ARO
Tool & Hoist Products

OPERATOR'S MANUAL

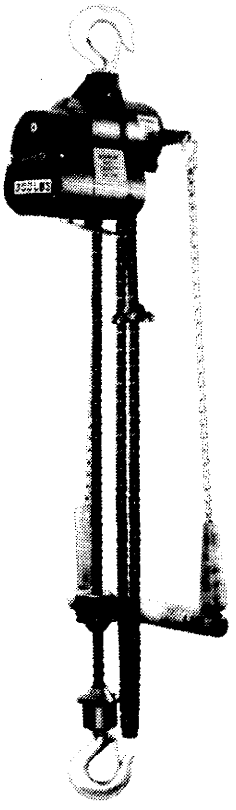
INCLUDING: OPERATION, INSTALLATION & MAINTENANCE

AIR–POWERED UTILITY HOIST

SECTION	M50
MANUAL	62
Released:	10/82
Revised:	8–9–93
Form:	2294–2

Models 7740–B, 7740–BT (LINK CHAIN), 7741–B and 7741–BT (ROLLER CHAIN).

IMPORTANT: READ THIS MANUAL CAREFULLY BEFORE INSTALLING, OPERATING OR SERVICING THIS EQUIPMENT.



FEATURES:

LINK OR ROLLER LOAD CHAIN
HOOK OR TROLLEY SUSPENSION
PULL–CHAIN THROTTLE CONTROL – 5 FT (1.5 m) LONG
WEIGHT – 15–1/4 LBS (7 kg)

SPECIFICATIONS:

LOAD CAPACITY (MAX.)		300 lbs (136 kg)
H.P. (MAX.)		.35 (261 m)
STANDARD LIFT		12 ft (3.7 m)
RATE OF LIFT (with 300 lb load)		
	7740–B	16 ft/min. (4.8 m) *Minimum
	7741–B	18 ft/min. (5.5 m) *Minimum
RATE OF DESCENT (with 300 lb load)		
	7740–B	17 ft/min. (5.2 m) *Minimum
	7741–B	17 ft/min. (5.2 m) *Minimum
LENGTH		7 in. (178 mm)
WIDTH		6 in. (152 mm)
HEIGHT (min. hook to hook)		
	7740–B	15–1/2 in. (394 mm)
	7740–BT	16–1/2 in. (419 mm)
	7741–B	15–1/8 in. (384 mm)
	7741–BT	16–1/8 in. (410 mm)

*With 90 p.s.i.g. (6 bar) at air inlet of hoist.

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For parts and service information, contact your local ARO distributor, or the Customer Service Dept. of the Ingersoll–Rand Distribution Center, White House, TN at PH: (615) 672–0321, FAX: (615) 672–0601.

ARO Tool & Hoist Products
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INGERSOLL-RAND®
PROFESSIONAL TOOLS

MODEL IDENTIFICATION

MODEL NO.	UPPER MOUNTING	TYPE CONTROL	TYPE LOAD CHAIN
7740-B	HOOK ASS'Y. 44061	PULL-CHAIN	LINK
7740-BT	ADAPTER EYE ASS'Y. 44121	PULL-CHAIN	LINK
7741-B	HOOK ASS'Y. 44061	PULL-CHAIN	ROLLER
7741-BT	ADAPTER EYE ASS'Y. 44121	PULL-CHAIN	ROLLER

WARNING: THE HOISTING EQUIPMENT SHOWN AND DESCRIBED IN THIS MANUAL SHALL NOT BE USED TO LIFT OR TRANSPORT HUMAN CARGO.

CAUTION: DO NOT USE OR INSTALL HOIST FOR DUMBWAITER, ELEVATOR OR GUIDED HOOK OPERATION.

Safe and efficient operation of your ARO Hoist can best be attained by observing proper operating, inspection and maintenance procedures. Allow only competent and qualified people to operate Hoist and subject each Hoist to a regular inspection and maintenance procedure. The qualified Hoist operator must be carefully instructed in the safe operation of the Hoist, including a study of the manufacturer's literature, and must thoroughly understand proper methods of hitching loads. The operator should have a good attitude regarding safety.

To aid in a better understanding of proper and safe use of hoists; the publication "Overhead hoists", ANSI B30.16 1981, can be purchased from the American Standards Institute, Inc., 1430 Broadway, N.Y., N.Y. 10018.

INSTALLATION AND OPERATION

INSTALLATION

Hoist shall be installed only in locations that will permit the operator to stand free of the load at all times.
Your ARO Hoist is completely lubricated and load tested before being shipped from factory. To place in service:

HOOK SUSPENDED MODELS (7740-B & 7741-B) – Select an overhead support capable of safely supporting combined weight of hoist and its capacity load. Hang hoist being certain the upper hook is firmly seated in the center of the hook saddle and that the safety latch is properly closed. Hook suspended models may also be used with Trolley Model 7737.

TROLLEY SUSPENDED MODELS (7740-BT & 7741-BT) – Hoist must be assembled to trolley with Shaft (44079) of trolley passing thru Adapter Eye (44121) of hoist. The trolley side plates must be spaced so the trolley wheels will properly engage the beam on which the trolley will be operated. Adjustment for various beam sizes is accomplished by arrangement of the spacer washers on the shaft which connects the trolley side plates. The distance between the outside edges of the trolly wheels should be approximately 1/2" greater than the width of the beam flange. The number of spacers used to space side plates must be the same on each side of the shaft between the side plate and the shaft flange and the remaining spacer must be equally distributed on the shaft between the side plate and lock nut, see figure 8. When installing trolley on beam, be certain side plates are vertical.

Determine the number of spacers needed to properly space side plates out and assemble shaft and spacers to hoist. Assemble one (1) side plate, spacers and nuts to shaft. Position trolley and hoist on beam and assemble other side plate, spacers and nut to shaft. Tighten nuts securely. The lock nuts must properly engage the shaft with the shaft extending all the way through the lock nut. The trolley wheels should be positioned as close as possible to the edge of the beam flange. Operate the trolley over the entire length of the track and observe operation. If it appears the trolley side plates can be moved closer together and freedom of movement maintained, remove an equal number of spacers from between the side plates and shaft flange on each side and assemble these spacers to the outside of the side plates between the lock nut and side plate.

The beam on which the trolley is to be used must safely support the combined weight of the Hoist, Trolley, and Capacity Load. Minimum turning radius of the Trolley is 18 inches. Connect hoist to nearest air source using a minimum 3/8" I.D. air hose assembly. Sufficient air hose must be provided to reach the farthest point of travel of the trolley.

OPERATION

OPERATE HOIST CAUTIOUSLY to become familiar with the performance of the hoist. Hoist shall be operated from a position that will not be hazardous to the operator. Pull controls slowly. Abrupt operation, resulting from "jerking" of controls, should be avoided.

BEFORE STARTING TO LIFT, insure chain is properly seated in Sprocket or Pocketwheel. Do not lift or move load more than a few inches until load is well balanced in sling or lifting device. Care should be taken in hoisting to insure that chain is not kinked or twisted and load does not contact any obstructions. Be certain hoist is centered over load to prevent danger of load swinging when lifted. Side or end pulling should always be avoided. Take up slack chain carefully to avoid overstress caused by jerking load when lifting. Be certain safety latch on load hook is properly closed.

DO NOT wrap the hoist load chain around the load. The load shall be attached to the hook by means of slings or other approved devices and shall be properly seated in the saddle of the hook.

CAUTION: DO NOT OPERATE HOIST WITHOUT UPPER CHAIN STOP AND LOWER CHAIN STOP ASSEMBLIES ATTACHED PROPERLY TO HOIST LOAD CHAIN. DO NOT USE CHAIN STOP AS A LIMIT SWITCH (to stop hoist when operating in the "up" mode).

The operator shall test the brakes each time a load approaching the rated load is handled by raising the load just enough to clear floor, or supports, and checking for proper brake action and lift continued only if brake is functioning properly.

DO NOT EXCEED RATED LOAD CAPACITY OF HOIST.

DO NOT operate hoist over people.

WARNING: DO NOT USE HOIST FOR HUMAN TRANSPORT.

DO NOT leave load suspended for extended or unattended periods.

AIR AND LUBE REQUIREMENTS

AIR PRESSURE of 90 p.s.i.g. (6 bar) at air inlet of hoist is required for maximum motor efficiency. If necessary, an air regulator should be installed to maintain this pressure when hoist is in operation.

A LINE OILER must be used with this hoist to insure proper lubrication for the motor.

FILTERED AND OILED AIR will allow the hoist to operate more efficiently and yield a longer life to operating parts and mechanisms. A line filter capable of filtering particles larger than 50 microns should be used with a line oiler.

FILTER-REGULATOR-LUBRICATOR (F-R-L) assembly Model 128231-300 is recommended for use with this Air Hoist. The capacity of the individual F-R-L is adequate to provide clean (40 micron) oiled and regulated air for the tool.

RECOMMENDED HOSE SIZE – 3/8" (10 mm) nominal inside diameter.

Hoists are lubricated before being shipped from factory. After approximately 250 hours of operating time, lubricate gearing thru grease fitting in gear housing using approximately 1/2 oz. (14 g) of 33153 Grease. Lubricate trolley wheels thru grease fittings at regular intervals, using 33153 Grease or equivalent.

LOAD CHAIN – The load chain should be lubricated periodically with heavy "EP" Gear Oil. Occasional cleaning of the chain, under normal operating conditions, will tend to reduce wear and prolong chain and sprocket or pocketwheel life. To properly clean, remove chain from hoist (see page 4) and wash in an oil solvent. Lubricate chain. Under highly contaminated operating conditions, the load chain should be cleaned and re-lubricated with greater frequency to remove grit, sand and other contaminants.

RECOMMENDED LUBRICANTS: Spindle Oil 29665, 1 qt. (.9 liter) container for oiler and air inlet; Grease 33153, 5 lb. (2.3 kg) can for gears and bearings, "O" Ring Lubricant 36460, 4 oz. (113 g) tube for lubrication and installation of "O" Rings.

INSPECTION AND MAINTENANCE

INSPECTION

ARO recognizes the need for periodical inspection of hoist components as an important step in preventive maintenance. The type of application for a hoist varies so greatly it is impractical to recommend an exact time-table for inspection of the hoist.
The frequency of inspection should be determined by the severity of the application.
The user of a hoist should be guided by an existing state or local regulations governing the use, testing or inspection of the hoist.
LOAD CHAIN

a. Visually check for nicked, gouged, twisted, bent, corroded, rusted, worn or broken links, sideplates or rollers. Check ends of chain where chain is fastened to hoist frame and where chain is fastened to lower hook connector. Check hook connector and connecting link.
b. Check chain elongation with a vernier caliper as shown in figure 1.

IT IS NOT INFERRED that a chain is safe prior to the occurence of elongation of the chain. It is inferred ONLY, that when said elongation is evident the chain must be replaced. Other factors, such as those mentioned as a visual check, may render chain unsafe long before replacement due to elongation is necessary.
NOTE: New chain should never be used on a worn pocketwheel; replace chain and pocketwheel as a pair.

c. Check Rubber Bumper for wear or splitting.

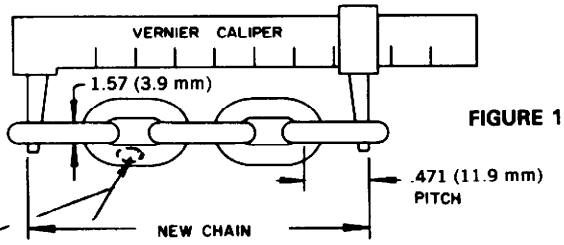
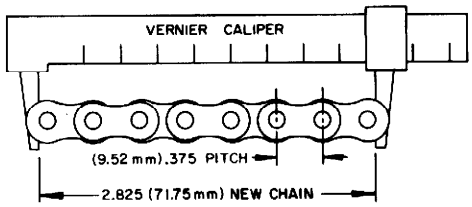


FIGURE 1

DETERMINE TYPE OF IDENTIFICATION MARKINGS EMBOSSED ON LOAD CHAIN AND FIND DIMENSIONS IN TABLE BELOW.

IDENTIFICATION MARKINGS	NEW CHAIN MEASUREMENT	REPLACE CHAIN
★	2.355 (59.8 mm)	2.386 (60.6 mm)
OC	2.369 (60.2 mm)	2.400 (61.0 mm)

IF VISUAL CHECK REVEALS NO DEFECTS, PROCEED AS FOLLOWS:
LAY USED CHAIN ON FLAT SURFACE AND MEASURE BETWEEN FIVE (5) LINKS AS SHOWN. MEASUREMENT SHOULD BE TAKEN ON PORTION OF CHAIN WHICH HAS MOST PASSED OVER THE POCKET WHEEL. IF MEASUREMENT TAKEN IS (SEE TABLE) INCHES OR MORE CHAIN SHOULD BE REPLACED.



IF VISUAL CHECK REVEALS NO DEFECTS, PROCEED AS FOLLOWS:
LAY USED CHAIN ON FLAT SURFACE AND MEASURE OVER EIGHT (8) ROLLS WHILE CHAIN IS PULLED TAUT AS SHOWN. MEASUREMENT SHOULD BE TAKEN ON PORTION OF CHAIN WHICH HAS MOST PASSED OVER THE SPROCKET.
IF MEASURMENT TAKEN IS 2.850 INCHES (72.39 mm) OR MORE, CHAIN SHOULD BE REPLACED.

HOOKS AND SUSPENSION

a. Check upper and lower hooks and components for bent, worn, cracked, broken or otherwise damaged parts.
b. On trolley suspended models, check conditions of trolley parts, trolley adapter and components. Replace any excessively worn or damaged parts.

BRAKE

a. Check brake and components, replace Liner and Insert and Spring.
b. Check brake operation.

GEARS, BEARINGS, SPROCKET OR POCKETWHEEL

a. Check condition of teeth on gears and motor shaft.
b. Check condition of sprocket teeth or pockets of pocketwheel.
c. Check condition of bearings.
d. Replace any worn or damaged parts.

THROTTLE VALVE

a. Check condition of valve and "O" rings on valve.
b. Check condition of bearings.
c. Replace any worn or damaged parts.

AIR MOTOR

a. Check end faces of rotor for roughness and blade slots for wear or burrs. A new blade should slide in and out of slots without binding.
b. Check blades for wear, warpage or other damage.
c. Check cylinder bore diameter for rough circular grooves from scoring. A badly scored cylinder cannot be restored by honing since it will only enlarge bore diameter, widening seal point between rotor and cylinder, hindering free exhaust of air and result in loss of speed and power.
d. Check end plates for wear or scoring. Check bearings.
e. Replace any excessively worn or damaged parts.

AIR HOISTS are made of precision parts and should be handled with reasonable care when servicing. Excessive pressure exerted by a holding device may cause distortion of a part. Apply pressure evenly when disassembling (or assembling) parts which have a press fit. When removing or installing bearings, apply pressure to the bearing race that will be the press fit to the mating part; if this is not practiced, Brinelling of the bearing races may occur making replacement necessary. It is important to use correct tools and fixtures when servicing an air hoist.

DISASSEMBLY should be done on a clean work bench with a clean cloth spread to prevent the loss of small parts. After disassembly is completed; all parts should be thoroughly washed in a clean solvent, blown dry with air and inspected for wear levels, abuse and contamination.

Double sealed or shielded bearings should never be placed in solvent unless a good method of relubricating the bearing is available. Open bearings may be washed but should not be allowed to spin while being blown dry. When REPLACEMENT PARTS are necessary, consult drawing containing parts.

UPON REASSEMBLING, lubricate parts where required. Use 33153 Grease or equivalent, in motor bearings. Use 36460 Lubricant for "O" ring assembly. When assembling "O" rings or parts adjacent "O" rings, care must be exercised to prevent damage to the rubber sealing surfaces. A small amount of grease will usually hold steel balls and other small parts in place while assembling.

WHEN ORDERING PARTS, be sure to list PART NUMBER, PART NAME and MODEL NUMBER OF HOIST. USE ONLY GENUINE ARO REPLACEMENT PARTS.

REMOVAL AND INSTALLATION OF LOAD CHAIN

REMOVAL

LOWER AND DISCONNECT LOAD FROM HOIST. SHUT OFF AIR AT SOURCE and operate hoist control to bleed air from hoist and air line BEFORE performing maintenance or service to hoist.

LINK CHAIN

Remove four (4) Screws (Y19-115-C) and remove Gear case (44765). Remove Gears (44767), (44768), and (44769). Remove Nut (Y22-8-C), Washer (Y1-8-C), Screw (Y154-43-C) and Washer (Y48-8-C) which anchors end of chain to housing. Remove two (2) Screws (Y19-412-C) and Upper Chain Stop (44517). Load Chain can now be pulled from housing.

ROLLER CHAIN

Remove four (4) Screws (Y19-115-C) from Gear case (44765) and remove Gear case. Remove Gears (44769), (44768) and (44767). Remove Upper Chain Stop (44040), Connecting Link (44011) and load chain from anchor lug on housing. Load chain can now be pulled thru housing.

INSTALLATION – LINK CHAIN

With Gear case (44765) and Gears removed as outlined in Removal of Chain; place upper hook in a vise with bottom end of hoist in an upright position. Feed load chain thru Lever (44095) and over Pocketwheel (44521-1) while rotating Output Gear (44020-1) by hand. Feed approximately one (1) foot of chain over Pocketwheel, back thru Lever (44095). Remove hoist from vise and hang in upright position. Insuring chain is not twisted, anchor end of chain which has been fed thru hoist to anchor lug on housing, securing with Screw (Y154-43-C), Washer (Y48-8-C), Washer (Y1-8-C) and Nut (Y22-8-C).
NOTE: The Link Chain must be installed so welded side of links face outward from Pocketwheel. Also, the end link of chain must be fed over Pocketwheel so it will be positioned properly to permit attaching to anchor lug without twisting of chain, see figure 2.

WARNING: DO NOT attempt to feed load chain over Pocketwheel while operating hoist under power as it may result in serious damage to the hoist housing, load chain and Pocketwheel.
Assemble Upper Chain Stop to Chain on tenth (10) link from anchored end of chain. Assemble Washer (Y13-9-C), Bumper (44047) and Lower Chain Stop (44517) to hook end of load chain positioning it on chain to obtain desired lift. Secure Chain Stops with Screws (Y19-412-C). Assemble Lower Hook Assembly (44061) to end of chain as shown, securing with Connectors (44516), Washers (30997) and Screws (Y19-412-C). NOTE: Lubricate Thrust Bearing (42363) and components liberally with 33153 Grease upon assembly. Insure Connectors are properly seated in last link of load chain and Screws (Y19-412-C) are tightened securely.

INSTALLATION – ROLLER CHAIN

With Gear case (44765) and Gears removed as outlined in Removal of Chain; place upper hook in a vise with bottom end of hoist in an upright position. Feed load chain thru Lever (44095) and over Sprocket (44026-1) while rotating Output Gear (44020-1) by hand. Feed approximately one (1) foot of chain over Sprocket and back thru Lever (44095). Remove hoist from vise and hang in an upright position. Insuring chain is not twisted, anchor end of chain which has been fed thru hoist to anchor lug on housing, securing with Connecting Link (44011). Assemble Upper Chain Stop to chain on seventh (7) link from anchored end of Chain. Assemble Lower Chain Stop Assembly (44076) to chain, positioning to obtain desired lift and assemble Lower Hook assembly to chain as shown. Insure chain is properly seated in connectors and tighten Screws (Y19-412-C) securely.
NOTE: Lubricate Thrust Bearing and components liberally with 33153 Grease.
WARNING: DO NOT attempt to feed chain over Sprocket while operating hoist under power as it may result in serious damage to the hoist housing, load chain and sprocket.

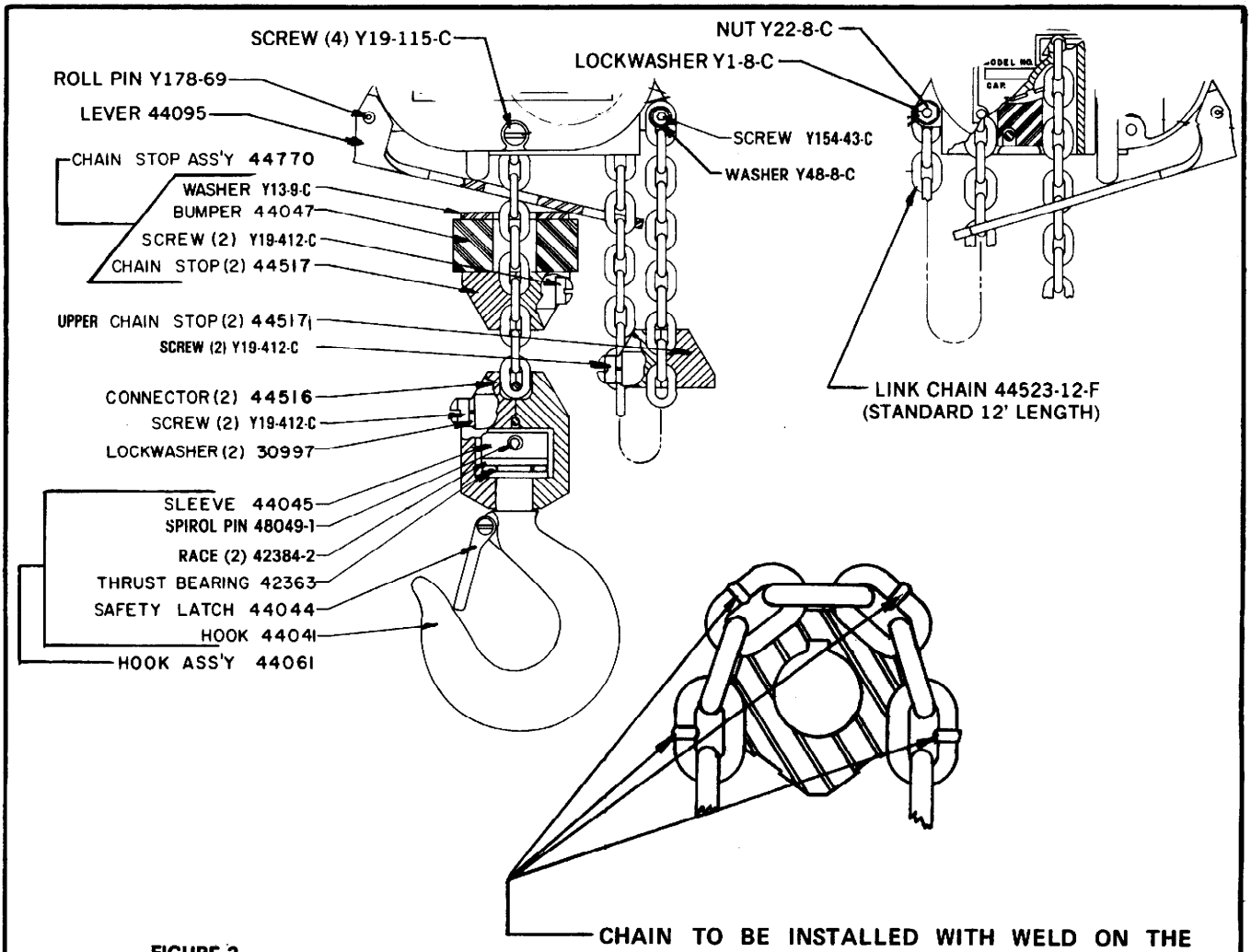


FIGURE 2

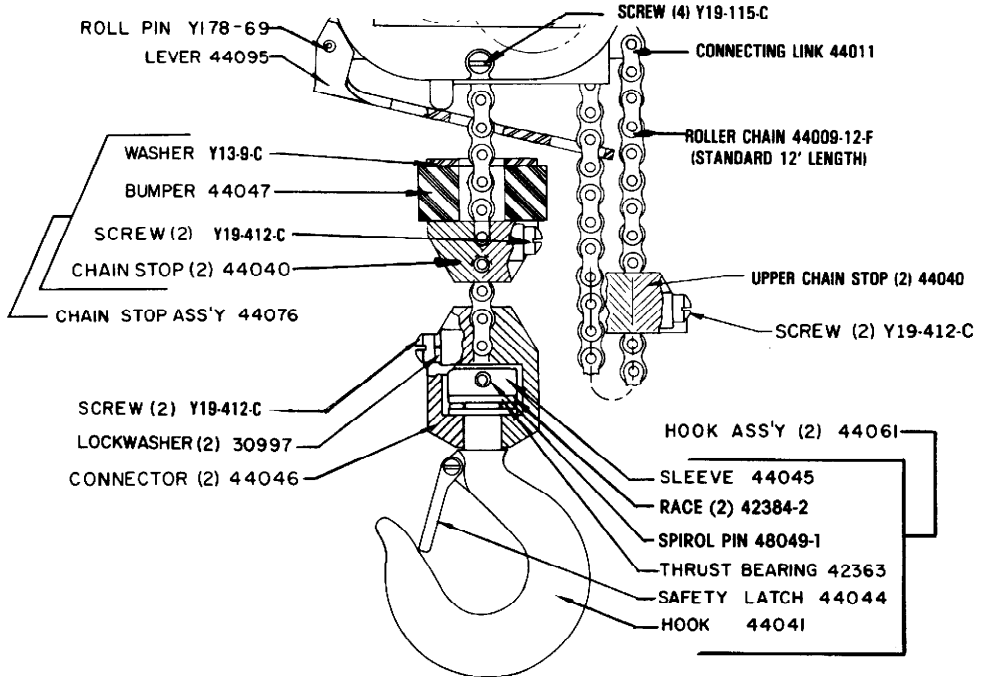


FIGURE 3

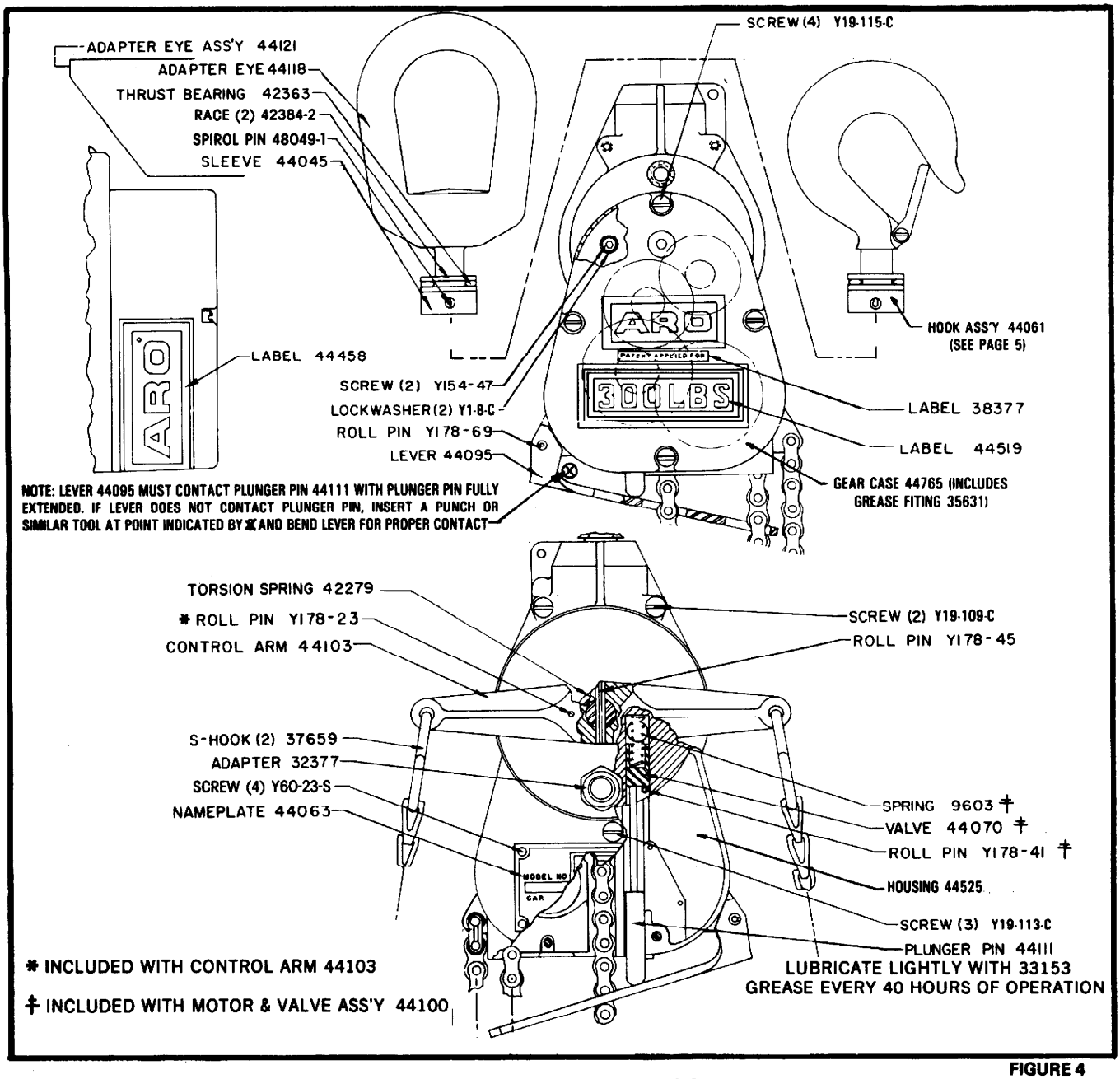


FIGURE 4

DISASSEMBLY AND REASSEMBLY

DISASSEMBLY (HOIST ON BENCH)

LOWER AND DISCONNECT LOAD FROM HOIST, SHUT OFF AIR AT SOURCE AND OPERATE HOIST CONTROL TO BLEED AIR FROM HOIST AND AIR LINE BEFORE PERFORMING MAINTENANCE OR SERVICE TO HOIST.

GEARING SECTION – Remove four (4) Screws (Y19-115-C) and Gear case (44765). NOTE: Gears may loosen with gear case or remain attached to housing. Remove Gears to remove Output Gear (44020-1) remove Thrust Race (42384) and Retaining Ring (Y145-18). Pull Gear (44020-1) off Shaft (44025-1). Remove Keys (37142).

VALVE AND MOTOR SECTION: Remove air inlet Adapter (32377), Roll Pin (Y178-45), Control Arm (44103), Torsion Spring (42279) and Upper Chain Stop. Remove end of load chain from anchor lug on housing.

With gearing removed as outlined under Gearing Section, remove load chain by pulling it through housing. Remove Roll Pin (Y178-69), Lever (44095), two (2) Screws (Y19-109-C), three (3) Screws (Y19-113-C) and Housing (44525). Removal of Housing (44525) will expose Upper Hook Assembly (44061) or Adapter Eye Assembly (44121), Sprocket (44026-1) and Chain Guide (44766), on Roller Chain models - Pocketwheel (44521-1), Chain Stripper (44518) and Chain Guide (44522) on Link Chain models, Plunger Pin (44111) and Valve and Motor Assembly. With Gear (44020-1) removed from opposite end of Shaft (44025-1), remove Shaft, Sprocket (44026-1) and Chain Guide (44766) – or Shaft, Pocketwheel, Chain Guide and Chain Stripper – from housing together as one unit. Remove two (2) Screws (Y154-47) with Washers (Y1-8-C) from gear end of housing and remove Motor and Valve Assembly. To remove Valve Housing (44101) and components, remove three (3) Screws (Y154-42) with Washers (Y14-8). To remove Valve (44070) and Spring (9603), remove Roll Pin (Y178-41). To remove Motor Assembly (44110), remove four (4) Screws (Y154-48) with Washers (Y14-8) from End Plate (44094). To disassemble motor; remove Retaining Ring (Y145-2), Spacer(s) (34778-1), Washer (44102), "O" Ring (Y325-11), Spring (30297) and Brake Liner and Insert (44098).

NOTE: Bearings (32850-1) are press fit on Rotor (44091). Locating on edge of Cylinder (44068), press Rotor thru Bearing and End Plate – either end.

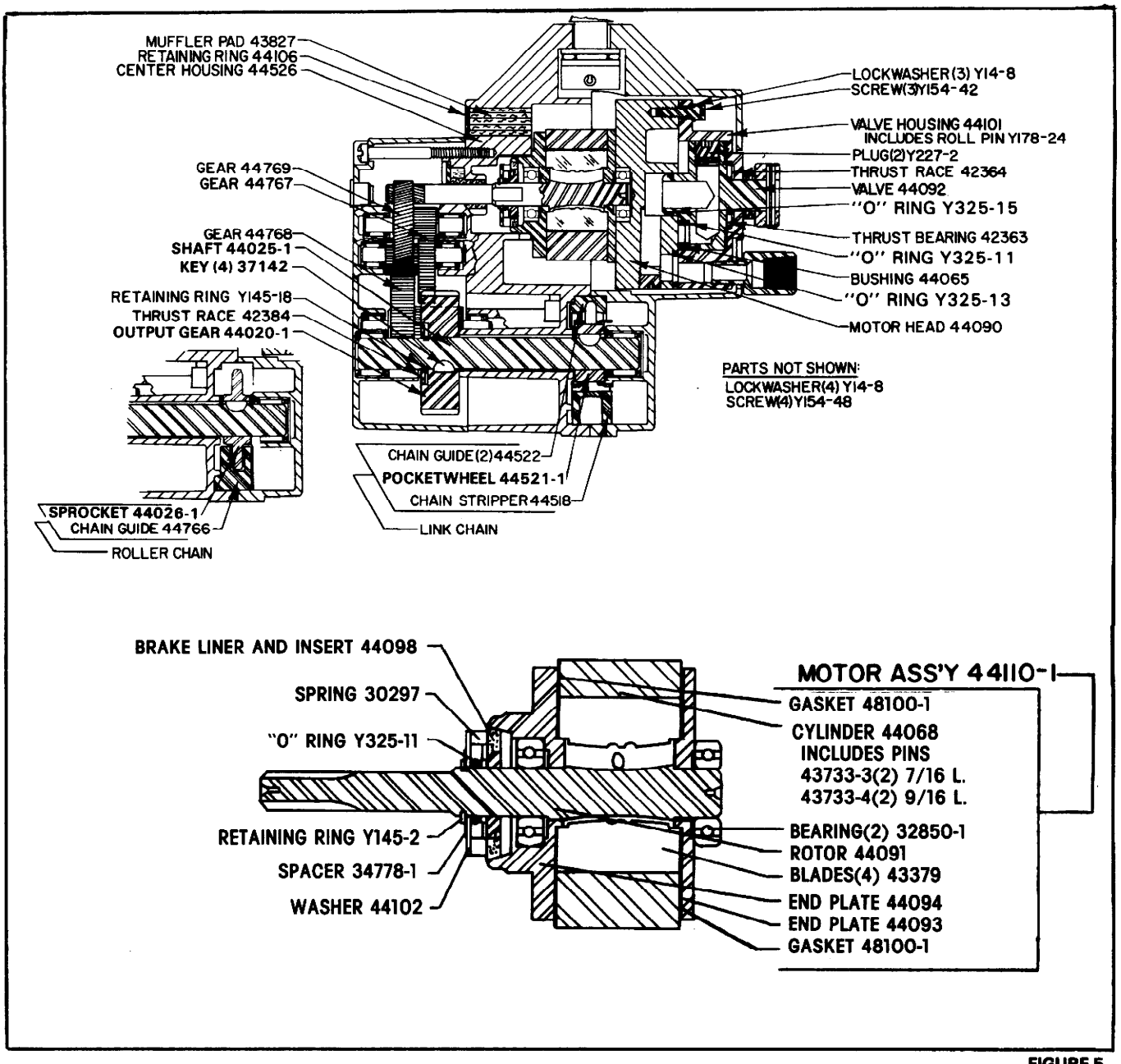


FIGURE 5

REASSEMBLY

NOTE: The following parts should be replaced upon reassembly of motor: Bearings (32850-1), Blades (43379), Gaskets (48100-1), Brake Liner and Insert (44098) and Spring (30297).

Assemble Gasket (48100-1) and End Plate (44093) to Cylinder (44068) aligning spiral Pins (43733-4) – these are the longer pins – with holes in End Plate (air inlet holes in Cylinder to be aligned with air inlet holes in End Plate). See figure 6 for correct positioning of cam on End Plate in relation to cylinder. Assemble Rotor (44091) to Cylinder and End Plate, locating face of Rotor flush with face of Cylinder (figure 6). Pack Bearings (32850-1) with 33153 Grease. Hold Rotor stationary and press Bearing (32850-1) on rear of Rotor. Press on inner race of bearing and take out end clearance. This assembly procedure will space Rotor to End Plate .0015 at front and from .001 to .002 at rear. Assemble Blades (43379) into slots in Rotor (notches in blades must be located toward bottom of Rotor slots) and assemble other Gasket (48100-1) and End Plate (44094) to Rotor and Cylinder (figure 5 and 6). Slide front Bearing (32850-1) over spindle of Rotor and down into bearing bore in End Plate. Press bearing to shoulder and take out end clearance. Hold Rotor stationary by pressing thru rear end of Rotor spindle. NOTE: Motor should turn freely, without binding or interference. While rotating spindle, apply end play in both directions; rotor must not interfere with end plates or seal point in motor housing.

Assemble Brake Liner and Insert (44098), Spring (30297) – with fingers of spring facing out – "O" Ring (Y325-11), Washer (44102), Spacer (34778-1) and secure with Retaining Ring (Y145-2). SPECIAL NOTE: Brake components must be so assembled as to require a torque of 30-50 in-oz. (2-3 in.-lbs.)to rotate spindle of Rotor in either direction. This is accomplished through the use of the .005 in. thick Spacer (34778-1). Use one or more Spacers (34778-1) as needed to reach required torque setting. (In some cases the use of Spacer may not be necessary to achieve required torque.)

Assemble Motor Assembly to Motor Head (44090) and secure with four (4) Screws (Y154-48) and Washers (Y14-8). Assemble "O" Ring (Y325-13) into counterbore of Motor Head (44090). Assemble Spring (9603) and Valve (44070) to Head and secure with Roll Pin (Y178-41). Assemble "O" Ring (Y325-15), "O" Ring (Y325-11), Bushing (44065), Thrust Bearing (42363) and Thrust Race (42364) to Valve (44092) and assemble Valve to Housing (44101). NOTE: Lubricate Bearing liber-

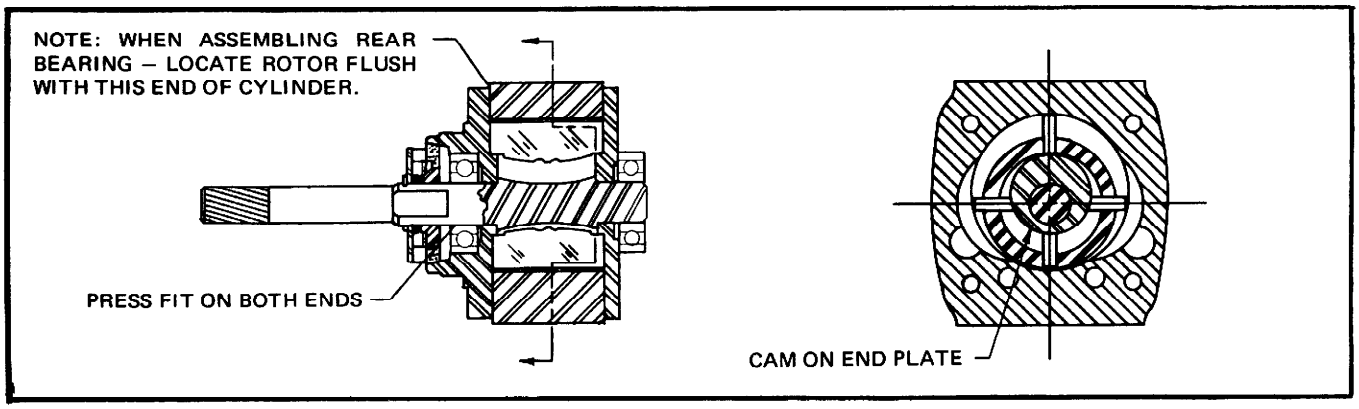


FIGURE 6

ally with 33153 Grease upon assembly.
Assemble Valve and Housing to Motor Head (44090) securing with three (3) Screws (Y154-42) and Washers (Y14-8).

Assemble Motor and Valve Assembly into housing positioning air inlet at bottom and secure with two (2) Screws (Y154-47) and Washers (Y1-8-C).

ROLLER CHAIN MODELS:
Assemble Keys (37142) and Sprocket (44026-1) to Shaft (44025-1) and assemble with Chain Guide (44766) to housing. Note position of Chain Guide in housing, figure 5.

LINK CHAIN MODELS:
Assemble Chain Guide (44522) and Chain Stripper (44518) into housing.
NOTE: Tabs on Chain Stripper to be assembled into grooves provided in housing. Assemble Keys (37142) to Shaft (44025-1) and assemble Pocketwheel to shaft with 13/16" counterbore side of pocketwheel assembled on shaft first.

Assemble Shaft with Pocketwheel to housing.

Assemble Plunger (44111) into Housing (44526) with the thickest part of Plunger Body aligned with groove in Housing (44526) and plunger pin aligned with Valve (44070).

Place Hook Assembly (44061) into proper position in Housing (44526) and assemble Housing (44525) to Housing (44526) securing with two (2) Screws (Y19-109-C) and three (3) Screws (Y19-113-C). NOTE: Lubricate Thrust Bearing and components liberally with 33153 Grease before assembling to housing.
Assemble Lever (44095) to housing securing with Roll Pin (Y178-69).
Assemble Keys (37142) and Output Gear (44020-1) to Shaft (44025-1) and secure with Retaining Ring (Y145-18).
SEE INSTALLATION OF LOAD CHAIN, PAGE 4 and assemble load chain to hoist.
Assemble Torsion Spring (42279) to Valve (44092) positioning legs of spring straddling Roll Pin (Y178-24) in Valve Housing (44101). Assemble Control Arm (44103) to Valve positioning Roll Pin (Y178-23) between legs of Torsion Spring (42279) and secure with Roll Pin (Y178-45).
Assemble Thrust Race (42384) to Shaft (44025-1). Assemble Gear (44767) to housing with small gear end out. Assemble Gear (44768) to housing aligning small gear end with Output Gear (44020-1) and large gear end with Gear (44767). Assemble Gear (44769) with small gear end aligned with Gear (44767) and large gear end aligned with motor shaft pinion. Coat all gears and bearing surfaces liberally with 33153 Grease when assembling.
Assemble Housing (44765) over gearing and secure with four (4) Screws (Y19-115-C).

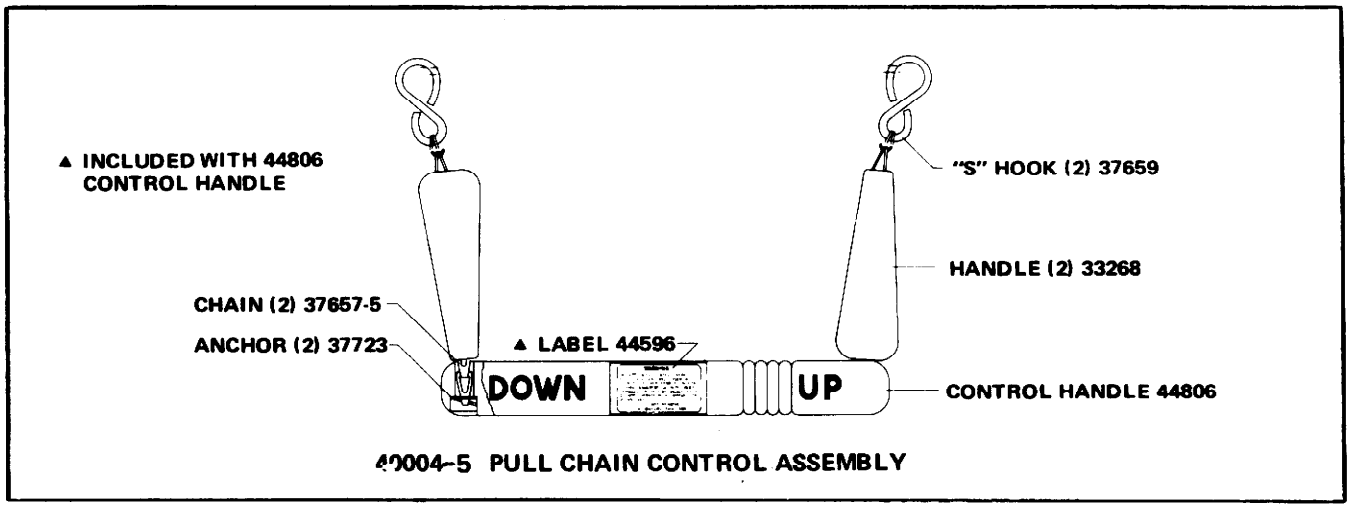
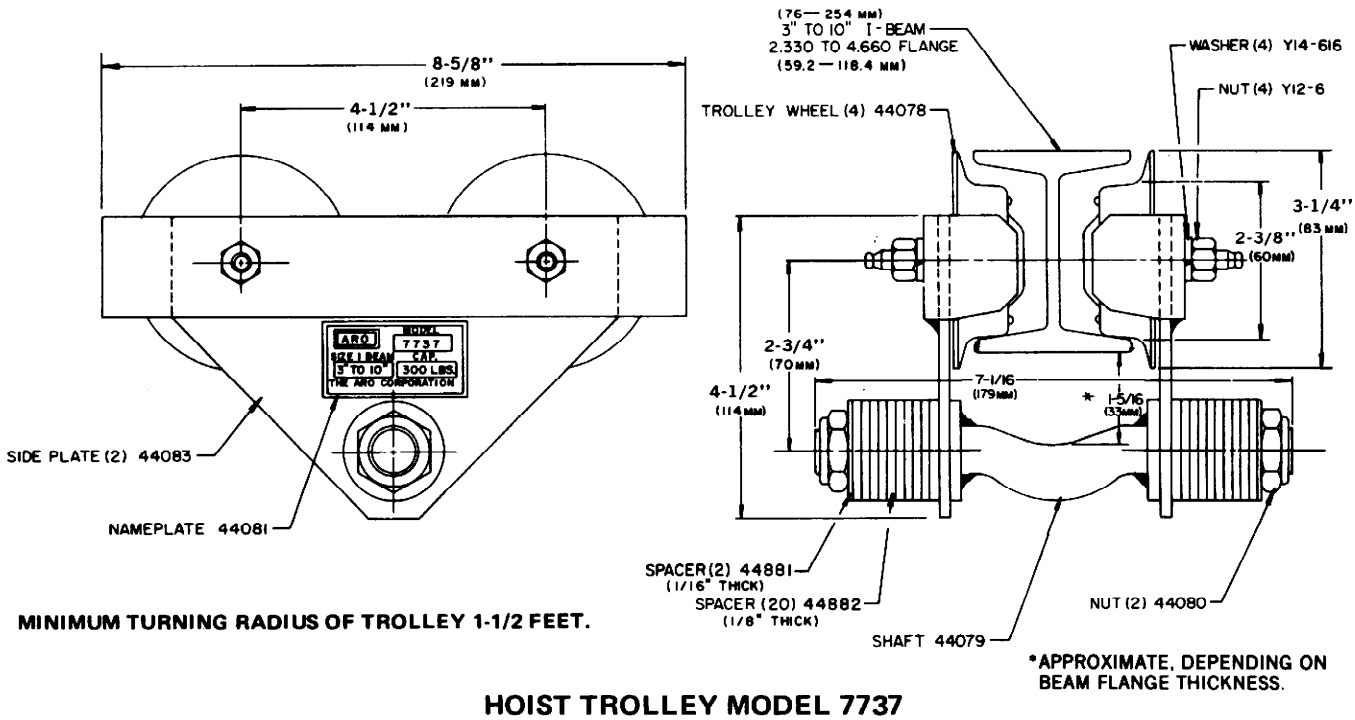


FIGURE 7

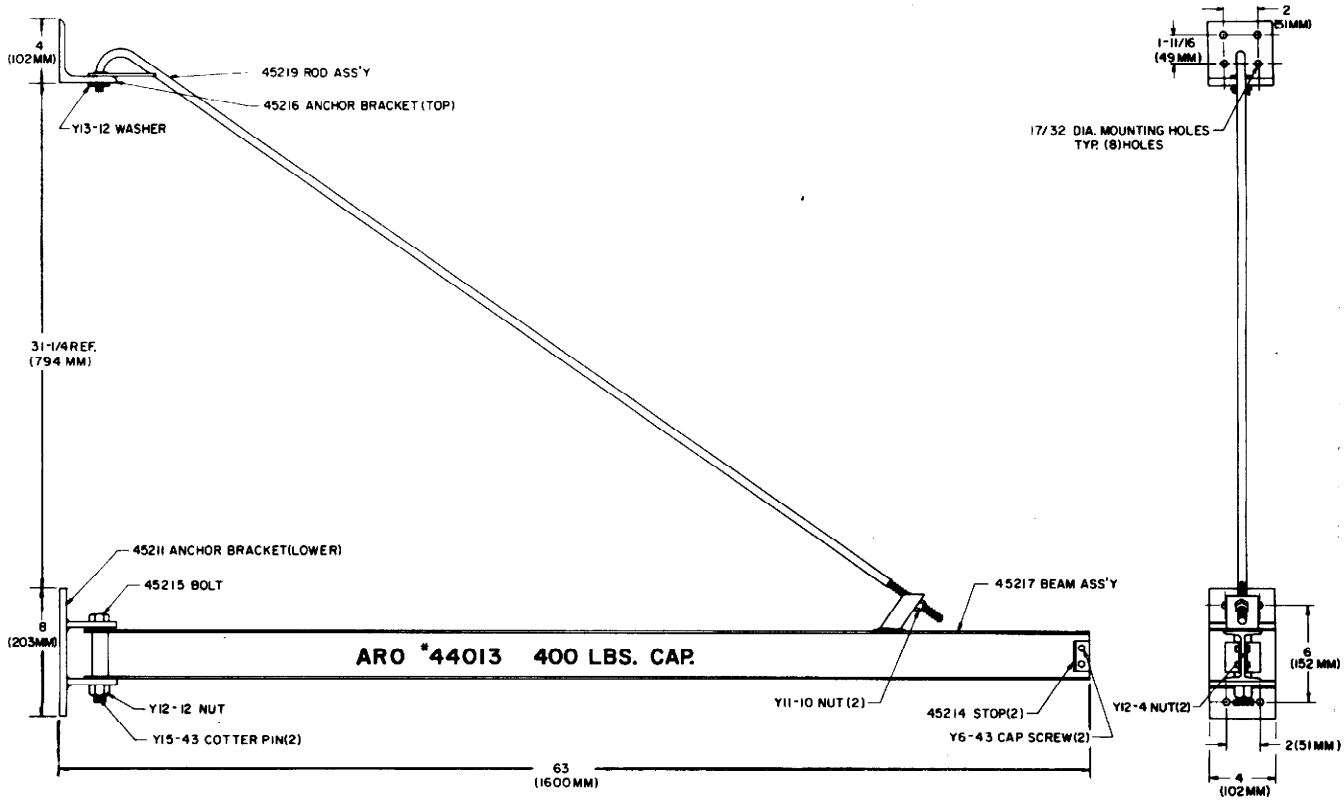


MINIMUM TURNING RADIUS OF TROLLEY 1-1/2 FEET.

*APPROXIMATE, DEPENDING ON BEAM FLANGE THICKNESS.

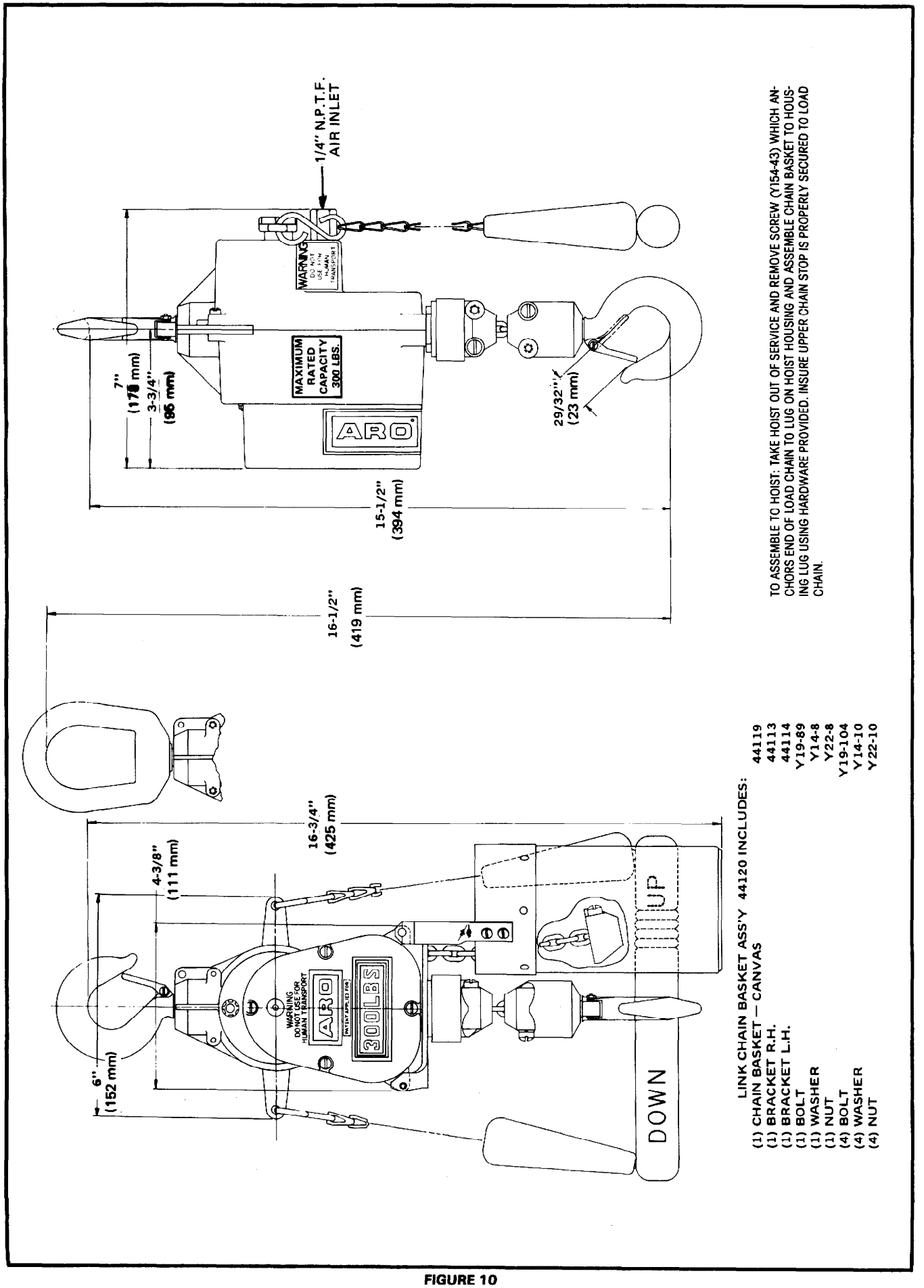
HOIST TROLLEY MODEL 7737

FIGURE 8



SWINGING JIB 44013

FIGURE 9



TO ASSEMBLE TO HOIST: TAKE HOIST OUT OF SERVICE AND REMOVE SCREW (Y154-43) WHICH ANCHORS END OF LOAD CHAIN TO LUG ON HOIST HOUSING AND ASSEMBLE CHAIN BASKET TO HOUSING LUG USING HARDWARE PROVIDED. INSURE UPPER CHAIN STOP IS PROPERLY SECURED TO LOAD CHAIN.

LINK CHAIN BASKET ASS'Y 44120 INCLUDES:

(1) CHAIN BASKET — CANVAS	44119
(1) BRACKET R.H.	44113
(1) BRACKET L.H.	44114
(1) BOLT	Y19-89
(1) WASHER	Y14-8
(1) NUT	Y22-8
(4) BOLT	Y19-104
(4) WASHER	Y14-10
(4) NUT	Y22-10

FIGURE 10

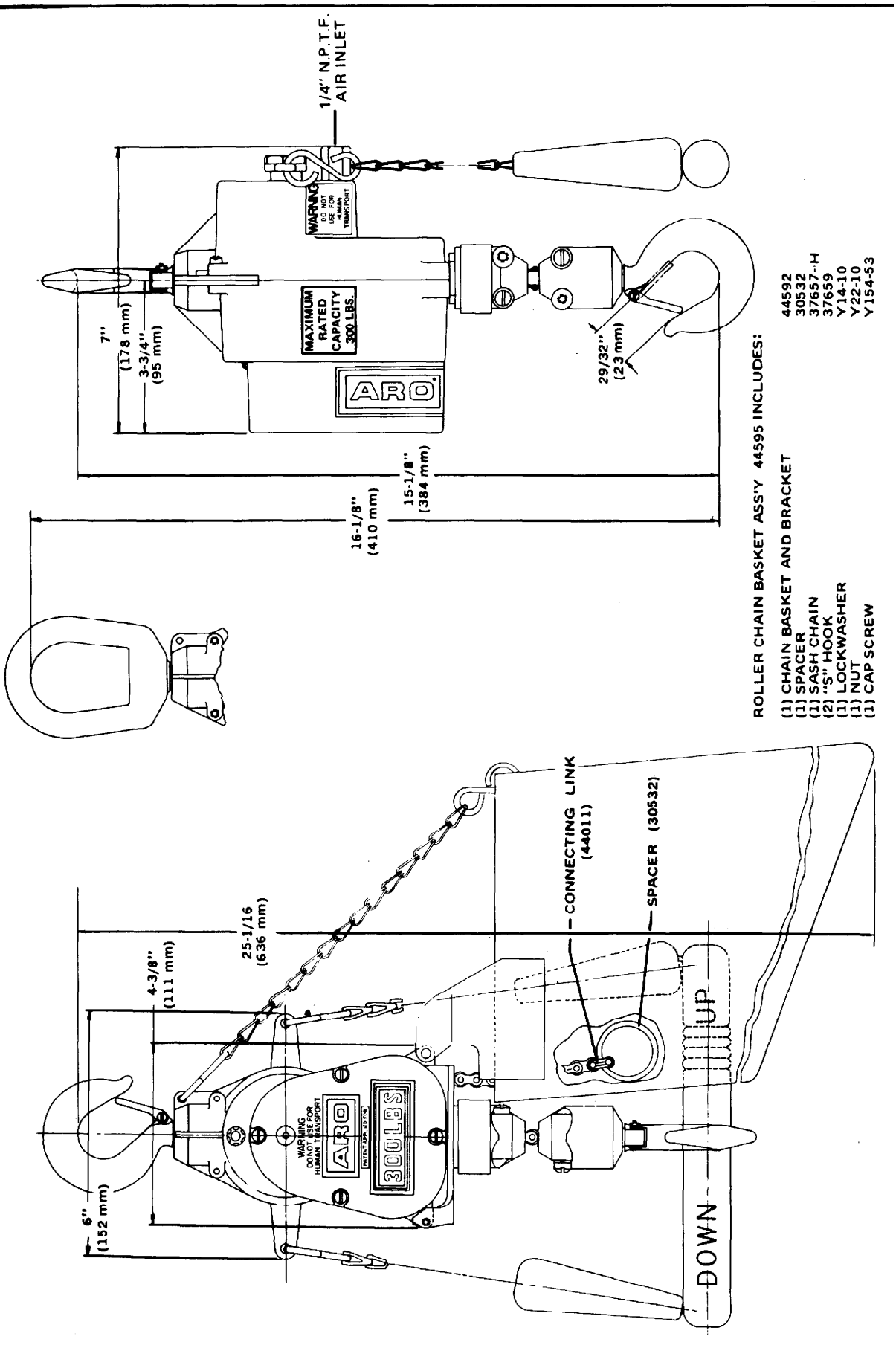

1/4" N.P.T.F.
AIR INLET
WARNING
DO NOT USE FOR HUMAN TRANSPORT
MAXIMUM RATED CAPACITY 300 LBS.
ARO
7"
(178 mm)
3-3/4"
(95 mm)
29/32"
(23 mm)
16-1/8"
(410 mm)
15-1/8"
(384 mm)
ROLLER CHAIN BASKET ASS'Y 44595 INCLUDES:
(1) CHAIN BASKET AND BRACKET 44592
(1) SPACER 30532
(1) SASH CHAIN 37657-H
(2) "S" HOOK 37659
(1) LOCKWASHER Y14-10
(1) NUT Y22-10
(1) CAP SCREW Y154-53
TO ASSEMBLE TO HOIST: TAKE HOIST OUT OF SERVICE AND REMOVE CONNECTING LINK (44011) FROM HOUSING AND REMOVE UPPER CHAIN STOP FROM CHAIN. ATTACH SPACER (30532). ATTACH BASKET USING HARDWARE PROVIDED AS SHOWN. (SEE ADJACENT VIEW).
CONNECTING LINK (44011)
SPACER (30532)
25-1/16
(636 mm)
4-3/8"
(111 mm)
6"
(152 mm)
ARO
300LBS
UP
DOWN

FIGURE 11

ARO®

Part of worldwide Ingersoll-Rand

PN 49999-110