ERECTING FRAMES
R-3939 FLOOR SUPPORTED HEAVY DUTY
HOISTING CENTER

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1. GENERAL

1.1 Scope

1.11 This section covers instruction for the assembly and used of the R-3939 Floor Supported Heavy Duty Hoisting Center for handling equipment weights up to 3 tons.

1.12 The R-3939 Floor Supported Heavy Duty Hoisting Center is recommended for use where:

(a) Weights range from 3,000 to 6,000 lbs. Under 3,000 lbs use R-3447.

(b) Equipment is floor supported in above weight ranges.

(c) Where trolley and hoist travel are required.

(d) Where ceiling inserts or beam clamps are not available or cannot handle 3 Ton capacity for Erecting equipment.

In these cases, the R-3939 Hoisting Center supports a trolley and 3 Ton Hoist. Two hoisting clamps are also provided which permit support of two hoists for maximum flexibility when used to hoist equipment to a vertical position and installed in place or after which the standard dolly truck is attached to the frame and the frame conveyed to its permanent location in the regular manner as described in other sections of Handbook 30.

2. HEIGHT REQUIREMENTS

2.1 The R-3939 Hoisting Center is adjustable in height and width. Telescoping legs permit a minimum of 7-1/2 ft. to a maximum of 14 ft. clear under I beam. Caster spread can be adjusted from a minimum spread of 45 inches to a maximum spread of 75 inches. A safety cable prevents over spread. See Figure 3 for insturctions for attaching safety cable.

2.2 To change height, lift both legs on one end simultaneously - a maximum of three holes at one time. Then lift other pair of legs to balance gantry.

CAUTION: Hoist trolley should be on opposite end from lifting.

3. HOISTING CAPACITIES

3.1 The R-3939 Heavy Duty Hoisting Center has been designed to handle equipment up to 6,000 lbs. or 3 tons. The following table is a guide for use of R-3939 at various heights:

LBS. I-BEAM TO FLOOR HEIGHTS

8'	10'	12'	14'
3T	3T	2.5T	2T

TABLE 1 OPERATING CAPACITIES

4. METHOD OF DISASSEMBLY

4.1 Method of disassembling the R-3939 is the reverse of that for assembly. Main support legs should be in lowest position before disassembly.

5. METHOD OF ASSEMBLY (See Figure 1)

5.1 The R-3939 can be assembled with a minimum of tools by two men. Figure 1 outlines recommended sequence for assembly.

STEP 1 Attach Frame Assemblies

The R-3939 Hoisting Center is designed to provide for inboard or outboard bracing at both ends of I Beam. This will provide more flexibility in the use of this unit where job conditions warrant it. See Figure 2 for detail assembly of fittings for inboard bracing.

When outboard bracing is required, attach outboard brace adapter Kit to gantry as shown in Figure 1.

STEP 2 Support Beam

The light weight I Beam can be supported one of two ways:

(1) When Overhead Support is available the U-Bolt on top of I Beam is intended to support the I Beam for vertical assembly or for raising or lowering the gantry to adjust the height.

(2) When overhead support is not available, it will be necessary to support I Beam on two R-3643 G8 ladders and secured with C Clamps as shown in Figure 1.

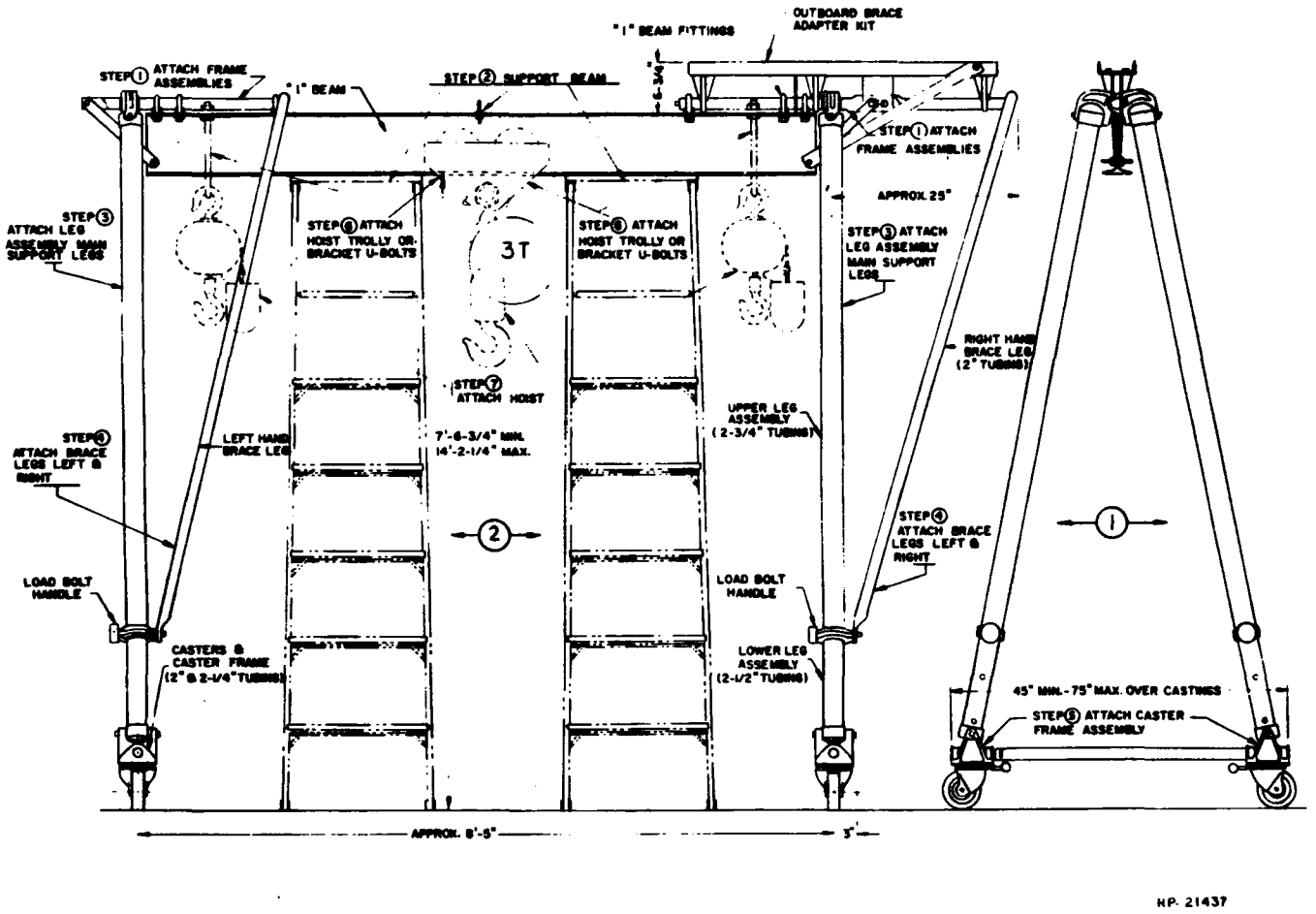


FIG. 1 METHOD OF ASSEMBLY R-3939 HOISTING CENTER

STEP 3 Attach Leg Assembly Main Support Legs

Position two intermeshed yokes and pin legs to yokes on both ends of I Beam.

CAUTION: Position legs with load bolt handle as shown for inboard on outboard bracing.

STEP 4 Attach Brace Legs Left & Right

Brace legs have been color coded to permit proper identification.

STEP 5 Attach Caster Frame Assembly

Bolt four casters and safety cables, see Figure 3, to caster frame, attach caster frame to the base of the Main support legs on both ends of I Beam.

STEP 6 Attach Hoist Trolley or Hoist Bracket U Bolts

The R-3939 is supplied with two types of hoist attachments.

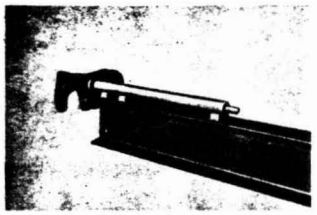
(1) Trolley Hoist.

(2) U-Bolt Brackets.

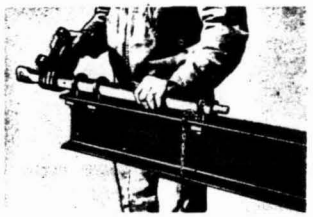
Depending on job conditions either or both can be attached to I Beam. To install trolley the trolley stop should be removed from either end of I Beam. U-Bolt Brackets may be installed in any position on I Beam.

STEP 7 Attach Hoist

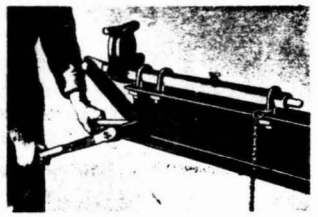
The R-3991 3-Ton Hand Hoist weighs approximately 80 lbs. and will require a safety rope to raise it to the proper height for attaching to trolley or U-Bolt Brackets. This requirement should be strictly enforced to prevent accidents.



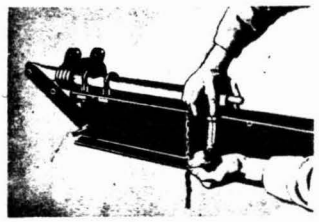
1. Interlock yokes on bar as shown. Then place bar on cradles as illustrated.



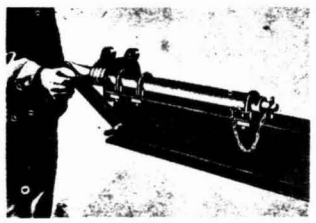
2. Slip U-Bolts into place. Note that S-Hook and Chain assembly MUST be on inboard U-Bolt BEFORE it is positioned. Attach bevel and lock washers, then attach nuts HAND TIGHT ONLY.



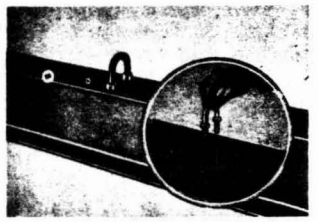
3. Attach diagonal brace straps, use special trolley stop bolt at I-Beam and standard bolt at load support bar. Tighten as shown.



4. Draw up U-Bolts. Tighten opposite sides evenly.

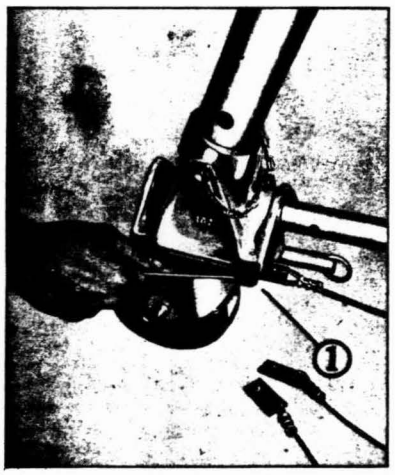


5. Insert cotter pins on both sides of interlocked yokes and spread the cotter pins securely to hold yokes in proper position for leg alignment. Repeat steps #1 to 5 at opposite end of I-Beam.



6. Attach yellow U-Bolt to center of top flange of I-Beam in the holes provided. This U-Bolt is intended to support the I-Beam for vertical assembly for raising or lowering the gantry to adjust the height, when an overhead support is available.

FIG. 2 ASSEMBLY OF FITTINGS FOR INBOARD BRACING



1 - When caster is bolted to the caster frame, with 4 bolts provided, be certain to attach one end of safety cable to one bolt as shown at (1), in photo at left.

2 - Repeat step No. 1 at opposite end of caster frame assembly.

3 - Photo opposite shows cable wrapped around tube, out of the way, and secured at caster spread pin (2).

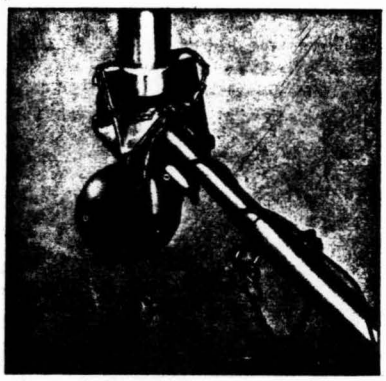


FIG. 3 ATTACHING SAFETY CABLE

6. OPERATION INSTRUCTIONS (See Figure 1)

6.1 Gantry is positioned firmly by locking casters at 90° angles. When loaded or unloaded, the R-3939 Gantry can be moved freely in the direction indicated by arrow (1), with legs extended or otherwise.

CAUTION: When loaded, the R-3939 should not be moved in the directions indicated by arrow (2). The extended portion of the leg cannot be properly braced to withstand severe shock loads in this direction.

For extended handling place load on a hand truck. It is recommended that the R-3939 be used only to place or remove equipment and to get it to or from an area located in a convenient aisleway. With attention to the above recommendation and safe practice, and others such as loading within rated limits, the R-3939 should give trouble free service.

→ Arrowed lines indicate new or changed information.

7. SAFETY CABLE

7.1 The safety cables provided with R-3939 GANTRY prevent the gantry from overspreading, in the event the caster spread pin (2), shown above, is pulled, without first securing the casters. It should be attached as shown in Figure 3.

Manager, Engineering Planning

Reason for Reissue:
To show outboard brace support in Figure 1.