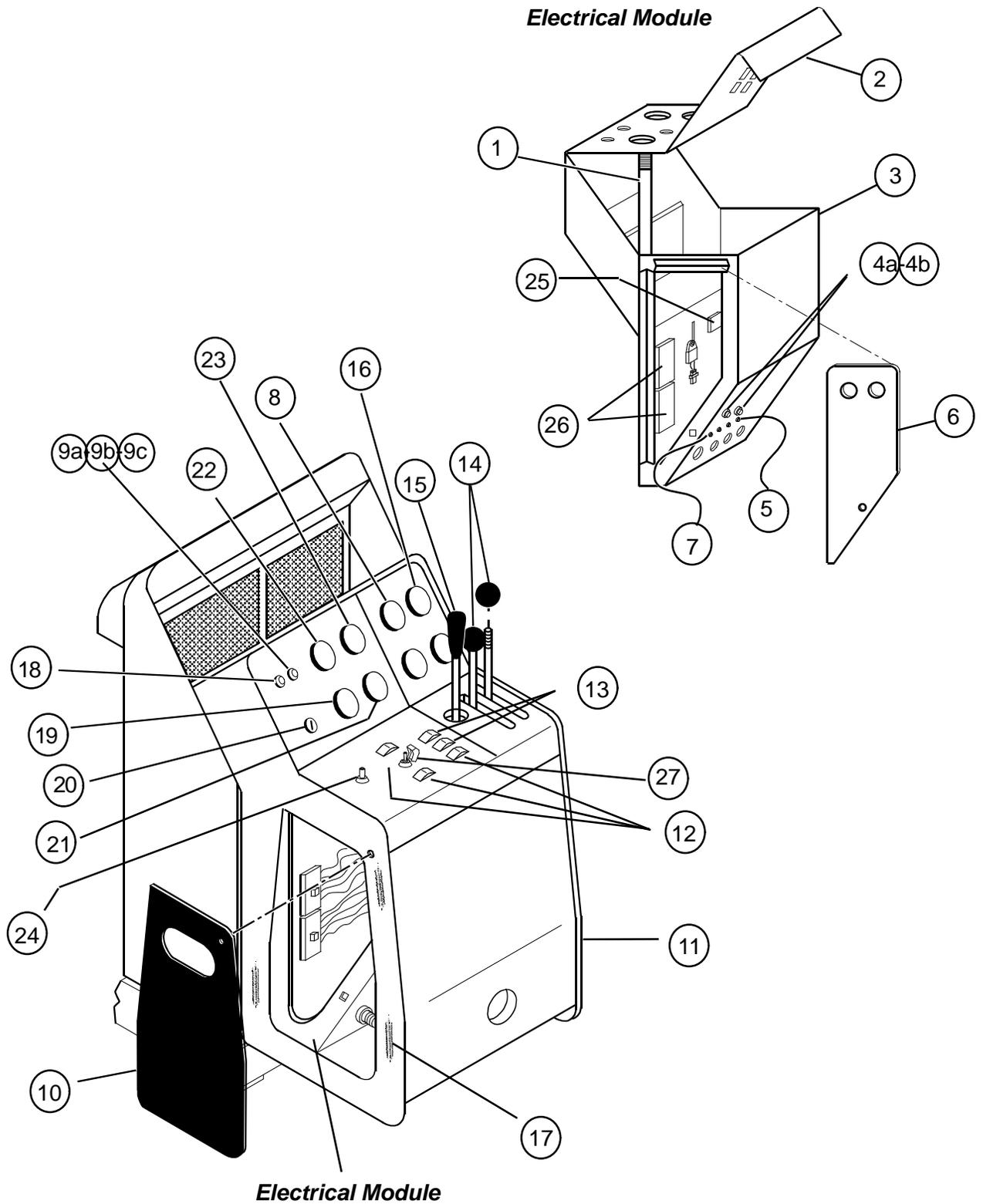
Rear Foot Assembly



Rear Foot Assembly Parts List

Item	Part Number	Description	Qty
1	270090	Pin	1
2	270091	Pin	1
3	162552	Rear Foot Link Chain	1
4	370063	Rear Foot Weldment	1
5	270092	Pin	1
6	1420X112HB	Hex Bolt – 1/4-20 X 1 1/2	3
7	14FL	Flat Washer – 1/4	3
8	1420HN	Hex Nut – 1/4-20	3
9	270533	Rear Foot Strut	1
10	4MB4MJ90	90° 1/4" Elbow	2
	Reference Page 52	Hose #231 (Not Shown)	1
	Reference Page 52	Hose #232 (Not Shown)	1

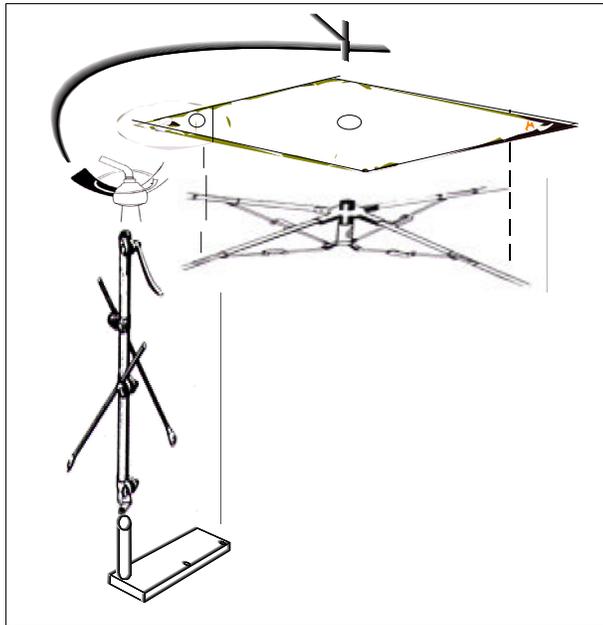
Control Panel / Instruments



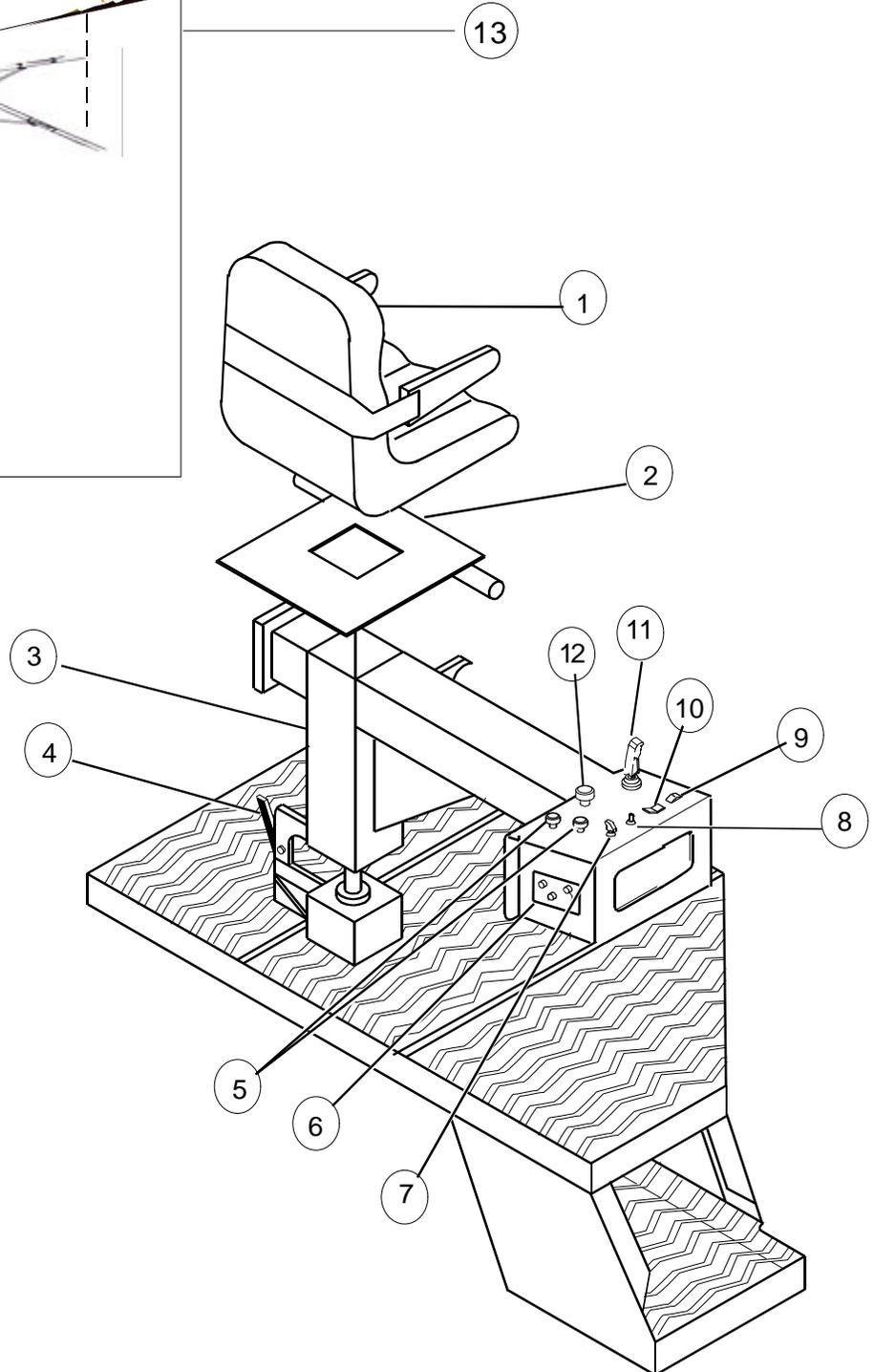
Control Panel / Instruments Parts List

Item	Part Number	Description	Qty
1	162175	Panel Prop	1
2	370445	Panel Weldment	1
3	470439	Module Weldment	1
4a	236-6138-02	Fuse Holder	2
4b	203-217-02	3AMP Fuse	2
5	236-5686-02	10AMP Circuit Breaker	1
6	262133	Access Panel	1
7	236-5687-02	15Amp Circuit Breaker	1
8	121040	3,000 PSI Pressure Gauge w/diaphragm	1
9a	120686	Indicator Housing	1
9b	120687	Indicator Lamp	1
9c	120511	Lens, Amber	1
10	270444	Door Weldment	1
11	470442	Console Weldment	1
12	120186	Rocker Switch On/Off	3
13	120465	Rocker Switch On MOM/Off	2
	120585 (Not Shown)	Connector, Housing-Carling Rocker Switch	5
14	120477	Sectional Valve	2
15	121128	Valve Handle	1
16	121042	6,000 PSI Hydraulic Gauge	3
17	120677	Extension Spring	3
18	120551	Preheat Indicator	1
19	120555	Tachometer	1
20	120554	Ignition Switch	1
	120676 (Not Shown)	Key	1
21	120556	Water Temperature Valve	1
22	120557	Oil Pressure Gauge	1
23	120553	Ammeter	1
24	120552	Override Switch	1
	120925 (Not Shown)	Rubber Boot	1
25	120801	Steering Electronic Relay	1
26	221034	Driver Board	2
27	120903	Toggle Switch with Safety Cover	1
Note:	Used On items 8 & 16		
	121036 (Not Shown)	Gauge Flange	8
	121043 (Not Shown)	Gauge Clamp	4

Control Panel Operator Station



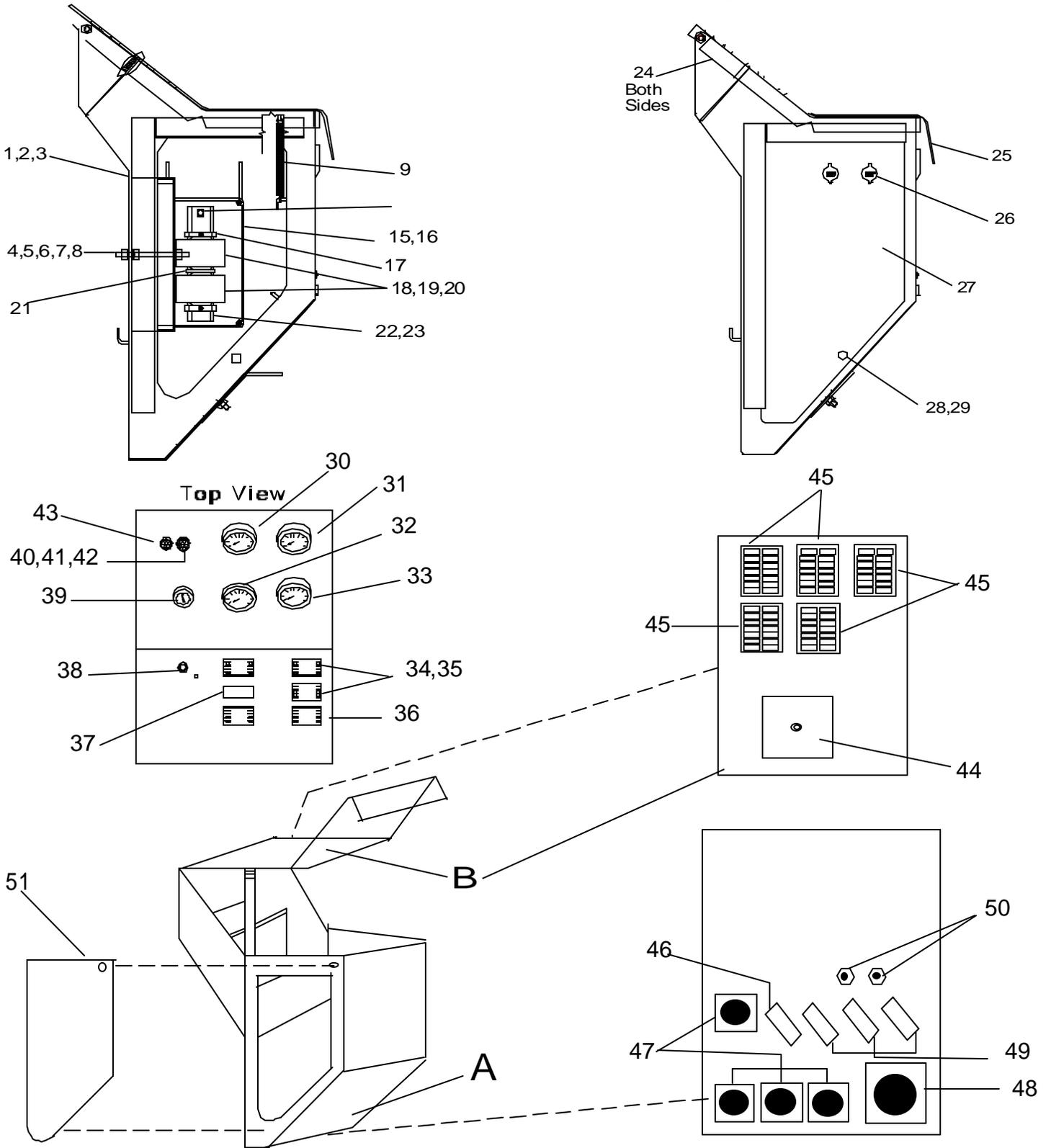
Optional



Control Panel Operator Station Parts List

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Qty.</u>
1	120513	Operator Seat	1
2	270253	Seat Mount Weldment	1
3	470122	Console Weldment	1
4	270454	Latch Weldment	1
5	220711	Autodrill Controller	2
6	120666	Control Strike Alert Panel	1
(-)	120667	Sensor coil – mounted on front stake plate	1
7	203-193-02	Operator Switch	1
8	120796	Potentiometer Mud Control	1
9	120186	Rocker Switch On/Off	1
10	120797	Rocker Switch Mud Control	1
11	221033	Joystick Controller	1
12	121244	Emergency Shutdown Switch	1
13	100087	Umbrella Kit	1
REF	270647	Weldment Bracket	1
REF	121371	Umbrella Frame with Bracket	1
REF	121732	Umbrella Cover	1

Electrical Module Assembly

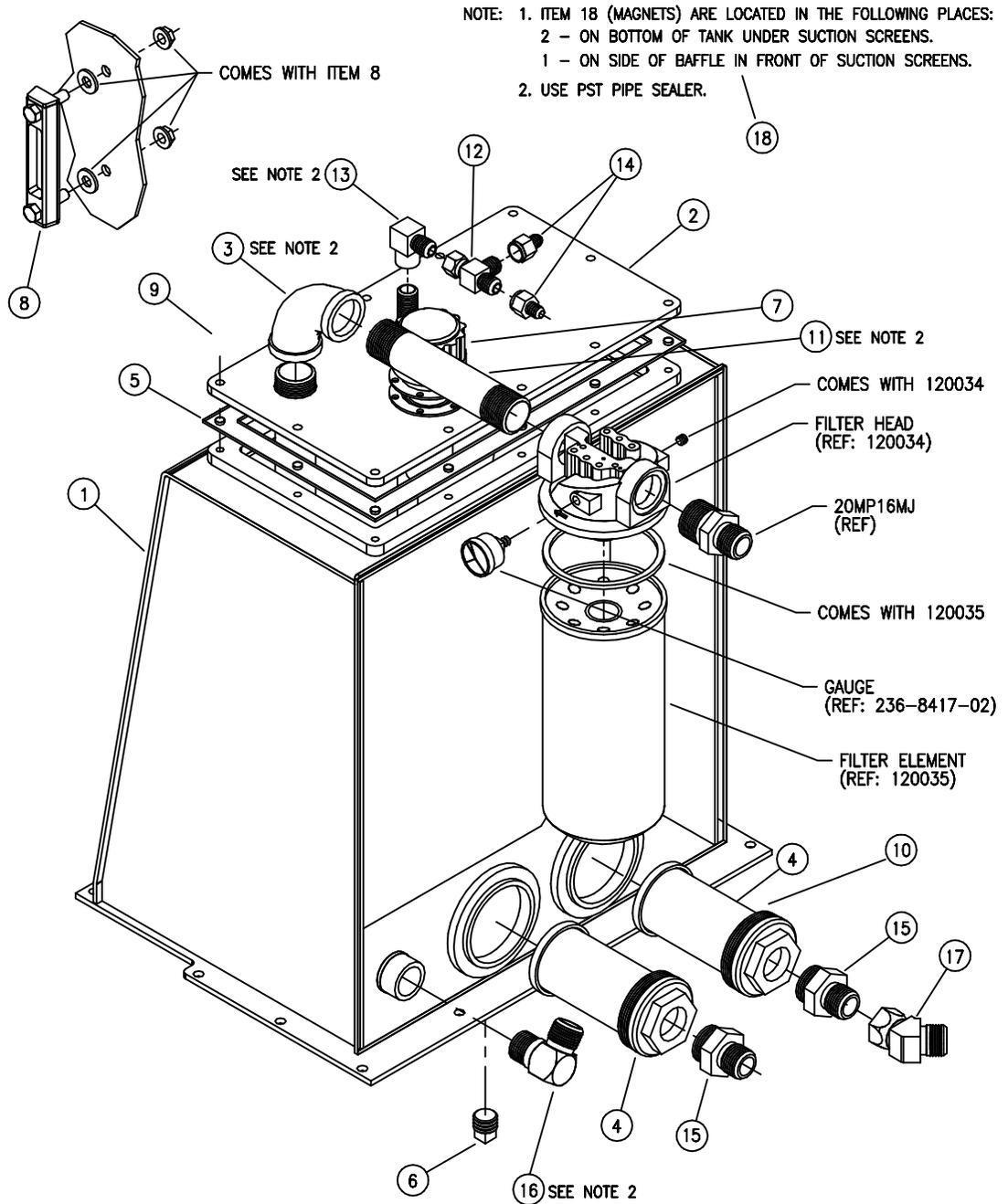


Electrical Module Assembly

Parts List

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Qty.</u>
1	110063	Alteration, enclosure - (driver)	1
2	701-010-02	Gasket, door	53.2"
3	701-013-02	Edge Protection	8"
4	701-704-02	Rod, threaded	4.0"
5	51618HN	Nut, Hex	3
6	516LW	Washer, Lock	3
7	516FW	Washer, Flat	3
8	236-5965-02	Bolt, hex (for relay strip)	2.5"
9	120677	Spring, extension	1
10	110062	Alteration, enclosure - water tight	1
11	516LW	Washer, Lock	3
12	516FW	Washer, flat	3
13	51618x34HB	Bolt, Hex (for relay strip)	1
14	38NH	Nut, hex	1
15	110062	Alteration, enclosure - water tight	1
16	701-013-02	Edge protection	8"
17	120758	Clamp end relay	2
18	120750	Relay, IDEC - RH4BU	2
19	120751	Socket, relay	2
20	120752	Spring, relay	4
21	120759	Spacer, relay	1
22	162189	Rail, relay	1
23	162184	Cushion, relay	2
24	701-010-02	Gasket, door	53.2"
25	370445	Weldment Panel, instrument	1
26	120508	Receptacle, auxiliary	2
27	262133	Panel access - module	1
28	51618x34HB	Bolt, Hex	1
29	120749	Nut, Cage 5/16-18	REF
30	120557	Gauge, oil pressure	REF
31	120746	Meter, volt	
32	120555	Tachometer	REF
33	120556	Gauge, water temperature	REF
34	120465	Switch, Rocker - SPST/ on -off	2
35	120585	Housing connector	5
36	120186	Switch, Rocker - DPDT/ on - off	3
37	120903	Switch, Toggle w/ safety cover	1
38	120552	Switch override	REF
39	120554	Switch ignition	REF
40	120686	Housing lamp - amber	1
41	120687	Lamp, miniature - amber	
42	120511	Lens cap - amber	1
43	120551	Light indicator - pre heat	REF
44	120552	Switch override	REF
45	120585	Housing connector	5
46	236-5686-02	10 AMP circuit breaker	1
47	120732	Receptacle 9 pin - 16-18 ga sq connector	2
48	120738	Receptacle 7 pin - 16-12 ga sq connector	1
49	236-5687-02	15 AMP circuit breaker	3
50	203-217-02	3 AMP Fuse	2
	236-6138-02	Fuse Holder	2
51	27044	Weldment door, control console	1

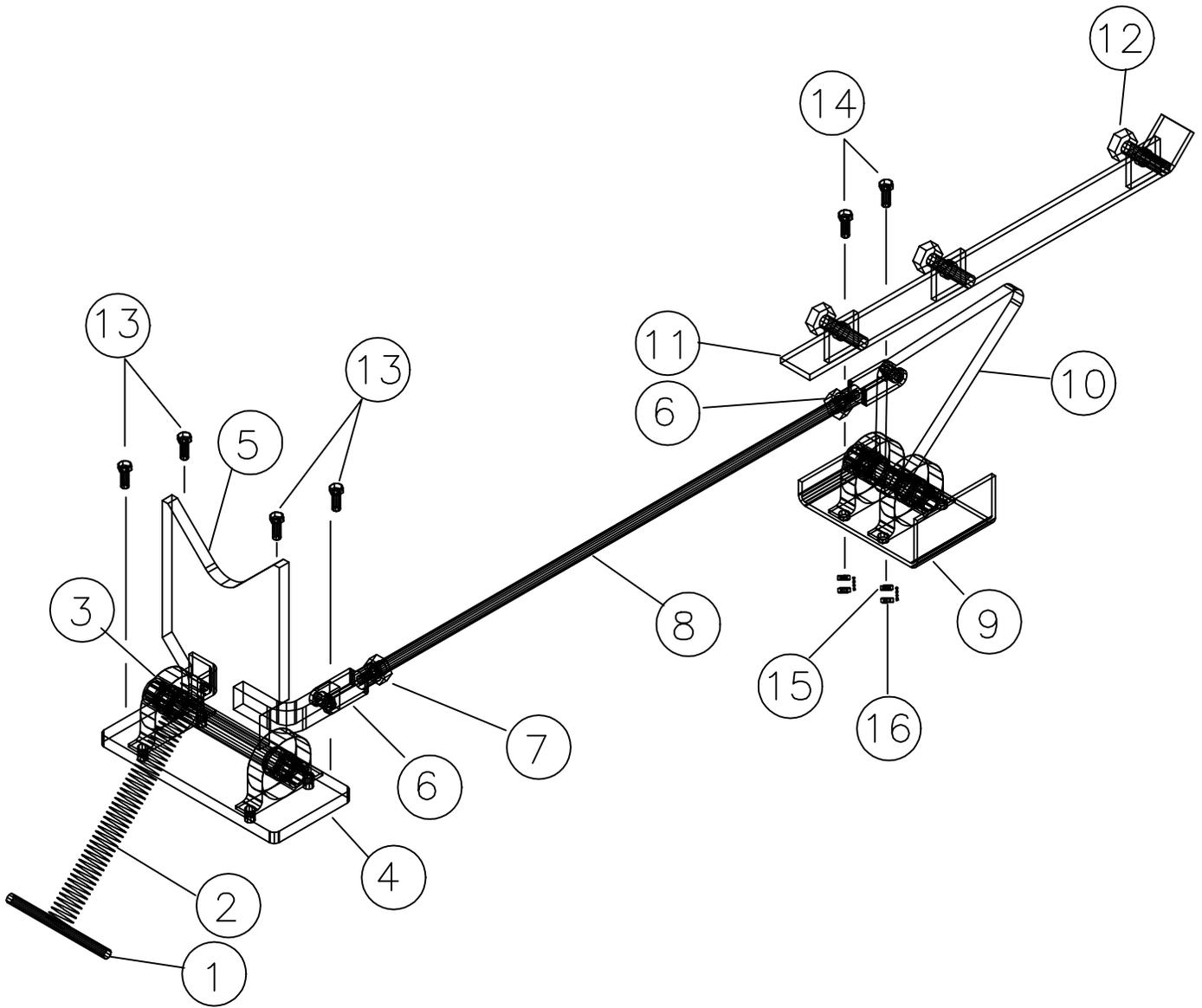
HYDRAULIC TANK



Hydraulic Tank Parts List

Item	Part Number	Description	Qty
1	470095	Hydraulic Tank	1
2	370098	Hydraulic Tank Lid	1
3	120033	90° Pipe Elbow – 1 1/4 NPT	1
4	236-1195-02	Suction Strainer	2
5	260390	Gasket, Hydraulic Tank Top	1
6	236-4931-02	Magnetic Drain Plug	1
7	202-405-02	Vented Filler Cap	1
8	202-400-02	Sight Gauge, With Thermometer	1
9	51618X34WHB	Hex Whiz Bolt – 5/16-18 X 3/4	12
10	121316	O-Ring	1
11	120550	Pipe Nipple – 1 1/4 X 8 Long	1
12	8MJ8MJ8FJXT	Tee Fitting	1
13	8MJ8FP90	1/2" 90° Elbow	1
14	6MJ8FJ	1/2" to 3/8" Fitting Adapter	2
15	20MB16MJ	1 1/4" to 1" Fitting Adapter	2
16	16MP16MJ90	1" 90° Elbow	1
17	16MJ16FJX45	1" 45° Elbow	1
18	120109	Magnet, 0.250 X 2.00 X 1.00 Cer 5	3

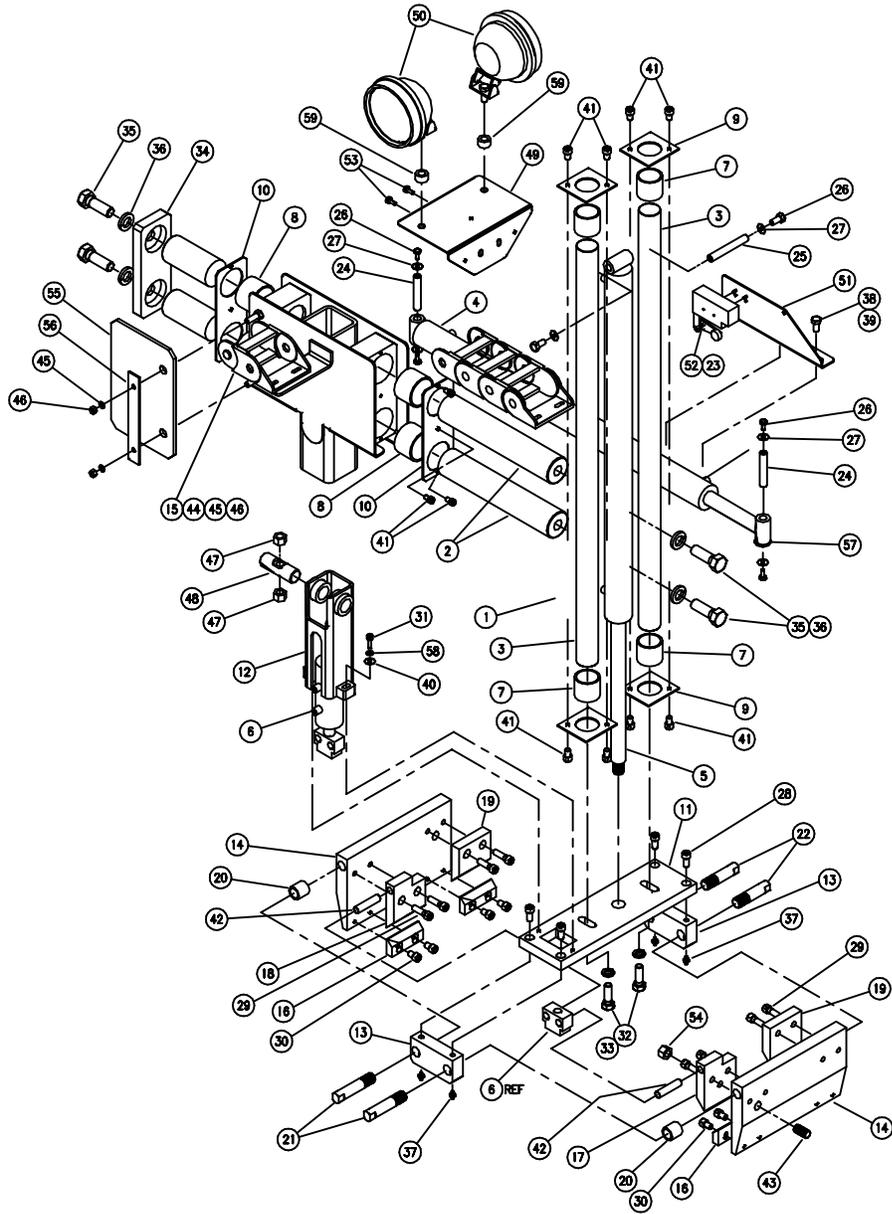
STEM CATCHER



Stem Catcher Parts List

Item	Part Number	Description	Qty
1	162245	Spring Anchor Bar	1
2	120934	Spring	1
3	120931	Pillow Block Bearing	4
4	162236	Mounting Plate	1
5	270458	Pivot Weldment	1
6	120933	Clevis Retainer	2
7	1220JN	Jam Nut – 1/2-13	2
8	162240	Actuator Rod	1
9	262239	Mounting Bracket	1
10	170459	Actuator Weldment	1
11	270460	Skid Plate	1
12	5811X2HB	Hex Bolt – 5/8-11 X 2	2

Rod Loader



Rod Loader

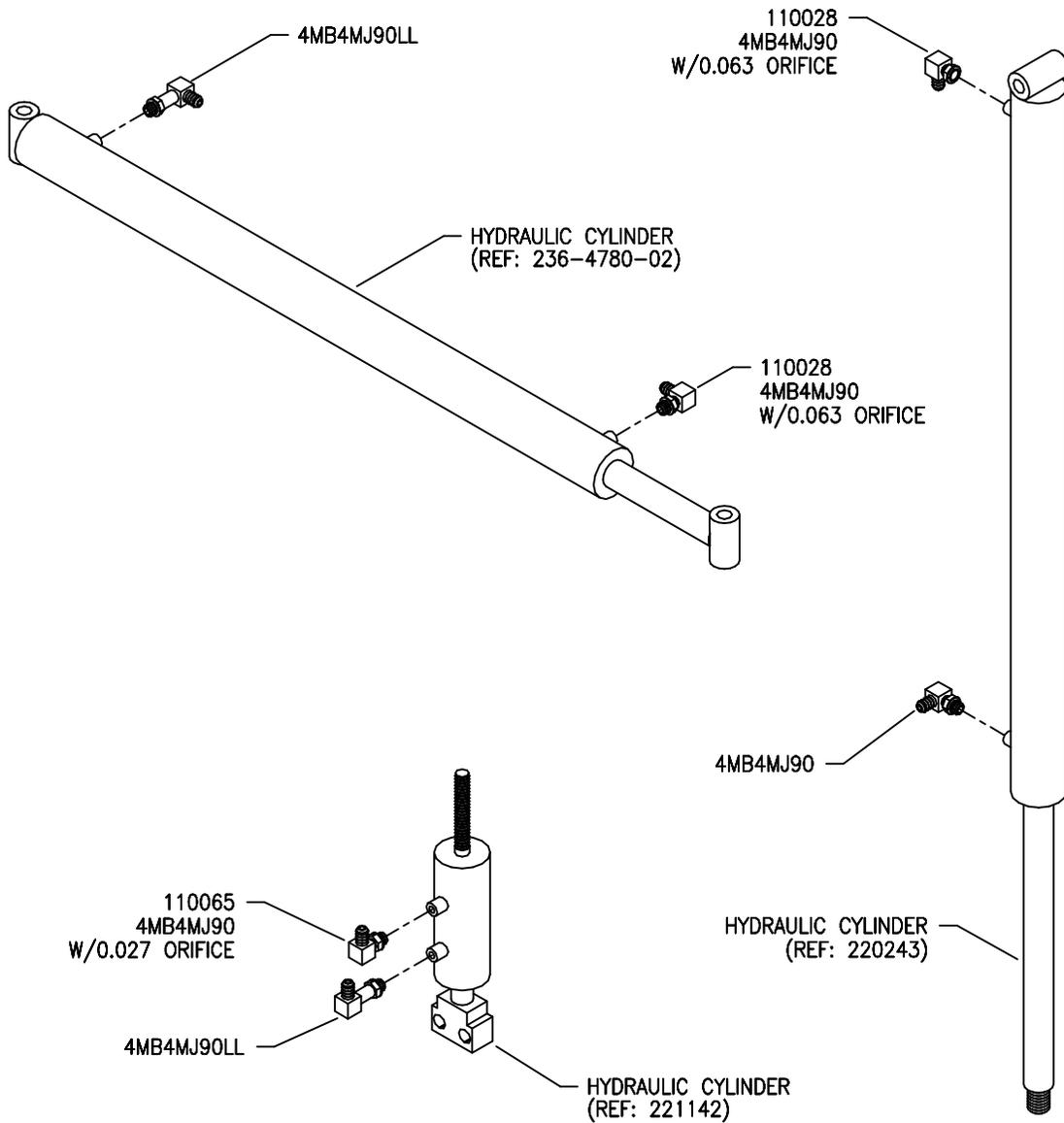
Parts List Pg 1

Item	Part Number	Description	Qty
1	470323	Rod Loader Weldment	1
2	161560	Guide Rod – 2.00 DIA X 35.50 Long	2
3	261499	Guide Rod – 1.50 DIA X 34.50 Long	2
4	236-4780-02	Hydraulic Cylinder – 1.50 Bore / 23.25 Stroke	1
5	220243	Hydraulic Cylinder – 1.50 Bore / 25.00 Stroke	1
6	221142	Hydraulic Cylinder – Rod Loader Jaw	1
7	236-4773-02	Rod Bushing – 1.50	4
8	236-4774-02	Rod Bushing – 2.00	4
9	161138	Rod Bushing Keeper Plate	4
10	161139	Rod Bushing Keeper Plate	2
11	261109	Rod Loader Jaw Anchor Plate	1
12	270610	Jaw Cylinder Housing	1
13	260479	Support Block	2
14	261558	Rod Loader Jaw	2
15	221181	Energy Chain	1
16	161424	Jaw Insert - Lower	4
17	161555	Jaw Insert – Upper With Adjusting Hole	1
18	161556	Jaw Insert – Front Fixed	1
19	161557	Jaw Insert – Rear Fixed	2
20	160451	Spacer Tube – 1.00 OD X 0.752 ID X0.990 Long	2
21	161238	Pivot Pin – Long	2
22	161244	Pivot Pin – Short	2
23	120348	Cable Connector – Strain Relief	1
24	160628	Cylinder Pin – 0.500 DIA X 2.75 Long	2
25	160827	Cylinder Pin – 0.500 DIA X 3.50 Long	1
26	1420X12HB	Hex Bolt – 1/4-20 X1/2	6
27	14FW	Flat Washer – 1/4	8
28	701-222-02	Socket Head Cap Screw – 3/8-16 X 3/4	4
29	701-214-02	Socket Head Cap Screw – 3/8-16 X 1 1/4	8
30	701-204-02	Socket Head Cap Screw – 5/16-18 X 1/2	8
31	51618X112SHCS	Socket Head Cap Screw – 5/16-18 X 1 1/2	2
32	1213X112SHCS	Socket Head Cap Screw – 1/2-13 X 1 1/2	2
33	12LW	Lock Washer – 1/2	2
34	161135	End Plate	1
35	3410X112HBG8	Hex Bolt – 3/4-10X 1 1/2 Grade 8	4
36	34LW	Lock Washer – 3/4	4
37	701-127-02	Grease Zerk – 1/8-27NPT	4
38	51618X34HB	Hex Bolt – 5/16-18 X 3/4	2
39	51618WHN	Hex Whiz Nut – 5/16-18	2
41	1420X12SHCS	Socket Head Cap Screw – 1/4-20 X 1/2	14
42	162159	Dowel Pin – 0.500 DIA X 2.13	2
43	1213X114SHCS	Socket Head Cap Screw – 1/2-13 X 1 1/4	1
44	1420X1FPHMS	Counter Sunk Phillips Head Machine Screw – 1/4"	4
45	14LW	Lock Washer – 1/4	6
46	1420HN	Hex Nut – 1/4-20	6
47	121143	Hex Nut – 1/2-20 NF Grade 8	2
48	162828	Cylinder Pin	1
49	262180	Work Light Bracket	1
50	120885	55 Watt Chrome Halogen Light (Pkg of 2)	1

Rod Loader Parts List Pg 2

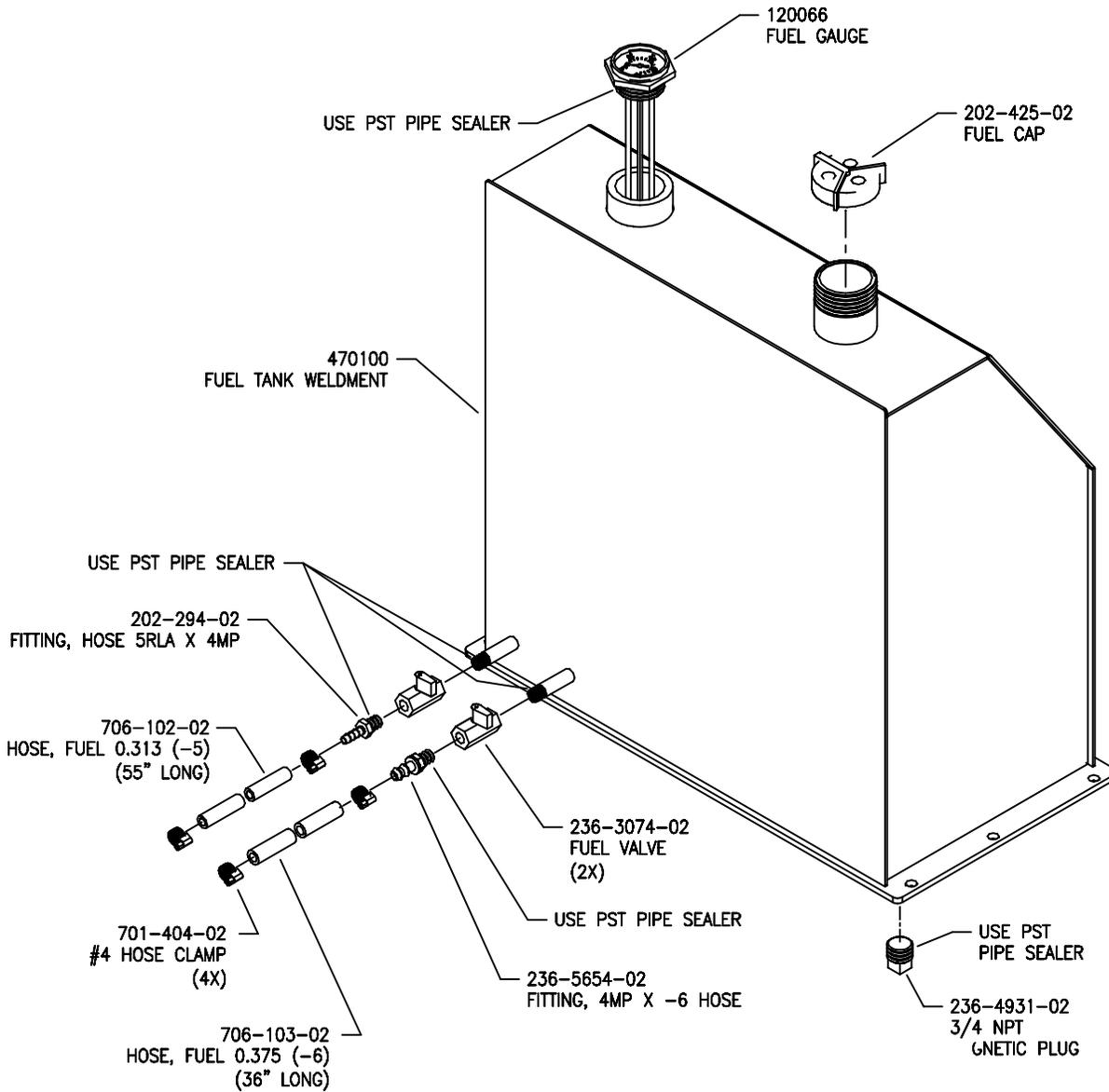
Item	Part Number	Description	Qty
51	262227	Loader Protection Switch Bracket	1
52	120838	Loader Protection Limit Switch	1
53	1420X12WHB	Hex Whiz Bolt – 1/4-20 X 1/2	2
54	1213HJN	Hex Jam Nut – 1/2-13	1
55	162869	Rubber Guard Plate	1
56	162870	Guard Holding Plate	1
57	716FW	Flat Washer – 7/16	2
58	516LW	Lock Washer – 5/16	2
59	236-1681-04	Spacer – 0.88 DIA X 0.50 ID X 0.50 Long	2

ROD LOADER CYLINDERS

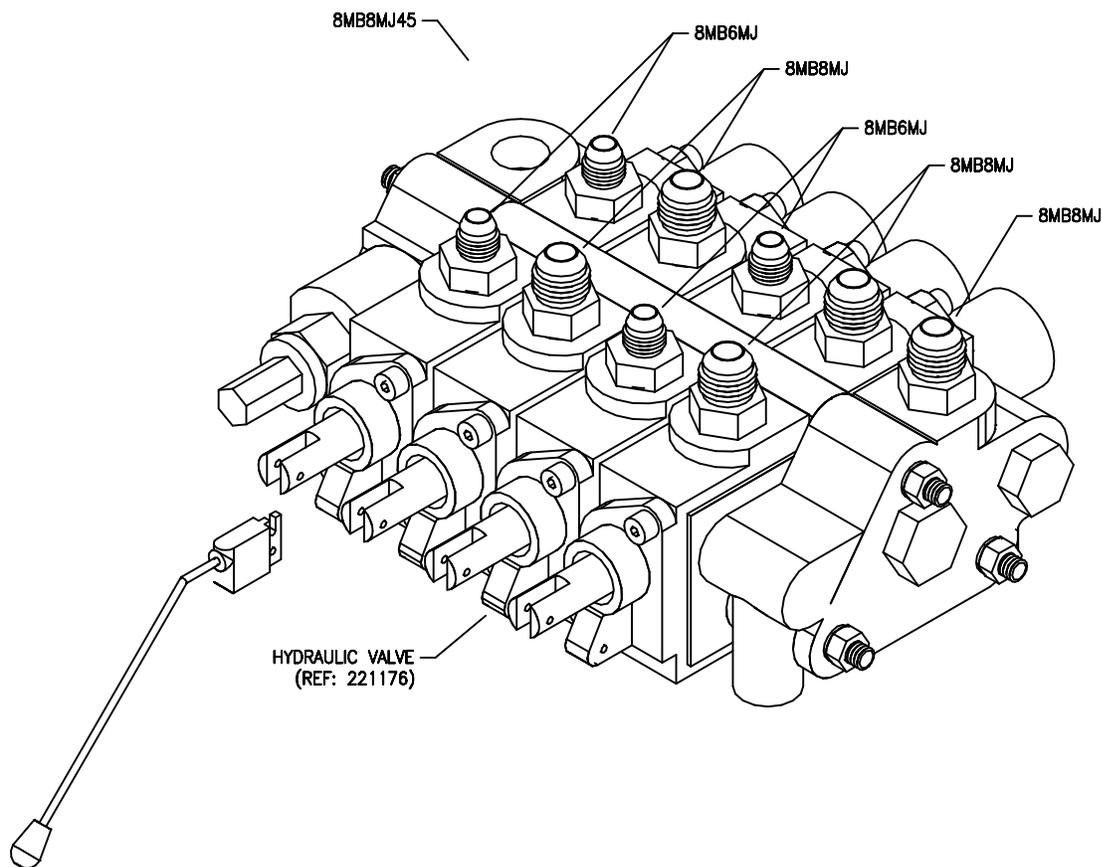


FUEL TANK

A - REVISED 2/29/00 SS

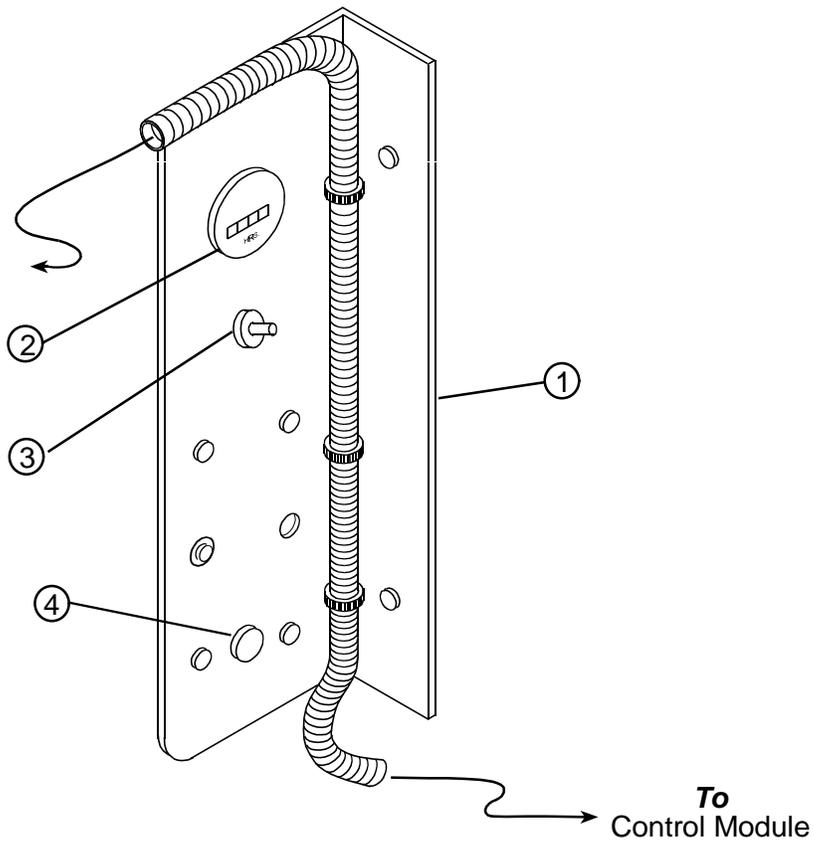
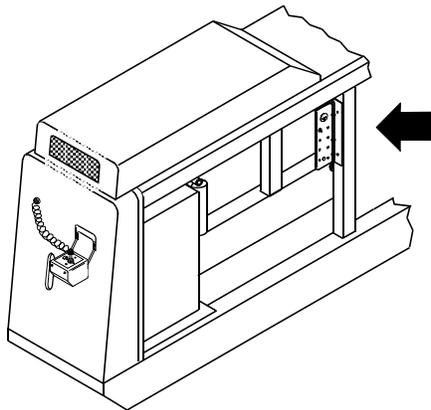


AUGER VALVE



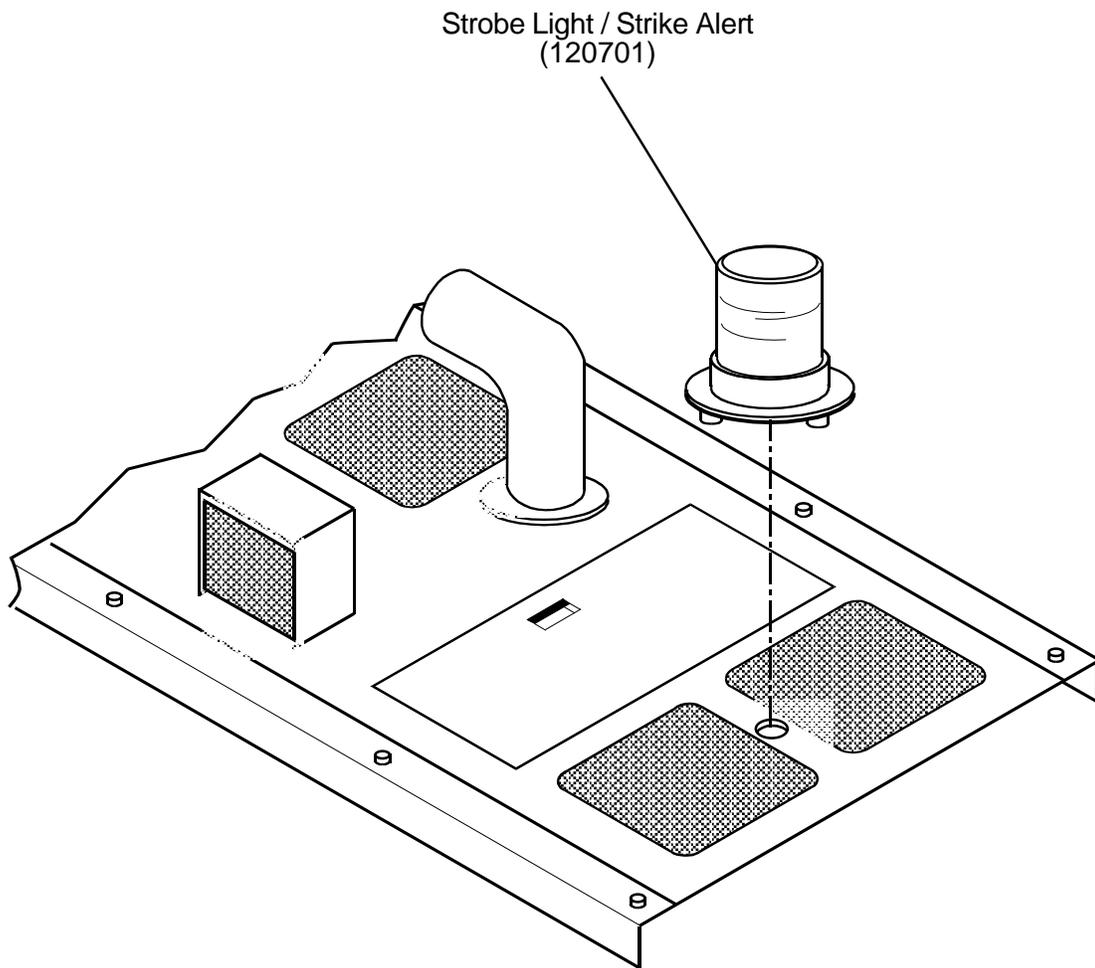
FITTING ORIENTATION FOR HYDRAULIC VALVE
ON OPERATOR WORKSTATION ASSEMBLY
THIS VALVE MOUNTS UNDERNEATH THE OPERATORS STATION

Power Panel

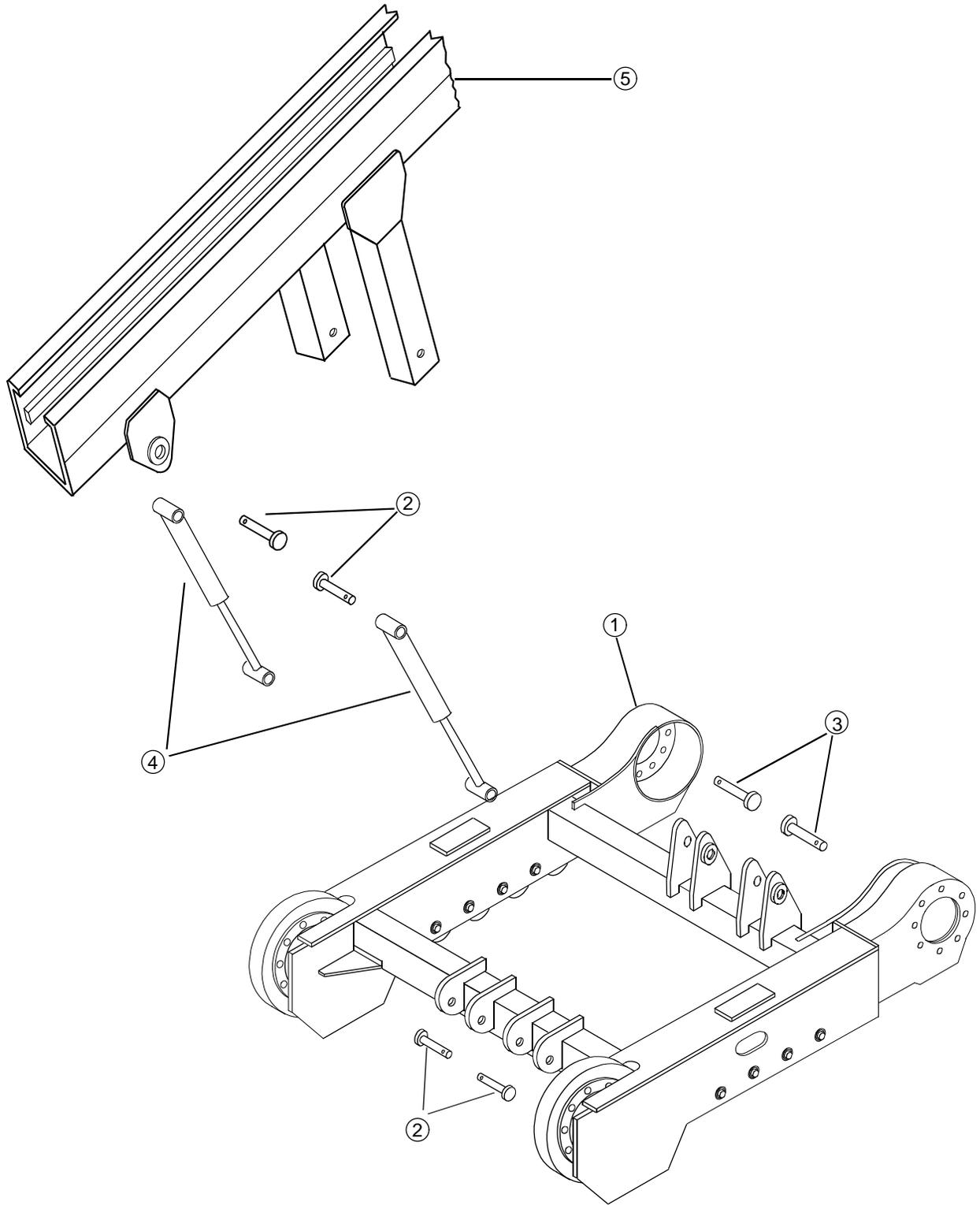


<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Qty.</u>
1.....	2622203.....	Center Bulkhead-Power Panel.....	1
2.....	236-8787-02.....	Hour Meter.....	1
3.....	203-197-02.....	Toggle Switch - Fan Override.....	1
4.....	236-6501-02.....	40AMP Manual Reset-Circuit Breaker....	1

Warning Light



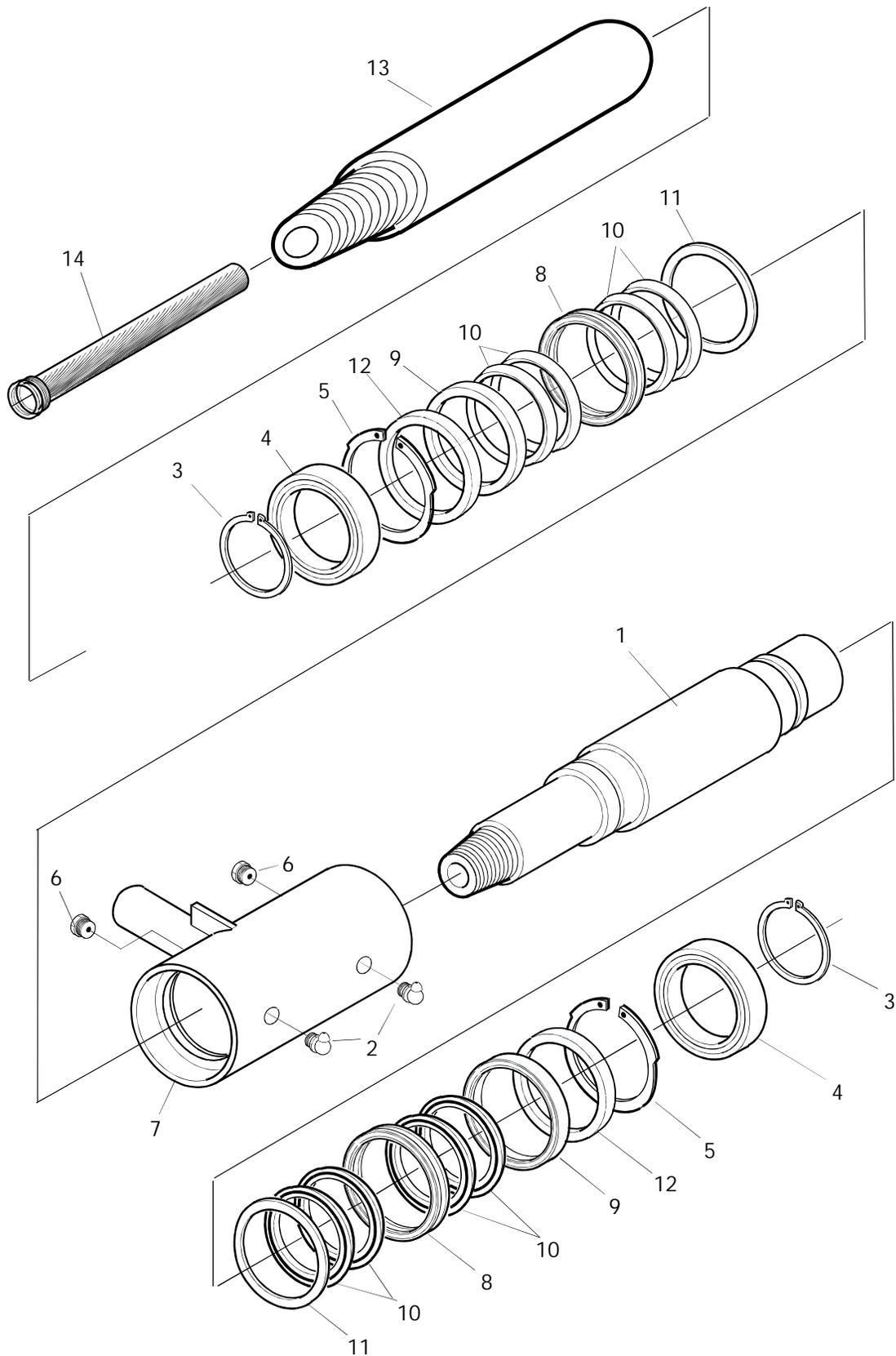
RACK ASSEMBLY



Rack Assembly Parts List

Item	Part Number	Description	Qty
1	480229	Track Frame	1
2	270093	Pin	2
3	270089	Pin	2
4	236-4885-02	Tilt Cylinder	2
5	270094	Pin	2
6	480260	Drill Frame Assembly	1

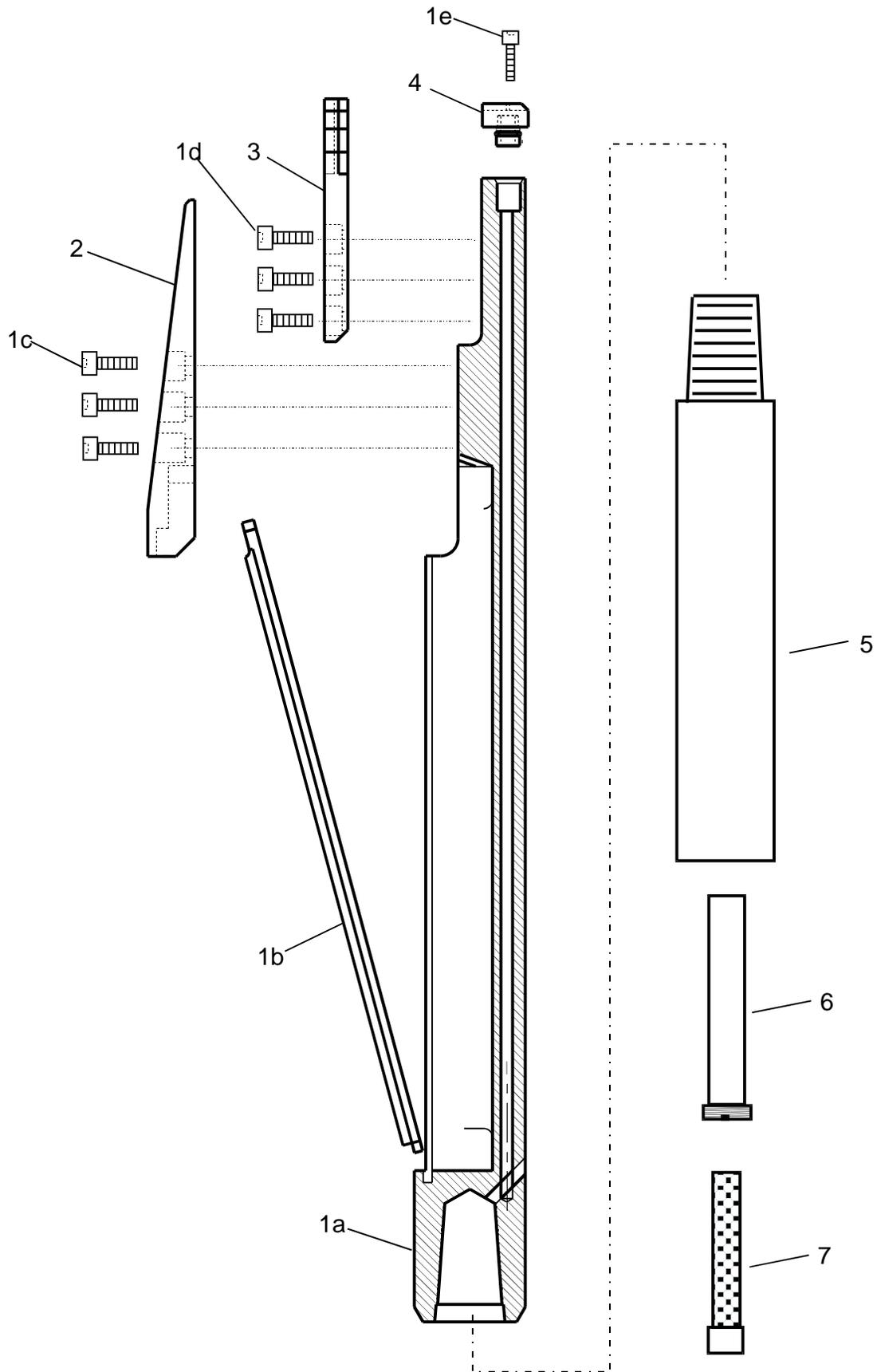
Mud Swivel Assembly



Mud Swivel Assembly Parts List

Item	Part Number	Description	Qty
-	480038	Swivel Assembly	-
Ref	236-6269-04	Swivel Repair Kit (Includes * Marked Items)	Ref
1	360571	Shaft	1
2	701-126-02	Grease Zerk	2
3	236-4192-02	*Retaining Ring	2
4	236-4194-02	Bearing	2
5	236-41-3-02	*Retaining Ring	2
6	236-3726-02	Grease Relief Valve	2
7	236-4186-04	Swivel Housing	1
8	236-4198-02	Grease Ring	2
9	236-4221-04	Seat Ring	2
10	236-4195-02	*Vee-Ring	8
11	236-4196-02	*Adapter Ring – Male	2
12	236-9332-03	Swivel Shim	2
13	262223	Sub Saver	1
14	236-2598-02	30 Mesh Filter	1

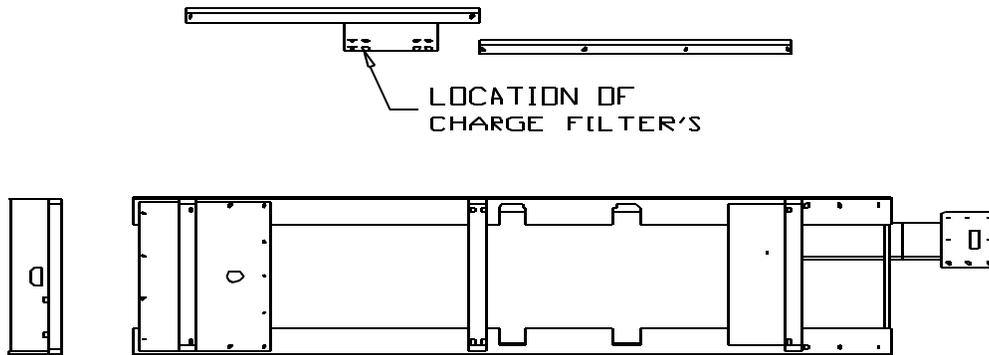
Pilot Bit



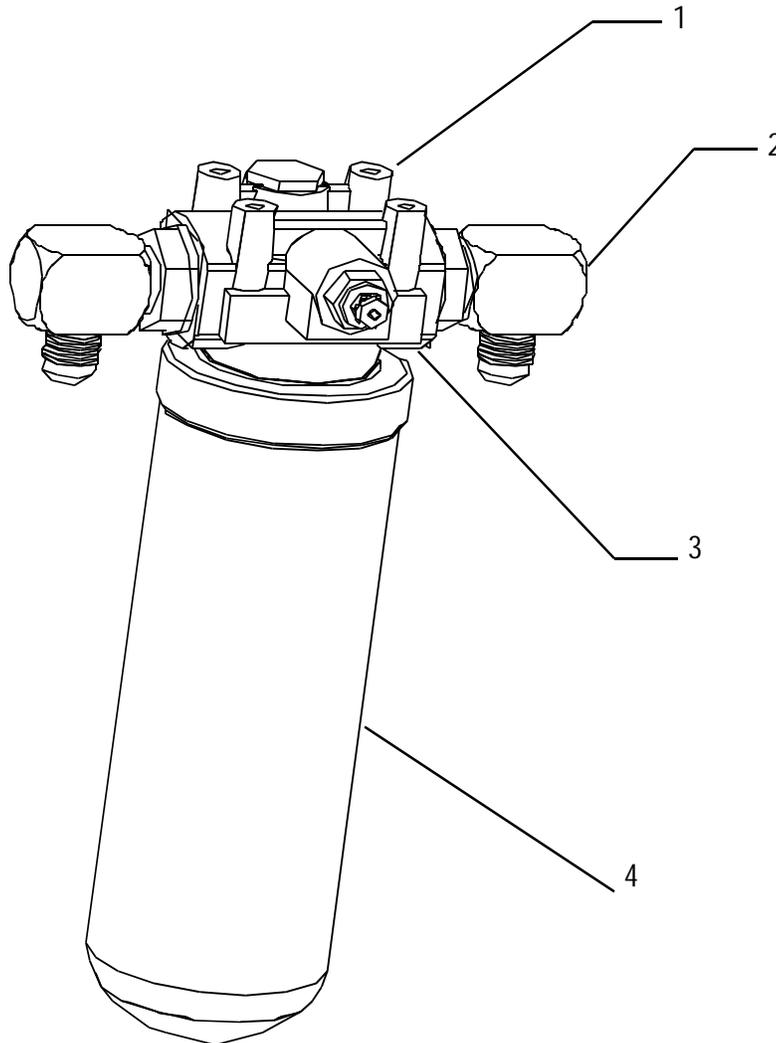
Pilot Bit Parts List

Item	Part Number	Description	Qty
1	180254	Housing Assembly for Heavy Duty Package	1
1	180123	Housing Assembly for Standard Package	1
1a	462342	Housing for Heavy Duty Assembly	1
1a	461374	Housing for Standard Assembly	1
1b	361346	Transmitter Cover	1
1c	701-217-02	Socket Head Cap Screw – 3/8-16 X 1	6
1d	701-222-02	Socket Head Cap Screw – 3/8-16 X 3/4	6
1e	701-110-02	Socket Head Cap Screw – 5/16-18 X 3/4	2
2	361587	3" Steering Shoe	1
2	361314	3 1/2" Steering Shoe	1
3	236-8841-04	3 1/2" Stepped Carbide Bit	1
3	260631	3 1/2" Tuff Bit	1
3	360323	3 1/2" Soft Soil Bent Bit	1
3	236-4738-04	4" Stepped Carbide Bit	1
3	262144	4" Soft Soil Bent Bit	1
4	180226	Nose with .063 Nozzle Jet	1
4	180126	Nose with .094 Nozzle Jet	1
4	180227	Nose with .125 Nozzle Jet	1
5	262344	Sub Filter Housing – Heavy Duty Package	1
5	236-2599-04	Sub Filter Housing – Standard Package	1
6	236-2600-04	Filter Retainer	1
7	236-2598-02	30 Mesh Filter	1
Ref	701-620-02	Roll Pin – 1/8" X 3/4" (Not Shown)	1

Charge Filters



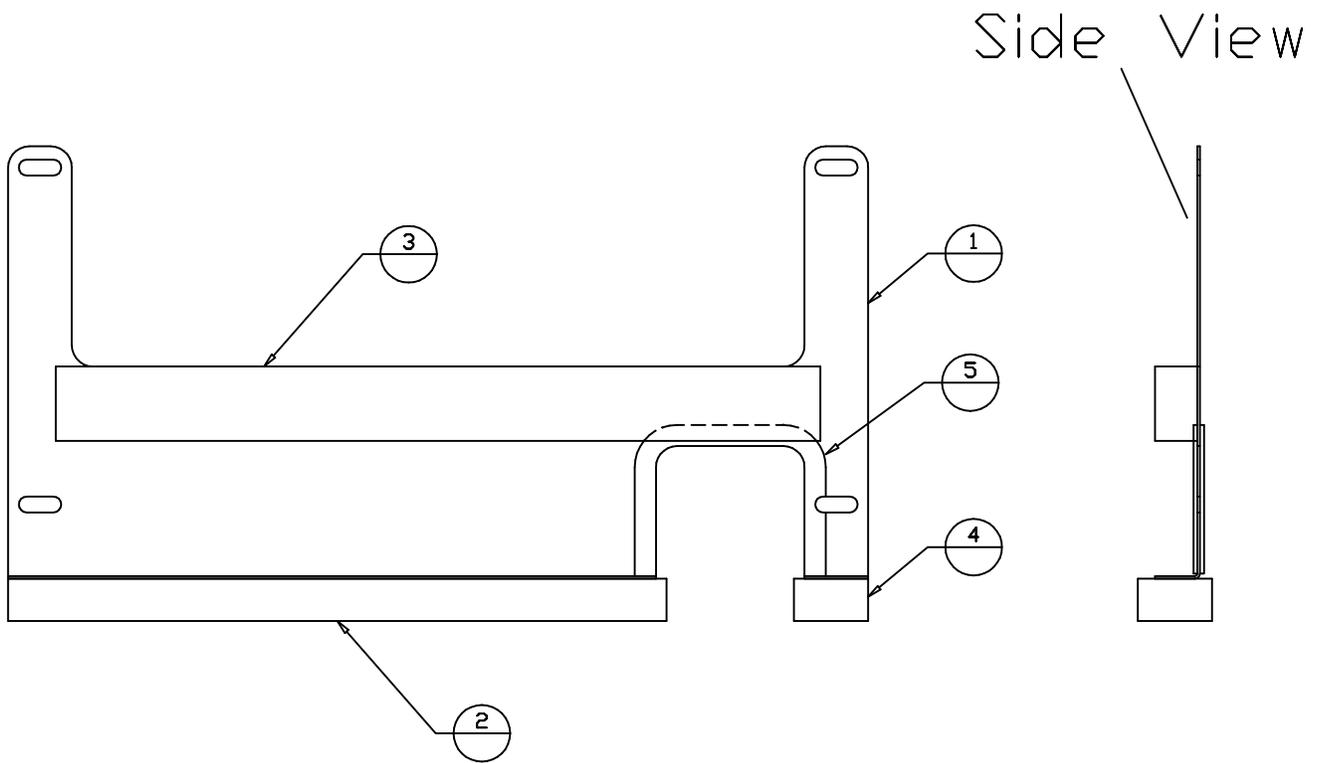
Mount With:
5/16"-18 X 3/4" Whix Hex Bolts
4 Per Filter Housing



Charge Filters Parts List

Item	Part Number	Description	Qty
1	120951	Filter Head	2
2	12MB8MJ90	90° Elbow Adapter – 3/4 to 1/2	4
3	120952	Sending Unit	2
4	120950	Filter Element	2

Lower Radiator Bracket



NOTE: 1. WEIGHT: 2.3 LB.

Lower Radiator Bracket Parts List

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Qty.</u>
1	262527	Radiator Bracket	1
2	236-0472-02	Foam Insulation – 1 ¾" x 15 ½" x 1" thick	1
3	236-0472-02	Foam Insulation – 1 ¾" x 18" x 1" thick	1
4	236-0472-02	Foam Insulation – 1 ¾" x 1 ¾" x 1" thick	1
5	701-013-02	Edge Protection	1

KIT, HOSE - 2462 HYDRAULIC

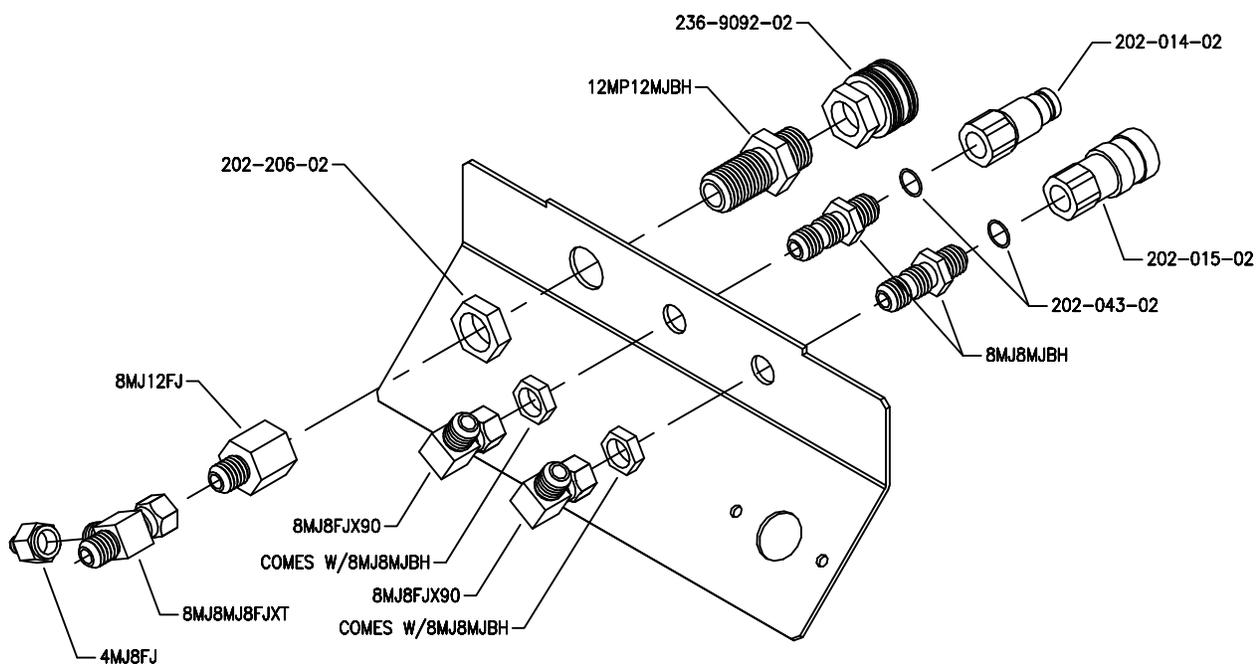
Item	Part No.	Description	Quan.
201	6-6FJX6FJX110R6	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL / 400 PSI	1
202	4-4FJX90S16R1	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL 90S / 3000 PSI	1
203	4-4FJX90S4FJX90S13R6	HOSE, FEMALE JIC SWIVEL 90S/FEMALE JIC SWIVEL 90S / 500 PSI	1
204	4-4FJX4FJX23R6	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL / 500 PSI	1
205	12-12FJX12FJX204R10	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL / 5000 PSI	2
206	12-12FJX12FJX90S105R10	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL 90S / 5000 PSI	2
207	12-12FJX90S12FJX90L20R10	HOSE, FEMALE JIC SWIVEL 90S /FEMALE JIC SWIVEL 90L/ 5000 PSI	1
208	8-8FJX8FJX48R2	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL / 3500 PSI	1
209	16-16FJX16FJX90S21R3	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL 90S / 565 PSI	1
210	12-12FJX12FJX90S25R10	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL 90S / 5000 PSI	1
211	12-12FJX12FJX60R9	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL / 3000 PSI	1
212	8-8FJX90S8FJX90L40R6	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL 90L / 400 PSI	1
213	16-16FJX16FJX36R3	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL / 565 PSI	1
214	12-12FJX12FJX90S64R10	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL 90S / 5000 PSI	2
215	8-8FJX8FJX90S23R3	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL 90S / 1000 PSI	2
216	12-12FJX12FJX252R2	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL / 2250 PSI	1
217	8-8FJX8FJX31R2	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL / 3500 PSI	1
218	8-8FJX8FJX38R2	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL / 3500 PSI	1
219	4-4FJX4FJX60R1	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL / 3000 PSI	1
220	8-8FJX8FJX90L61R6	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL 90L / 400 PSI	1
221	16-16FJX16FJX40R4	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL / 250 PSI	1
222	8-8FJX8FJX90L125R2	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL 90L / 3500 PSI	1
223	8-8FJX8FJX19R2	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL / 3500 PSI	1
224	8-8FJX8FJX90S126R2	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL 90S / 3500 PSI	1
225	8-8FJX8FJX90S204R6	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL 90S / 400 PSI	1
226	8-8FJX8FJX90S144R6	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL 90S / 400 PSI	1
227	6-6FJX6FJX30R6	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL / 400 PSI	1
228	4-4FJX4FJX53R2	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL / 5000 PSI	2
229	4-4FJX4FJX46R2	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL / 5000 PSI	2
230	4-4FJX4FJX85R2	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL / 5000 PSI	2
231	4-4FJX4FJX66R1	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL / 3000 PSI	1
232	4-4FJX4FJX72R1	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL / 3000 PSI	5
233	4-4FJX4FJX90L140R1	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL 90L / 3000 PSI	1
234	4-4FJX4FJX161R1	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL / 3000 PSI	3
235	4-4FJX4FJX90S26R1	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL 90S / 3000 PSI	4
236	16-16FJX16FJX22R4	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL / 250 PSI	1
237	6-6FJX6FJX220R6	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL / 400 PSI	1
238	6-6FJX6FJX260R6	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL / 400 PSI	1
239	4-4FJX4FJX52R1	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL / 3000 PSI	2
240	8-8FJX8FJX68R2	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL / 3500 PSI	1
241	16-16FJX16FJX90S30R4	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL 90S / 250 PSI	1
242	12-12FJX12FJX16R10	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL / 5000 PSI	1
243	12-12FJX12FJX42R10	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL / 5000 PSI	2
244	12-12FJX12FJX17R10	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL / 5000 PSI	1

KIT, HOSE - 2462 HYDRAULIC

245	4-4FJX4FJX184R1	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL / 3000 PSI	1
246	8-8FJX8FJX90L36R6	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL 90L / 400 PSI	2
247	8-8FJX8FJX24R3	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL / 1000 PSI	2
248	4-4FJX4FJX30R1	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL / 3000 PSI	2
249	4-4FJX4FJX90S30R1	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL 90S / 3000 PSI	1
250	4-4FJX4FJX90L30R1	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL 90L / 3000 PSI	1
251	4-4FJX4FJX90S20R1	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL 90S / 3000 PSI	2
252	4-4FJX4FJX24R1	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL / 3000 PSI	2
253	4-4FJX4FJX16R1	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL / 3000 PSI	1
254	4-4FJX4FJX90S137R1	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL 90S / 3000 PSI	1
255	4-4FJX4FJX225R1	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL / 3000 PSI	1
256	4-4FJX4FJX90S108R1	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL 90S / 3000 PSI	1
257	4-4FJX4FJX90L108R1	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL 90L / 3000 PSI	1
258	8-8FJX8FJX90S64R2	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL 90S / 3500 PSI	1
260	12-12FJX12FJX60R3	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL / 750 PSI	1
261	4-4FJX4FJX85R1	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL / 3000 PSI	1
262	4-4FJX4FJX90S16R6	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL 90S / 500 PSI	1
263	4-4FJX90S4FJX90S145R6	HOSE, FEMALE JIC SWIVEL 90S/FEMALE JIC SWIVEL 90S / 500 PSI	1
264	4-4FJX4FJX90S169R6	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL 90S / 500 PSI	1
265	8-8FJX8FJX90S60R2	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL 90S / 3500 PSI	1
266	8-8FJX8FJX90S66R2	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL 90S / 3500 PSI	1
267	6-6FJX90L6FJX90L192R2	HOSE, FEMALE JIC SWIVEL 90L/FEMALE JIC SWIVEL 90L / 4000 PSI	2
268	8-8FJX8FJX90S204R2	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL 90S / 3500 PSI	2
269	6-6FJX90L6FJX90L170R2	HOSE, FEMALE JIC SWIVEL 90L/FEMALE JIC SWIVEL 90L / 4000 PSI	2
270	8-8FJX8FJX90S190R2	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL 90S / 3500 PSI	2
271	4-4FJX90S4FJX90S25R6	HOSE, FEMALE JIC SWIVEL 90S/FEMALE JIC SWIVEL 90S / 500 PSI	1
272	8-8FJX8FJX90S87R6	HOSE, FEMALE JIC SWIVEL/FEMALE JIC SWIVEL 90S / 400 PSI	1

85 TOTAL HOSES

Rear Coupler Fitting



2462 SERVICE KIT

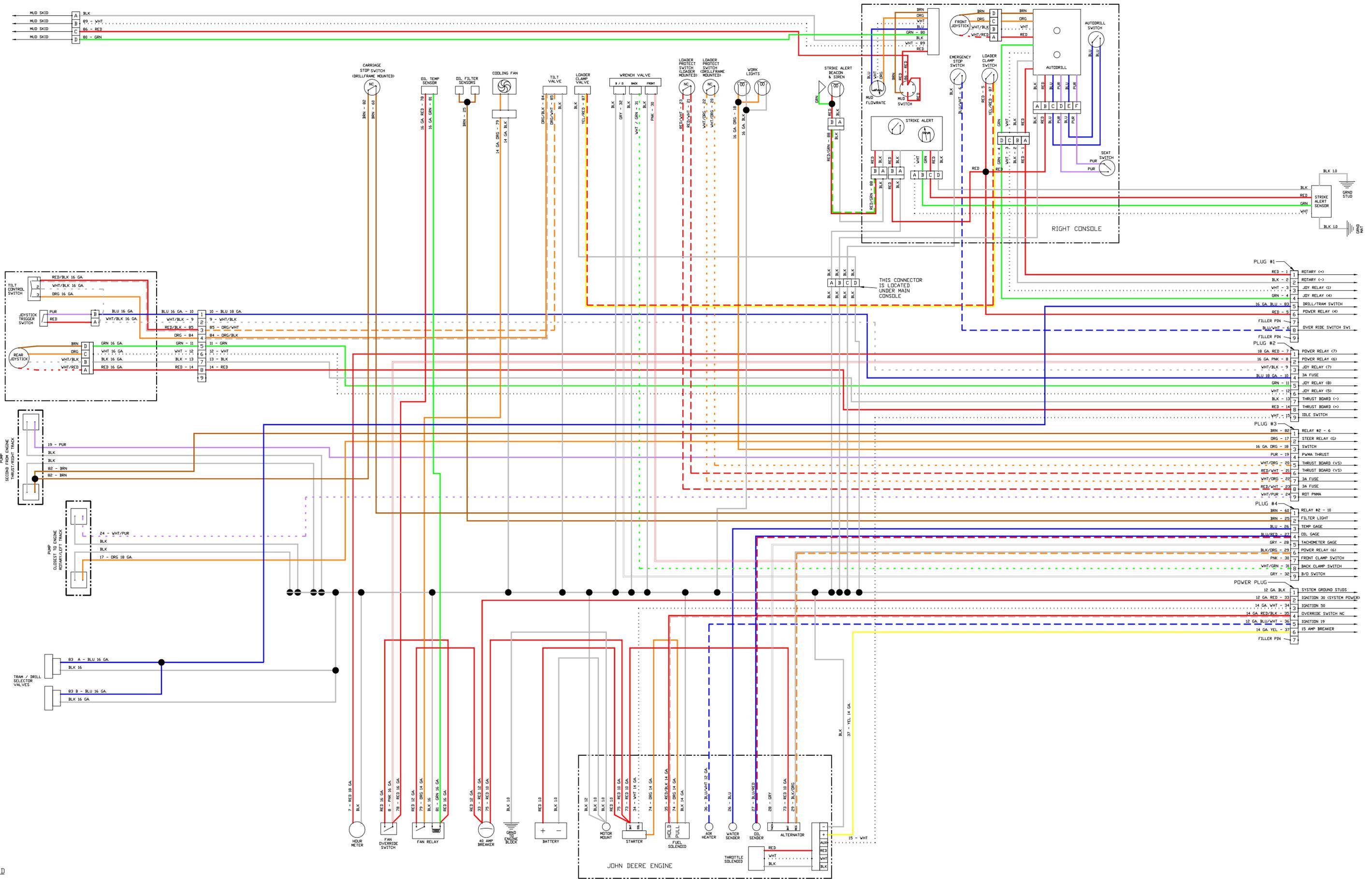
Hour Interval	Item #	Description	Qty Required
First 50	236-7125-02	Water Resistant Grease	1
	120035	Hydraulic Filter Element	1
	120950	Hydraulic Filter Element	2
	208-1070-02	Engine Oil	4qt
	120518	Engine Oil Filter	1

*Every 200 (400, 600, 800, etc.)	208-1070-02	Engine Oil	4qt
	120518	Engine Oil Filter	1

Every 500	120035	Hydraulic Filter Element	1
Or as needed	120950	Hydraulic Filter Element	2

AS NEEDED	162426 or	Rod Guide Insert (2.25" Standard)	1
	162427	Rod Guide Insert (2.5" Heavy Duty)	
	51618X3SHCS	Shear Bolt	8
	270466	Wrench Jaw (Cylinder Side)	2
	270467	Wrench Jaw (Fixed Side)	2
	120519	Fuel Filter	1
	236-7125-02	Water Resistant Grease	1
	120520	Fan Belt	1
	120521	Air Filter	1

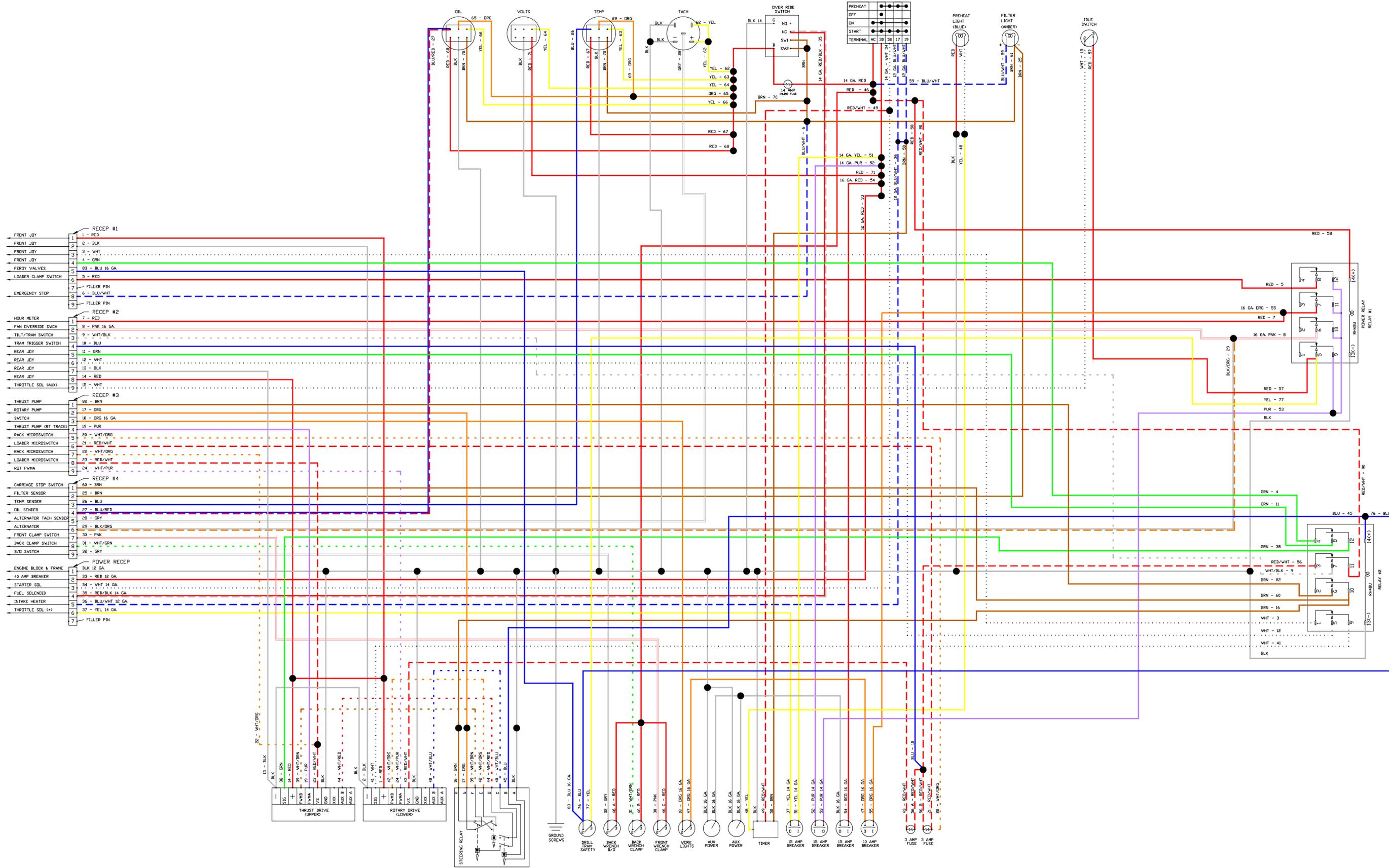
*Engine oil and filter change interval specifications taken from page 45 of Deere Power Systems Group Operation Manual #OMRG26439 and are dependent on the use of a diesel fuel with a sulfur content less than .5%. If a fuel with greater than .5% sulfur content is used reduce the service interval by 50%.



LEGEND

SOLID COLOR	—————
PRIMARY COLOR	—————
SECONDARY COLOR	—————
COLOR PRIMARY/WHITE	—————
WHITE PRIMARY/COLOR	—————
WHITE WIRE

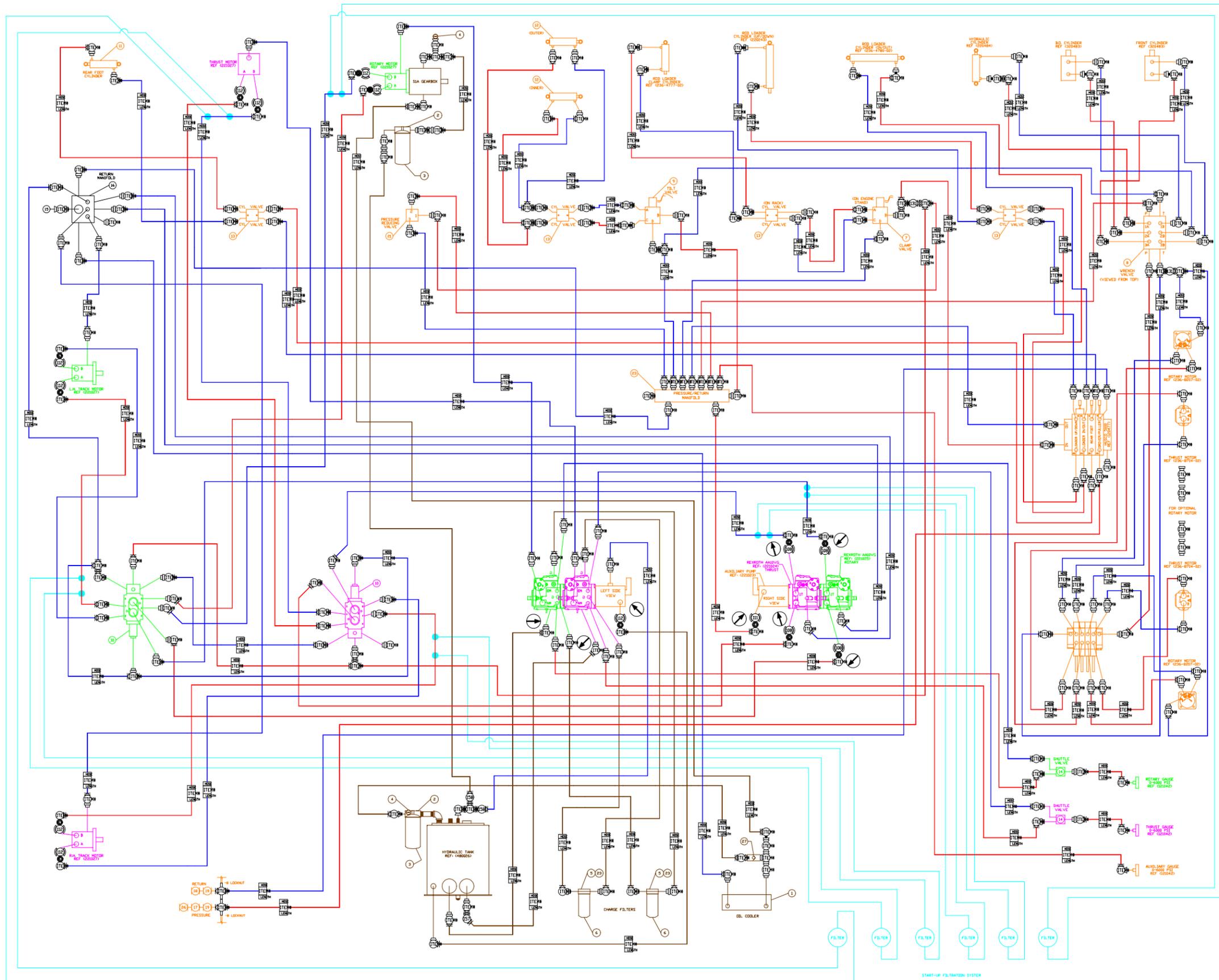
<p>ALL DIMENSIONS ARE IN INCHES TOLERANCES: UNLESS SPECIFIED: DECIMALS: .XXXX—±0.0010 DECIMALS: .XX—±0.010 DECIMALS: .X—±0.040 DECIMALS: —±0.080 ANGLES: MACHINED—±0°30'0" ANGLES: FORMED—±2°00'0" RADIUS: —±0.010</p>	<p>BREAK ALL SHARP EDGES MATERIAL: N/A SURFACE: ✓ HARDNESS: N/A PLATING: N/A</p>	<p>REMOVED WEATHERPACK CONNECTOR AT JOYSTICK TRIGGER SWITCH REMOVED FERRY VALVES AND REAR JOYSTICK ADDED CARRIAGE STOP SWITCH AND WIRES 82, 83</p>	<p>DATE: 02/16/20 DRAWN BY: [Signature] CHECKED BY: [Signature] DATE: [Blank] SCALE: N/A</p>	<p>PROJECT: 2462 BOM ON PAGE PAGE: [Blank]</p>	<p>DESCRIPTION: SCHEMATIC, WIRING MAIN HARNESS TEXT ASSEMBLY DRAWING NUMBER: [Blank] REV: [Blank]</p>
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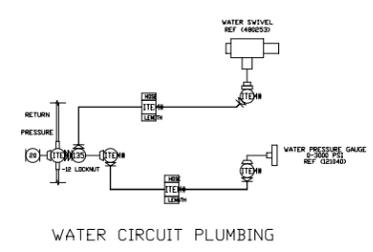
LEGEND

SOLID COLOR ———— PRIMARY COLOR
 DASHED COLOR ———— SECONDARY COLOR
 DASHED COLOR WITH WHITE ———— COLOR PRIMARY/WHITE
 WHITE PRIMARY/COLOR ———— WHITE PRIMARY/COLOR
 WHITE WIRE ———— WHITE WIRE

<p>ALL DIMENSIONS ARE IN INCHES. TOLERANCES, UNLESS SPECIFIED: DECIMALS: .XXXX—±0.0010 .XXX—±0.0010 .XX—±0.0010 .X—±0.0010 ANGLES: MACHINED—±0.030° FORMED—±0.000° RADIUS: ————±0.010</p>	<p>BREAK ALL SHARP EDGES MATERIAL: SURFACE: HARDNESS: PLATING:</p>	<p>DESCRIPTION: CLAMPED ROUTING OF WIRE TO — NO CIRCUIT CHANGE. ADDED WIRE NUMBER 30. ADDED DRILL/TRAM SAFETY SWITCH, NUMEROUS WIRES REROUTED. ADDED WIRE NUMBERS 60, 62, RELAY #2 WAS R0200 (10075)</p>	<p>DATE: 02/16/09 DATE: 04/19/09 DATE: 02/10/09</p>	<p>THIS DRAWING AND ALL RIGHTS HEREOF ARE THE PROPERTY OF STRAIGHTLINE MFG. CO. AND SHALL NOT BE REPRODUCED, COPIED, OR USED IN WHOLE OR IN PART FOR ANY PURPOSE WITHOUT THE EXPRESS WRITTEN PERMISSION OF STRAIGHTLINE MFG. CO. THIS DRAWING IS LOANED IN CONFIDENCE WITH THE UNDERSTANDING THAT IT SHALL BE RETURNED ON DEMAND.</p>	<p>DRAWING NO: 2462 BOM ON PAGE N/A PAGE 1 of 1 PAGES</p>	<p>DESCRIPTION: SCHEMATIC, WIRING MODULE NEXT ASSEMBLY DRAWING NUMBER</p>
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BILL OF MATERIALS			
ITEM	QTY	PART NO.	DESCRIPTION
1	1	221050	COOLER, OIL
2	2	120034	HEAD, FILTER
3	2	120035	ELEMENT, FILTER
4	2	236-8417-02	GAUGE, FILTER
5	2	120951	ASSEMBLY, HEAD - FILTER
6	2	120950	FILTER, HYDRAULIC
7	1	221256	VALVE, HYD. - 4 WAY / 2 POS / 1 SEC
8	1	221260	VALVE, HYD. - 4 WAY / 2 POS / 3 SEC
9	1	221255	VALVE, HYD. - 4 WAY / 3 POS / 1 SEC
10	2	221015	VALVE, SELECTOR
11	1	236-4636-02	CYLINDER, HYD. - 2.5 X 19.5
12	2	236-4885-02	CYLINDER, HYD. - 2.5 X 8.85
13	4	236-2931-02	VALVE, CHECK
14	2	120709	VALVE, SHUTTLE
15	1	236-9489-02	SWITCH, SENSOR
16	1	362843	MANIFOLD, HYDRAULIC
17	1	202-014-02	COUPLER, MALE
18	1	202-015-02	COUPLER, FEMALE
19	2	202-043-02	O-RING, -8
20	1	236-9092-02	COUPLER, VALVELESS
21	1	120223	VALVE, CARTRIDGE
22	1	100062	KIT, HOSE
23	2	120952	INDICATOR, SERVICE
24	1	262278	MANIFOLD, HYD. - RETURN & PRESSURE
25	1	100066	KIT, FITTINGS
26	1	202-017-02	COUPLER, CAP
27	1	121286	VALVE, CHECK
106	1	110065	ALTERATION, MALE BOSS/MALE JIC 90 ORIF
114	1	210022	ALTERATION, MALE BOSS/FEMALE PIPE
146	1	110027	ALTERATION, MALE BOSS/MALE JIC ORIFICE
147	4	110028	ALTERATION, MALE BOSS/MALE JIC 90 ORIF
151	1	110029	ALTERATION, MALE BOSS/MALE JIC ORIFICE
164	2	110064	ALTERATION, MALE PIPE/FEMALE BOSS
171	1	110066	ALTERATION, MALE PIPE/MALE JIC 90 ORIF



- LEGEND**
- PRESSURE LINE
 - RETURN LINE
 - HOSE SIZE
 - HOSE LENGTH
 - MALE JIC
 - FEMALE JIC
 - MALE BOSS
 - MALE PIPE
 - SAE O-RING FLANGE CODE 61
 - SAE O-RING FLANGE CODE 62
 - SAE O-RING FLANGE KIT
 - FEMALE JIC SWIVEL
 - MALE BOSS W/DRIFICE
 - FEMALE PIPE

<p>ALL DIMENSIONS ARE IN INCHES BREAK ALL SHARP EDGES REV</p> <p>TOLERANCES, UNLESS SPECIFIED MATERIAL:</p> <p>DECIMALS: .XXXX--- ±0.0010</p> <p>DECIMALS: .XXX--- ±0.0030</p> <p>DECIMALS: .XX--- ±0.0040</p> <p>DECIMALS: .X--- ±0.0080</p> <p>ANGLES: MACHINE--- ±0°30'0"</p> <p>ANGLES: FORMED--- ±2°00'0"</p> <p>RADIUS:----- ±0.010</p>	<p>DESCRIPTION</p> <p>CHANGED FITTINGS AT TRACK MOTOR DRAINS AND POWER ANCHOR ROTARY MOTORS AND OIL COOLER RETURN. ADDED ITEMS 27, 106, 164 & 171. ITEM 2 WAS QTY 1, ITEM 3 WAS QTY 1, ITEM 4 WAS QTY 1. ADDED SIA FLUSH CIRCUIT. REVISION RECORD TABS.</p> <p>CHANGED FITTINGS FOR THE RH TRACK MOTOR AT THE SELECTOR VALVE. CHANGED HOSES TO THE RH TRACK MOTOR.</p>	<p>DATE BY</p> <p>09/08/99 LJS</p> <p>06/18/99 LJS</p>	<p>THIS DRAWING AND DATA EMBODY PROPRIETARY INFORMATION WHICH IS THE PROPERTY OF STRAIGHTLINE INC. AND SHALL NOT BE REPRODUCED, COPIED, REPRODUCED, DISCLOSED TO OTHERS, OR USED IN WHOLE OR IN PART, FOR ANY PURPOSE WITHOUT THE EXPRESSED WRITTEN PERMISSION OF STRAIGHTLINE INC. THIS DRAWING IS LOANED TO YOU WITH THE UNDERSTANDING THAT IT SHALL BE RETURNED TO STRAIGHTLINE INC.</p>	<p>STRAIGHTLINE</p> <p>1450 SOUTH SPENCER ROAD, NEVTON, KANSAS 67114</p>	<p>SCHEMATIC, HYDRAULIC ASSEMBLY</p> <p>PROJECT: 2462</p> <p>DATE: 05/27/99</p> <p>CHECK BY: L. STEPHENS</p> <p>SCALE: N/A</p> <p>WEIGHT: N/A</p> <p>QTY: 1</p>	<p>REV</p> <p>480248</p> <p>480284</p> <p>K</p>
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