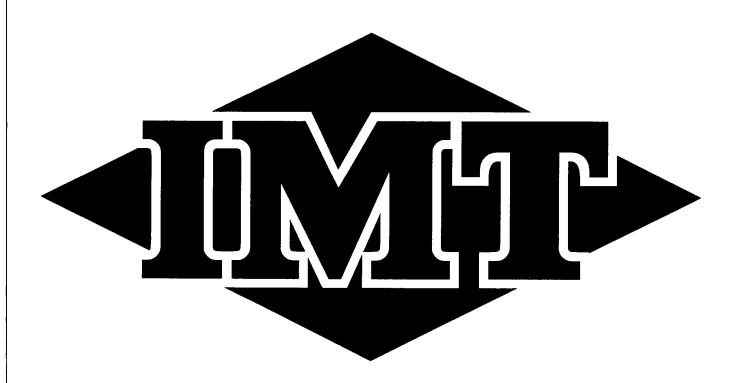
Installation & Instruction Manual

Installation, Operating, Safety and Maintenance



IMPORTANT

- 1. Always stand clear of liftgate while operating.
- 2. This is not a passenger lift DO NOT RIDE.
- 3. Improper operation can result in serious personal injury read operating instructions before use.
- 4. Any alteration of liftgate voids warranty.
- 5. Only authorized, properly trained adults should operate this liftgate.
- 6. Always store in the closed position with both safety locks secured.
- 7. Controls *must* be wired through the truck ignition per installation instructions. *Never* leave gate unattended with key in ignition.
- 8. Decals must remain on gate for safety reasons.
- 9. Never exceed rated capacity. Always center load on platform and as close to truck as possible.

IOWA MOLD TOOLING COMPANY, INC., 500 Hwy. 18 W. Garner, Iowa 50438, Phone 641-923-3711

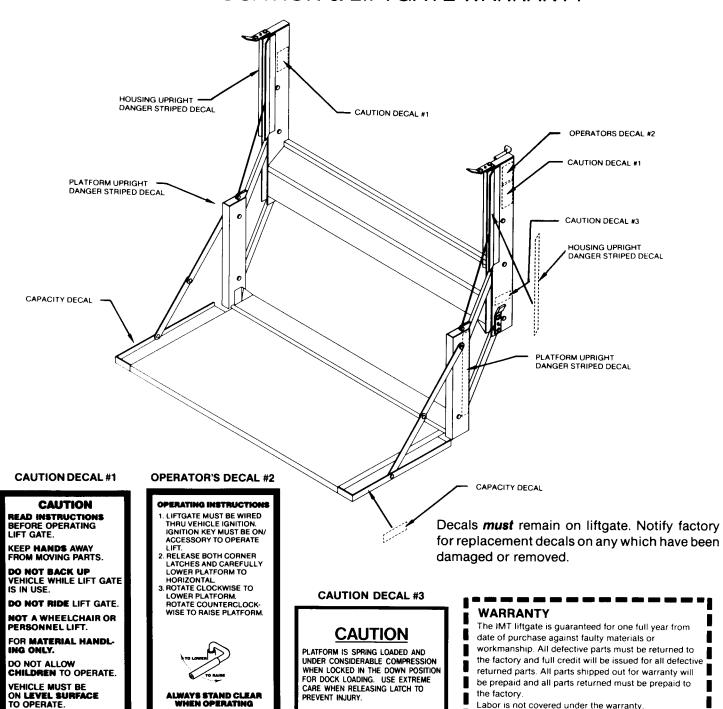
INTRODUCTION

This manual contains information necessary for the proper installation and operation of your IMT LIFTGATE. Installation of the liftgate should be conducted by qualified personnel only. Before operating the liftgate, please study the manual carefully and keep it in a handy place for future reference, above all else remember — SAFETY FIRST!!!

It is important that every vehicle that has an IMT Liftgate have legible caution and operation decals clearly posted on liftgate and that there is an operator's manual in the vehicle at all times for a guide to proper operation and maintenance.

For missing decals please contact Iowa Mold Tool for replacements.

DECAL LOCATION & LIFTGATE WARRANTY



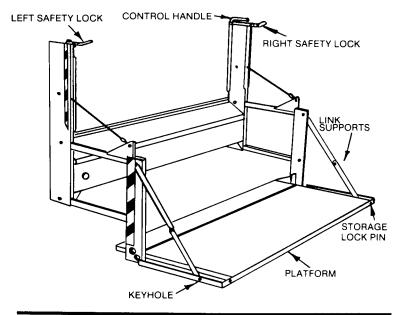
OPERATION

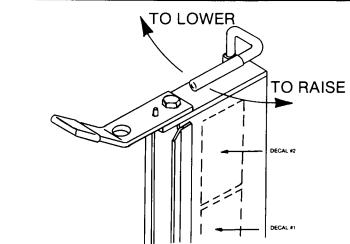
- 1. Truck ignition key must be in "on" or "accessories" position.
- 2. Unlatch left (driver's side) safety lock by lifting up and turning outward.
- 3. Unlatch right (passenger's side) safety lock and manually lower platform down to level position for loading.
- 4. **To lower platform to ground:** Rotate control handle inward (clockwise). Platform may be stopped at any desired height simply by releasing control lever. Control lever automatically returns to neutral position upon release.
- 5. To raise platform to truck bed: Rotate control handle outward (counterclockwise). NOTE: Whenever liftgate is being raised, an audible safety alarm is activated. This is an important feature for the safety of the operator and public.
- 6. **To store the gate:** a) Raise platform until level with truck bed. b) Manually lift platform to closed vertical position. c) Right safety lock will engage with moderate pressure on the platform. Manually engage left safety lock.

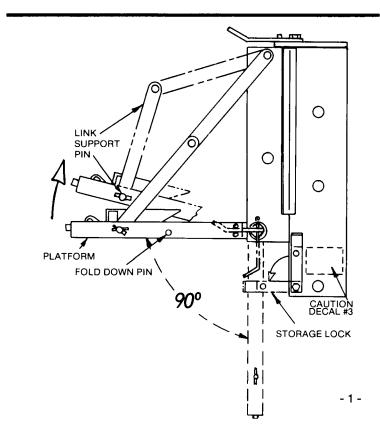
7. To place platform in drop-away position:

a) Manually lift platform and at same time, lift the left (driver's side) platform link supports upward at hinge point. This will allow the Keyhole of the platform and the link support pin to line up. Disconnect link support from platform. b) Repeat the same procedure on the right (passenger side) link supports. c) Platform will now *drop-away* for dock or forklift loading. d) Secure the platform with the storage lock (at bottom of upright) on passenger side of liftgate. This must be done on all 48" travel series, and on 38" travel gates which have the optional foldout extension. e) Use drop-away position *only* for loading at docks or with forklifts. *Do not* store platform in this position.

CAUTION: Platform is spring loaded and under considerable compression when locked in the down position for dock loading. Use extreme care when releasing latch to prevent injury.





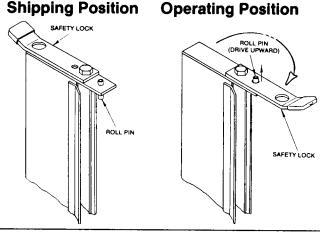


NOTICE: For shipping purposes, the safety lock on both the right and left uprights have been turned backwards. This is to prevent the safety locks from being damaged during shipment.

ATTENTION: Before removing the cardboard from IMT liftgate, turn the safety lock handles around so they latch onto the storage lock pins of the platform. The tension on the latch is already set. (DO NOT LOOSEN BOLTS TO TURN LATCHES. SIMPLY TURN LATCHES AND SECURE PLATFORM.) Once the platform is secured by the safety locks, you may cut the banding from the liftgate and mount on truck. When the liftgate is completely mounted, lower the platform to the ground. At this time, drive the roll pins upward so the safety locks cannot raise up and swing out of line.

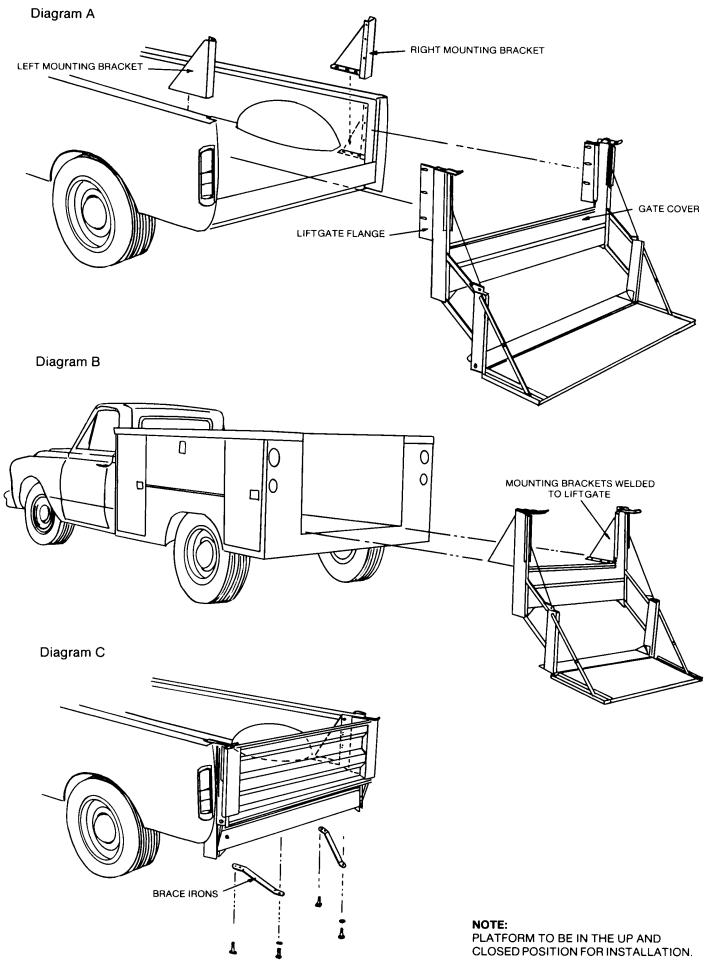
- 1. Remove original tailgate, all bolts and hardware.
- 2. Remove bumper, if pickup or truck has one.
- 3. Mounting brackets:
- **A.** Chevrolet, G.M.C., and Dodge Place right and left mounting bracket in pickup box (continue on to step 4 diagram A).
- **B. Ford** Ford brackets bolt to sidewall of pickup box. For this reason, set liftgate up flush with rear of truck floor. Using 3/8" x 1 1/4" bolts, bolt gate flange to the right and left brackets. This will allow you to use the brackets as a pattern for drilling holes in the sidewall. Once the holes are drilled, bolt mounting brackets to box with 3/8" x 1 1/4" hex bolts (Reverse Steps 4 and 5 diagram A).
- C. Models 48, 49 and 54: The mounting brackets are already welded to uprights of liftgate. Simply slide gate into the truck opening and bolt to floor of truck (diagram B). (Follow Step 4 instructions and disregard Step 5).
- 4. Using the mounting brackets as a pattern, mark and drill two holes in truck floor for each bracket. Bolt mounting brackets in place by using 3/8" x 1 1/4" hex bolts. (diagram A).
- 5. Remove cardboard from liftgate and set in position on truck box. Using 3/8" x 1 1/4" hex bolts, bolt mounting brackets in pickup to corresponding holes on gate flange, liftgate should be flush with rear of truck floor (diagram A).
- 6. With gate secured to truck box, you can at this time unlatch and lower platform to the ground. (Follow directions in the operator's instructions page). Drive the roll-pins for the safety locks upward so the safety locks cannot swing out of alignment.
- 7. Remove gate cover (diagram A).
- 8. Attached to power unit is a small envelope containing a vent plug for the oil reservoir. Remove the solid plastic plug from power unit and screw vent plug into place. (Plastic plug is for shipping purposes

Safety Lock Handle



- only). The power unit is filled with proper amount of HYDRAULIC oil. DO NOT ADD ANY OIL.
- 9. Bolt (1/2" x 1 1/4" hex bolts) the two support brace irons to bottom of liftgate frame. Nuts are welded to the inside of main frame for these bolts. Do not tighten at this point (diagram C).
- 10. Drill 1/2" holes corresponding to brace iron holes to frame of truck and bolt (diagram C).
- 11. Tighten ALL bolts on IMT liftgate unit.
- 12. Uncoil electrical power cable and pull through the 1 1/4" hole at the back of main frame. The safety ignition wire is attached to this power cable. Slide the rubber grommet, furnished in the fastener bag, over both wires and slide to main frame of gate. Insert in opening to support the wires and prevent them from being cut on the steel. Fasten the 1/4" male plug to the 14 ga. ignition wire. Attach the battery terminal swag to the power cable.
- 13. Carefully string the two cables along frame of truck, taking care to stay away from exhaust system and any sharp points that may cause shorts in either cable. Secure cables to frame of truck with 4-6" nylon ties which are furnished with the hardware kit.
- 14. Connect the power cable to HOT SIDE (Positive +) of battery. (Battery should be checked for proper ground, and fully charged. This will prevent any damage to the solenoid).
- 15. Connect the safety ignition wire by threading through the firewall of truck and wiring into the fuse box on the ACCESSORY SIDE only (any of the 20 amp terminals). This will allow gate to be operated only with the key of truck in the "on" or "accessories" position. DO NOT BYPASS THIS IMPORTANT STEP OF THE INSTALLATION IT IS FOR YOUR AND THE PUBLIC'S PROTECTION (See page 7).
- 16. Replace gate cover onto main housing of IMT liftgate.

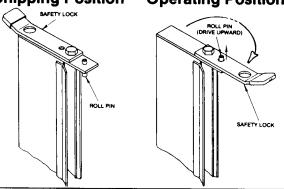
LIFTGATE IS READY FOR OPERATION



NOTICE: For shipping purposes, the safety lock on both the right and left uprights have been turned backwards. This is to prevent the safety locks from being damaged during shipment.

ATTENTION: Before removing the cardboard from IMT liftgate, turn the safety lock handles around so they latch onto the storage lock pins of the platform. The tension on the latch is already set. (DO NOT LOOSEN BOLTS TO TURN LATCHES. SIMPLY TURN LATCHES AND SECURE PLATFORM.) Once the platform is secured by the safety locks, you may cut the banding from the liftgate and mount on truck. When the liftgate is completely mounted, lower the platform to the ground. At this time, drive the roll pins upward so the safety locks cannot raise up and swing out of line.

Safety Lock Handle Shipping Position Operating Position



Preparing Bracket:

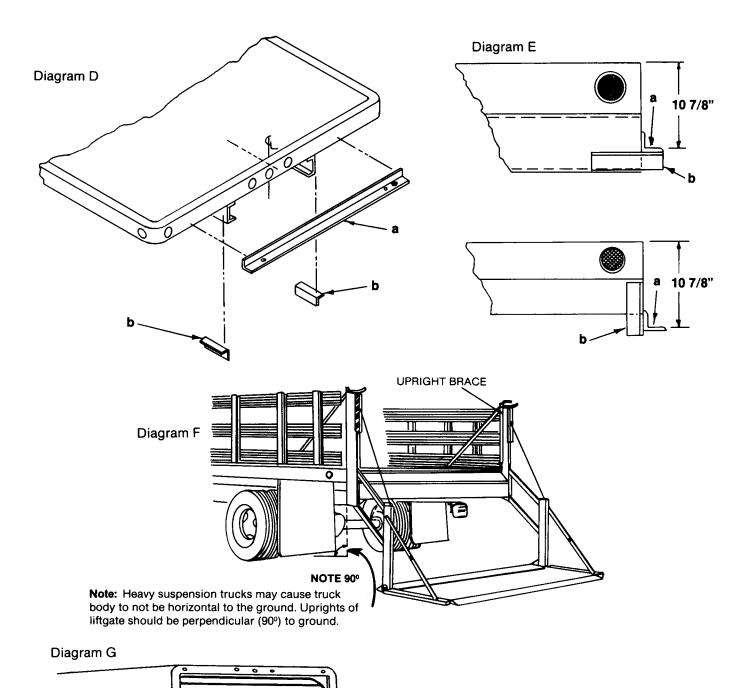
- 1. Remove any obstruction on the rear end of truck. This includes all rear lights which are not flush. Cut off the longitudinal sills of truck if they extend beyond the rear rail.
- Locate and mark the exact center of truck's rear.
 (Measure outside to outside of truck's box or stake floor diagram D).
- 3. Measure from floor of truck down 10 7/8" and mark. Mark this point on both the right and left side of rear rail. THIS IS AN IMPORTANT MEASUREMENT (diagram E).
- 4. Remove angle iron mount (a) from bottom of liftgate.
- 5. Centering the angle iron mount (a) onto the rear rail, and exactly 10 7/8" down from the floor of truck to the angle iron's top horizontal leg, tack weld the mount in place (diagrams D and E).
- 6. At this time, do not go any further. DOUBLE-CHECK to see that the angle iron mount (a) is level, centered and the distance from floor of truck to the top horizontal leg of the angle iron is 10 7/8" exact.
- 7. Weld the two short 10" angle iron braces (b) to the longitudinal rails of truck so that they support the longer angle iron mount (a) (diagram E).
- 8. Weld the 10" angle iron braces (b) to the larger mount bracket (a) (diagram E).
- If all measurements are correct, the mounting bracket is level, centered and welded securely, it is ready for the liftgate to be mounted.

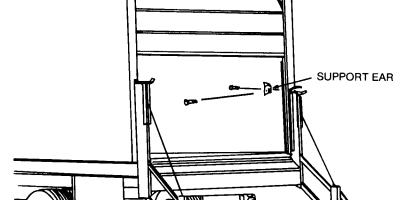
Mounting Liftgate:

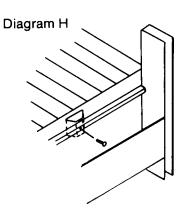
- NOTE: Where electrical cable comes out of liftgate housing, you may need to drill or cut a hole in the truck outrail so the electrical cable may be pulled from the liftgate when installation calls for it.
- 2. Remove cardboard from liftgate. Set the liftgate onto the angle iron mount (a) aligning the corresponding holes of the angle iron mount (a) to the holes in the bottom of the liftgate housing. Bolt liftgate on mount with two 1/2" x 1 1/4" x 13" UNC hex head bolts and two 1/2" lockwashers. The nuts are already welded inside the liftgate housing.
- 3. Securing uprights of IMT liftgate:
 A. STAKE BODY TRUCKS bolt an upright brace (1/4" x 1 1/4" x 42 1/8" long) to each upright, using 1/2" x 1-1/4" x 13" UNC hex head bolt, lock washer and nut. Mark and drill corresponding holes in floor of truck to holes in each brace, making sure that the uprights of liftgate are perpendicular (90°) to ground (diagram F).

- B. CUTAWAY VAN BODIES Drill holes corresponding to the upright ears through the van body. Weld the support ears (2" x 2" x 1/4" x 3" long in mounting kit) to the van body. Bolt liftgate uprights to the support ears. Check that uprights are tight against van box (diagram G).
- 4. With gate secured to truck box, you can at this time, unlatch and lower platform to the ground. (Follow directions in the operator's instructions page.) Drive the roll-pins for the safety locks upward so the safety locks cannot swing out of alignment.
- 5. Remove gate cover.
- 6. Drill 2-1/2" holes through liftgate main housing into stake pockets on stake bodies and into rear rail of van bodies. Bolt solid. This gives support to main frame of liftgate (diagram H).
- 7. Attached to power unit is a small envelope containing a vent plug for the oil reservoir. Remove the solid plastic plug from power unit and screw vent plug into place. (Plastic plug is for shipping purposes only). The power unit is filled with proper amount of HYDRAULIC oil. DO NOT ADD ANY OIL.
- 8. Uncoil electrical power cable and pull through the 1-1/4" hole at the back of main frame. The safety ignition wire is attached to this power cable. Slide the rubber grommet, furnished in the fastener bag, over both wires and slide to main frame of gate. Insert in opening to support the wire and prevent them from being cut on the steel. Fasten the 1/4" male plug to the 14 ga. ignition wire. Attach the battery terminal swag to the power cable.
- 9. Carefully string the two cables along frame of truck, taking care to stay away from exhaust system and any sharp points that may cause shorts in either cable. Secure cables to frame of truck with 4-6" nylon ties which are furnished with the hardware kit.
- 10. Connect the power cable to HOT SIDE (Positive +) of battery. (Battery should be checked for proper ground, and fully charged. This will prevent any damage to the solenoid.)
- 11. Connect the safety ignition wire by threading through the firewall of truck and wiring into the fusebox on the ACCESSORY SIDE only (any of the 20 amp terminals). This will allow gate to be operated only with the key of truck in the "on" or "accessory" position. DO NOT BYPASS THIS IMPORTANT STEP OF THE INSTALLATION—IT IS FOR YOUR AND THE PUBLIC'S PROTECTION (See page 7).
- 12. Replace gate cover onto main housing of IMT liftgate.

LIFTGATE IS READY FOR OPERATION

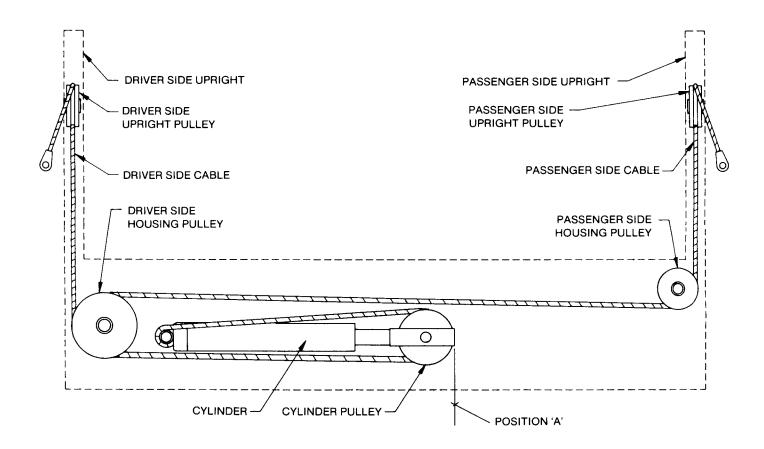






NOTE:PLATFORM TO BE IN THE UP AND CLOSED POSITION FOR INSTALLATION.

CABLE INSTALLATION



NOTE: Before removal of damaged cable; note and mark position 'A' of cylinder. Also note how the cables are positioned in the liftgate.

REMOVING DAMAGED LIFT CABLE:

- **A)** Loosen the two cable clamps which secure the lift cable near the base of the cylinder.
- **B)** Remove the snap ring and pin where the lift cable is secured to the upper lift arm. (Note cable thimble, and position of the bottom of thimble).
- C) Pull cable from liftgate.

INSTALLING NEW LIFT CABLE:

DRIVER'S SIDE LIFT CABLE:

- A) Insert cable end OVER the top and DOWN the back side of the upright pulley (single groove pulley).
- **B)** Attach the cable eyelet to the upper lift arm with pin and secure with snap ring. (Install the eyelet with the cable thimble in the same position as it was on the cable that was taken out).
- C) Thread cable end into frame UNDER the housing pulley and on the OUTSIDE groove. (Outside groove of pulley is the groove closest to you standing at rear of truck).
- D) Thread cable UNDER and OVER the OUTSIDE

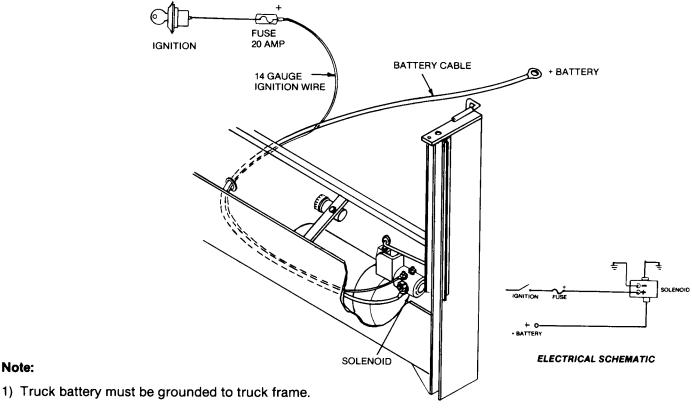
groove of the cylinder pulley (double groove pulley).

E) Align position 'A' on cylinder at mark made before dismantling cable. If cylinder is in correct position, pull cable tight and secure with two cable clamps at base of cylinder.

PASSENGER'S SIDE LIFT CABLE:

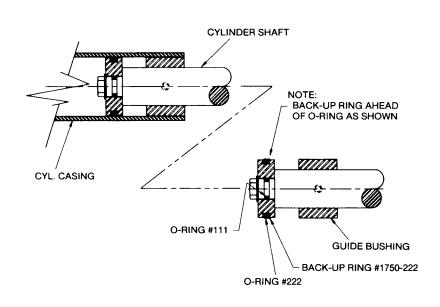
- A) Insert cable end OVER the top and DOWN the back side of the upright pulley (single groove pulley).
- **B)** Attach the cable eyelet to the upper lift arm with pin and secure with snap ring. (Install the eyelet with the cable thimble in the same position as it was on the cable that was taken out).
- **C)** Thread cable end into frame UNDER the housing pulley.
- **D)** Thread cable OVER TOP and DOWN UNDER the INSIDE groove of the driver's side housing pulley. (Inside groove of pulley is the groove farthest away from you standing at rear of truck.)
- **E)** Insert cable UNDER and OVER the inside groove of the cylinder pulley (double groove pulley).
- **F)** Align position 'A' on cylinder at mark made before dismantling cable. If cylinder is in correct position, pull cable tight and secure with two cable clamps at base of cylinder.

ELECTRICAL DIAGRAM



- 2) Ignition wire must run to accessory side of fuse box with minimum 20 amp fuse.
- 3) All electrical cables must be installed so as to avoid any moving parts or exhaust system.

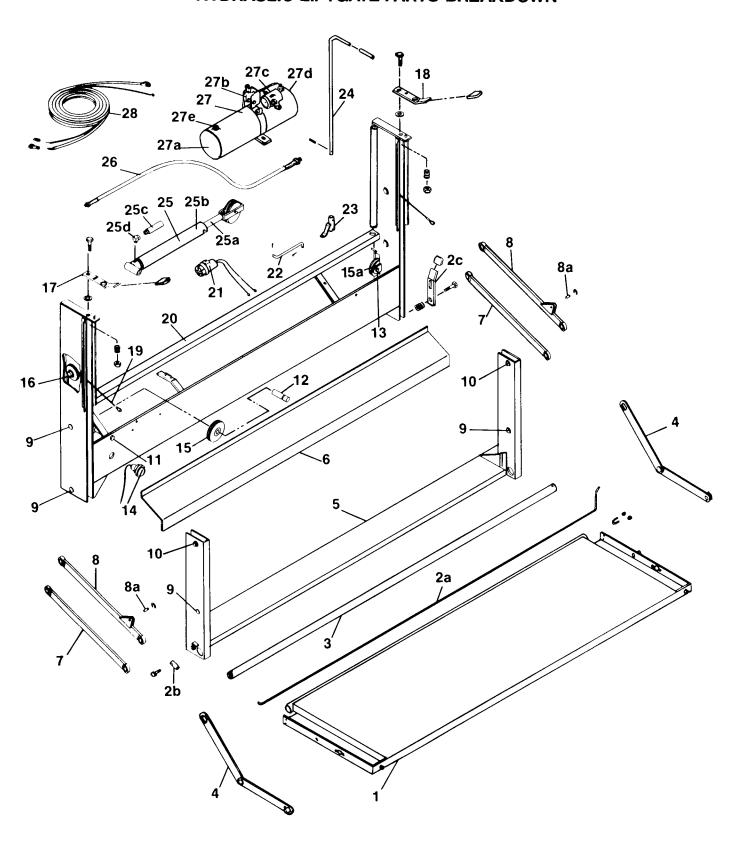
CYLINDER SEAL INSTALLATION



- 1) Remove hose from cylinder casing. (Note: Hose to remain attached to pump.)
- 2) Remove the four cable clamps from the cables and pull the cables through the cylinder's double groove pulley. (Note: Cable routing through the pulley as cables must be rerouted the same way.)
- 3) Remove snap rings and cylinder retention pin so complete cylinder may be removed from liftgate.
- 4) Remove two bolts which hold the bushing in place.
- 5) Pull cylinder shaft, bushing and piston outward.
- 6) Replace seal kit.

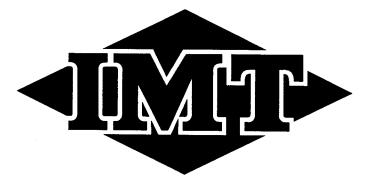


HYDRAULIC LIFTGATE PARTS BREAKDOWN



IMT Parts List

DRAWING NO.	PART NO.	DESCRIPTION	QTY. REQUIRE
1	49-32120	Platform-IMT 38-60 TPX	
1	49-32125	Platform-IMT 38-60 Grated	
1	49-32097	Platform-IMT 38-64 TPX	1
1	49-32099	Platform-IMT 38-64 Grated	
1		Platform-IMT 48-86 TPX	
1	49-42099	Platform-IMT 48-86 Grated	
1	49-42385	Platform-IMT 48-64 TPX	
1	49-42395	Platform-IMT 48-64 Grated	1
2a	49-32015	Torsion Spring-IMT 38-60	1
2a	49-32014	Torsion Spring-IMT 38-64	1
2a	49-42018	Torsion Spring-IMT 48-86	1
2b	49-22006	Springlock	
2c	49-21190	Fold-down Lock & Acc	
3	49-21980	Hinge Tube-IMT 38-60 w/Cotter Pins	1
3	49-22002	Hinge Tube-IMT 38-64 w/Cotter Pins	1
3	49-42012	Hinge Tube-IMT 48-86 w/Cotter Pins	1
4	49-34990	Dietform Link Cumparts IMT 20" series	2
4	49-44990	Platform Link Supports-IMT 38" series	
	49-44990	• •	
5	49-21150	Sub-Assembly-IMT 38-60	
5	4 9 -21145	Sub-Assembly-IMT 38-64	
5	49-41170	Sub-Assembly-IMT 48-86	1
6	49-21070	Housing Cover-IMT 38-60	1
6	49-21107	Housing Cover-IMT 38-64	
6	49-41107	Housing Cover-IMT 48-86	
7		Parrellel Arm-IMT 38" series	
7	49-44010	Parrellel Arm-IMT 48" series	2
8	49-34005	Lift Arm-IMT 38" series	2
8	49-44005	Lift Arm-IMT 48" series	
8a	49-50024	Cable Locking Pin w/Snap Ring	
9	49-50016 49-50018	Pivot/Pulley Pin w/Snap Ring	
10		Pivot/Link Pin w/Snap Ring	
12	49-50010 49-50012	Cylinder Pin w/Snap Ring Pulley Pin w/Snap Ring (Dr. Side)	
13	49-50012	Pulley Pin w/Snap Ring (Dr. Side)	
14	17-34510	License Plate Light	
15	49-50045	4" Double Groove Pulley	
15a	49-50055	4" Single Groove Pulley	
16	49-50035	3" Single Groove Pulley	
17	49-21207	Storage Lock & Acc. (Dr. Side)	1
18	49-21205	Storage Lock & Acc. (Pa. Side)	1
10		_ , , , ,	
19 19	49-47200 49-47300	Cable Assembly-IMT 38" series w/Clamps Cable Assembly-IMT 48" series w/Clamps	
		•	
20	49-34900	Main Housing Assembly-IMT 38-60	1
20	49-34920	Main Housing Assembly-IMT 38-64	1
20	49-44920	Main Housing Assembly-IMT 48-86	1
21	49-54150	Audible Safety Alarm	1
22	49-25036	Pump to Control Linkage Rod	
	49-25020	Linkage Cam Assembly	
		•	
24	49-35016	Main Control Handle-IMT 38" series	
24	49-45016	Main Control Handle-IMT 48" series	
25	49-3800	Cylinder Assembly Complete-IMT 38" series	1
25	49-4800	Cylinder Assembly Complete-IMT 48" series	1
25a	27-83030	Cylinder Shaft-IMT 38" series w/Pulley	1
25a	27-84030	Cylinder Shaft-IMT 48" series w/Pulley	
		•	
25b	27-82980	Cylinder Barrell Assembly-IMT 38" series	
25b	27-83980	Cylinder Barrell Assembly-IMT 48" series	1
25c	49-55500	In-Line Control Valve	1
25d	31-23845	Street Elbow	
25e	27-82004	Cylinder Bushing	1
25f	27-82002	Cylinder Piston	1
25g	31-69900	Cylinder Seal Kit	1
26	31-11415	Hydraulic Hose-IMT 38" series	1
26	31-11420	Hydraulic Hose-IMT 48" series	1
		-	
27	88-50800	Hydraulic Pump & Motor Assembly	
27a	88-90175	Reservoir Tank w/Seal Assembly	
27b	88-51380	Pump Cam	
27c 27d	88-90170 88-51270	Solenoid Switch	
270 27e	88-51390	Motor Complete Vent Plug	
		_	
28	49-56105	Electric Cable-IMT 38" series w/Terminal Ends	
28	49-56125	Electric Cable-IMT 48" series w/Terminal Ends	1



500 Hwy. 18 W. Garner, lowa 50438 Phone 641-923-3711

SERVICE AND MAINTENANCE

NOTE: Gate should be serviced every 100 cycles.

Regular Service Tips:

1. IMPORTANT: Check steel lift cables for wear or damage.

REPLACE IMMEDIATELY if any sign of fraying is observed.

- **2.** Inspect all shafts, retaining rings, roll pins. (If missing or worn, replace immediately).
- **3.** Inspect all welds for cracks or fatigue. (If found, repair as required).
- **4.** Check oil level in reservoir of pump. Proper fluid level should be 2/3 full with platform on ground, with cylinder completely collapsed. (Fill with AUTOMATIC TRANSMISSION FLUID if needed).

- **5.** Inspect fittings, hoses and cylinder for leakage. (Replace as needed).
- **6.** Grease pulley grooves to prolong cable life. This will keep cables flexible and help them from fraying at stress points.
- 7. Battery terminals should be checked for proper connections, and free from corrosion. Also check battery fluid for purposes of keeping battery fully charged.
- 8. Check list for safety features:
 - a. Warning alarm sounds when gate is lifting.
 - b. Gate will not operate unless ignition key is in "on" or "accessories" position.
 - Control handle springs back to neutral when released.
 - d. Safety storage locks hold gate securely when stored.

ALL ABUSED OR MALFUNCTIONING PARTS SHOULD BE REPLACED IMMEDIATELY.

Simple Trouble-Shooting Tips:

- 1. Liftgate does not raise to proper height, but unit sounds as though it is running: Check fluid level in reservoir of power unit. It is probably low. (Follow step 4 in regular service tips above).
- 2. Platform will not raise, but warning alarm is working: This indicates there is electrical power to the unit, but not enough to raise the liftgate. Battery charge is low. Try to start truck so there is enough power to raise platform. Have your battery charged, or replace battery.
- **3.** Platform will not raise, and warning alarm is not working: This is caused by one of a number of reasons:
- a) Fuse a blown fuse in the fuse box for the ignition lockout will cause failure of unit.
 b) Short in electrical cable caused

by sharp object on frame of truck, or too close to exhaust system. c) Short in ignition lockout wire — again caused by sharp object on frame of truck, or too close to exhaust system. d) Bad solenoid on truck — if the solenoid of truck should ever go bad, check all the following items: I) Low charged battery; II) Poor connection on battery terminals; III) Bad ground connection to battery from truck, including bad ground wire; IV) Shorts in battery and ignition wires as found in b and c above; V) Poor grade of electrical wire. This may happen if a lower grade of electrical cable is used to replace a shorted wire at any time. Only factory-approved electrical cable may be used.

OWNERS INFORMATION:				
DATE PURCHASE:	GATE SER. NO			
INSTALLED BY:				