

# INSTALLATION INSTRUCTIONS for MODEL MLK-K390 BRAKE RELEASE KIT

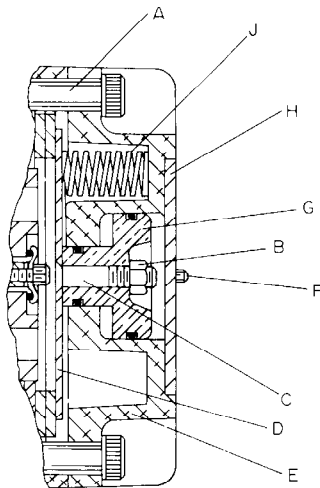
**READ THIS MANUAL BEFORE USING THESE PRODUCTS.** This manual contains important safety, installation, operation and maintenance information. Make this manual available to all persons responsible for the operation, installation and maintenance of these products.

## **WARNING**

- Disconnect the air supply to the Hoist before Installing the Brake Release Kit.
- Do not suspend a load from the Hoist when installing the Brake Release Kit.

Refer all communications to the nearest Ingersoll-Rand Material Handling Products Office or Distributor.

## DISASSEMBLY INSTRUCTIONS



Brake end of a  
standard HLK  
or MLK Hoist

(Dwg. TPC475)

1. Unscrew the four Shoulder Bolts (A) and remove the Spring and Piston Housing (E) from the Hoist.
2. Unscrew the two Load Rating Plate Screws (F) and discard them.
3. Lift the Load Rating Plate (H) from the Spring and Piston Housing.

4. Clamp the Pressure Plate (D) and assembled Spring and Piston Housing vertically in a vise.
5. Remove the Piston Nut (B) and discard it.

### NOTICE

• **Two types of Pressure Plates are used on these Hoists. One style has a threaded stud as an integral part of the Pressure Plate and the other style has a detached Pressure Plate Screw (C) that fits through the hole in the center of the Pressure Plate.**

6. If your Pressure Plate has the detached Pressure Plate Screw, remove the Screw and discard it.
7. If you are installing the heavy duty Brake Springs (11), refer to note \* on page 3 and continue as follows:
  - (a) Carefully loosen the vise and remove the Pressure Plate and Spring and Piston Housing.
  - (b) Set the Housing on a workbench with the Pressure Plate upward.
  - (c) Lift the Pressure Plate off the Housing and remove the Brake Springs.

## ASSEMBLY INSTRUCTIONS

1. If the heavy duty Brake Springs (11) are being installed, proceed as follows:
  - (a) Place the Spring and Piston Housing (E) on a workbench with the three spring cavities upward.
  - (b) Place a Brake Spring in each cavity.
  - (c) **For Pressure Plates without the integral stud,** install the new Pressure Plate Screw (10) so that the screw head enters the counterbore in the Pressure Plate (D). Place the Pressure Plate and Screw over the Brake Springs so that the Screw enters the hole in the Brake Piston (G).  
**For Pressure Plates with the integral stud,** place the Pressure Plate (D), stud side first, over the Brake Springs so that the stud enters the hole in the Brake Piston (G).
  - (d) Using a vise, carefully compress the Pressure Plate against the Brake Spring and Piston Housing until the Screw or stud protrudes through the Piston.
2. Install the Yoke Pin (2) in the crosshole of the Release Yoke (1).
3. Start the thread of the Yoke Release onto the new Pressure Plate Screw (10) or the stud of the Pressure Plate (D). **Do not reuse the old Pressure Plate Screw.**
4. Remove the assembly from the vise.
5. **For Pressure Plates without the integral stud,** tighten the Pressure Plate Screw and Release Yoke until a .006 to .012 in. (.15 to .30 mm) gap exists between the Pressure Plate and Brake Piston (G.)

### NOTICE

• **Make certain the slot in the end of the Release Yoke will be vertical when the Housing is bolted to the Hoist.**

**For Pressure Plates with the integral stud,** tighten the Release Yoke to 50 to 70 in-lb (5.65 to 7.91 N m) torque.

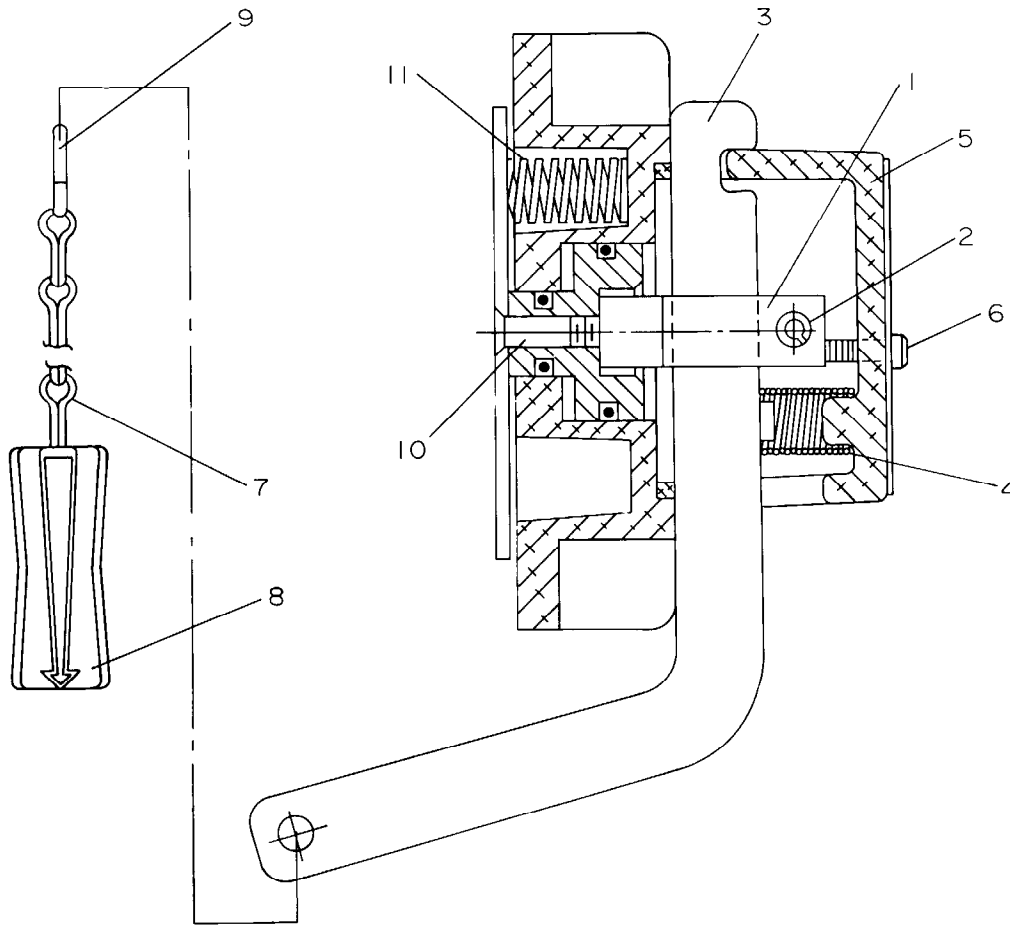
### NOTICE

• **Make certain the Brake Piston extends completely through the Spring and Piston Housing and contacts the Pressure Plate. Also, make certain the slot in the end of the Release Yoke will be vertical when the Housing is bolted to the Hoist.**

6. Install the assembled Brake Spring and Piston Housing on the Hoist and secure it with the four Shoulder Bolts (A) and Lock Washers.
7. Insert the Release Lever (3) through the slot in the Release Yoke with the notched end of the Lever toward the top of the Hoist and the notch facing away from the Brake Spring and Piston Housing.
8. Place the Release Lever Spring (4) on the hub inside the Housing Cover (5).
9. Position the Housing Cover and Release Lever Spring against the Brake Spring and Piston Housing. Make certain the shallow slot at the top of the Housing Cover engages the notch in the Release Lever and the Release Lever Spring encircles the hub on the Release Lever.

10. Position the Load Rating Plate (H) against the end of the Housing Cover.
11. Secure the Plate and Housing Cover to the Brake Spring and Piston Housing with the two Load Rating Plate Screws (6).
12. Cut the Pull Chain (7) to the desired length.

13. Insert one end of the Chain through the Pull Chain Handle (8) and attach an S-Hook (9) to the end link of Chain at the arrowhead end of the Handle. Bend the S-Hook to keep it on the Chain.
14. Attach the other end of the Pull Chain to the Release Lever with the remaining S-Hook.



(Dwg.TPC476)

### BRAKE RELEASE KIT PARTS LIST

ITEM NO.	DESCRIPTION OF PART	QTY. TOTAL	PART NO.
	Brake Release Kit	1	MLK-K390
1	Release Yoke	1	MLK-381
2	Yoke Pin	1	JC3350-74
3	Release Lever	1	MLK-380
4	Release Lever Spring	1	MLK-942
5	Housing Cover	1	MLK-391
6	Load Rating Plate Screw	2	CE110-302
7	Pull Chain (10-1/2 ft. length)	1	D02-413-10-1/2
8	Pull Chain Handle	1	MR-415
9	S-Hook	2	DO2-421
10	Pressure Plate Screw	1	MLK-392
*	11 Brake Spring	3	ML50K-832H
12	Lockwasher (not shown)	2	R2-320

\* These Brake Springs are to be used only if brake capacities must be increased to 150% dynamic and 200% static as required by Military Specifications. These heavy duty Springs may cause reduced Brake Disc life and may affect Hoist operation at light loads and low pressure. If increased capacities are not required, do not use heavy duty Brake Springs.

## United States Office Locations

### For Order Entry and Order Status:

#### INGERSOLL-RAND Distribution Center

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## International

Office and distributors in principal cities throughout the world. Contact the nearest Ingersoll-Rand office for the name and address or the distributor in your country or write to: Ingersoll-Rand Material Handling P.O. Box 24046 Seattle, WA 98124-0046 USA

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