SG-7000

Installation & Operation Manual

Date Installed_____
Serial #_____

IMPORTANT SAFETY INSTRUCTIONS

Read these safety instructions entirely!

Always lock the lift before going under the vehicle. Never allow anyone to go under the lift when raising or lowering.

INSPECT your lift daily. Never operate if it malfunctions or if is has broken or damaged parts. Repairs should be made with original equipment parts. *ATTENTION! LOOK OUT!* Routine check of safety latch system is very important - the discovery of device failure before needed could save you from expensive property damage, lost production time, serious personal injury and even death.

Operating controls are designed to close when released. Do not block open or override them.

NEVER overload your lift. Manufacturer's rated capacity is shown on nameplate affixed to the lift. ALWAYS know the gross weight of vehicle.

NEVER use the lift to raise one end or one side of vehicle.

NEVER raise vehicle with anyone inside it. No one should be in the lift area during operation.

ALWAYS keep lift area free of obstructions, grease, oil, trash and other debris.

Before lowering lift, be sure tool trays, stands, etc. are removed from under vehicle. Release locking devices before attempting to lower lift.

Care must be taken as burns can occur from touching hot parts.

Adequate ventilation should be provided when working on internal combustion engines.

Use only manufacturer's recommended attachments.

KEEP HANDS AND FEET CLEAR. Remove hands and feet from any moving parts. Keep feet clear of lift when lowering. Avoid pinch points.

GUARD AGAINST ELECTRIC SHOCK. This lift must be grounded while in use to protect the operator from electric shock. Never connect the green power cord wire to a live terminal. This is for ground only.

DANGER! The power unit used on this lift contains high voltage. Disconnect power at the receptacle before performing any electrical repairs. Secure plug so that it cannot be accidentally plugged in during service.

WARNING! RISK OF EXPLOSION. This equipment has internal arcing or sparking parts which should not be exposed to flammable vapors. This machine should not be located in a recessed area or below floor level.

MAINTAIN WITH CARE. Keep lift clean for better and safe performance. Follow manual for proper lubrication and maintenance instructions. Keep control handles and/or buttons dry, clean and free from grease and oil.

STAY ALERT. Watch what you are doing. Use common sense. Be aware.
CHECK FOR DAMAGED PARTS. Check for alignment of moving parts, breakage of parts or any condition that may affect its operation. Do not use lift if any component is broken or damaged.

NEVER remove safety related components from the lift. Do not use lift if safety related components are damaged or missing.

ALWAYS wear safety glasses. Every day eyeglasses only have impact resistant lenses. They are not safety glasses.

READ AND UNDERSTAND ALL SAFETY WARNINGS & PROCEDURES BEFORE OPERATING LIFT.

POST THESE SAFETY TIPS WHERE THEY WILL BE A CONSTANT REMINDER TO YOUR LIFT OPERATOR. FOR INFORMATION SPECIFIC TO THE LIFT, ALWAYS REFER TO THE LIFT MANUFACTURER'S MANUAL.

Improper installation can cause accelerated wear, resulting catastrophic failure which may cause property damage and / or bodily injury. Manufacturer will assume no liability for loss or damage of any kind, expressed or implied, resulting from improper installation or use of this product. Read this installation manual in its entirety before attempting to install or operate the lift.

SELECTING SITE: Before installing your new lift, check the following.

OVERHEAD OBSTRUCTIONS: The area where the lift will be located should be free of overhead obstructions such as heaters, building supports, electrical lines etc.

FLOOR REQUIREMENTS: Visually inspect the site where the lift is to be installed and check for cracked or defective concrete. This lift must be installed on a solid level concrete floor with no more than 2 degrees of slope. A level floor is suggested for proper installation and level lifting. If a floor is of questionable slope, consider a survey of the site and/or the possibility of pouring a new level concrete slab. This lift is designed to be installed on a minimum of 4" thick, 3500 psi, steel reinforced concrete. Do not install this lift on asphalt, wood, or any other surface other than described. This lift is only as strong as the foundation on which it is installed.

DO NOT install this lift outdoors unless special consideration has been made to protect the power unit from weather conditions.

DO NOT begin installation with lift close to wall. It is necessary to leave adequate clearance for installing safety linkage rods. Allow 60" for clearance. **(See Fig.1)**

NOTE The power unit can be place in one of two locations, front left or rear right **(See Fig. 1)**

Unpacking: Unpacked the lift close to the installation site. Open the small bolt / parts box, and arrange the components of your lift so that every part is visible and easy to identify. Review your packing list and assembly drawing to verify that you have all the parts.

Layout a chalk line on the floor following the floorplan **(See Fig.1).**
Stand the columns in place making sure to position the power unit mounting bracket at the correct location and the lock blocks facing outward.

TOOLS recommended

"Rotary Hammer Drill Or Similar (If Anchoring)
"3/4" Masonry Bit (If Anchoring / Not required)
"Hammer
"4 Foot Level
"Open-End Wrench Set: 7/16" - 1-1/8"
"Socket And Ratchet Set: 7/16" - 1-1/8"
"Hex-Key / Allen Wrench Set
"Medium Crescent Wrench
"Medium Pipe Wrench
"Crow Bar
"Chalk Line
"Medium Flat Screwdriver
"Tape Measure: 25 Foot Minimum
"Needle Nose Pliers

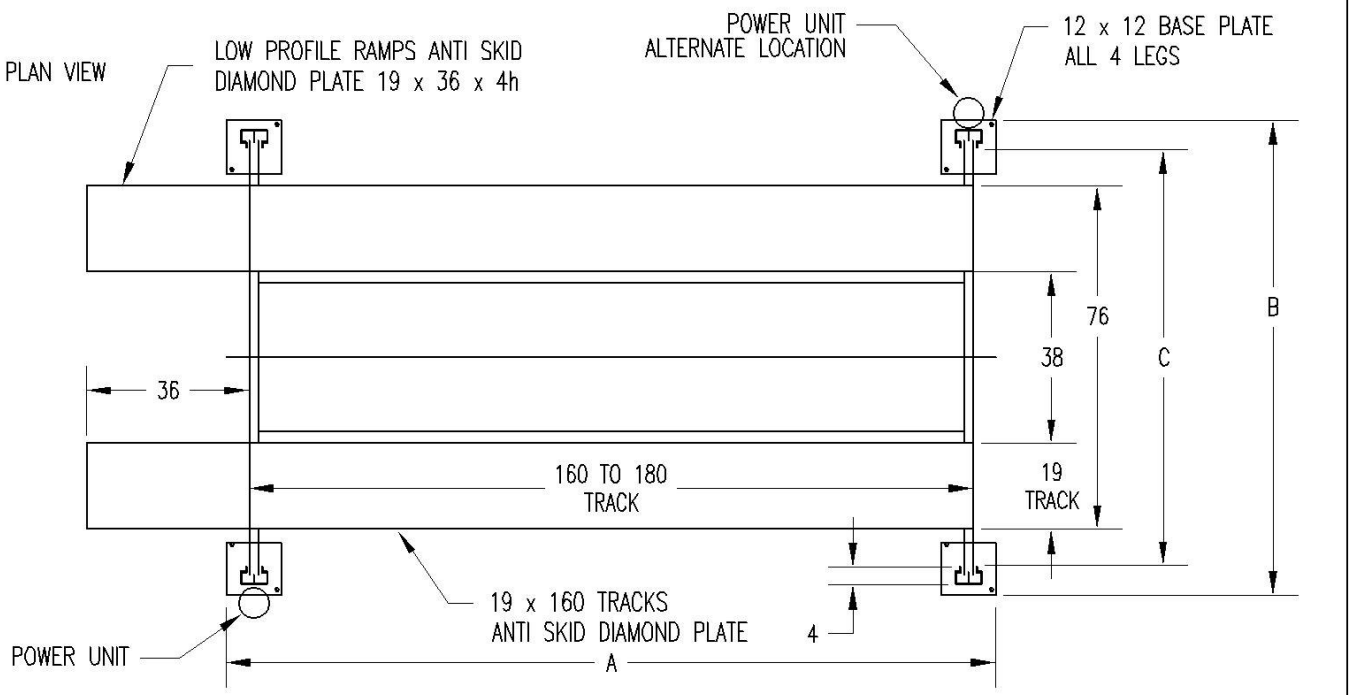


FIG 1

MODEL#	A	B	C	D	E
SG7000N	170 1/2	105	92	67	84
SG7000	170 1/2	112	98	67	84
		120	106		
		125	111		
		130	116		
SG7000XLT	190	112	98	77	94
		120	106		
		125	111		
		130	116		

COLUMN & CROSSRAIL INSTALLATION Lay down rear columns. Position the crossrail at the top of the two columns. (both cross rails are the same) Install the crossrail in the column by sliding the plastic guide blocks into the column channel. The safety latch must be positioned with bevel side to the leg top, and safety latch facing towards the outside of the lift when you stand the columns back up. Manually open the safety latch devise on each side of the crossrail and slide the crossrail down until it rests on the safety lock position closest to the floor. **(See Fig.2)** Repeat the procedure for the remaining columns and crossrail. Stand the assembled columns up in the positions indicated on the floor plan. Position the two column assemblies 170 1/2" apart for the **SG7000** and the **SG700N** ; 190" apart for the **SG7000XLT** . Measure the distance from the outside of the column baseplates, so that the measurement includes the column baseplates. **(See Fig.2)**

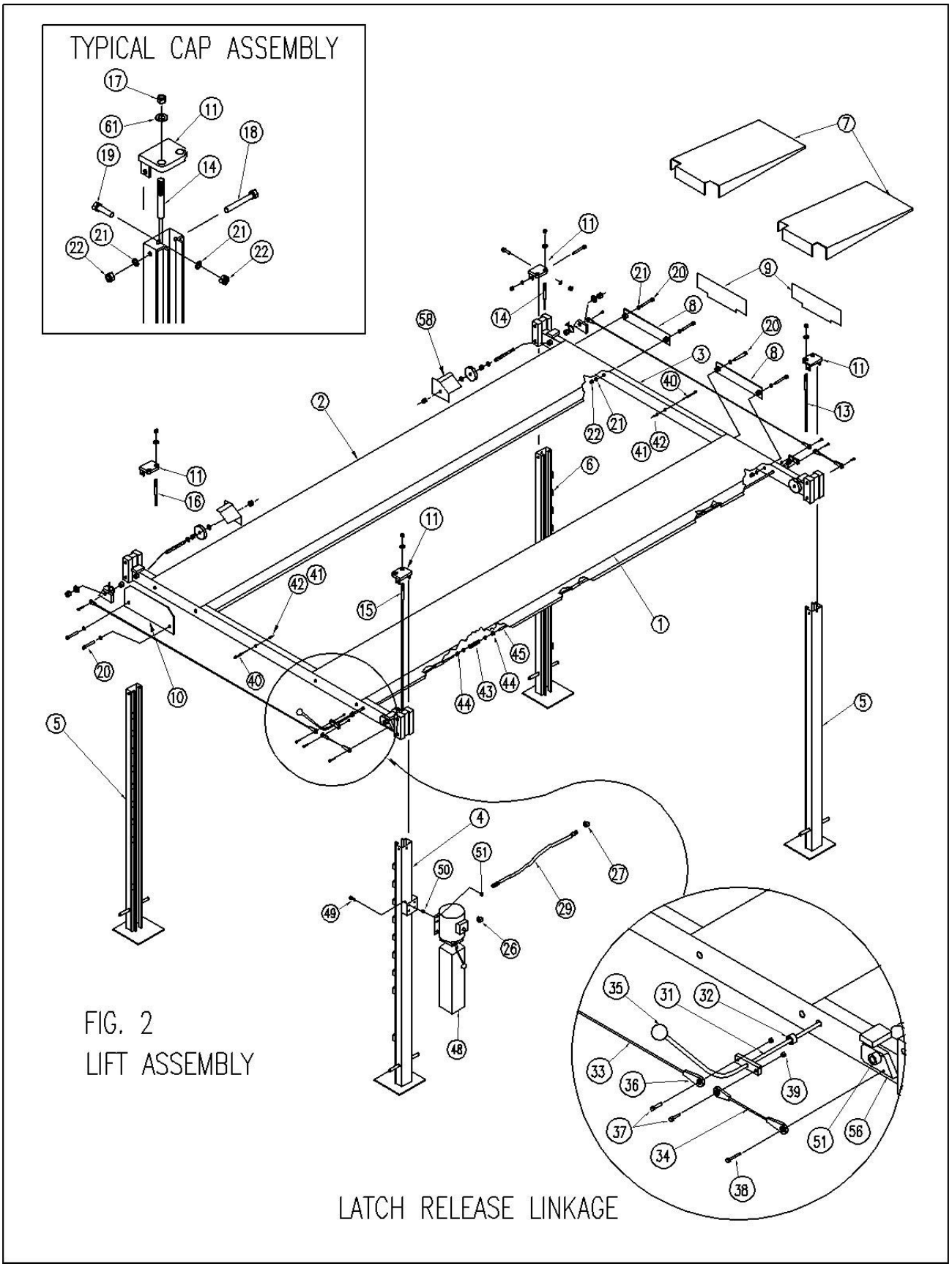


FIG. 2
LIFT ASSEMBLY

ITEM	DESCRIPTION	QTY
1	MAINSIDE TRACK	1
2	OFFSIDE TRACK	1
3	CROSSRAIL	2
4	COLUMN POWER UNIT BRKT	1
5	COLUMN – LEFT RACK	2
6	COUMN – RIGHT RACK	1
7	RAMP	2
8	RAMP BRACKET	2
9	REAR WHEEL STOP	2
10	FRONT WHEEL STOP	2
11	LEG CAP – LEFT HOLE	2
12	LEG CAP – RIGHT HOLE	2
13	CABLE – SHORT	1
14	CABLE – MEDIUM	1
15	CABLE – LONG	1
16	CABLE – X-LONG	1
17	3/4 NYLOCK NUT	4
18	HEX BOLT 1/2 x 7	4
19	HEX BOLT 1/2 x 1-1/4	4
20	HEX BOLT 1/2 x 4	8
21	FLAT WASHER 1/2"	16
22	NYLOCK NUT 1/2"	16
23	1" FLAT WASHER	1
24	1" NYLOCK NUT	1
25	3/8 MNPT VENT PLUG	1
26	90 DEGREE O-RING FITTING	1
27	90 DEGREE W/NUT – NO O-RING	1
28	90 DEGREE FITTING W/ PIPE THREAD	1
29	HYDRAULIC HOSE 71"	1
30	HYDRAULIC HOSE 82" (64"7000N)	1

ITEM	DESCRIPTION	QTY
31	HANDLE & ROD SAFETY LATCH	1
32	SPACER	2
33	LONG LINKAGE ROD	2
34	SHORT LINKAGE ROD	2
35	KNOB	1
36	HIMEN ROD END 1/4 BORE 1/4-28UNF RH THRD	8
37	1/4-28 UNF X 1-1/4 – IN HANDLE	2
38	1/4-20 UNC X 1-3/4	4
39	1/4-20 8 UNC NYLOCK NUT	8
40	EYE BOLT 1/4 UNC X 4-1/2	2
41	1/4 UNC HEX NUT	2
42	1/4 FLAT WASHER	8
43	1/4-20 UNF COUPLER LINKAGE ROD	1
44	JAM NUT 1/2	2
45	ROD EXTENSION	1
46	CABLE FLANGE	1
47	CABLE RETAINER	1
48	POWER UNIT	1
49	HEX BOLT 5/16 x 1	4
50	NYLOCK NUT 5/16	4
51	HEX NUT 5/16	4

CABLE ROUTING

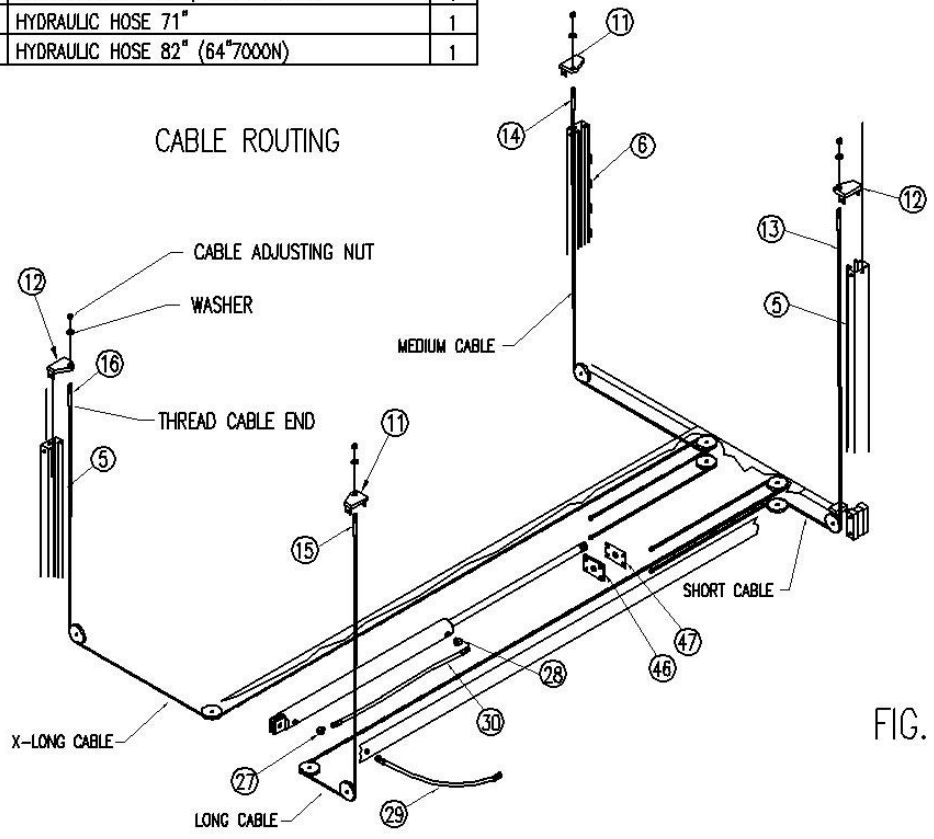


FIG. 3

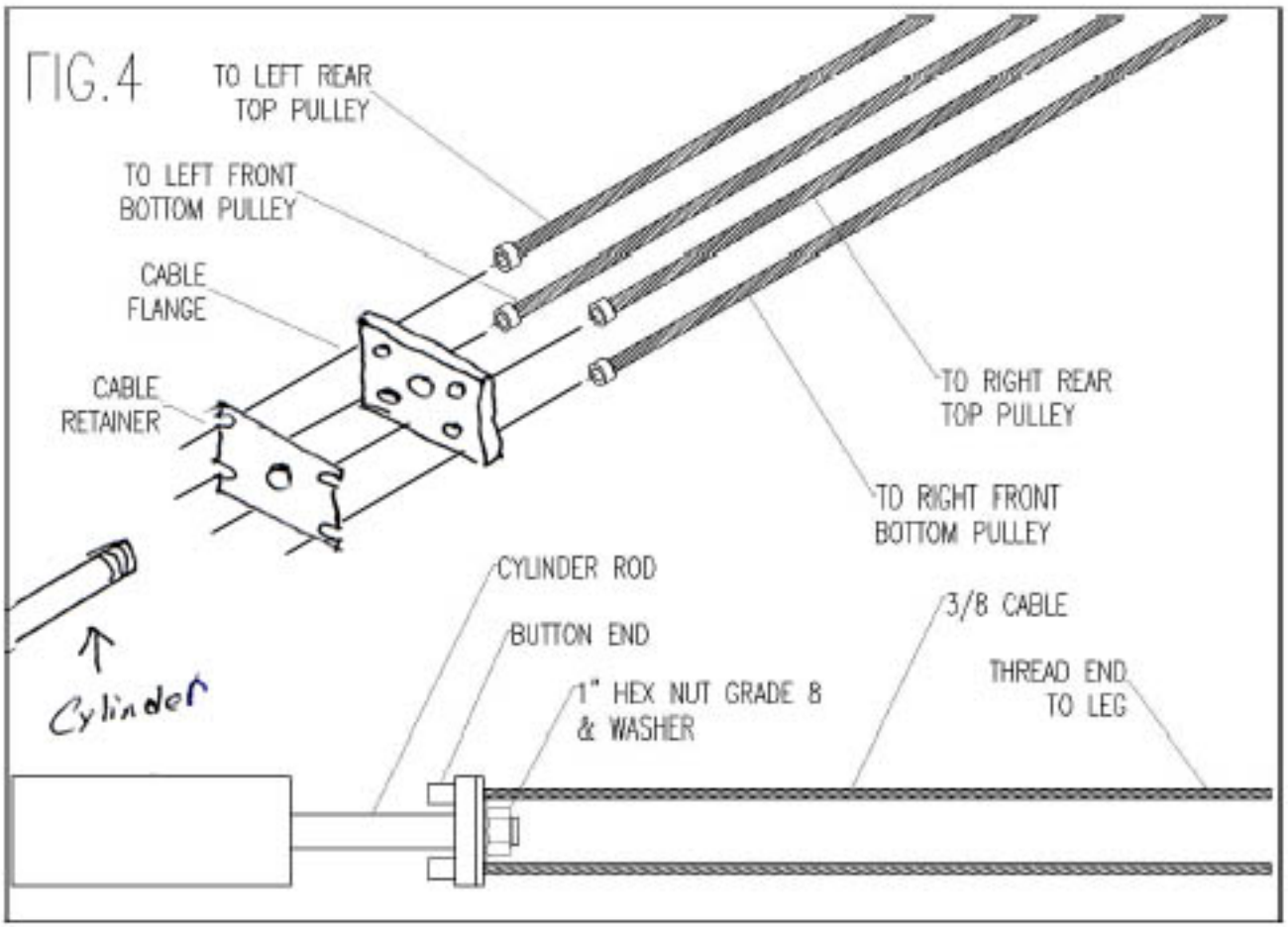
Track Installation

Start with the track with the cylinder. This track will be located with the hose connection facing out toward the leg with power unit bracket attached. **NOTE** The power unit can be located in two locations shown **(See Fig.1)**. With an assistant, pick up and place one end of the mainside track on the crossrail, and then pick up and place the other end on the opposite crossrail (if you have three assistants, place both ends at the same time). Use a large screwdriver or aligning punch to align the mounting holes in the cross rails with the mounting holes in the track. **Do not leave the tracks unbolted – install the mounting bolts immediately!** Install **1/2" x 4" mounting bolts and 1/2" washers** thru the ramp brackets and wheel stops. Make sure the bolt head is on the flat side of the bracket. Install the two ramp brackets and two wheel stop with bolts and washers as you secure the mainside track to the cross rail. Secure the bolts with 1/2" washers and nuts placed **hand tight**. Now, install the offside track and again secure with ramp brackets, wheel stops with **1/2" x 4" bolts and nuts**. After both tracks are installed, tighten all bolts 1/2" x 4" bolts - torque - 45 ft-lbs.

Find the leg caps **(4 each), 1/2" x 7" bolts (4 each), 1/2" x 1 1/4" bolts (4 each), 1/2" nuts (8 each) and 1/2 " flat washers (16 each),** holes for cable face towards the center of the lift. Secure the leg caps with **1/2" x 1 1/4" bolts**. Place the bolts with washers in through channel and secure with washers and nuts on the outside of the leg. Install the **1/2" x 7**" bolts through the leg and top cap. Install from outside of the leg, and secure with a nut on the inside of the leg. Tighten the **1 1/4" bolt**. Tighten the 7" bolt to a torque of 45 ft-lbs. Do not over tighten the **7" bolt**, as this may warp the column channel and bind the guide blocks.
(See Typical Leg Cap Assembly Fig.2)

Extend cylinder rod: use compressed air or use a come-along: Remove the plastic shipping caps from ports near each end of the cylinder. Install fittings to adapt your supply of compressed air to **3/8" NPT** vent fitting on back end of cylinder opposite of the rod. (The fittings are not included with your lift). When using this method, do not apply air suddenly to the cylinder - gradually increase the air pressure or the rod will extend too quickly. If no compress air is available use a come-along to extend the cylinder. **Caution** - Do not damage the chrome cylinder rod – this can ruin the seals of the cylinder resulting in fluid leakage. Remove any tools or hardware used to extend the rod.

Note: For purpose of this next drawing Front = front of cylinder or rod end and Right = right as if facing the same direction as front of cylinder. You could say - Left Rear = opposite corner from power unit and has no bearing on the rotation of the lift or orientation to your garage or drive because the ramps and wheel stops can go on either end.



Cable installation: Install the cable flange and retainer on the hydraulic cylinder rod with the 1" locking nut and washer provided.

Start with the shortest cable. Insert the button end of cable into the outside cylinder rod end of the mainside track and make ¼ turn or 90 degrees around the lowest pulley.**(See Fig.3)**

Place button end in the bottom left cable flange slot and secure with the cable retainer. **(See Fig.4)** Feed the bolt end of the cable ¼ turn or 90 degrees around the crossrail pulley near the closest leg and secure the bolt end of the cable in the leg top cap. Place nut on bolt end hand tight.

Get the next shortest cable. Insert the button end through the other side of the mainside track and make ¼ turn or 90 degrees around the adjacent lower pulley. Place button end in bottom right cable holder slot and secure with cable retainer.

Insert the bolt end of the cable through the opening in the offside track, then run cable ¼ turn or 90 degrees around the pulley on the crossrail. Secure the bolt end to the leg top cap. Place washer and nut on threaded end hand tight.

Run the button end of the next shortest cable ¼ turn or 90 degrees around the pulley on the opposite end of the mainside track.

Run the threaded end around the crossrail pulley and secure threaded end to leg top cap with nut hand tight.

Run the button end of the cable through the underside of the mainside track and make ½ turn or 180 degrees around the upper pulley.

Secure the button end to the cable holder and cable retainer.

Get the remaining (longest) cable. Run the button end through the openings in the offside track towards the mainside track.

Run the bolt end around the crossrail pulley and secure the bolt end to the leg top cap with nut hand tight.

Run the button end through the underside of the mainside track to the only remaining open pulley.

Bring the cable back ½ turn or 180 degrees around to the cable holder and secure it with the cable retainer. Tighten the hydraulic cylinder rod nut to show approximately 2 or 3 threads past the nylon insert. Make sure that the cables are not crossed.

Safety Latch Linkage Installation: Locate and identify the components needed to install the safety latch linkage rods. Install the spacers from on the straight threaded end of the **1/2" x 50" (1/2" x 70" for the SG7000XLT) bent rod** and the threaded end of the **1/2" x 126" straight safety latch linkage rod. (See Fig.2**)

Install the **1/2" x 50" (70" XLT) bent safety latch linkage rod** into the mainside track adjacent to back end of the cylinder (opposite the cylinder rod). Safety latch linkage rod should pass through guide tubes on underside of track.

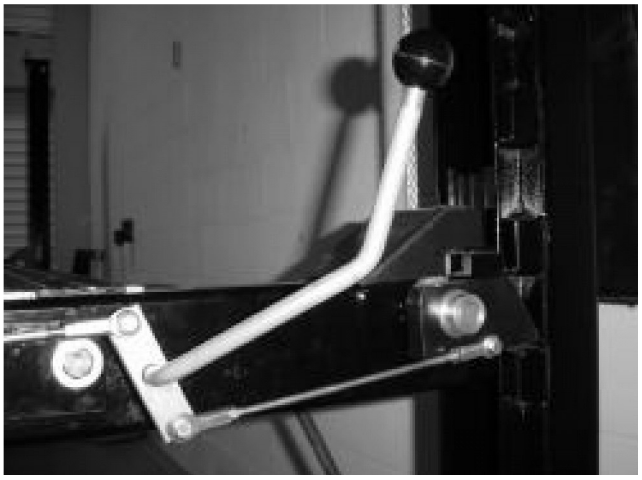
Install the **1/2" x 126" straight safety latch linkage rod** into the mainside track from the opposite end. The rod should pass through two guides on the underside of the mainside track.

Install lock nuts on threaded ends of both safety lock rods. Thread nuts down rod to approx ½" of end of threads.

Locate **two 1/4" x 79" – 7000N or (82" standard) rods**. Install heim ends on one end each of both **1/4" x 79" or (82 ")** rods. Locate two **1/4" x 6" – 7000N or (9" standard) rods**. Install heim ends on both ends of **1/4" x 6" (9") rods.**

Thread a 1/4" nut to the end of the threads on each of the two eyebolts. Follow with a 1/4" washer. Install eyebolts in center of cross rail, with eye on outside of lift and secure with a 1/4" washer and nut.

Install one **1/4" x 79" or (82") rod** through the eye bolt to the column safety lock. Install the heim end on the threaded end of the rod, and attach the heim end to the column safety lock with a **1/4" x 1 1/4" bolt**.



Attach the other heim end to the upper hole in the bent rod flange with a **1/4" x 1 3/4" bolt.** Make final adjustments to the rod length at this time using the heim ends.

Use a **1/4" x 1 3/4" bolt** to secure the heim end of one **6" or (9") rod** to the lower hole in the bent rod flange. Secure the other heim end to column safety latch with **1/4" x 1 1/4" bolt**. Make final adjustments to rod length at this time using the heim ends.

Install knob on the bent rod.

Reach underneath the mainside track and install a 1/2" jam nut on other end of the bent rod, and thread it approximately 2" onto the rod. Then, thread the 1/2" coupler approximately 3/4" onto the bent rod.

Thread a 1/2” jam nut onto the **1/2” x 126” rod**. Then, thread the **1/2” x 126”Rod** into the 1/2” coupler. This can Be started by hand from underneath, and adjusted and tightened from the flange end using a 1” open end wrench.

Align the flange on the **1/2” x 126” rod** to approximately an 11:00 orientation. Have an assistant tighten the jam nuts tight to the coupler.

Install **1/4” x 79” (82 1/2”) rod** through eye bolt. Secure heim end to column safety latch with **1/4” x 1 1/4”** bolt.

Install a heim end on the remaining end of the rod, and secure it to the upper hole in the flange with a **1/4” x 1 3/4” bolt**. Make a final adjustment of rod length at this time; ensure that the rod does not have more than 1/2” of bend. Secure the heim end of the **1/4” x 6” or (9”) rod** to the lower hole in the flange.

Secure remaining heim end of **6” or (9”) rod** to safety latch. Make final adjustments to rod length. Inspect the 1/4” rods for excessive bowing. If so, adjust strain at the 1/2” coupling.

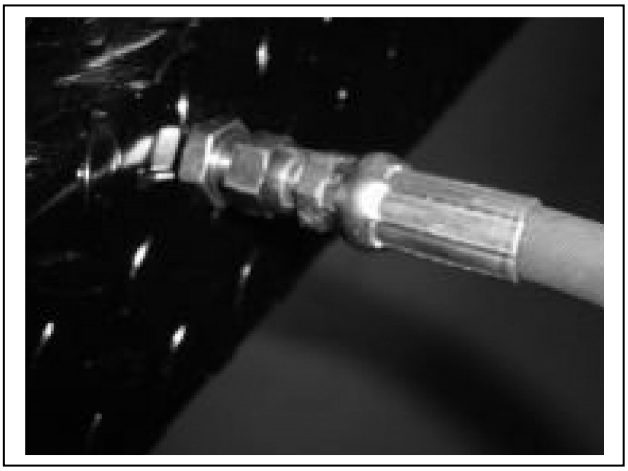
Power Unit Installation: Insert four **5/16" x 1" bolts** into power unit mount on column. Position so that threaded end of bolt is facing out. Secure the bolts with 5/16" nuts. Install the power unit on column over the exposed ends of the bolts and secure with four 5/16" locknuts.

Remove the plastic shipping plug from the base of power unit pump. Install the 90° fitting w/O-Ring in the base of power unit pump next to the lever operated release valve. **IT IS NOT NECESSARY TO USE TEFLON TAPE ON O-RING FITTINGS.**

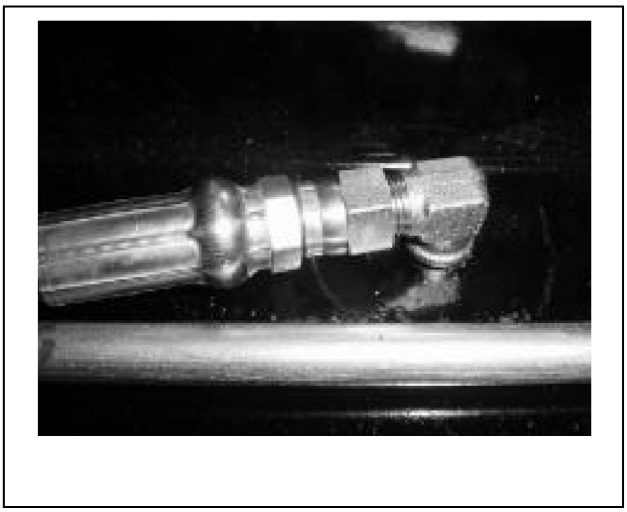
Attach the **71" hose** to the fitting on the power unit.

Warning: Make sure the hose will not hang on tank. Do not kink hose – the hose can be placed on the other side of power unit by switching plug to other side.

Angle the fitting toward the track. Install the 90° fitting w/nut (bulkhead fitting) - on the outside of the mainside track and tighten.



Attach the other end of the **71" hose** to outside fitting in mainside track.



Attach one end of the other hose to the opposite side of the 90° fitting on the inside of the mainside track.

Wrap pipe threads of the 90° fitting **without** O-Ring

with three layers of Teflon tape (not included). Install the fitting in the rod end of cylinder. Attach the other end of the **71"or (81"** SG7000XLT **) hose** to the 90° fitting **without** O-Ring that you have just installed on the cylinder.

Install the **3/8" NPT vent fitting** in the back end of the hydraulic cylinder. Check ALL the hydraulic fittings – **Do not over tighten** – fittings will crack.

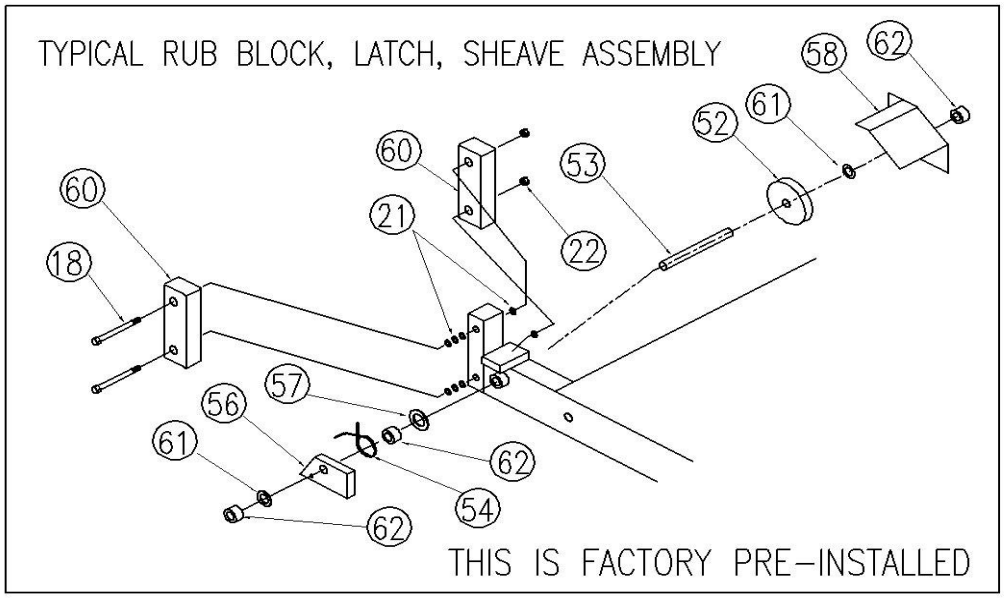
Feed the plastic tie wraps into the slots on the adhesive platforms, and then affix the platforms to underside of the mainside track. Secure the hose to platforms with the tie wraps -make sure you leave the tie wraps loose to allow the hose to move freely. **MAKE SURE HOSES ARE KEPT CLEAR OF CABLES.**

Place a funnel into vent cap hole and fill the tank with one of the following fluids: **AW-32** or **ISO-32** hydraulic oil. **Mobile DTE 24, or Texaco HD 32 DO NOT USE DEXRON® IN THIS LIFT!** This tank will hold approximately 12 quarts.

Relocating or changing components may cause problems. Each component in the system must be compatible; an undersized or restricted line will cause a drop in pressure. All valve, pump, and hose connections should be sealed and/or capped until just before use. All parts should be supplied from manufacture. Air hoses can be used to clean fittings and other components. However, the air supply must be filtered and dry to prevent contamination. **Most important - cleanliness** - contamination is the most frequent cause of malfunction or failure of hydraulic equipment.

Check Pulley Cover and Lock Collars: Before proceeding, double check to make sure the locking shaft collars for the crossrail cable pulleys are tight and secure. Check the pulley cover (2-RIGHT and 2 LEFT) over the shaft located on the pulley side of each crossrail. CHECK the pulley and cover are firm against the locking shaft collar already in place. Check the additional lock collar on the outside of the shaft are tight and secure. (See Fig.2) To prevent personal injury or death, crossrail lock collars must be tight. If they are ever removed - always make sure the locking shaft collars are tight and secure.

After installation is completed, before start up, be sure to inspect and tighten all bolts.



NOTE: ALL RUB BLOCKS MUST HAVE 3 WASHERS ON THE LATCH SIDE AND 1 ON THE SHEAVE SIDE

FACTORY PRE-INSTALLED		
52	CABLE SHEAVE	10
53	SHAFT	4
54	SPRING - LEFT	2
55	SPRING RIGHT	2
56	LATCH	4
57	WASHER 1"	4
58	COVER-PLASTIC-LEFT	2
59	COVER-PLASTIC-RIGHT	2
60	RUB BLOCK	8
61	3/4 FLAT WASHER	8
62	COLLAR W/ SET SCREW	12

FIG. 5

Start Up: Make sure power unit reservoir is full with 12 quarts of 10-wt hydraulic oil and spray the inside of the columns where the slide blocks glide with a light lubricant.

Initial Operation: Press the UP SWITCH on the power unit. Raise the lift slowly until all the slack in the cables is taken out. Raise the lift until the safety latch closest to the power unit comes within 1" to the bottom of the lowest lock position. Tighten the cable adjusting nut on top of each leg cap until all remaining safety latches come within 1" to the bottom of the lowest lock position. If cables are adjusted evenly the lift should be raising level and all four safety latches engage or audibly click simultaneously.

IF LIFT DOES NOT RISE: Check hose connections. Fluid should be pumping through the hose. Check fluid level.

NOTE: There will be some initial stretching of the cables in the beginning. It will be necessary to readjust the cables a week or so after first use.

Run the lift up and down a few times to make sure that the safety latches is engaging uniformly and that the safety latch release is functioning properly. Re-adjust if necessary.

When lowering the lift **PAY CAREFUL ATTENTION. ALWAYS** make sure that all **FOUR SAFETY LATCHES** are disengaged. If one of the latches locks on descent **STOP** immediately and raise until it is clear of the stop and adjust the hemin on that latch.

Install the approach ramps on the entry side of the lift. Drive a vehicle onto the lift tracks then install the rear wheel chocks. Run the lift up and down a few times to insure that the latches are engaging uniformly and that the safety latch release is functioning properly. Re-adjust if necessary.

OPERATION

Do not use this lift unless you know the proper operation of the lift and its safety devices, and the hazards involved. See Safety Instructions page 2.

1. Drive the vehicle onto lift platform. Set the vehicle's parking brake and leave the transmission in park / gear. Chock the vehicle's wheels.

2. Stand clear - Push the top UP button to raise vehicle to desired height. Push the rod handle on the power unit to open release valve and lower tracks until it stops, check the all four latches for full engagement in the rack on each leg.

3. To lower – push UP button to raise – rotate latch release rod handle and hold - push rod handle on power unit to lower. Warning: Make sure all four latches release – if not STOP, raise higher until latch is clear, if it does not work now the hemin - tie rod end on that latch needs adjustment.

4. Any hydraulic oil leakage, unusual noise, or excessive wear must be fixed before using lift.

MAINTENANCE SCHEDULE

The following periodic maintenance is the suggested minimum requirements and minimum intervals. If you hear a noise or see any indication of impending failure - *cease operation immediately* - inspect, correct and/or replace parts as required. DO NOT REPLACE ANY PART OF THE LIFT WITHOUT CONSULTING THE FACTORY.

WARNING OSHA AND ANSI REQUIRE USERS TO INSPECT LIFTING EQUIPMENT. THESE AND OTHER PERIODIC INSPECTIONS ARE THE RESPONSIBILITY OF THE USER.

PRE OPERATION CHECK

The user should perform daily check. *ATTENTION! LOOK OUT!* Daily check of safety latch system is very important - the discovery of device failure before needed could save you from expensive property damage, lost production time, serious personal injury and even death.

1. Check safety latches for free movement and *full engagement with rack.*
2. Check hydraulic connections, and hoses for leakage.
3. Check cables for damage and that they are in the groove on cable sheave.
4. Check lock collars at all rollers and sheaves.
5. Check bolts, nuts, and screws and tighten.
6. Check wiring & switches for damage.
7. Keep base plate free of dirt, grease or any other corrosive substances.

WEEKLY MAINTENANCE

1. Check hydraulic oil level.
2. Check and tighten bolts and nuts, and screws.

YEARLY MAINTENANCE

1. Lubricate inside column
2. Change the hydraulic fluid - good maintenance procedure makes it mandatory to keep hydraulic fluid clean. No hard fast rules can be established; - operating temperature, type of service, contamination levels, filtration, and chemical composition of fluid should be considered. If operating in dusty environment shorter interval may be required.

The following items should only be performed by a trained maintenance expert. Consult the factory before performing any of the following tasks.

1. Replace hydraulic hoses.
2. Replace cables and sheaves.
3. Replace or rebuild air and hydraulic cylinders as required.
4. Replace or rebuild pumps / motors as required.
5. Check hydraulic and air cylinder rod and rod end (threads) for deformation or damage.
6. Check cylinder mount for looseness and damage.

Relocating or changing components may cause problems. Each component in the system must be compatible; an undersized or restricted line will cause a drop in pressure. All valve, pump, and hose connections should be sealed and/or capped until just before use. All parts should be supplied from SuperLifts. Air hoses can be used to clean fittings and other components. However, the air supply must be filtered and dry to prevent contamination. Most important - cleanliness - contamination is the most frequent cause of malfunction or failure of hydraulic equipment.

TROUBLE	**CAUSE**	**SOLUTION**
(1) Pump/motor does not start.	Improper electrical hook-up. Blown fuse. Pump binding or stuck. Motor thermal overload tripped. Thermal overload in starter box tripped (30 only).	⊠ Rewire .⊠ Replace fuse. ⊠ Remove (flush) or replace. ⊠ Let cool. ⊠ Push button (starter box) reset. ⊠ Replace switch. ⊠ Call electrician.
(2) Pump/motor operates but no pressure.	Wrong rotation of motor (NOTE: Air bubbles out inlet lone).	⊠ Rewire.
(3) Pump/motor operate low flow and/or low pressure (in raise mode).	Clogged inlet strainer (cracking noise). Relief valve leaking dirt on seat.	⊠ Clean strainer in solvent. ⊠ Flush seat or ballize seat again.
(In pressure mode).	Release valve leaking. Dirt on seat. Release stem out of adjustment. O-Ring missing or cut. Relief valve setting too low.	⊠ Flush seat. ⊠ Readjust stem setting. ⊠ Replace O-ring. ⊠ Reset.
(4) Pump/motor operates does not hold system.	Fitting/fittings loose. Check valve leaking. Dirt on seat. Release stem out of adjustment. O-ring missing or cut. Defect of blowhole in motor end head internally.	⊠ Tighten or replace fitting. ⊠ Flush seat. ⊠ Readjust stem setting. ⊠ Replace O-ring. ⊠ Replace motor.
(5) Failure to lower.	Sticking release valves stem, or out of adjustment.	⊠ Replace stem and/or cartridge. ⊠Readjust stem setting.
(6) Air in oil.	Loose inlet connection or low oil level. Leaky or blown oil seals in pump. Siphon check does not seat	⊠ Tighten connections. ⊠ Add oil. ⊠ Replace oil seat. ⊠ Replace.
(7) Motor does not run when energized.	Breaker thrown or fuse blown. Motor thermal overload tripped. Thermal overload in starter box tripped (30 only). Check micro switch. Faulty wiring, connections.	⊠ Reset or replace. ⊠ Wait for overload to cool. ⊠ Push button to reset. ⊠ Replace if necessary. ⊠ Call electrician.
(8) Oil blows out the breather/filter port	Oil overload. Vehicle has been lowered too fast.	⊠ Remove to ½ to 2/3 full. ⊠ Restrict lowering with manually controlled release valve. ⊠Replace.
(9) Cylinder will not lift load.	Seal damage to piston. Oil leaking from front of cylinder.	⊠ Call factory for instructions. ⊠ Call factory for instructions.
(10) Oil requirements.	**AW-32** or **ISO-32** hydraulic oil.	

NOTES