Meyer SNOW PLOWS

Form No. 1-568
JUNE 1985

ELECTROLIFT

MODEL T-5 & T-6

DIAGNOSIS CHART

	MOTOR WILL NOT RUN	WILL NOT RAISE - MOTOR RUNS	RAISES SLOWLY	DOES NOT HOLD IN RAISE	PLOW FALLS SLOWLY	TOP SEAL LEAK	LEAK BETWEEN RES. & MOTOR	ICE CRYSTALS IN OIL	LEAK BETWEEN BASE & RES.
CHECK BATTERY VOLTAGE	1		2						
CLEAN & TIGHTEN ELEC. CONN.	2		3						
R & R MOTOR SOL.	3								
CHECK STARTER BUTTON	4								
PRIME UNIT		2							
FLUID LEVEL		1	1						
ADJUST RELEASE VLV.		3	4	1	1				
STICKING INLET VLV.		4							
STICKING CHECK VLV.		5		2					
PUMP ASSEMBLY		6	5						
RAM PACKING CUP				3					
LOOSE CYL. IN BASE				4					
LOOSE RELIEF VLV. SEAT					2				
T-5 VALVE SEATS LOOSE				5					
RAM OR CYLINDER BINDING					4				
CONTAMINATED OIL		9	7		3			1	
CHECK FOR PITTED OR SCORED RAM						1			
REPLACE O-RING						2			
REPLACE WIPER						3			
REPLACE SLEEVE						4			
CHECK CAM ROLL PINS		7	6						
MOTOR SHAFT SEAL							1		
RES. HOUSING									2
REPLACE GASKET									1
R & R MOTOR	5								

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Printed in U.S.A.

Meyer PRODUCTS
18513 Euclid Ave. • Cleveland, Ohio 44112-1084
Phone 486-1313 (Area Code 216)

ELECTROLIFT • MECHANICALLY-OPERATED RELEASE VALVE

- Special Extra Capacity Lifts are available in 6 & 12 Volt Models. These units require 4-1/2 to 6 Seconds for Full Lift.

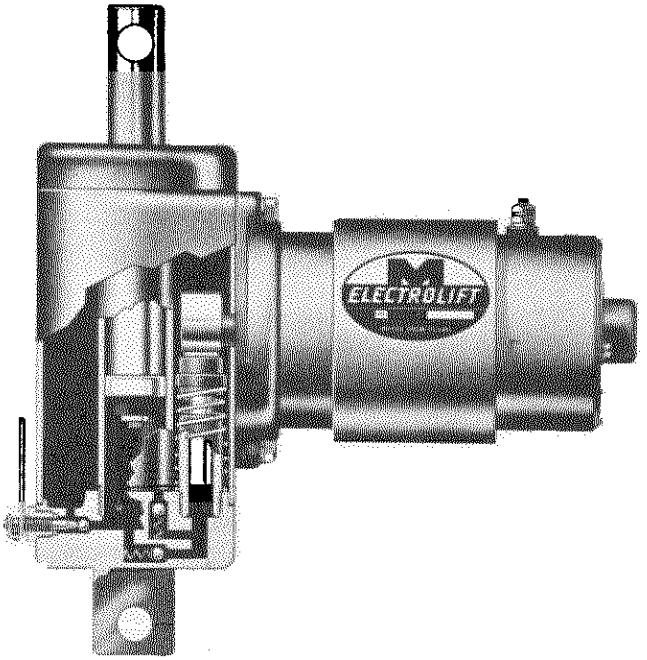
ELECTROLIFT

UNITIZED CONSTRUCTION

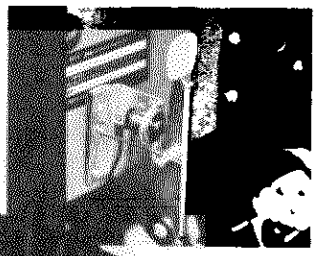
The Meyer Electrolift offers unique advantages, both in design and performance, since it is a power hydraulic lift designed exclusively for snow plows.

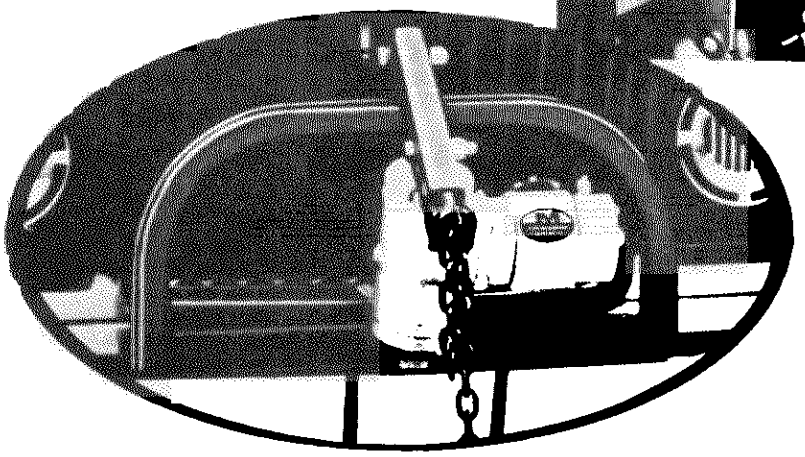
The cab control lever, conveniently located at the driver's finger tips, provides three positions for fast snow plow operations. Push to raise, release to hold at any height, and pull to lower into float-plowing position.

The Meyer Electrolift requires less than three seconds to complete a full lift, uses less than 1/10 ampere hour, and operates only when lifting, eliminating unnecessary wear and engine drag.



The Control Lever, located on the dash convenient to the driver, provides instant action up or down.





The Electrolift is front mounted for ease of installation and service. In addition, there are no external hydraulic hoses or fittings and only a minimum number of internal moving parts.

This completely self-contained unit with an electric drive motor, hydraulic pump, fluid reservoir and ram provides a 2,000 pound lifting force for the plow.

MEYER PRODUCTS, INC. 18513 Euclid Ave. · Cleveland, Ohio 44112
Phone: 486-1313 (Area Code 216)

ELECTROLIFT EXPLODED VIEW

WITH MECHANICALLY-OPERATED RELEASE VALVE

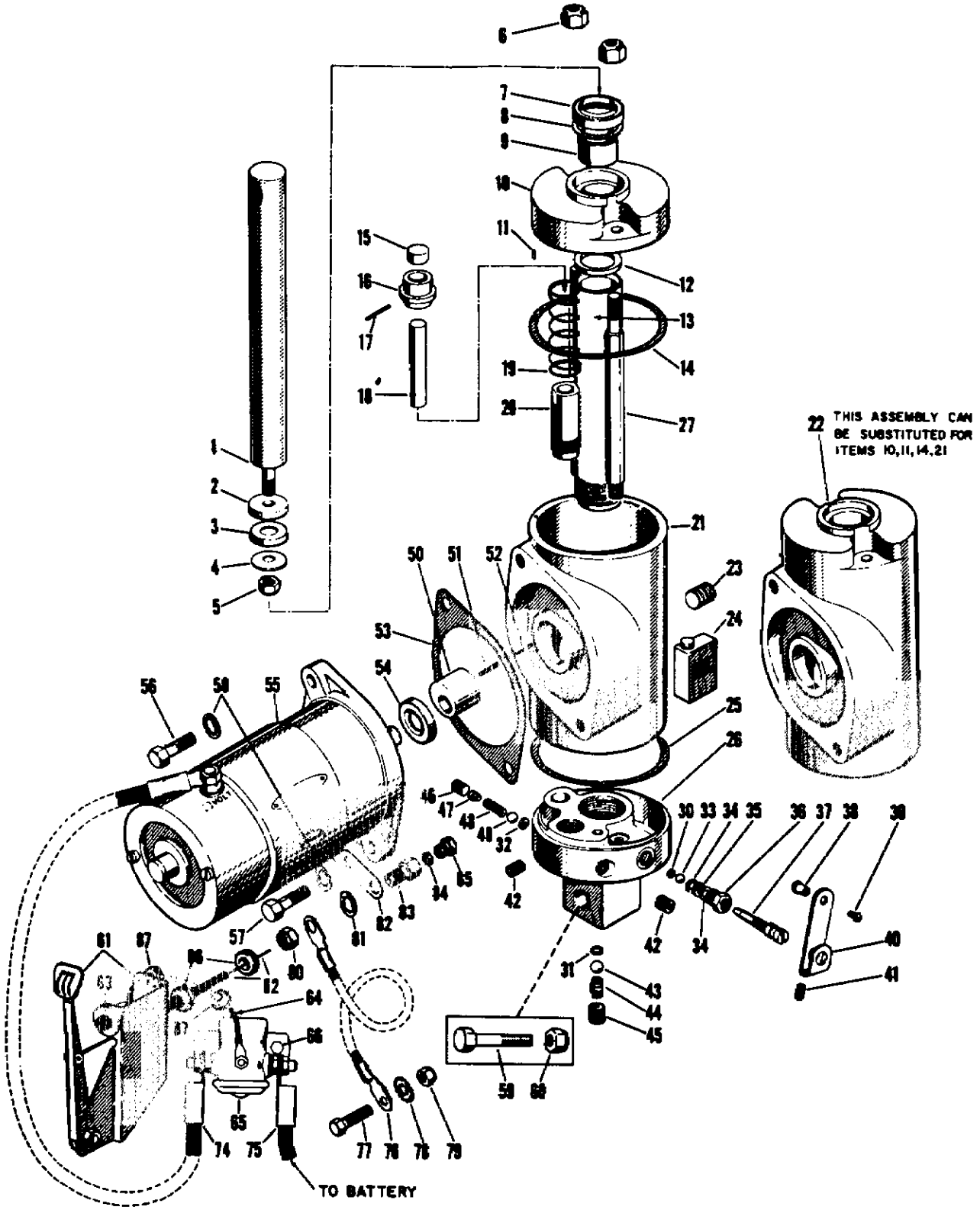


Figure 5. Electrolift
Exploded View

Form No. 1-101R19
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Phone: 486-1313 (Area Code 216)

PARTS FOR ELECTROLIFT ASSY

Item No.	Part No.	No. Req'd	Description
	2005174	1	RAM PLUNGER ASSY Includes:
1	2005114	1	. PLUNGER
2	2005363	1	. GUIDE, plunger
x 3	2005111	1	. CUP, plunger
4	2005364	1	. SPREADER, cup
5	2021395	1	. NUT, plunger cup
6	2021290	2	NUT, stud (top)
x 7	2005119	1	SEAL, top cap
x 8	2005365	1	WASHER
x 9	2005149	1	BUSHING, Nylon
10	2005138	1	CAP, top
x11	2005124	1	LOCATING PIN, top cap
12	2005113	1	STOP WASHER, ram plunger
13	2005140	1	CYLINDER, ram
x14	2005123	1	GASKET, top cap
	2005189	1	PUMP ASSY Includes:
x15	2005146	1	. INSERT, cap
16	2005067	1	. CAP
17	2021304	1	. PIN
18	2005068	1	. PLUNGER
19	2005066	1	. SPRING, plunger
20	2005064	1	. CYLINDER, pump
21	2005326	1	RESERVOIR
22	2005326	1	COMBINATION RESERVOIR & TOP CAP (This part can be substituted for Items 10, 11, 14, 21)
23	2021276	1	PLUG (3/8"), filler
x24	2005109	1	OIL, Electrolift (1 pint)
x25	2005075	1	GASKET, base (bottom)
	2005187	1	BASE ASSY Includes:
26	2005214	1	. BASE SUB ASSY
27	2005334 †	2	. . STUD
30	2005090	1	. . BUSHING, release valve
31	2005091	1	. . BUSHING, inlet valve
32	2005092	1	. . BUSHING, outlet valve
	2005070	1	. RELEASE VALVE ASSY
x33	2005080	1	. . STEEL BALL (1/4")
x34	2005271	2	. . BACK-UP WASHER, packing
x35	2005079	1	. . PACKING, valve
36	2005202	1	. . NUT, packing
37	2005201	1	. . SPINDLE, valve
	2005069	1	. LEVER ASSY, release
	2005288	1	. . SWIVEL POST & SCREW
38	2005047	1	. . . POST, swivel
39	2005045	1	. . . SCREW, post
40	2005076	1	. . LEVER
41	2021273	1	. . SET SCREW, lever
42	2021274	2	. PIPE PLUG, (1/8"), base hole
x43	2005083	1	. STEEL BALL (3/8") inlet valve
x44	2005084	1	. SPRING, inlet valve
45	2021275	1	. PIPE PLUG, (1/4") inlet valve
46	2021274	1	. PIPE PLUG, outlet valve
x47	2005087	1	. GUIDE, spring
x48	2005086	1	. SPRING, outlet valve
x49	2005085	1	. STEEL BALL, (5/16") outlet valve
	2005104	1	CAM ASSY, standard lift
	2005298	1	CAM ASSY, extra capacity lift Includes:
50	2005362	1	. CAM, standard lift
	2005368	1	. CAM, extra capacity lift
51	2021334	1	. PIN, cam
52	2021319	1	. INNER PIN, cam
x53	2005143	1	GASKET, motor
x54	2005103	1	SEAL, motor shaft
55	2005100	1	MOTOR, 6 Volt
	2005101	1	MOTOR, 12 Volt
	2005102	1	MOTOR, 24 Volt
56	2020071	1	BOLT, motor
57	2021530	1	BOLT, motor
58	2020328	2	LOCK WASHER, motor bolt
59	2020145	3	BOLTS, Electrolift Mtg. (5/8x3)
60	2020318	3	LOCK NUT, Electrolift Mtg. (5/8)

† For BASES with Splined Nuts order #2005139 studs.

x Parts included in Seal Kit (See Service Exchange Chart)

KITS, SERVICE EXCHANGE UNITS, ELECTROLIFT ASSY

Part Nos.			DESCRIPTION
6V.	12V.	24V.	
2005000	2005002		ELECTROLIFT COMPLETE KIT (Includes: Electrolift, Controls & Cables) Standard Lift with 76" Cable
	2005004		NOTE: Replace 2005004 with 2005002
2005001	2005003	2005006	Standard Lift with 108" Cable
2005290	2005291		Extra Capacity Lift with 108" Cable
2005170	2005178	2005275	SERVICE EXCHANGE ELECTROLIFT ASSY
*	*		CONVERSION UNIT, 6 to 12V. *(order 2005178 plus 2005032 12V. Solenoid)
2009375	2009375	2009375	ELECTROLIFT SEAL KIT Contains parts marked with "x"
2005127	2005128	2005129	ELECTROLIFT ASSY Standard Lift
2005292	2005293		Extra Capacity Lift

PARTS FOR CONTROLS AND CABLES

Item No.	Part No.	No. Req'd	Description
		1	CONTROL LEVER & CABLE ASSY:
61	2005036	1	** 76" Cable
	2005037	1	** 108" Cable
63	2005029	1	STARTER BUTTON
64	2005025	1	WIRE, starter
65	2005031	1	SOLENOID, starter (6 Volt)
	2005032	1	SOLENOID, starter (12 Volt)
	2005208	1	SOLENOID, starter (24 Volt)
66	2021398	4	SCREW, solenoid & control assy. mtg.
			6, 12 and 24 VOLT PARTS
74	2005023	1	CABLE, motor to solenoid
75	2005024	1	CABLE, solenoid to battery
76	2005279	1	CABLE, motor ground
77	2020027	1	BOLT, ground cable
78	2021400	1	LOCK WASHER, ground cable
79	2020304	1	NUT, ground cable
80	2021399	1	LOCK NUT, conduit
81	2020328	1	LOCK WASHER, CONDUIT NUT
82	2005278	1	CLIP, conduit mounting
83	2005204	1	NUT, conduit
84	2005205	1	WIPER, conduit
85	2005206	1	RETAINER, wiper ring
86	2005329	2	GROMMET, control cable
87	2005330	2	GROMMET, starter wire

** Includes Items 38, 39, 80, 81 & 83 thru 87.

PARTS INDENTED ARE INCLUDED IN THE ASSEMBLY UNDER WHICH THEY ARE INDENTED.

IMPORTANT: When ordering parts, furnish part number, description and Serial No. of the ELECTROLIFT UNIT.

NOTE

Your Electrolift requires 1/10 Ampere hour of current per lifting cycle. The vehicle's standard electrical system should handle this additional current requirement under normal intermittent operating conditions. For steady night time operation, additional generating capacity will probably be required.

Meyer Products, Inc., reserves the right, under its continuing product improvement program, to change construction or design details, specifications and prices without notice or without incurring any obligation.

INSTALLATION & OPERATING INSTRUCTIONS

CAUTION: FOR SAFETY, ALWAYS DISCONNECT BATTERY BEFORE MAKING INSTALLATION.

The ELECTROLIFT UNIT has been carefully checked and tested at the factory and is shipped ready for installation and operation. Before installation, make sure that the unit is of proper voltage for the vehicle (6, 12 or 24 volt).

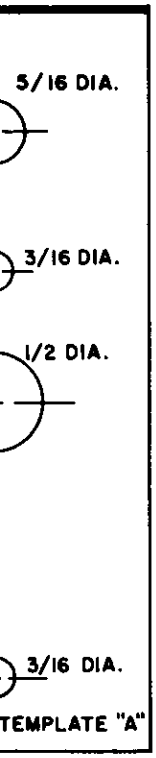
A. MOUNTING INSTRUCTIONS

1. ELECTROLIFT UNIT (See Fig. 1)
   Install Lift Frame per separate Mounting Instruction Sheet, covering each vehicle. Attach unit to Lift Frame with a (5/8 x 3) bolt at "Z" and to Lift Arm with a (5/8 x 3) bolt at "Y". The base bolt at "Z" should be tight and coated with grease or oil to prevent rust, as it acts as an auxiliary ground. The lift arm bolt at "X" must be tight to insure proper alignment of this Electrolift unit.

2. CONTROL GROUP

   (a) Install Control Assembly (See Fig. 2) To mount Control Assembly, punch or drill four holes in dashboard and one in firewall (reasonably in line with Control Assembly) for control cable. NOTE: The cable should be as straight as possible (to avoid kinking of control wire) and slope downwards to Electrolift (to avoid creating pockets where moisture can accumulate and freeze). Select a location for Control Assembly (on the dashboard) which will be convenient to driver. Use template "A" when punching or drilling holes. Self-tapping screws work best in punched holes.

   To install Control Assembly, insert control cable through the 1/2" hole in dashboard and firewall. When necessary to make a hole in body sheet metal, make a 7/16" diameter hole and assemble control cable grommet (86). Fasten this assembly to dashboard (see fig. 2) with self-tapping screws furnished.



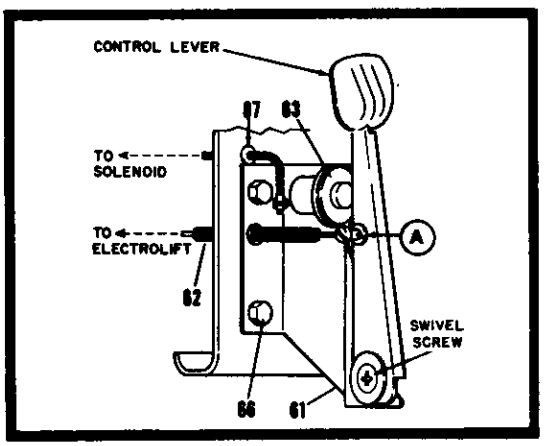


Figure 2. Control Lever Installation

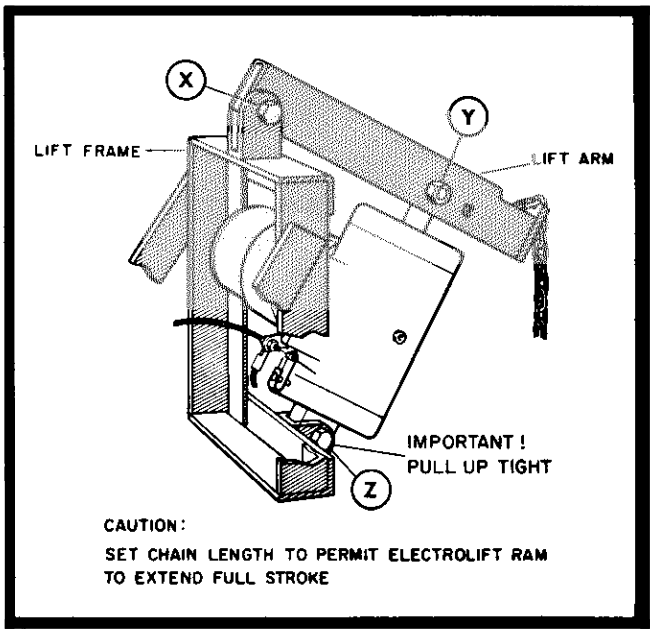


Figure 1. Electrolift Installation

(b) Connect and Adjust Control Cable. Pass Control Cable (62, fig. 5; 68, fig. 6) thru grille or other convenient opening to Electrolift, avoiding sharp bends. When necessary to make a hole in body sheet metal, make a 7/16" diameter hole and assemble control cable grommet (86). To check conduit length, temporarily insert Control Cable through control cable mounting clip (82). If conduit is too long, mark the point where it passes through the clip. NOTE: It is recommended that cable be re-routed or adjusted to take-up a small amount of slack, rather than cutting conduit.

If conduit cutting is necessary, first, loosen control wire lock screw at Control Lever ("A" in fig. 2). Pull control wire out several feet then cut conduit at the mark previously made. After cutting, thread conduit as follows: Place a few drops of oil on end of conduit. Install and turn conduit nut on conduit to form a thread. Remove nut after thread is formed.

To fasten Control Cable (62, fig. 5; 68, fig. 6) to mounting clip (82), slip lock nut (80), ground cable terminal (76) and lock washer (81) over end of conduit. Place conduit nut (83) in clip and position conduit for mounting, then thread conduit nut on end of conduit. Run control wire back through conduit until it extends approximately 1" beyond conduit nut. Place Wiper Ring (84) over control wire and into position in Conduit Nut, then install Wiper Ring Retainer (85) and thread into conduit nut, snugly against wiper ring. Assemble lock washer, ground cable terminal and lock nut to conduit nut. Tighten securely.

Advance control wire through conduit and release lever swivel post (38, fig. 5) until it extends approximately 1/2". Tighten swivel post screw (39). Place release lever (40) in closed position. Snap starter button into place in control bracket. Set control lever 1/16" away from starter button then lock control wire at "A" by tightening set screw. Cut off excess wire.

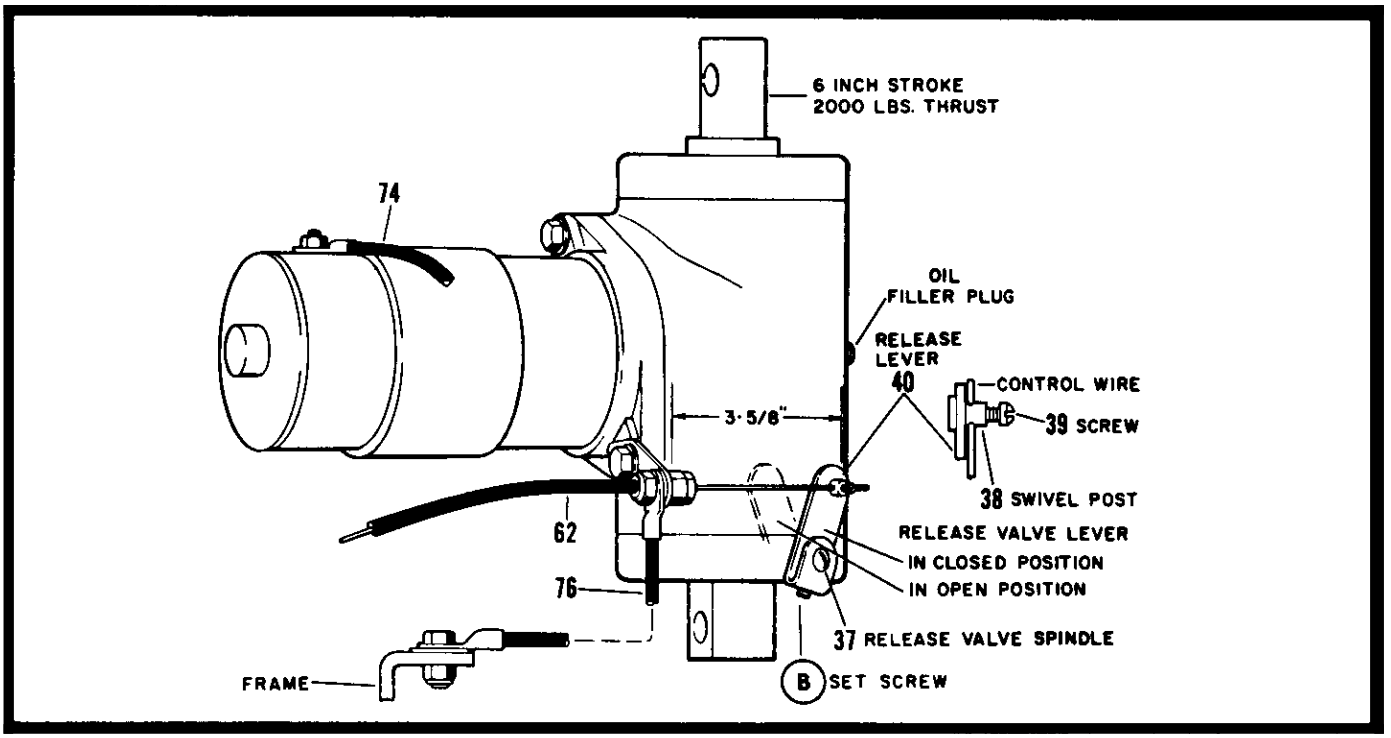


Figure 3. Electrolift Connections and Adjustments

3. ELECTRICAL GROUP (See Fig. 4)

(a) Install Solenoid (65, fig. 5; 73, fig. 6). Select a location for Solenoid on fender and under hood so that cables furnished will reach their connections. Use template "B" as a guide for correct hole spacing, and punch or drill mounting holes for self-tapping screws (See Par. 2a).

(b) Electrical Connections. The Starter Wire (64) attaches to the small terminal on Solenoid, passes thru a grommet in firewall; when unavailable, make a 5/16" hole in firewall and assemble starter wire grommet (87). The starter wire then passes through top hole drilled in dashboard, and snaps into terminal at back of Starter Button.

The Motor Cable (74) connects to solenoid terminal opposite the one marked "Battery", runs out thru grille and connects to terminal on Electrolift motor. Connect the Live Wire Cable (75) to the solenoid terminal marked "Battery" and the opposite end to the hot battery terminal or other available hot line connection. When connecting directly to battery terminal, be sure to coat the terminal with grease to prevent loss of conductivity due to corrosion.

Connect Ground Cable (76) to vehicle frame or other good grounding point using any suitable hole which can be reached by Ground Cable or, when necessary, drill a hole for a 5/16" bolt. NOTE: Be sure to place lockwasher (78) between ground cable terminal and grounding point. Fasten with bolt (77) and Locknut (79).

NOTE: Install a #6 gauge, or heavier, ground cable between engine block and vehicle frame on all vehicles not so equipped, to prevent possible electrical system damage.

Connect battery. The unit is now ready to operate. Tighten all bolts and connections. Attach Plow and lift chain for testing and checking Electrolift operation and adjustment.

B. OPERATING INSTRUCTIONS

CAUTION: The plow will drop quickly when released. Make sure that adequate safety precautions are observed when operating the lift and when the plow is raised.

TO RAISE THE PLOW: Push the Control Lever in against Starter Button.
TO HOLD THE PLOW: Withdraw pressure on Lever.
TO LOWER THE PLOW: Pull Control Lever back.
NOTE: If the unit fails to operate satisfactorily, refer to section "C" and "E" for service information.

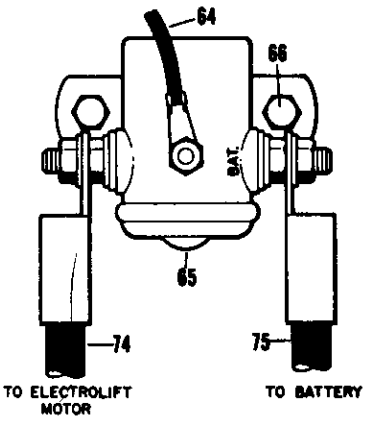


Figure 4. Solenoid Electrical Connections

WARRANTY INFORMATION

The materials and workmanship in this equipment are warranted by the manufacturer for a period of one year from the date of purchase subject to the terms and conditions in the Warranty. The Registration card must be mailed within 10 days or the warranty will be void. Unauthorized repairs will also void the warranty. For further information see your dealer or write the Factory.

TEMPLATE "B"

3/16 DIA.

The Electrolift is a simple electric-hydraulic mechanism which, with normal care, will give lengthy service. The following recommendations will prevent unnecessary difficulties and act as a trouble shooting guide.

C. MAINTENANCE & TROUBLE SHOOTING

1. WHEN ELECTRIC MOTOR WILL NOT RUN:

   (a) Tighten base bolt at "Z" and check Ground Cable, (install one if not already a part of wiring system).
   (b) Check Starter Button and Solenoid (an audible click will be heard when Starter Button is pressed, if Button and Solenoid are functioning properly). Make sure all electrical connections are sound.
   (c) Also see Par. 5.

2. WHEN ELECTROLIFT WILL NOT RAISE:

   (a) Prime unit by setting Release Lever at open position and pump Lift Arm up and down several times by hand. Priming can be aided by operating Electrolift Motor while pumping Lift Arm.
   (b) Free valve ball checks by setting Release Lever in the closed position, raise Lift Arm and then apply down-pressure to Lift Arm. It may be necessary to repeat steps "a" and "b" several times.
   (c) Check oil level in Electrolift. It should be just below filler plug (See Fig. 3). Tapping the casting with a hammer, in the area around the filler plug, will aid in removing the plug. Normally, your unit should not require re-filling. NOTE: A certain amount of oil may work up through Top Cap and Wiper-Scraper Seal, but, as long as Lift holds in raised position, this does not indicate any failure. In most cases, the actual amount of oil lost is negligible. For best results, use only genuine Electrolift Oil which contains an anti-icer additive and remains free-flowing at sub-zero temperatures. When Electrolift Oil is not available, SAE 10W cut with 25 to 50% Kerosene may be used temporarily. However, empty and re-fill with Electrolift Oil as soon as possible.

3. WHEN ELECTROLIFT DOES NOT RAISE QUICKLY OR HOLD WHEN RAISED:

   (a) Free Control Wire at "A" in fig. 2 and manually set the Release Valve Lever in the closed position (See Fig. 3). Check the Lever location against the 3-5/8" dimension shown in fig. 3. If Lever is out of position, loosen set screw "B" (see fig. 3) and turn (clockwise) Release Valve Spindle snugly into closed position with a screw driver, rotate Lever on the Release Valve Spindle until the 3-5/8" dimension is obtained then re-tighten Set Screw "B". Set Control Lever so that it is about 1/16" away from Starter Button and tighten Swivel Post Screw, (at "A"), against Control Wire.
   (b) Check the oil level per par. 2c.
   (c) If these steps do not correct the problem, the Ram Cup may require replacement. Refer to section "E".

4. WHEN ELECTROLIFT DOES NOT LOWER QUICKLY:

   (a) Make sure that set screw "B" (Fig. 3) and Swivel Post Screw (39) are tight. Also check Release Valve Lever in closed position against the 3-5/8" dimension in figure 3. If necessary to re-adjust, see par. 3a.
   (b) Also see Par. 5e.

5. GENERAL ELECTROLIFT MAINTENANCE:

   (a) Make sure your battery terminals are clean and all electrical connections are sound. Also see Par. 1a.
   (b) Make sure that the battery does not have a weak or dead cell.
   (c) Have the voltage regulator and generator or alternator checked to make sure that they are producing proper amperage and that they cut in at the proper time. On vehicles equipped with generators, it may be necessary that engine RPM, at idle, be increased slightly above normal to speed-up re-charging of battery.
   (d) Check to make sure that A-Frame does not contact obstructions before Electrolift has completed its full stroke. If it does, drop chain down as many links as necessary, at Lift Arm.
   (e) The Electrolift base bolt and lift arm bolts must be tightened firmly. NOTE: Excessively tightened, bolts will slow lowering operation of Electrolift.

6. TO PREVENT RUST AND IMPROVE PERFORMANCE OF CONTROL CABLE AND LEVER:

   (a) Periodic Lubrication is recommended.
   (b) Adjustment of tension on control lever handle is controlled by swivel screw (See Fig. 2) and held in adjustment by a locknut. To tighten control handles, use a screw driver (cross-recessed type) to turn swivel screw to the desired tension. Then hold swivel screw stationary while pulling-up lock nut. To loosen control handles, hold the swivel screw from turning, while backing off the locknut. Adjust the swivel screw as desired. Hold swivel screw stationary and tighten lock nut.

D. POST-SEASON MAINTENANCE

1. Store Electrolift with Release Lever in closed position and Ram Plunger in extended position, heavily coated with grease. This procedure will leave Ram Cylinder filled with oil which will prevent corrosion in this vital area.

2. It is advisable to drain and flush the unit yearly. Drain Electrolift oil and use Kerosene to flush it. Pump Ram Plunger up and down to circulate Kerosene, then drain. Re-fill with clean Electrolift Oil (See Par. C-2c).

E. DISASSEMBLY & REPAIR OF ELECTROLIFT UNIT

If the unit fails to operate satisfactorily and simple steps outlined in Section "C" do not correct the situation, we recommend that a Service Exchange Electrolift (See Parts Lists and Form 3-129) be obtained. These units are available at various stock points, are factory warranted and offer the best low cost answer to field service.

Meyer factory repair service is available if you wish to return your unit to the factory. The unit will be repaired and returned. You will be charged for parts and labor.

If for some reason, you wish to repair your Electrolift, it will be necessary to disassemble the unit.

Before disassembling, a Seal Kit (Part No. 2009375) should be obtained. This seal kit contains all seals and valves necessary to overhaul an Electrolift. In addition, it contains service instructions (Form 1-132) with details on the updating of Electrolift units.

Disassembly of Model T Electrolifts prior to Serial 8800 requires special tools and it is not recommended that these units be repaired in the field. They should be returned to the factory for repair.