Installation Engineering Handbook 30
Western Electric
Service Division

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UNPACKING AND CONVEYING FRAMES

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1. GENERAL

1.1 Scope

1.11 This section contains information for unpacking frames of all systems and conveying them to the hoisting center.

1.12 Detailed information peculiar to specific systems may be found in handbook sections devoted to that system.

1.2 Associated Information

1.21 Reference should be made to floor plan drawings and specification information furnished the job.

1.22 The conveyance of Transistor Cabinets is referred elsewhere in Handbook 30.

1.3 Preparation of Tools

1.31 Prior to starting operations covered by this section, the tools and other items required should be obtained and made available at the work location to minimize later inconvenience and delay.

1.32 Two foot sections of 2" x 4" wooden shipping details should be ready for placing under newly arrived frames.

1.4 Precautions Against Personal Injury and Equipment Damage

1.41 The specific precautions to be taken to prevent personal injury, equipment damage, and service interruptions are covered in this section with the associated operations. General precautions are covered in the general sections of this handbook and in Handbook 0. These precautions should be observed at all times, as they apply to the particular operation being performed.

2. INSTALLING EQUIPMENT

2.1 Tools and Supplies

2.11 In addition to those tools found in the general tool kits, the tools listed below will be required for the operations covered within this section.

R-2599 Truck, Dolly, Pipe Frame
R-1605 Truck, Hand
R-2599-A Truck, Dolly, Pipe Frame, Modified
R-3632 Truck, Skid Dolly
R-3662 Cutter, Steel Strapping, Safety

2.2 The 2" x 4" wood sections should be prepared on the job for supporting the frames.

3. UNPACKING FRAMES

3.1 Uncrate shipped materials in quarters separate from the equipment room in order to keep to an absolute minimum dust, lint and other undesirable particles which could create maintenance problems.

3.11 Clean received material before bringing into the equipment room by removing foreign matter such as wood chips, etc. It is not necessary to pressure clean the received material at this time.

3.2 Removing the sides, ends and tops of frame packing cases outside the building will reduce the labor involved in handling packing material and will facilitate hoisting of the frames into the building. The skids are left attached to the frame to permit ready handling on the dolly truck.

3.21 If a skid is not present, the sides and bottom of the corrugated container supporting the frame are to be left intact. The packing details at the ends of the frame must also be left intact to allow ready handling. However, unnecessary material such as the lid and steel strapping are to be left outside the equipment area.

3.3 Unpack frames by the following methods:

3.31 If the box or crate is bound with steel banding, cut them with the R-3662 Safety Steel Strapping Cutter.

3.32 Remove the nails at the bottom of the box and lift the box off the frame.

3.33 If the box cannot be lifted conveniently, as indicated above, remove the nails from one end and take the box off from the opposite end of the frame.

CAUTION: TO PREVENT SAFETY HAZARDS, REMOVE NAILS AND STAPLES OR BANG THEM FULLY INTO THE WOOD. NAILS STAPLES AND ANY OTHER LOOSE PACKAGING MATERIAL MUST BE CLEANED OFF THE FLOOR PROMPTLY. STEEL STRAPPING IS TO BE HANDLED WITH GLOVES AND DISCARDED LOCALLY.

4. CONVEYING FRAMES

4.1 Preparation of Frames

4.11 To simplify raising and lowering of frames, racks and other loads to be conveyed by dolly truck while lying on their back or sides, store slightly above the floor level.

4.111 When frames are received in the building, a blocking detail (2 x 4) should be placed under each end of the skid. Locate the blocking details, with its wider edge down, approximately 12 inches from each end.

4.112 Frames in corrugated cartons without skids should be supported by a clocking detail at its center in addition to the blocking detail supports placed under each end.

4.2 R-2599 Pipe Frame Dolly Truck

4.21 The R-1605 Hand Truck may be used for raising the ends of light frames or cartons lying in the horizontal position to allow placement and removal of the R-2599 Pipe Frame Dolly Truck.

4.22 The R-2599 Pipe Frame Dolly may be used for conveying single bay framework lying on their back or sides.

CAUTION: A POSSIBLE SAFETY HAZARD EXISTS WHEN THIS TRUCK IS USED TO CONVEY DOUBLE BAY FRAMES PACKAGED ON THEIR SIDE. THEREFORE, WHENEVER POSSIBLE, THE R-3632 SKID DOLLY TRUCK SHOULD BE USED TO CONVEY DOUBLE-BAY FRAMES (SEE PARS. 4.3 & 4.4).

4.23 The pipe dolly is to be placed under the center of the bay with its long side parallel to the length of the bay frame.

4.231 Exceptionally heavy single bays will require the use of two such pipe dollies, spaced two feet from each end of the bay.

4.24 Cautions

4.241 Convey frame slowly to prevent overturning or collision.

4.242 Avoid abrupt movements.

4.243 Do not push frame sideways.

4.244 Do not stand under bay which is overturning or try to prevent it from falling.

4.25 When the dolly is removed from under the bay, and the bay is not in position to be erected, blocking details should be placed under each end of the bay.

4.3 R-2599-A Modified Pipe Frame Dolly Truck

4.31 Some of the heavy double bay #5 Crossbar frames are packed on 29-1/8" wide skids. Neither the 22" wide R-3632 Skid Dolly Truck nor the 27" wide R-2599 Pipe Frame Dolly Truck can be used to convey these frames; rather, the R-2599-A Modified Pipe Frame Dolly Truck, which is 30" wide, should be used.

NOTE: The R-1605 Hand Truck can be used to raise the end of these frames to allow for the placement and removal of the R-2599-A Truck; however, the 22" width of the hand truck will necessitate that it be applied on the center runner of the skid (not a crossmember).

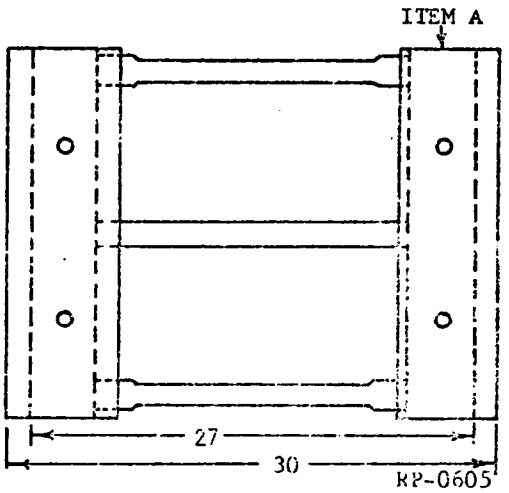

FIG. 1 R-2599-A DOLLY TRUCK (TOP VIEW) WITH 30" WIDTH (PAR. 4.321)

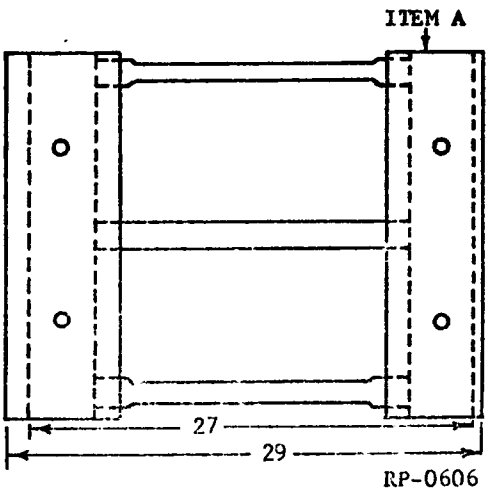

FIG. 2 R-2599-A DOLLY TRUCK (TOP VIEW) WITH 29" WIDTH (PAR. 4.321)

4.32 The R-2599-A Truck is identical to the R-2599 Truck except for the addition of two aluminum plates which increase the width of the platform (see Fig. 1) from 27" to 30".

4.321 Notice the configuration of the aluminum plate marked "Item A" in Figs. 1 & 2. The holes are drilled off-center to permit either a 30" or 29" width depending on aisle width. Since it is preferred to use the truck with the 30" width configuration, it will be necessary to check the width of affected aisles before conveying frames.

4.33 It is recommended that two (2) R-2599-A Dolly Trucks be used whenever possible to convey frames packed on 29-1/8" wide skids in order to provide better stability.

4.34 The "Cautions" stated in Par. 4.24 for the R-2599 Dolly Truck should also be observed for the R-2599-A Dolly Truck.

4.4 Skid Dolly

4.41 The R-3632 Skid Dolly Truck, as shown in Figure 3, is a hydraulic lift truck to be ordered and used in pairs. It was designed to safely transport single and double bay frames lying on their sides and attached to shipping skids. It has a rated capacity of 2,000 lbs.

4.411 This truck may also be used for handling transistor cabinets, crated frames and other loads of box shaped construction.

4.5 Uncrated frames on their sides, attached to skids and resting on blocking details are handled in the following manner:

4.51 Attach the Det. 14 Adapter to the adjustable upper back stop plate on the truck. Move the back stop to the highest position in which it will bear conveniently against the frame being handled. Relocate the pin on the center rod to hold the plate in the appropriate position.

CAUTION:	CHECK TO MAKE SURE THAT LOCKING NUT AT BOTTOM OF JACK SHAFT IS ON AND SECURE. IF THIS NUT IS MISSING THERE IS A POSSIBILITY THAT THE PIPE CLAMP SECURES THE LIFTING PLATFORM TO THE JACK SHAFT WILL SLIP OFF AND CONSEQUENTLY THE TRUCK SHOULD NOT BE USED.

4.52 Move the dollies into position with their lifting platforms under each end of the skid. The back stops must bear against the top and base of the frame.

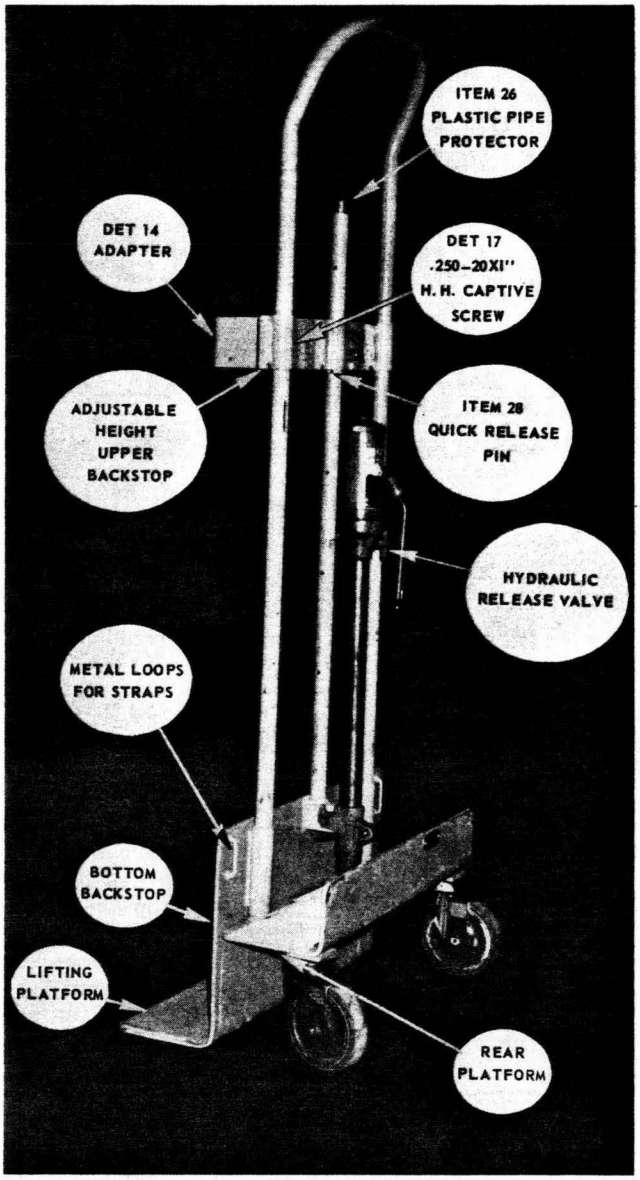

FIG. 3 R-3632 SKID DOLLY TRUCK

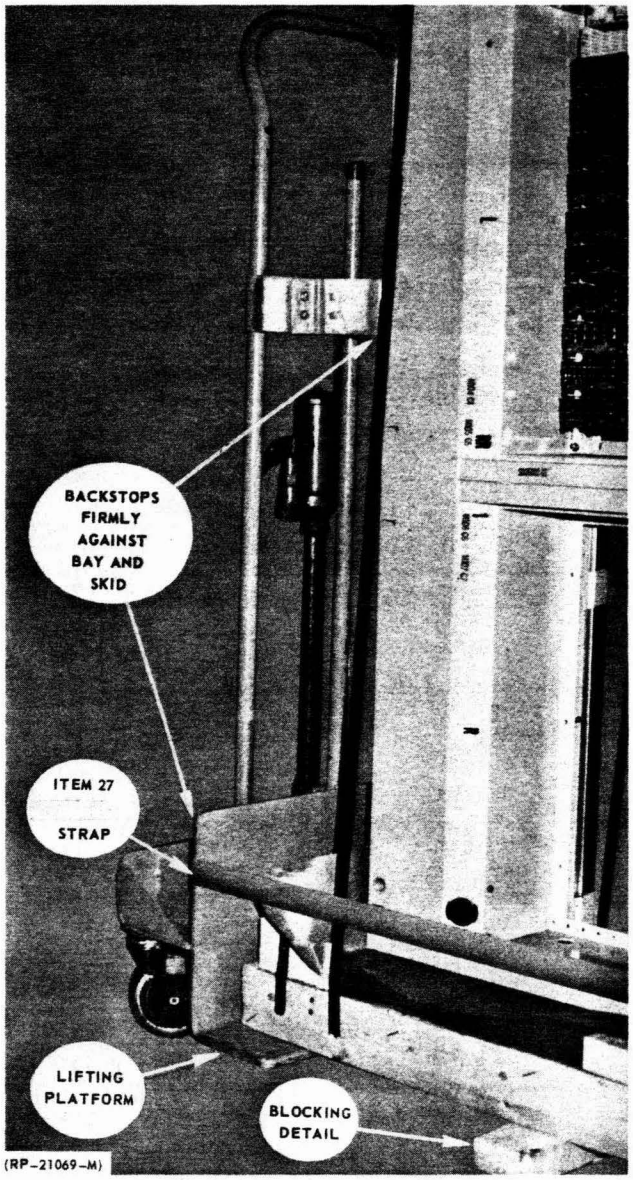

FIG. 4 USE OF R-3632 TRUCK FOR MOVING HEAVY DOUBLE BAYS

4.53 Check to insure that the release valve on each jack is tightened in the clockwise direction.

4.54 Operate pump with up and down motion. While starting the lift, keep lifting platform under load by placing one foot against the back of the truck. The difference between the raised height at each end of the skid should not exceed 1/2 inch.

4.55 Move frame to hoisting center where two additional blocking details should be ready for the load to be lowered on.

4.56 To lower the load, turn the release valve slowly counterclockwise. Place one foot against the back of the truck to keep it in place.

4.57 Remove the trucks from both ends before erecting bay.

4.6 Loads under 500 lbs. will generally require the utilization of the 1-1/2 inch cotton safety strap which is Item 27 of the truck. Safety straps should also be used on loads when it is desirable to restrict the marring of the loads bottom.

4.61 This strap should be wrapped around the metal loops located on the rear, and one inch from the sides, of the bottom back stop. The straps from each of the two dollies being used should be connected alongside the load with their metal buckles.

4.7 General operation of the R-3632 Dolly when used for crated frames or boxes is similar to their operation when used with uncrated frames. However, the Det. 14 Adapter is not applicable. It is to be removed and stored on the rear platform of the dolly.

4.8 The associated safety straps must be utilized when the R-3632 Dolly is used instead of the R-3083 Dolly to move Translator Cabinets. These cabinets should be mounted on an R-3093 Lifting Frame before moving. See the affected section in Handbook 30 for additional information.

4.9 Hydraulic jack oil or SAE #30 motor oil should be purchased locally and used to refill the hydraulic jack oil supply when necessary. Depending on the model of the jack, the filling plug will be on the top side of its body.

Arrowed lines indicate new or changed information.

[Vertical lines at side of paragraph indicates requirements.

Engineering Planning Manager
Common Installation Engineering

Reason for Reissue:
(1) To reword Par. 3.11.
(2) To reword CAUTION in Par. 4.22.
(3) To add new Par. 4.3 causing renumbering of remainder of section.
(4) To add Figs. 3 & 4.