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EVJ

DC HYDRAULIC LIFTING SYSTEM

OPERATING & SERVICING INSTRUCTIONS

Serial No. _____ Purchase Date _____

Do not use the EVJ until the operator has read, and fully understands the "OPERATING INSTRUCTIONS" section in this Manual.

February, 1997

EVJ DC HYDRAULIC LIFTING SYSTEM PARTS LIST

EVJ UNDER-THE-HOIST JACK, HD

ITEM	PART NO.	DESCRIPTION	QTY.
1	EVJ-F	FRAME TANK	1
2	6738	3.125" INTERNAL RING	1
3	ETJA-RSL	LOWER PISTON	1
4	5239	DASH 261 O-RING	1
5	ETJA-83	DASH 245 O-RING 5238	1
6	ETJA-83	TANK TOP	1
7	5254	DASH 342 O-RING	1
8	5224	DASH 206 O-RING	2
9	6626	1/2" SAE FLAT WASHER	2
10	ETJA-89	TANK TOP RETAINING BOLT	2
11	6948	1/8" x 1." SPRING PIN	2
12	ETJA-RSU	UPPER PISTON	1
13	5236	DASH 235 O-RING	1
14	8046	AIR BLEEDER PLUG LABEL	1
15	ETJA-58	LOWER PISTON CAP	1
16	5748	1/8" NPT HH PIPE PLUG	1
17	5244	DASH 336 O-RING	1
18	---------		
19	ETJA-96	FVC LEVELING THR ROD	1
20	6025	3/8" NC HEX NUT	19
21	7253	23-4IRB LOCKING CASTER	2
22	6250	3/8" x 1." NC HH BOLT	16
23	(same as #20)		
24	7249	21-4HRR 4" SWIVEL CASTER	2
25	7895	#2 3/16" SH "U" DRIVE SCW	2
26	7890	MHC BRASS OVAL TAG	1
27	8048	WARNING/INSTRN LABEL	1
28	5751	1/4" NPT HH PIPE PLUG	1
29	8050	OIL LEVEL LABEL	1
30	8044	AIR BLEEDING LABEL	1
31	8010	MHC CORPORATE 5" DECAL	1
32	8040	MHC PRODUCT SVC LABEL	1
33	---------		
34	---------		
35	8100	2000 LB CAPACITY LABEL	1
36	5850	EVJ TANK VENT	1
37	EVJ-28	REAR PROTECTION PLATE	1
38	6196	.25 x .5" NC HH BOLT	2
39	6016	.25" NC HEX LOCK NUT	2
40	(part of #42)		
41	9263	#24 DEEP-CYCLE BATTERY	1
42	9264	BATTERY CASE w/strap	1
43	(same as #22)		
44	6617	3/8" SPLIT LOCK WASHER	5
45	(same as #20)		
46	---------		
47	---------		
48	---------		
49-58	(not used)		

ITEM	PART NO.	DESCRIPTION	QTY.
59	ETJA-119	FVC LEVELING SPG ANCHOR	2
60	EVJ-GA	FOOT VALVE CONTRL ASSY	1
61	EVJ-G	FOOT VALVE CONTROL	1
62	7420	F4 COMPRESSION SPRING	1
63	ETJA-67	RELEASE LOCKING PIN	1
64	6700	3100-50 1/2" SNAP RING	3
65	ETJA-69	FVC PIVOT PIN	1
66	6300	1/2" x 1" NC HH BOLT	1
67	EVJ-I	SPRG COMPRESSION PLATE	1
68	7431	VALVE COMPR. SPRING	2
69	ETJA-70	VALVE STEM CONNECTOR	2
70	6027	3/8" NF HEX FIN JAM NUT	2
71	ETJA-72	EXHAUST VALVE STEM	1
72	ETJA-71	INTAKE VALVE STEM	1
73	5222	DASH 204 O-RING	2
74	5918	7/16" GR25 BALL BEARING	2
75	6020	5/16" NC HEX LOCK NUT	2
76	6225	SPECIAL 5/16" PIVOT BOLT	2
77	ETJA-I	HYDRAULIC VALVE ROCKER	2
78	(FVC Support Block - part of #1)		
79	6015	3/8"-16 x .375 SET SCREW	1
80	9280	SNAP SWITCH - 20 amp	1
81	6947	1/8" x 1.25" SPRING PIN	2
82	7443	AIR VALVE EXT. SPRING	2
83	EVJ-33	VALVE SPRING WASHER	1
84	EVJ-32	VALVE SPRING PUSHER PIN	1
85	7432	EVJ HD VALVE COMPR SPRG	1
86	EVJ-13	EXHAUST PORT PIN	1
87	---------		
88	---------		
89	---------		
90	9210	TRANS. TIE-DOWN STRAP	1
91	ETJA-U	UPPER TILT PIVOT PIN	1
92	6710	3100-75 3/4" SNAP RING	2
93	ETJA-Q	UPPER TILT HEAD ASSY.	1
94	EVJ-N	LOWER TILT HEAD ASSY.	1
95	6055	5/8" NF FIN JAM NUT	2
96	9300	BLK FLUTED PLASTIC KNOB	2
97	ETJA-M	SHAFT TILT INSERT	1
98	7580	1/4"-28 x .5" GREASE FITTING	2
99	6645	3/4" SAE FLAT WASHER	1
100	EVJ-51	LOWER ROCKER BOLT	1
101	6640	3/4" SPLIT LOCK WASHER	1
102	6070	3/4" NC HEX NUT	1
103	---------		
104	---------		
105-109		(not used)	
110-116		(see ETJA-TRAN section)	
117-119		(not used)	
120-130		(see ETJ-EH section)	
131-140		(not used)	

ITEM	PART NO.	DESCRIPTION	QTY.
141	9260	13" BLK BATTERY CABLE	1
142a	EVJ-WB10	BLK HOT POLE/CONNECTOR	1
142b	EVJ-WR17	RED HOT POLE/SWITCH W.	1
142c	EVJ-WY18	YLW SOLENOID/SWITCH W.	1
143	9266	MONARCH M-326 HYD PUMP	1
144	6609	5/16" SAE FLAT WASHER	4
145	6616	5/16" SPLIT LOCK WASHER	4
146	6240	5/16" x .75" NC HH BOLT	4
147	MH-1738	EVJ OUTPUT HOSE ASSY	1
148	5643	3/8" NPT STREET ELBOW	3
149	5737	3/8" x 3.5" PIPE NIPPLE	1
150	5625	3/8" NPT 90 DEG. SWIVEL	1
151	5623	3/8" NPT STRAIGHT SWIVEL	1
152	5646	3/8" NPT 90 DEG. F/F ELBOW	1
153	5693	1/8" x 2.5" PIPE NIPPLE	1
154	5644	1/8" NPT 90 DEG. F/F ELBOW	1
155	EVJ-81	RELIEF HOSE TUBE	1
156	5618	ADJUSTABLE HOSE CLAMP	1
157	9261	30" RED BATTERY CABLE	1
158	MH-1138	EVJ RELIEF HOSE ASSY.	1
159	MH-15538	EVJ INPUT HOSE ASSEMBLY	1
160-169	(see EVJM-02 Battery Holder Slides)		
170-179	(see EVJM-01 Pallet Holder Slides)		
180	EVJ-J	COVER WELDMENT	1
181	8230	PINCH POINT LABEL	2
182	8005	MHC CORP. 2.5" DECAL	2
183	8221	RECHARGE CAUTION LABEL	1
184a	9265	BATTERY CHARGE GAUGE	1
184b	EVJ-WG6	GRN GAUGE GROUND WIRE	1
184c	EVJ-WB11	BLK GAUGE/CONNECTOR W	1
185	8220	INDICATOR GAUGE LABEL	1
186	(same as #64)		
187	8940	NEOPRENE RUBBER 3/4x1.5	1
188	ETJA-110	TRANSPORT HANDLE PIN	1
189	(same as #181)		
190	EVJ-H	TRANSPORT HANDLE	1
191	7880	HANDLE GRIP	2
192	6250	3/8" x .75" NC HH BOLT	8
193	7301	EVJ FLOOR LOCK	1
194	(same as #20)		
195	(same as #44)		
196	(same as #192)		
197	8222	COVER REMOVAL LABEL	1
198	(same as #182)		

ITEM	PART NO.	DESCRIPTION	QTY.

ETJA-TRAN SUPPORT ARM ASSEMBLY
(optional)

110	6302	1/2" x 1.25" NC HH BOLT	8
111	6625	1/2" USS FLAT WASHER	12
112	ETJA-107	TRANSMISSION SUPPT ARM	4
113	6336	1/2"x4.5" NC ALL THRD. BOLT	4
114	6035	1/2" NC NUT	12
115	ETJA-X	TRANSMISSION PAN SUPPT.	4
116	6310	1/2" x 2" NC HH BOLT	4

ETJ-EH ENGINE SUPPORT HEAD
(optional)

120	ETJM-25	PROTECTION RUBBER PAD	1
121	6247	5/16"x4.5" NC CARR. BOLT	4
122	ETJM-28	MOTOR BASE WOOD	2
123	6609	5/16" SAE FLAT WASHER	4
124	6021	5/16" NC FORGED WING NUT	4
125	ETJM-B	#2 MOTOR BASE SLIDE	2
126	6300	1/2" x 1" NC HH BOLT	4
127	ETJM-A	#1 MOTOR BASE SLIDE	2
128	ETJM-C	MOTOR SUPPORT HEAD	1
129	---------		
130	9200	RATCHET TIE-DOWN STRAP	2

EVJM-02 BATTERY HOLDER SLIDES
(optional)

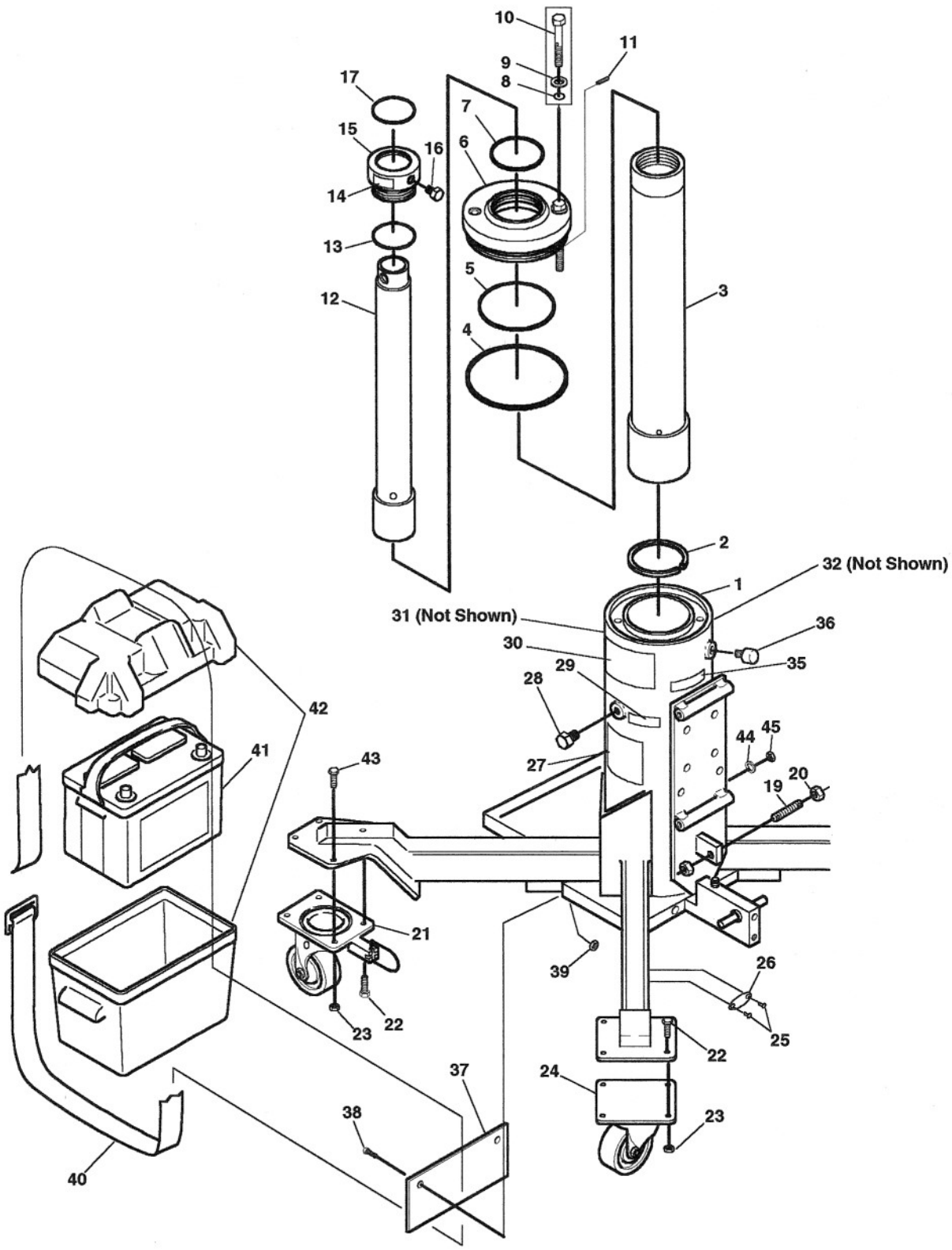
160	EVJM-02C	SHORT HOLDER SLIDE SET	1
161	8227	BATTERY HOLDER LABEL (R)	1
162	8950	1/2" NEO RUBBER (4" x 9")	4
163	---------		
164	6870	1/2"x3.5" COTTLS. HITCH PIN	4
165	EVJM-02L	LONG B. HOLDER SLIDE SET	1
166	8226	BATTERY HOLDER LABEL (F)	1

EVJM-01 PALLET HOLDER SLIDES
(optional)

170	EVJM-01A	SHORT PALLET SLIDE SET	1
171	8229	PALLET HOLDER LABEL (R)	1
172	---------		
173	EVJM-01B	LONG PALLET SLIDE SET	1
174	8228	PALLET HOLDER LABEL (F)	1

Meyer Hydraulics Corp.

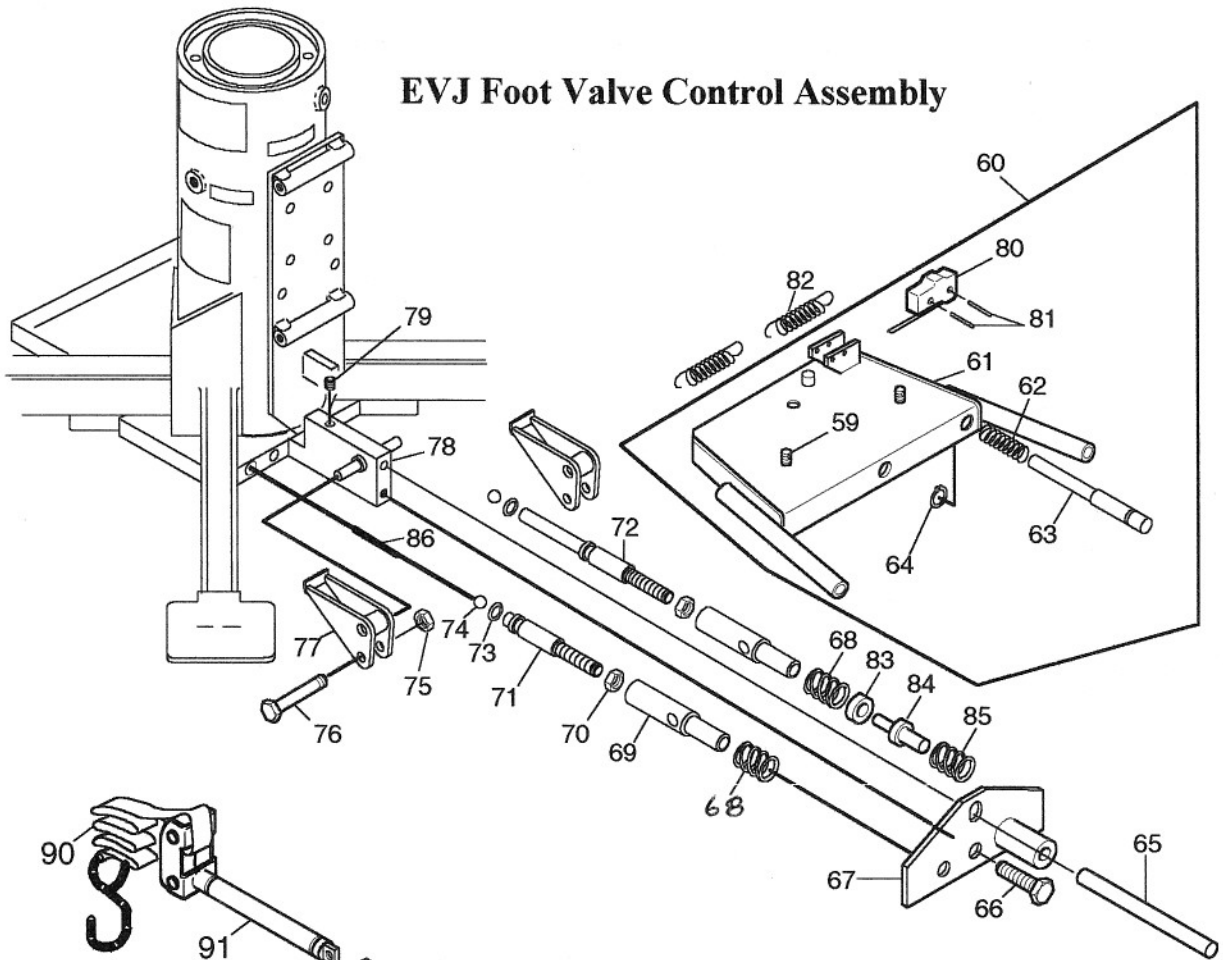
EVJ DC Hydraulic Lifting System

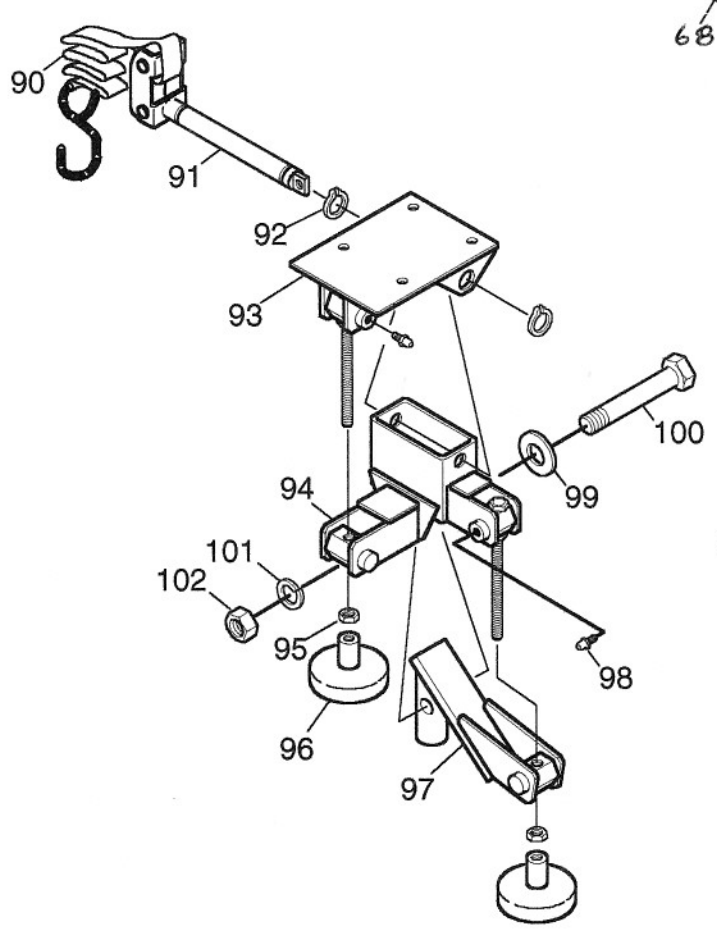


EVJ Main Frame Assembly

EVJ DC Hydraulic Lifting System

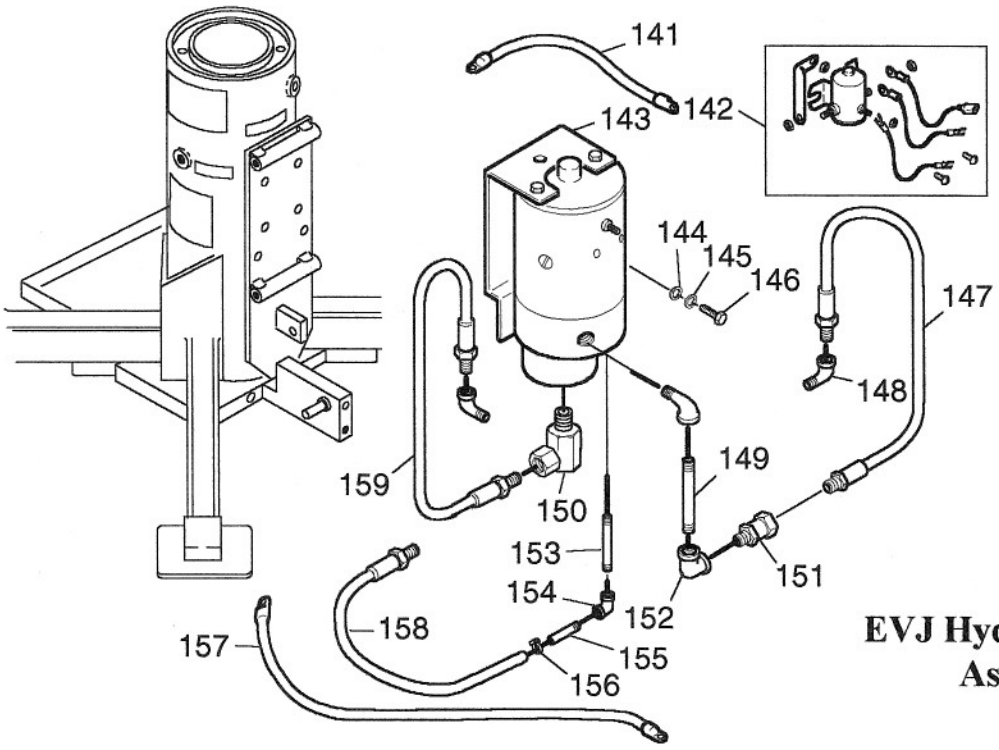
EVJ Foot Valve Control Assembly



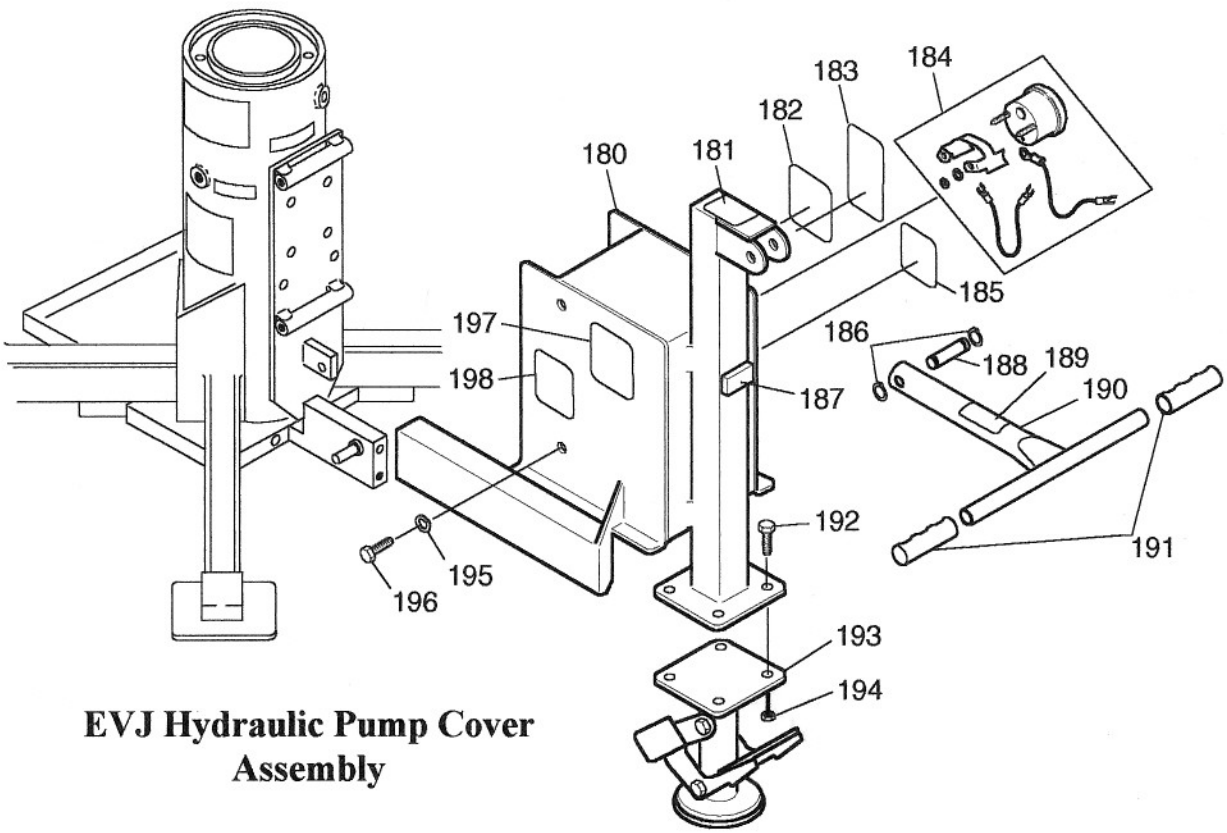


EVJ Lifting Head Assembly

EVJ DC Hydraulic Lifting System

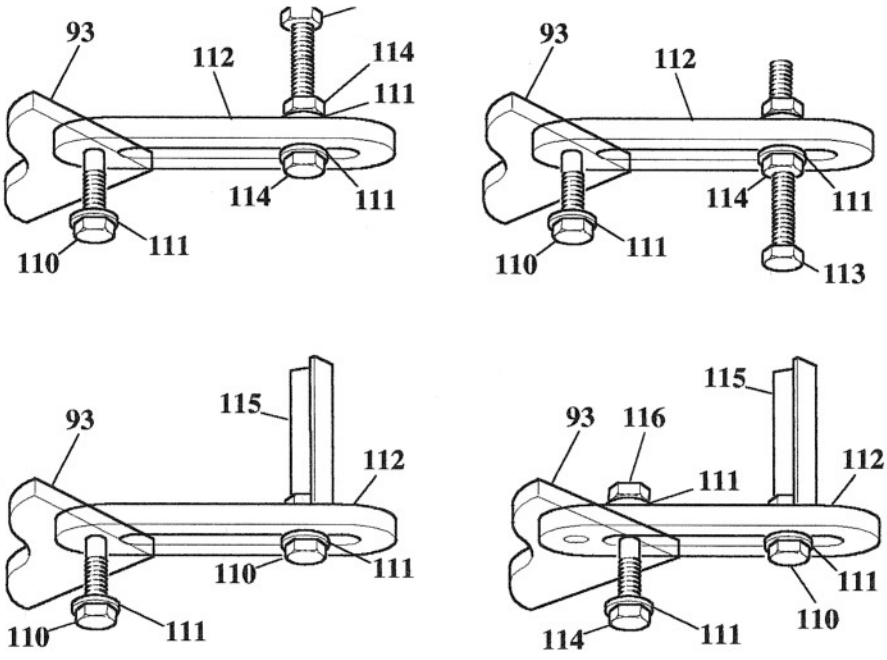


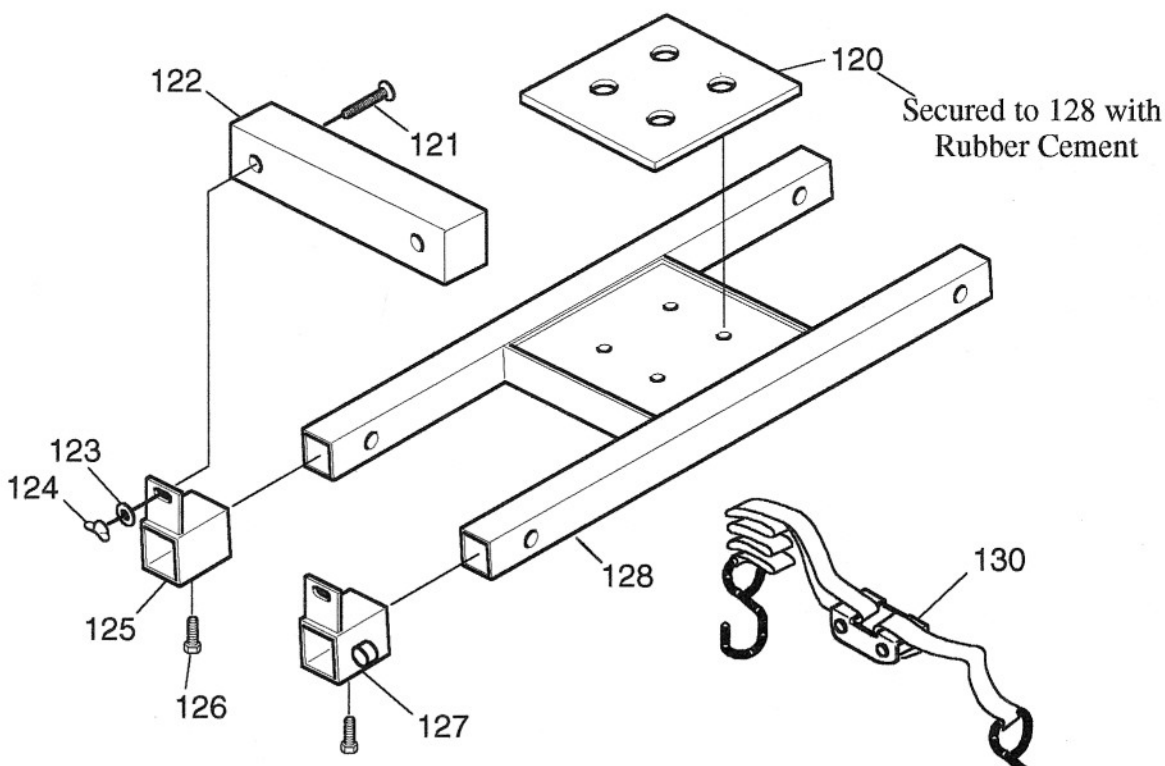
EVJ Hydraulic Pump Assembly



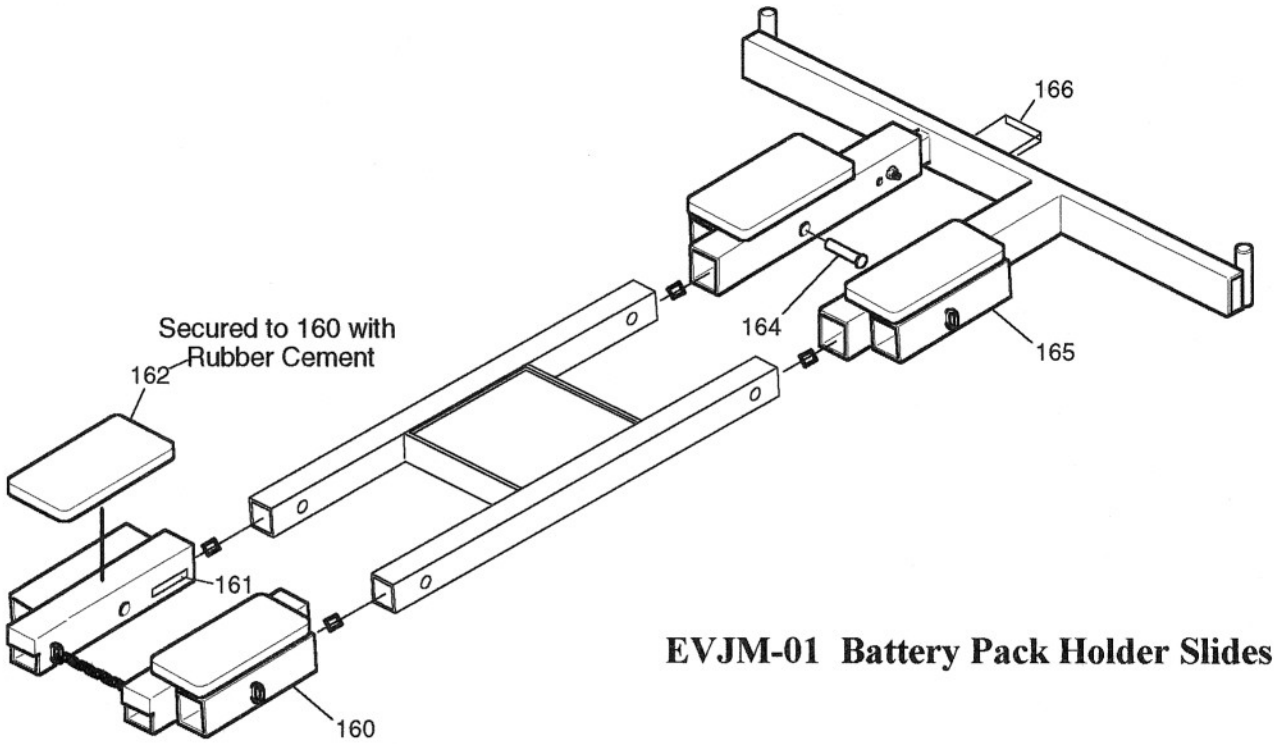
EVJ Hydraulic Pump Cover Assembly

ETJA-TRAN Support Arm Assembly Configurations (optional)

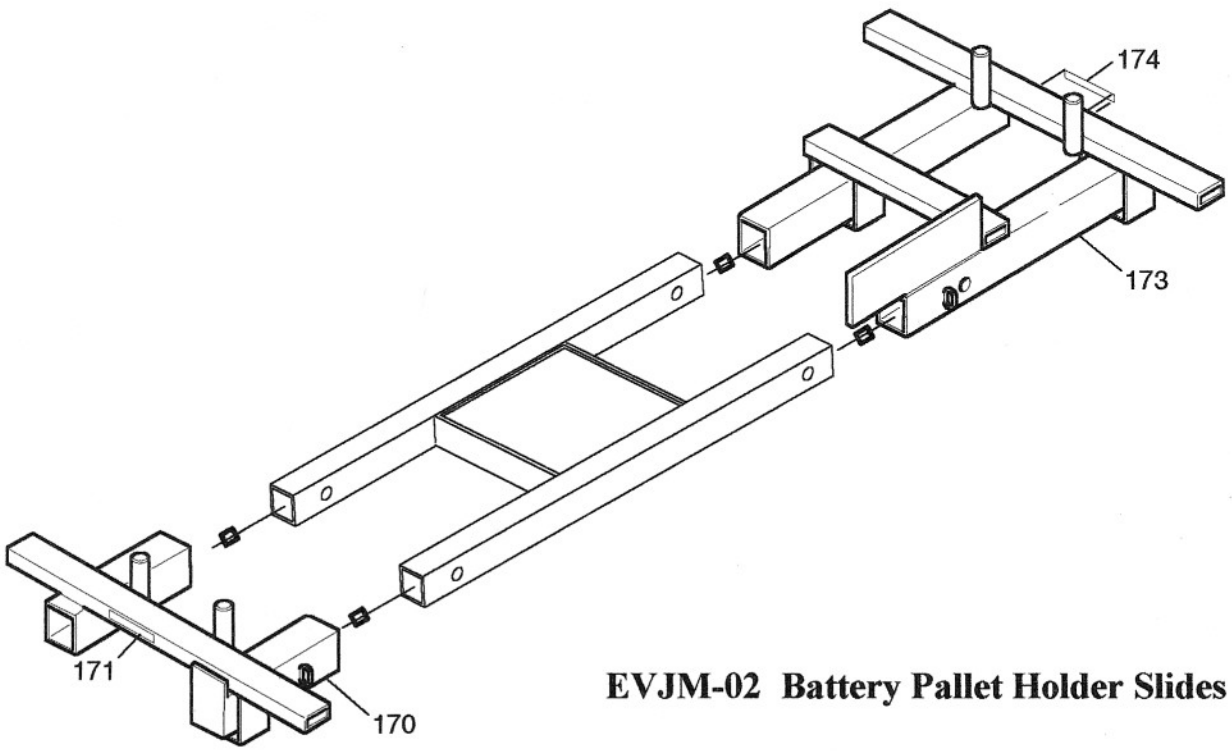




ETJ-EH Engine Support Head Assembly (optional)



EVJM-01 Battery Pack Holder Slides



EVJM-02 Battery Pallet Holder Slides

OPERATING THE EVJ

Lifting & Lowering

1. The EVJ's Hydraulic Pump Motor (143) will start to run just after you step down on the right (intake) side of the Foot Valve Control (61)....and just before the Hydraulic Intake Valve (72) is activated. It will continue to run basically all the time your foot is on the right side of the Foot Valve Control—even if the Hydraulic Intake Valve is closed. It is normal for the Hydraulic Pump Motor to sound louder while the Hydraulic Intake Valve is closed, as it's forced to relief all oil back into the Tank (1).

   ! NOTE: Conserve your Battery power by only running the Hydraulic Pump Motor when necessary.

2. When you take your foot off the Foot Valve Control (61), lift your foot off instead of sliding it off. This prevents the Foot Valve Control from rocking too far the other way.

3. Frequently check the Battery Charge Indicator Gauge (184) while the Hydraulic Pump Motor (143) is running. When the Gauge's indicator needle begins to get close to the red zone, it's time to think about recharging the Battery (41).

   ! CAUTION: When recharging the marine deep cycle Battery, make sure the two jumper cables are properly attached to the Battery prior to turning the battery charger on. When finished recharging, turn the battery charger off prior to disconnecting the jumper cables from the Battery.

4. For **coarse adjustment** of the EVJ height, step hard on the right (intake) side of the Foot Valve Control (61) for lifting, or on the left (exhaust) side for lowering. The Pistons (3)(12) will begin their travel smoothly, but briskly. All movement will immediately stop the instant the pressure is taken off the Foot Valve Control.

5. For **fine adjustment** of the EVJ height, step lightly on the right (intake) side of the Foot Valve Control (61) for lifting (or the left (exhaust) side for lowering) until you feel a restriction (the bottom of the Foot Valve Control has now come into contact with the Valve Rocker (77)). Then begin to increase your foot pressure slightly until the Load Piston (3) or (12) begins to travel at the speed you want it to. A little practice makes perfect!

6. The Release Locking Pin (63) may be used when lowering the EVJ height only when there's no load! Simply press down completely on the left (exhaust) side of the Foot Valve Control (61) and push in the Pin until it can rest on top of the tab welded onto the side of the Tank (1). While holding the Pin in, release the pressure on the Foot Valve Control. To release the Pin, simply press down on the left (exhaust) side again; and the Pin will return to its original position and allow the Foot Valve Control to return to its.

Transporting Loads

1. Always lower the Pistons (3)(12) completely before transporting a load from one location to another. Keep your walking speed below 2 1/2 feet per second. Use the two Ratchet Safety Tie-down Straps (130) to secure the load while transporting.

2 Never lock the two Locking Casters (21) into the position where their offset swivel lead is towards the direction of travel.

3. Be careful of long loads that may swing around and pinch your hand while pushing or pulling on the Transport Handle (190). Never rest your hand on top of the Transport Handle anchor area where the Pinch Point Label (181) is located.

Transmission Support Arms Use

1. If necessary, remove the ETJ-EH Engine Support Head (128) from the Upper Lifting Head (93); and turn the Safety Tie-down Buckle (91) until it points upwards, thereby allowing the Safety Strap (90) to be slung over a transmission or other load.
   Always use the Safety Tie-down Strap to secure the load!

2. Attach the Transmission Support Arms (112) to the Upper Lifting Head (93) by following one of the configurations shown in the ETJ Support Arm Assembly Configurations Drawing....or through one of your own configurations that meet your needs.
   ! WARNING: The Bolt (110 or 116) must have a thread engagement of at least 7/16" in the Support Arm or the Retaining Nut (114).

ETJ-EH Engine Support Head Use

1. If necessary, remove the Transmission Support Arms (112) from the Upper Lifting Head (93); and turn the Safety Tie-down Buckle (91) until it points straight down. Hook the "J" Hook of the Safety Tie-down Strap (90) into the the hole in the Upper Tilt Pivot Pin (91) from beneath; and wrap the excess Strap around the Lower Rocker Weldment (94) to keep it out of the way.

2. Set the ETJ-EH Engine Support Head (128) over the Upper Lifting Head (93) to where the Support Head holes line up with those in the Upper Lifting Head. Push four of the Retaining Bolts (110 or 116) through the Support Head; and then through the Upper Lifting Head. Tighten the Bolts in place with the Nuts (114).
   ! WARNING: The Bolts (110 or 116) must have a thread engagement of at least 7/16" in the Retaining Nuts (114).

3. **Always use the two Ratchet Safety Tie-down Straps (130) to secure the load!** It is suggested that the Ratchet Safety Tie-down Straps be slung over the engine with the "J" hooks dangling around its bottom prior to raising the vehicle on the hoist.

EVJM-xx Slides Use

1. Always use the Cotterless Hitch Pins (164) to secure the appropriate Slides ((160 & 165) or (170 & 173)) to the Support Head (128).

2. Never use the Slides ((160 & 165) or (170 & 173)) to pick up a load they were not designed for. Each set was designed to center a particular load arrangement directly over the center of the EVJ's Pistons (3)(12).

   ! WARNING: Any offset loading may endanger the operator, and/or lead to damage of the EVJ Jack.

3. Always lower the Pistons (3)(12) completely before transporting a load from one location to another. Use the two Ratchet Safety Tie-down Straps (130) to secure the load while transporting.

MAINTAINING THE EVJ

Monthly Maintenance Schedule

1. Oil both sides of the Upper Tilt Pivot Pin (91) where it comes out of the Upper Lifting Head (93). Tilt the Upper Lifting Head towards the threaded rod that's anchored to it; and oil the Pivot Pin where it pivots on the inside and outside of the Lower Rocker Weldment (94).

2. Oil the Lower Rocker Bolt (100) in between the Upper Piston (12) and the Lower Rocker Weldment (94).

3. Inspect both threaded rods that are anchored to the Upper Lifting Head (93) and the Lower Rocker Weldment (94) and make sure they're free from dirt and grit. Oil both liberally. If necessary, grease the Pivoting Hex Anchors in both the Upper Lifting Head and the Lower Rocker Weldment at the two Grease Fittings (98).

4. Have both Pistons (3)(12) completely lowered. Wipe off all dirt and debris on top of the Lower Piston (3), the Lower Piston Cap (15) and the Tank Top (6). Now raise both Pistons to their full height. Wipe off any dirt that may be on the "bare" portions of the

Pistons. Spread a film of oil on each Piston. Lower both Pistons completely and wipe off any excess oil.

5. Oil the Transport Handle (190) where it pivots on the Transport Handle Pin (188).

6. Make sure the Cover Bolts (196) and the Spring Compression Plate Bolt (66) haven't become loose. Do not over-torque!

Bi-Annual Maintenance Schedule

1. Grease the axle and oil the upper ball bearing race on each one of the Swivel Casters (21)(24). Some may find their EVJ rolls and casters better if they grease and oil the Swivel Casters more often.

2. Lower both Pistons (3)(12) completely. (For EVJs with serial numbers 1002 to 1028 have the Lower Piston (3) extended 3 3/4" to 4".) Unscrew the Oil Filler Pipe Plug (28) on the side of the Frame Tank and check the oil level. If necessary, fill the Tank with Dexron Automatic Transmission Oil until the oil level reaches the bottom of the filler hole. The total oil capacity is 7½ quarts (8 quarts for those EVJ's with serial numbers 1002 to 1028). Never overfill! Replace the Oil Filler Plug.

Hydraulic Oil Change Schedule

1. The hydraulic oil should be completely changed once every 5 years. The EVJ uses 7½ quarts (8 quarts for those EVJ's with serial numbers 1002 to 1028) of Dexron Automatic Transmission Oil.

2. Lower both Pistons (3)(12) completely. The Foot Valve Control (61) must be in its neutral position with the Release Locking Pin (63) not engaged. Tilt the EVJ towards the side that has the Oil Filler Pipe Plug (28) until the Frame Tank is horizontal. Place a two gallon capturing pan under the Oil Filler Plug. Unscrew the Plug and drain all the oil.

3. Put the EVJ back upright. Screw a 90 degree 1/4" n.p.t. pipe street elbow into the Filler Hole. Using a small funnel, pour in 7½ quarts (8 quarts for EVJ's with serial numbers between 1002 and 1028) of Dexron Automatic Transmission Oil. Never overfill! If too much oil is put into the Tank, oil may be exhausted at the EVJ Tank Vent (36).

4. Remove the 90 degree 1/4" n.p.t. pipe street elbow and re-tighten the Oil Filler Plug (28) back into the filler hole on the side of the Frame Tank.

SERVICING THE EVJ

Under-the-Cover Servicing

- **! CAUTION:** Never remove the Cover (180) without first disconnecting the Black Negative Cable (141) from the Battery (41), and then disconnecting the Red Positive Cable (157). Now you can disconnect the Battery Charge Indicator Gauge Wires (142a & 184c) at the male/female connectors that are just under the bottom of the Cover.

- **! WARNING:** The relief valve in the Hydraulic Pump (143) is factory set at 450 p.s.i.. Absolutely do not tamper with this setting! Contact Meyer Hydraulics if you think something is wrong with the pressure setting.

- While the Cover (180) is off, check to make sure all connections are properly tightened down—including the Wires (142b & 142c) that connect to the Switch (80).

- Never reinstall the Cover while the Battery Cables are still connected to the Battery. After the Cover is bolted back on, you can first connect the Positive Red Cable and then the Black Negative Cable to the Battery.

Symptoms & Cures

The Pistons have become "jerky" or "jumpy"!

- **! WARNING: Do not continue to operate the EVJ in this condition!**

- The oil level in the EVJ's Tank (1) may have become so low that air now enters the cylinder before the Pistons reach full extension. Normally, the air is brought in when the Upper Piston (12) is within two inches of its full extension.

- Remove any load from the top of the Support Arms (112) or Engine Support Head (128). Raise both Pistons (3)(12) to their fully extended position. Step down on the left side of the Foot Valve Control (61) until one of the Pistons lowers a few inches. Slowly unscrew the Air Bleeder Plug (16) at the top of the Lower Piston (3) just enough to allow the trapped air to escape. When a steady stream of oil flows out, re-tighten the Air Bleeder Plug.

- Lower both Pistons (3)(12) completely. (For EVJ's with serial numbers 1002 to 1028, you should now raise the Lower Piston (3) 3 3/4" to 4".) Unscrew the Oil Filler Pipe Plug (28) on the side of the Frame Tank and fill the Tank with Dexron Automatic Transmission Oil until the oil level reaches the bottom of the filler hole.

- If the EVJ took only a small amount of oil...or none, it is advised that the operator refrain from rapidly raising both Pistons (3)(12) to their full extension. Stopping for one to two seconds when the Upper Piston (12) is three to six inches of its full extension will cure the internal vortex phenomenon. It would also help to refrain from running the Hydraulic Pump Motor (143) for more than three seconds without activating the Intake Valve (72) while the Upper Piston is within 6" of full extension.

The EVJ will raise the load with the large Lower Piston (3), but not the smaller Upper Piston (12)!

- The most common cause is that the load is too heavy. If there's no question that the load is below 2000 pounds in weight, please contact Meyer Hydraulics.

- The load may be severely off-set. The more a load is off-set, the more the friction will obsorb the lifting force.

- Make sure the Spring Compression Plate Bolt (66) hasn't become loose. Do not over-torque!

The EVJ slowly lowers the load when it shouldn't!

- **! WARNING: Do not continue to operate the EVJ in this condition!**

- Make sure the Spring Compression Plate Bolt (66) hasn't become loose. Do not over-torque!

- Check for proper Valve Stem adjustment by placing a 3/8" or smaller rod into each one of the inspection holes in the Spring Compression Plate (67). Insert it until it "bottoms out." The depth should be **1/2"** (.500") plus or minus 1/32" (.031") to the outside surface of the Spring Compression Plate (the depth rod should "bottom out" at 2 1/2" on the left side for EVJs with serial numbers 1002 thru 1028).

  ! WARNING: Any setting outside of the above tolerances should be considered dangerous!

- There might be something between the Ball Bearing (74) and its seat in one of the ports in the Base of the Frame (1). Try to "flush" the valve seats by raising and lowering the Pistons (3)(12) rapidly.

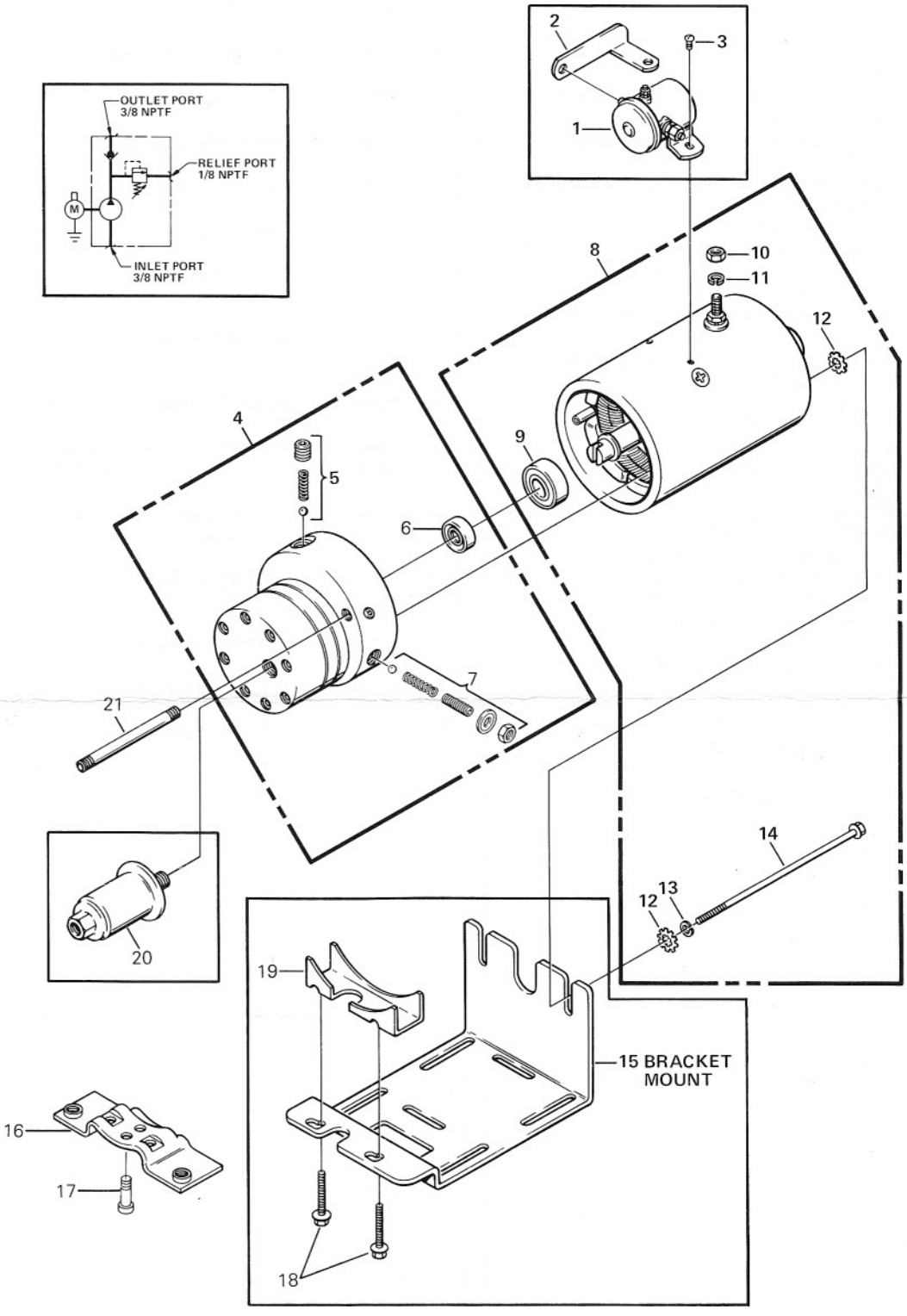
- If there's no external leaking of oil, the Cylinder/Tank Top O-Ring Seal (5) may have started to leak oil back into the Tank (1). Contact Meyer Hydraulics for further instructions.

The EVJ's Hydraulic Pump Motor (143) continues to run after I take my foot off the Foot Valve Control (61)!

- You may have to "tilt" the Foot Valve Control more to the left than it is now. Loosen the right Hex Nut (20) on the FVC Leveling Threaded Rod (19) about 1/2 turn, and then tighten the left Hex Nut. Normally, this is all that's needed. If the Foot Valve Control is touching the Exhaust Hydraulic Valve Rocker (77)(left side) while in a relaxed state, you've went too far.

I still have a problem with my EVJ!

- Contact Meyer Hydraulics for factory direct assistance.


OUTLET PORT
3/8 NPTF
RELIEF PORT
1/8 NPTF
INLET PORT
3/8 NPTF
M
1
2
3
4
5
6
7
8
9
10
11
12
12
13
14
15 BRACKET
MOUNT
16
17
18
19
20
21

Ref. No.	Part No.	Description	No. Req.
1	03427	SWITCH, Solenoid, 12 VDC, 3-post grounded to can	1
	03481	SWITCH, Solenoid, 12 VDC, 3-post (coated) grounded to can	1
	03336	SWITCH, Solenoid, 12 VDC, 3-post insulated ground	1
	03340	SWITCH, Solenoid, 12 VDC, 3-post (coated) insulated ground	1
	03335	SWITCH, Solenoid, 12 VDC, 4-post isolated ground	1
	03342	SWITCH, Solenoid, 12 VDC, 4-post (coated) isolated ground	1
	03467	SWITCH, Solenoid, 24 VDC, 3 post, grounded to can	1
	03652	SWITCH, Solenoid, 24 VDC, 3 post (coated) grounded to can	1
	03343	SWITCH, Solenoid, 24 VDC, 3-post insulated ground	1
	03344	SWITCH, Solenoid, 24 VDC, 3-post (coated) insulated ground	1
2	01349	STRAP, Motor-Solenoid Connecting	1
3	07683	SCREW, Round Head Machine 10-32 x 1/4"	2
4	03147	PUMP ASSEMBLY, Gear Code 62	1
	02662	PUMP ASSEMBLY, Gear Code 51	1
	02858	PUMP ASSEMBLY, Gear Code 43	1
	02660	PUMP ASSEMBLY, Gear Code 42	1
	02653	PUMP ASSEMBLY, Gear Code 05	1
	02661	PUMP ASSEMBLY, Gear Code 03	1
5	00075	• PARTS KIT, Check Valve (main)	1
6	02159	• SEAL	1
7	03766	• PARTS KIT, Relief Valve	1
		FOR FURTHER BREAKDOWN OF PUMP ASSEMBLY SEE PUMP SECTION	

Ref. No.	Part No.	Description	No. Req.
8	08111	MOTOR, Electric, 12 VDC	1
	08112	MOTOR, Electric, 12 VDC	1
	08120	MOTOR, Electric, 24 VDC	1
9	02318	• BEARING, Base, motor	1
10	07625	• NUT, Hex 5/16-24	1
11	07781	• WASHER, Lock, 5/16"	1
12	07737	• WASHER, Star, 1/4"	4
13	07795	• WASHER, Lock, 1/4"	2
14	07738	• SCREW, Hex Head Cap 1/4-20 x 6-1/2"	2
		FOR FURTHER BREAKDOWN OF MOTOR, SEE MOTOR SECTION	
15	02238	BRACKET, Mounting	1
16	04559	BRACKET, Plate Mount 5.00" C to C	1
	04560	BRACKET, Plate Mount 3.25" C to C	1
17	07894	SCREW, Socket Head Cap, Thread forming, torx drive, 5/16-18 x 1-1/8	2
18	07717	SCREW, Hex Head, thread forming 1/4-20 x 1-3/8"	2
19	01329	ADAPTER, Pump Mounting Bracket	1
20	01291	FILTER, Suction, inline	1
21	01208	NIPPLE, 1/8 NPT x 4"	1

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