



MANHOLE COVER LIFT POWERARM OPERATIONS MANUAL

Vehicle Mounted Electric Hoist

P.O. #:

Order #:

Part #:

OVERVIEW & OPERATING PRINCIPLE

Vehicle Mounted Manhole Cover Lift System - Electric

The Manhole PowerArm™ mounts to a standard Class II, two-inch square trailer hitch receiver. For operation, once the unit is secured to the vehicle, move it into position so that the unit is within three feet of the center of the manhole cover.

The adjustment features of the Manhole PowerArm™ enables positioning to the cover location. The Arm has a 3 foot, 180° swing radius and a double jointed elbow that allows the positioning of the magnet (sold separately) to the center of the manhole cover.

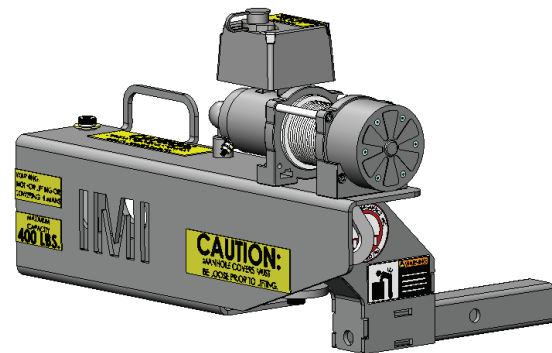
With the magnet is centered, lower it with the hoist control until it sets stable on the manhole cover. Turn the magnet to the "lock-on" position and use the hoist control to start lifting the manhole cover. When the manhole cover is clear from its rim, swing the manhole cover away. Reverse the steps to replace the manhole cover. Please see detailed set-up and operating instructions on page 3.



CAUTION: Working Load Limit (WLL) is 400 lbs.(181 kg.)



Hoist Controls



Unit shown in folded / storage position



HEALTH AND SAFETY WARNINGS



GENERAL



Please be advised that in and around the application of magnetic equipment, there are potential safety concerns that can arise with sensitive medical devices:



- » Pacemaker behavior can be affected when they are near strong magnetic fields
- » Medical implants and external fixation systems can be influenced by magnetic fields
- » Hearing aid behavior may be affected when exposed to strong magnetic fields

Any individual that carries the above equipment or other sensitive medical devices should use caution when they are around or handling magnets. For more specific information the wearer should contact their physician.



Beware of pinch points from sudden attraction and unexpected movement between magnets and ferrous metal equipment components or tools.



Beware of pinch points at the pivot, lift hook, and handle when adjusting Hoist System positions.



Entrapment hazard: keep extremities clear of hoist, taut wire rope or strap & hook when operating the hoist.



ADDITIONAL SAFETY PRECAUTIONS

1. Manhole covers must be loose prior to lifting.
2. Working Load Limit is not to exceed 400 lbs.(181 kg.). DO NOT OVERLOAD. Overloads can damage the hoist and/or the wire rope and create unsafe operating conditions.
3. DO NOT "move" the vehicle if the hoist is bearing a load.
4. ALWAYS STAND CLEAR OF WIRE ROPE, HOOK AND HOIST.
5. INSPECT EQUIPMENT FREQUENTLY. A frayed wire rope must be replaced immediately. Always replace wire rope with the manufacturer's identical replacement part. Periodically check the hoist installation to ensure that all bolts are tight.
6. USE HEAVY LEATHER GLOVES when handling wire rope. DO NOT LET WIRE ROPE SLIDE THROUGH YOUR HANDS.
7. NEVER HOIST WITH LESS THAN 5 TURNS of wire rope AROUND THE HOIST DRUM since the wire rope end fastener may NOT withstand full load.
8. NEVER HOOK THE WIRE ROPE BACK ONTO ITSELF.
9. NEVER USE THE POWERARM & HOIST FOR LIFTING OR MOVING PEOPLE.
10. NEVER OBSCURE THE WARNING AND INSTRUCTION LABELS.

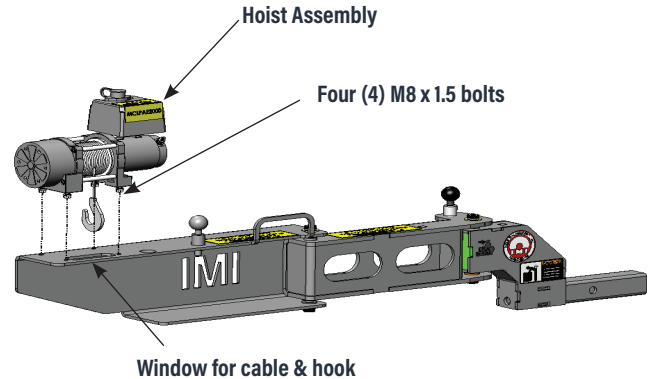


HOIST INSTALLATION TO POWERARM

1. HOIST MOUNTING AND CABLE ATTACHMENT -

For maximum strength and safety, the hoist should be mounted with the provided four M8 x 1.5 Grade 5 bolts, washers and lock washers (hoist base is threaded for these fasteners).

2. Position the hoist over the holes in the structural support. While positioning the hoist, make sure that the cable winds in the proper rotation on the drum. Cable and hook will run through window in the Power Arm
3. Secure hoist to the structural support using bolts, washers and nuts supplied.

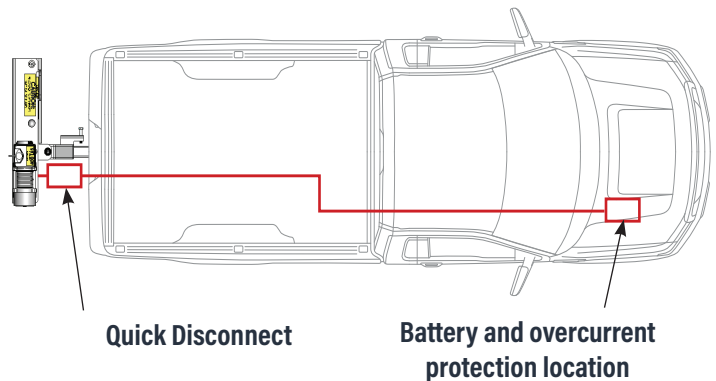


See Hoist Manufacturer's Manual for Specific Operation Instructions and Unit Features - ref: model OCH650

ELECTRIC HOIST WIRING ASSEMBLY

HOIST USES VEHICLE POWER

- Hoist must be direct wired to a vehicle battery installed within 12 feet of hoist location.
- Requires a vehicle battery in good condition, with at least 650 cold-cranking amps (650 CCA).
- Use includes quick disconnects to make it convenient to connect your hitch-mounted hoist to the power supply from the vehicle's battery.
- Wiring connections and circuit over-current protection are to be furnished by the user.
- A circuit breaker kit (IMI PN 610476) is available from Industrial Magnetics, Inc. Please call for current price and availability. Note that compatibility for all vehicle electrical systems has not been verified - use with caution.



Installation Procedure

Rear of the vehicle

1. Find a place to mount vehicle-side quick disconnect at the end of the long power wire and short ground wire.
2. Ground the short wire from the quick disconnect to a clean, metal surface on the vehicle frame.
3. Run the long power from the quick disconnect to the vehicle's battery in the engine compartment, avoiding places where the wires could become too hot or get pinched.

Under the hood

1. Connect the power wire from the rear of the vehicle to the positive post on the vehicle's battery.
NOTE: If a circuit breaker is used, the circuit breaker needs to be installed in-line with the power wire running to the vehicle's battery.

2. Ensure that the negative terminal of the battery is properly grounded to vehicle frame.

To provide power to the hoist, simply connect the quick disconnect on the hoist side to the quick disconnect on the vehicle side.

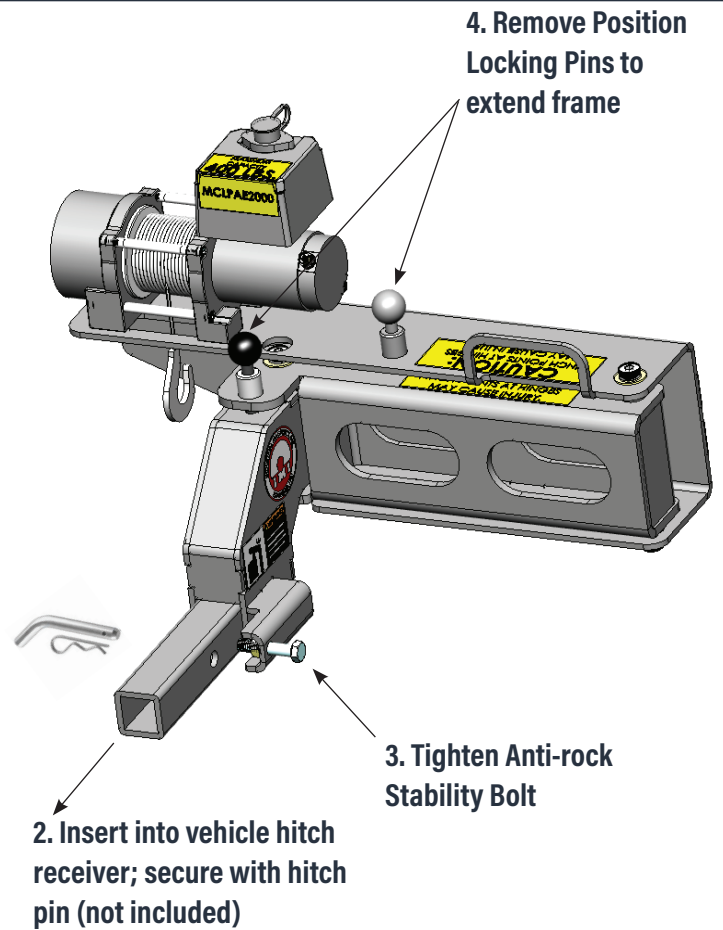


Quick Disconnect wire harness



POWERARM SETUP AND OPERATION

1. Make sure the hoist is securely attached to the Mounting Plate.
2. While in the folded position, insert the PowerArm into the vehicle's 2" x 2" hitch receiver. Line up hole in PowerArm and hitch. Secure with Hitch Pin (not included).
3. Tighten Hitch Anti-rock Stability Bolt against outside of vehicle hitch receiver
4. Remove Position Locking Pins located on the top of the PowerArm and extend frame into Operating Position.
5. Make sure the manhole cover is clean of dirt or other debris. If manhole cover is packed with snow or ice use a tool of choice to clear it. Manhole Cover must be loose prior to lifting.
6. Center Magnet on the Manhole Cover and rotate the handle of the magnet to the "ON" position. There will be resistance as the handle moves until it gets to the "ON" position.
7. Attach Hook securely to Magnet and use hoist control/handle to begin lifting Manhole Cover. See hoist manual for operating instructions.
8. When the Manhole Cover is lifted, slowly rotate the PowerArm until the cover is clear of the opening.
9. Reverse steps to return the PowerArm to storage (folded) position.



Extended operating position

COMMENTS OR CONCERNS?

We believe Industrial Magnetics, Inc. offers the finest Manhole Cover Lift System available today. Great pride has gone into the design and manufacture of this unit. Any comments or concerns should be directed to our Customer Service Department at 1-888-582-0821.

We appreciate the opportunity to serve you!