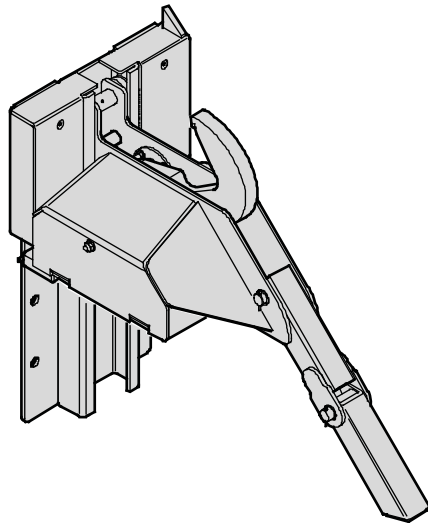


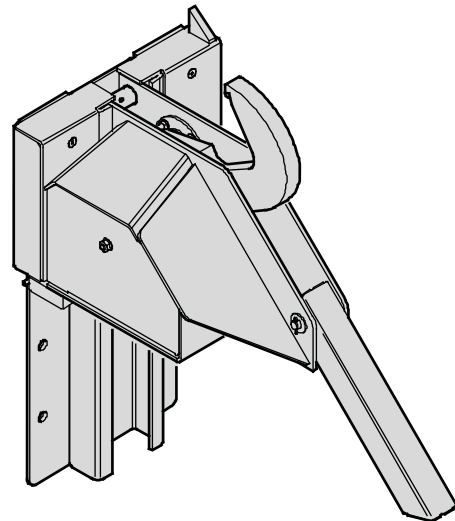


Vehicle Restraint Installation Manual



RHR-600 Dok-Lok[®]
Vehicle Restraint

RHR-1000 Dok-Lok[®]
Vehicle Restraint



This Manual Covers Restraints Built After Serial Numbers:
RHR001000 and up

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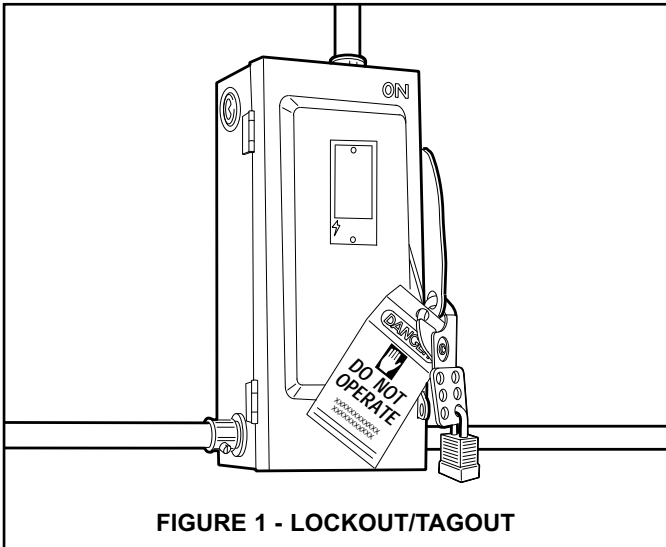
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NOTICE TO USER

Your local Rite-Hite® representative provides a Planned Maintenance Program (P.M.P.) which can be fitted to your specific operation. Call your local representative or Rite-Hite® at 414-355-2600.

The Rite-Hite products in this manual are covered by one or more of the following U.S. patents: 5,546,623; 5,553,987; 5,582,498; 5,664,930; 5,702,223; 5,762,459 (RE: 37,570); 5,882,167; 6,065,172; 6,070,283; 6,085,375; 6,089,544; 6,092,970; 6,106,212; 6,116,839; 6,190,109; 6,276,016; 6,311,352; 6,318,947; 6,322,310; 6,360,394; 6,368,043; 6,431,819; 6,488,464; 6,499,169; 6,505,713; 6,520,472; 6,524,053; 6,634,049; 6,726,432; 6,773,221; 6,832,403; 6,880,301; 7,032,267; 7,062,814; 7,134,159; 7,213,285; 7,216,391; 7,363,670; 7,380,305; 7,503,089; 7,533,431; 7,546,655; 7,584,517; 7,681,271; 7,823,239; 7,841,823; 7,877,831; 7,914,042; 8,006,811; 8,065,770; 8,141,189; 8,191,194; 8,286,757; 8,287,223; 8,303,235; 8,307,956; 8,443,474; 8,464,384; 8,464,846; 8,465,245 and pending U.S and foreign patent applications. RITE-HITE®, THINMAN™, SAFE-T-LIP®, HYDRACHEK®, WHEEL-LOK™, DOK-LOK®, DUAL-DOK®, SAFE-T-STRUT™, DOK-COMMANDER®, JUMBO™, HYDRA-RITE™, SAFE-T-GATE®, RITE-VU™ LIGHT COMMUNICATION SYSTEM and SMOOTH TRANSITION DOK SYSTEM™, are trademarks of Rite-Hite®.

SAFETY WARNINGS



⚠ WARNING

When working with electrical or electronic controls, make sure that the power source has been locked out and tagged out according to OSHA regulations and approved local electrical codes.

LOCKOUT/TAGOUT PROCEDURES

The Occupational Safety and Health Administration (OSHA) requires, in addition to posting safety warnings and barricading the work area (including, but not limited to, trucking office and loading docks), that the power supply has been locked in the OFF position or disconnected. It is mandatory that an approved lockout device is utilized. An example of a lockout device is illustrated. The proper lockout procedure requires that the person responsible for the repairs is the only person who has the ability to remove the lockout device.

In addition to the lockout device, it is also a requirement to tag the power control in a manner that will clearly note that repairs are under way and state who is responsible for the lockout condition. Tagout devices have to be constructed and printed so that exposure to weather conditions, or wet and damp locations, will not cause the tag to deteriorate or become unreadable.

RITE-HITE® does not recommend any particular lockout device, but recommends the utilization of an OSHA approved device (refer to OSHA regulation 1910.147). RITE-HITE® also recommends the review and implementation of an entire safety program for the Control of Hazardous Energy (Lockout/Tagout). These regulations are available through OSHA publication 3120.

⚠ DANGER

This is the highest level statement. Failure to follow the listed instructions will most likely result in severe injury or death.

⚠ CAUTION

The statements used with this level of warning deal with a safe operating procedure. If the procedure is ignored the possibility of personal injury may exist.

⚠ WARNING

This is a statement of serious hazard. Failure to follow the listed instructions could place the individual at risk of serious injury or death.

IMPORTANT

IMPORTANT is used to draw attention to a procedure that needs to be followed to prevent machine damage.

INSTALLATION INSTRUCTIONS

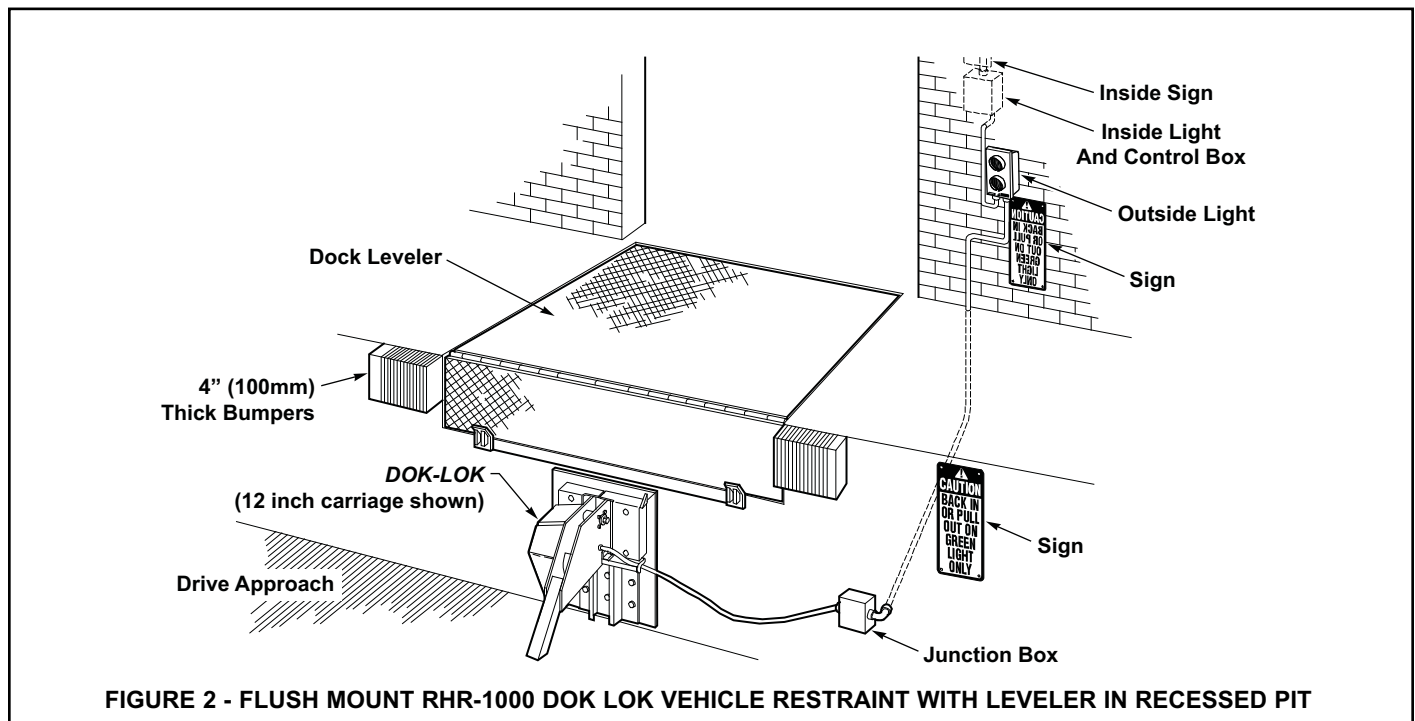


FIGURE 2 - FLUSH MOUNT RHR-1000 DOK LOK VEHICLE RESTRAINT WITH LEVELER IN RECESSED PIT

! DANGER

Post safety warnings and barricade work area, at dock level and at ground level, to prevent unauthorized use of the dock position.

IMPORTANT

Whether there is a leveler or not, a 4" (100mm) thick bumper is required. DO NOT install a DOK-LOK vehicle restraint on docks without 4" (100mm) thick bumpers. For thicker bumpers consult factory.

Follow the six (6) step installation procedure below:

1. Inspect DOK-LOK vehicle restraint materials.
2. Install roller track plate.
3. Install DOK-LOK vehicle restraint into roller track plate.
4. Install electrical components.
5. Install signs.
6. Test operation.

INSPECT DOK-LOK MATERIALS

1. Open and inspect all materials. Immediately report any damage or material shortage. Study component assemblies and determine their proper locations.

INSTALLATION INSTRUCTIONS

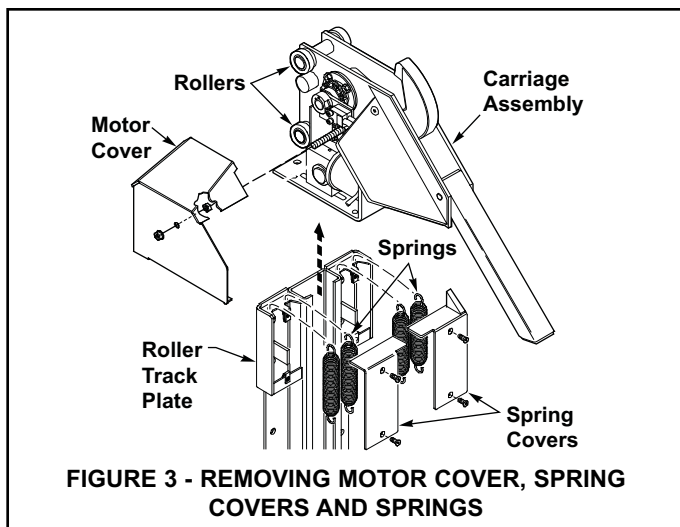
A DOK-LOK vehicle restraint may be installed on docks with or without levelers. Consult Rite-Hite for proper application.

INSTALLATION INSTRUCTIONS CONT.

INSTALL ROLLER TRACK PLATE

The RHR Model DOK-LOK vehicle restraint is shipped assembled. The track roller plate must be disassembled from the DOK-LOK vehicle restraint to begin installation. To disassemble:

1. Remove motor cover.
2. Remove spring cover and springs. Refer to Figure 4.
3. Remove nuts from spring bar.
4. Roll DOK-LOK vehicle restraint out of roller track plate. Be careful to keep rollers on the axles. Refer to Figure 3.



Install roller track plate onto dock face at specified location by welding to an embedded steel plate or by using the fifteen (15) concrete anchors provided in conjunction with welding to pit steel and a leveler frame. Refer to Figures 4 or 5.

For site specific installation refer to Rite-Hite Application information provided with Dok-Lok vehicle restraint. When doubt, call Rite-Hite Representative or Rite-Hite Customer Service at (800) 456-0600.

IMPORTANT

- **A plumb roller track plate is required. If the dock face is not plumb/perpendicular, contact your Rite-Hite representative or Rite-Hite at (800) 456-0600.**
- **The carriage roller track cannot be bent or deformed. Straighten or replace as required.**

NOTE: Trim roller track plate, as necessary, up to a maximum of 5" (125mm) from the bottom. Refer to Rite-Hite Application Guidelines for specific mounting height.

NOTE: Some mechanical dock levelers have an adjusting nut access hole in the leveler front subframe. If the RHR vehicle restraint roller track interferes with the access hole, the track plate must be cut to allow access. Refer to Figure 7, page 8.

NOTE: Some levelers may be slightly recessed within pit. A shim must be inserted between the roller track plate and the leveler front subframe and then must be welded in place. Refer to Figure 8, page 8 for adding a necessary lip guide.

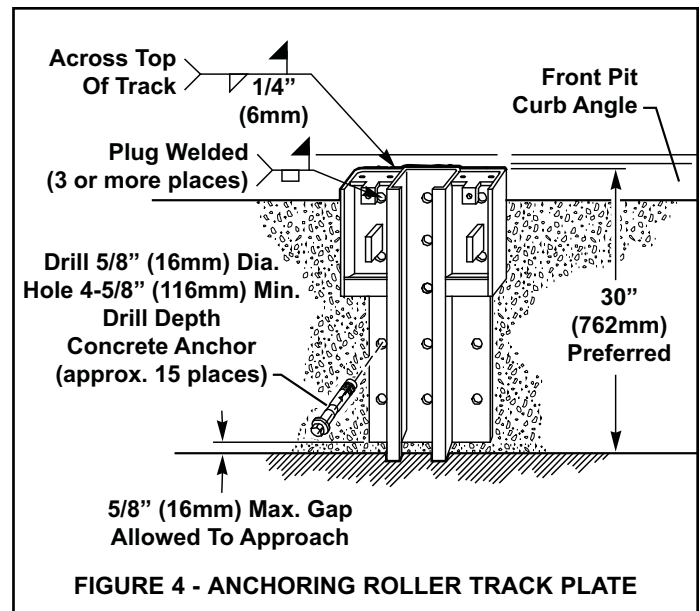
INSTALLATION INSTRUCTIONS CONT.

IMPORTANT

Fifteen (15) concrete anchors are provided with each RHR Dok-Lok vehicle restraint. You must install an anchor in each roller track plate hole except those plug-welded to embedded steel.

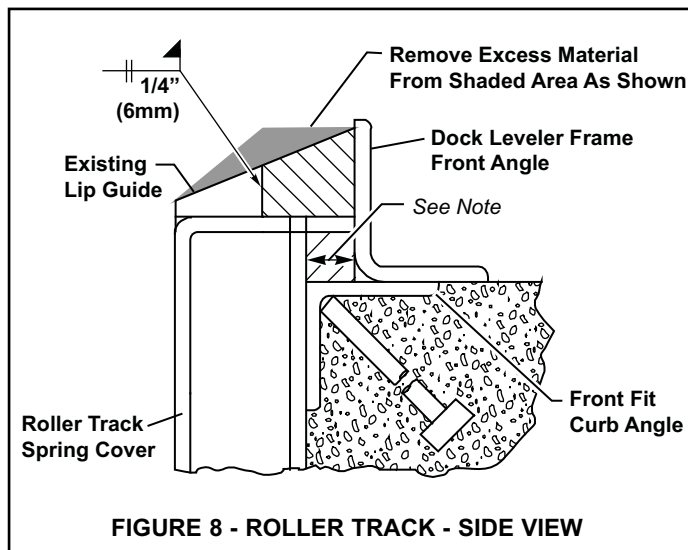
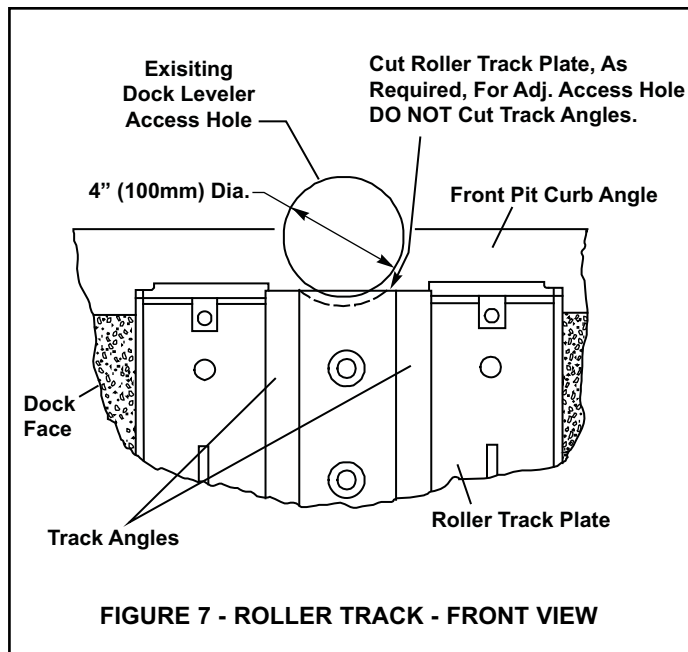
ANCHOR INSTALLATION INSTRUCTIONS

1. Put roller track plate in place.
2. Drill hole of 5/8" (16mm) diameter and minimum of 4-5/8" (116mm) deep. Clean out hole.
3. Insert anchor and drive flush with roller track plate, making certain that the threaded wedge is put in first. Do not disassemble anchor prior to installation.
4. Install all anchors and torque to 60 ft-lbs (80 N-m). See figure 4.



INSTALLATION INSTRUCTIONS CONT.

SPECIAL APPLICATION INSTALLATION



NOTE: Shim as required behind track angles (1/2" (13mm) thick minimum bar stock) and weld in place. See figure 8.

IMPORTANT

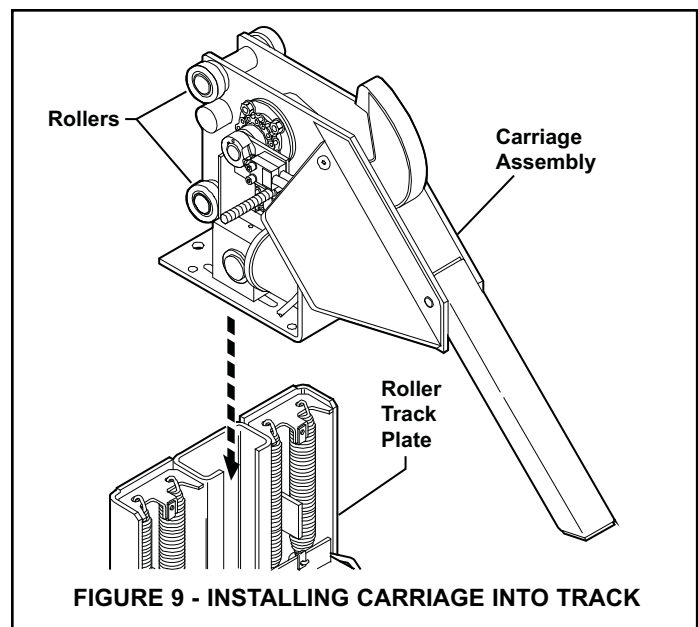
Add length to lip guide as required (supplied by others). Weld in place as shown in Figure 8. Do not weld to leveler front frame angle.

INSTALL DOK-LOK VEHICLE RESTRAINT INTO ROLLER TRACK PLATE

CAUTION

When lifting carriage (approx. 110 lbs. (50 kg)) use lifting device (ex. crane, jack). Lifting by hand may cause back injury.

1. Attach the four (4) springs to the lower spring bar.
2. Pull upward and slide over top spring mount on the track roller plate. Then slide the carriage assembly into the roller track. Refer to Figure 10.
3. Position and bolt the lower spring bar to the bottom of the DOK-LOK vehicle restraint carriage.
4. Install the spring covers and motor cover.



INSTALLATION INSTRUCTIONS CONT.

DANGER

When working with electrical or electronic controls, make sure that the power source has been locked out and tagged according to OSHA regulations and approved local electrical codes.

CAUTION

- When drilling holes in the box, **DO NOT** allow the drill to go too deeply into the box. Damage to the control systems may occur.
- **DO NOT** turn control box upside down to drill any access holes. Cover internal electrical components prior to drilling - this will prevent debris from contacting the internal electrical components.
- Remove all debris from box using a shop vacuum. **NEVER** use air to blow debris from the control box.

CONTROL BOX AND CONDUIT INSTALLATION PROCEDURES.

1. Install the control box on a wall adjacent to the overhead door at approximately 48" (1220mm) above the floor level. See figure 10.
2. Drill a hole for the power supply conduit (by others) in the bottom of the control box. **All holes drilled through the control box must be through the bottom of the box.**

IMPORTANT

- The control box and all wiring should be installed by a qualified electrician in accordance with all national and local electrical codes.
- If rigid conduit is installed, bonding must be maintained between conduit connections by using ground bushings and a jumper wire.

INSTALL ELECTRICAL COMPONENTS

If the incoming electrical power for the RHR DOK-LOK vehicle restraint is taken from a nearby electrical appliance, i.e., overhead door opener, verify that the amperage is in accordance with local and federal codes.

The DOK-LOK vehicle restraint requires 120V, single phase power, 60 Hz power and 10 amps of current, for a 1/4 HP motor, to operate properly.

Two (2) DOK-LOK vehicle restraints can be hooked into one (1) 20 amp branch circuit breaker per the 1999 National Electrical Code Paragraph 430-53.

When in doubt, call your RITE-HITE representative or RITE-HITE at (800) 456-0600.

IMPORTANT

All components must be connected to a SAFETY EARTH GROUND where indicated. The SAFETY EARTH GROUND must conform to the 1999 National Electric Code Section 250-50 section (a) or section (c) for a grounding electrode system.

The DOK-LOK vehicle restraint assembly includes a 63" (1600mm) long flexible wiring harness. Also provided are the control box with lights and the outside signal light box. The outside junction box, conduit fittings and wire are provided by others. Quality material and workmanship should be used. Refer to Figure 10, page 10 for component location information. Refer to electrical schematics found inside the control box for wiring information.

CONTROL BOX INSTALLATION GUIDELINES - TEMPERATURE CONTROLLED APPLICATIONS.

- a. Conduit should be routed to enter through the bottom or side of the enclosure. A drip leg may be needed if the conduit could fill with water.
- b. Seal the conduit in any location where the conduit transitions temperature zones that may produce condensation.
- c. Spacers should be installed between the enclosure and the wall to provide tempature insulation and air flow.

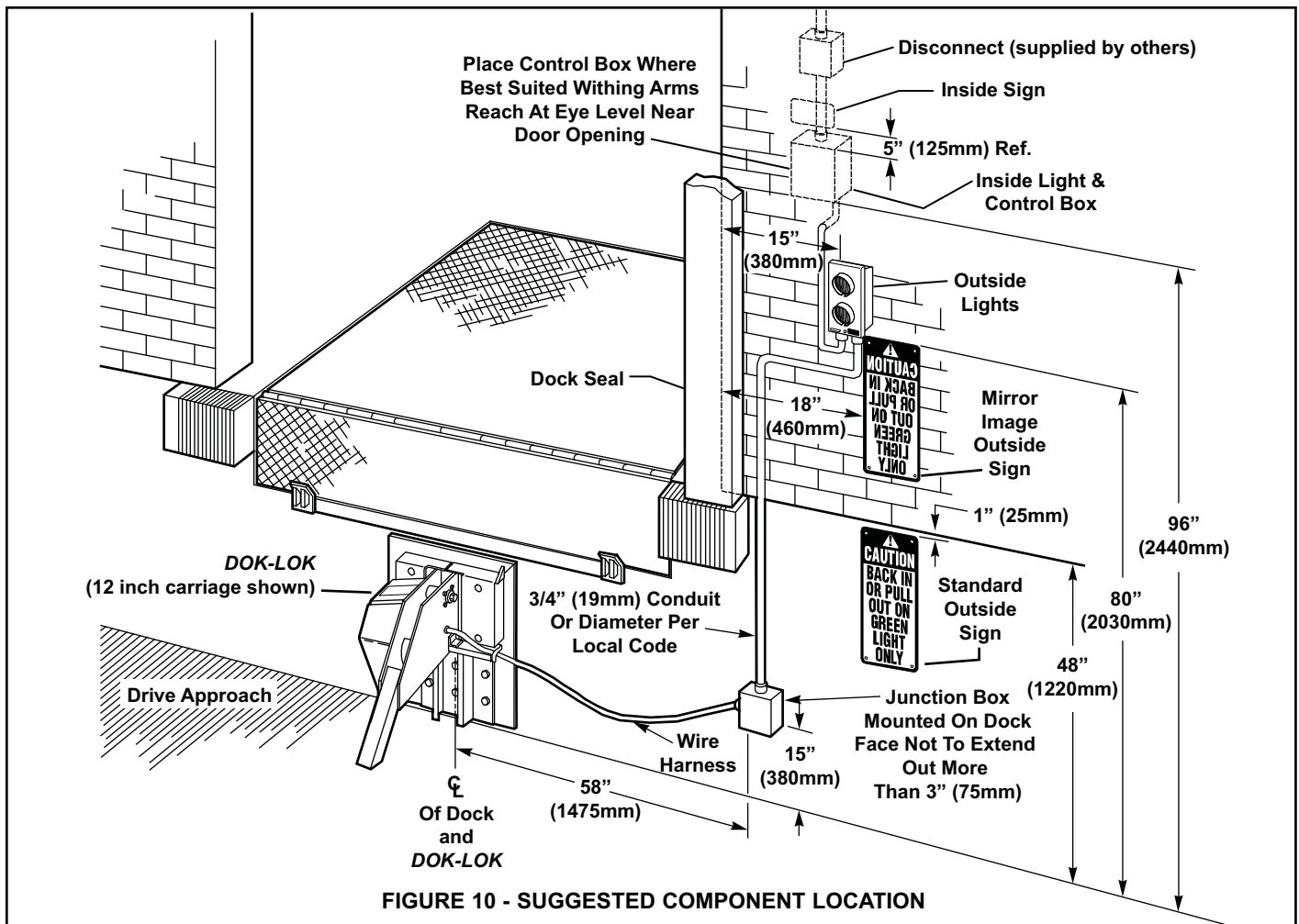
INSTALLATION INSTRUCTIONS CONT.

INSTALL SIGNS

There are two (2) driver warning signs and one (1) inside operator sign supplied with each Dok-Lok vehicle restraint. Because of the many ways signs can be mounted, hardware is not supplied. Mount both outside signs on the right hand side of the Dok-Lok vehicle restraint. The mirror-image sign is usually mounted above the lower sign and near the outside signal lights. (Mirror-image permits the truck driver to read sign from truck mirror.) Mount the inside sign next to the control box. All signs must be installed.

TEST OPERATION

Follow Operating Procedure in owners manual.



NOTES:

- Some docks may have dock/truck seals (or shelters) installed or planned which are larger than standard. Outside light, sign location, and mounting should be studied before proceeding to avoid interference. See figure 10.
- If required for special reasons, signs may be trimmed for fit. NEVER cut or eliminate sign letters/words. See figure 10.
- Attach signs with concrete anchors or screws. Nails are not acceptable. See Figure 10.
- NEVER put conduit in front of signs. A clear view of both exterior signs and the single interior sign must be maintained at all times. See figure 10.

NOTES

RITE-HITE STANDARD WARRANTY

Rite-Hite warrants that its products will be free from defects in design, materials, and workmanship for a period of 365 days from the date of shipment. All claims for breach of this warranty must be made within 30 days after the defect is or can, with reasonable care, be detected and in no event no more than 30 days after the warranty has expired. In order to be entitled to the benefits of this warranty, the products must have been properly installed, maintained, and operated within their rated capacities and/or specified design parameters, and not otherwise abused. Periodic lubrication and adjustment is the sole responsibility of the owner. This warranty is Rite-Hite's exclusive warranty. RITE-HITE EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS. Non-standard warranties, if any, must be specified by Rite-Hite in writing.

In the event of any defects covered by this warranty, Rite-Hite will remedy such defects by repairing or replacing any defective equipment or parts, bearing all the costs for parts, labor, and transportation. This shall be the exclusive remedy for all claims whether based on contract, negligence, or strict liability.

LIMITATION OF LIABILITY

RITE-HITE SHALL NOT IN ANY EVENT BE LIABLE FOR ANY LOSS OF USE OF ANY EQUIPMENT OR INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND, WHETHER FOR BREACH OF WARRANTY, NEGLIGENCE, OR STRICT LIABILITY.



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