

# OPERATOR'S MANUAL

INCLUDING:  
OPERATION, INSTALLATION, & MAINTENANCE

for

**7791-A AND 7793-A SERIES HOISTS**

SECTION M 50  
MANUAL 21-A

Released: 10-15-83

Revised: 7-9-86

Form: 2067-2

MODELS: 7791-A15-A, -A15-B.

7793-A15-A, -A15-B.

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

**NOTICE: THIS MANUAL IS A SUPPLEMENT TO, AND MUST BE ACCOMPANIED BY,  
OPERATOR'S MANUAL SECTION M50 MANUAL NUMBER 21 TO MAKE UP  
A COMPLETE OPERATOR'S MANUAL FOR THE ABOVE LISTED HOIST MODELS.**

## OPERATING PRECAUTIONS

To aid the operator's understanding of proper and safe use of hoists, the publication "OVERHEAD HOISTS", ANSI B30.16-1981, can be purchased from:

American Standards Institute, Inc.  
1430 Broadway  
New York, New York 10018

- Do not use the hoist described in this manual to lift or transport humans.
- Never try to lift a load heavier than the rated capacity of the hoist.
- Operate hoist with caution. Operator should have a good attitude toward safety.
- Always follow "proper operating" instructions given in this manual.
- Allow only people who have received training in "proper hoist operation" to operate hoists.
- Follow all operating and routine inspection procedures prescribed in this manual.
- Operator of hoist shall operate hoist in a position that will not be hazardous to his health.
- Do not attempt to operate hoist if it is not operating properly.
- Before operating hoist, all routine inspection and lubrication procedures should be completed.

## AIR SUPPLY REQUIREMENTS

Air is supplied to the Power Trolley thru hoist. Air pressure of 90 p.s.i.g. (6 bar) is required at the air inlet of Hoist to operate the Power Trolley.

For maximum operating efficiency, the following air supply specifications should be maintained to this hoist.:

- AIR PRESSURE — 90 PSIG (6 bar)
- AIR FILTRATION — 50 micron
- LUBRICATED AIR SUPPLY
- HOSE SIZE — 1/2" (13 mm) I.D.

An ARO model 128241-800 airline FILTER/REGULATOR/LUBRICATOR (F-R-L) is recommended to maintain the above air supply specifications.

## RECOMMENDED LUBRICANTS

Refer to Operator's Manual Section M50 Manual 21 (form 2062-2).

## SUSPENDING HOIST

The Power Unit is shipped unattached from trolley side plate. Assemble the side plates to hoist and beam before assembling the power unit to side plate.

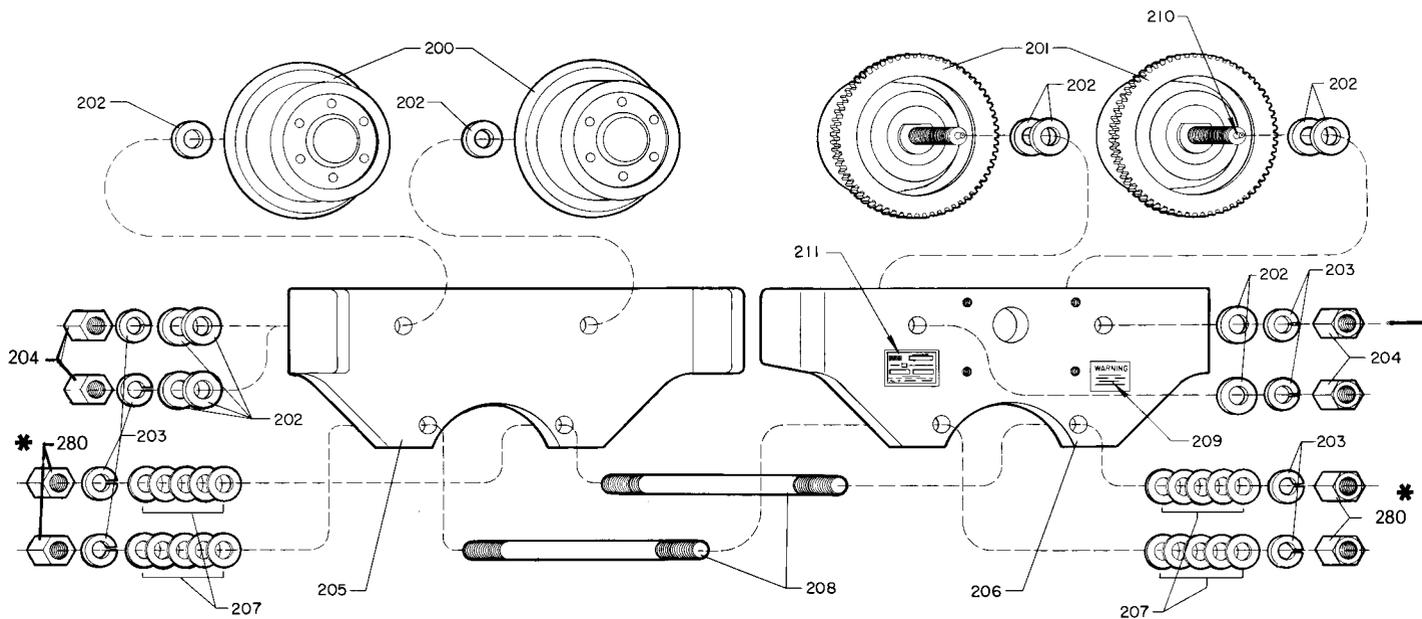
Always select an overhead support capable of supporting combined weight of hoist, trolley, and hoist's load capacity.

- Be sure TROLLEY WHEELS are compatible with beam being used. Tapered wheels for "I" type beam; flat tread wheels for "H" type beam.
- Width between outside of TROLLEY WHEELS should be the width of beam flange + 3/4".
- Width is varied by using SPACERS between the hoist body and the trolley SIDE PLATES.
- Insert an equal number of SPACERS on each inside of the trolley SIDE PLATES until beam flange + 3/4" measurement is reached. SIDE PLATES must be vertical.
- Insert SHAFTS (208) through hoist and trolley SIDE PLATES.
- Position trolley and hoist assembly on beam.
- Put an equal number of SPACERS on each end of SHAFTS (208) with lock washer being last.
- Tighten nuts on SHAFTS (208). SHAFTS should extend all the way through the Nuts. Tighten NUTS 25 to 30 ft. lbs. torque only.
- Move trolley over entire length of beam. If it appears the trolley SIDE PLATES can be moved closer together and freedom of movement will be maintained, remove an equal number of SPACERS from inside the SIDE PLATES and assemble these SPACERS to the outside of the SIDE PLATES.
- Assemble Power Unit to trolley side plate and secure with cap screws and lock washers.
- Assemble elbow, muffler and connectors to power unit.
- Assemble Hose Assembly and Pendant control to power unit.
- Connect sufficient length of air hose to reach the maximum travel distance of trolley.

## ROUTINE LUBRICATION REQUIREMENTS

Inject 2 to 3 strokes NLGI #1 "EP" grease (33153) thru grease fitting of power trolley housing to provide lubrication for gearing.

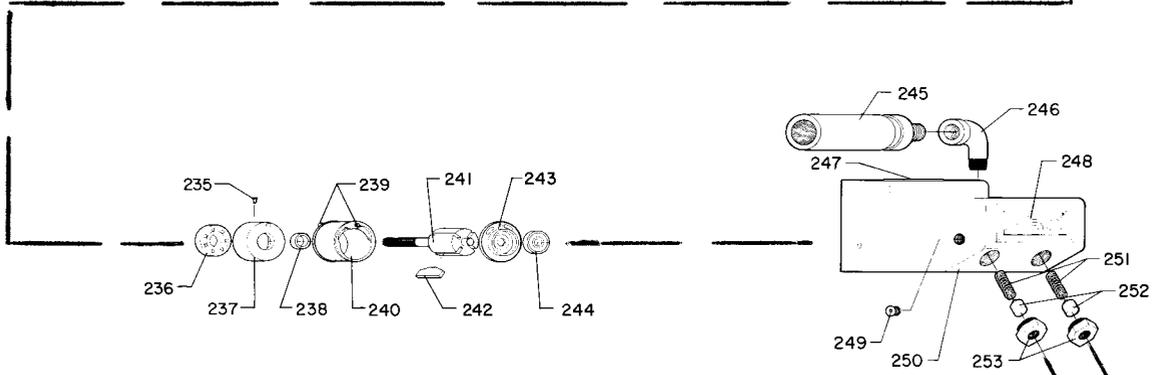
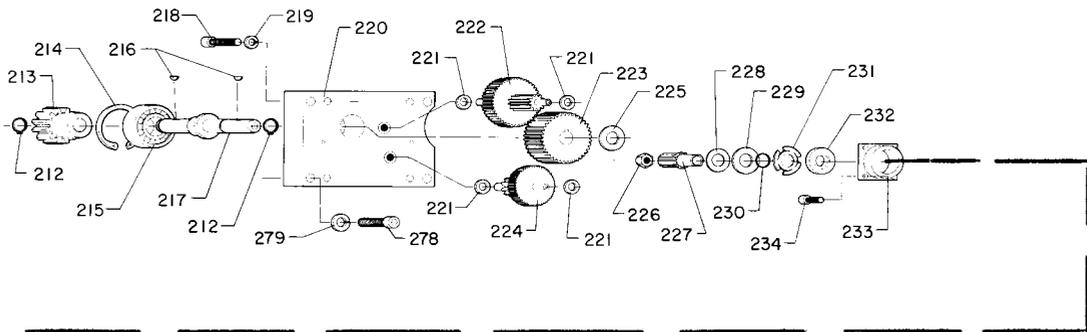
Refer to Operator's Manual Section M50 Manual 21 (form 2062-2).



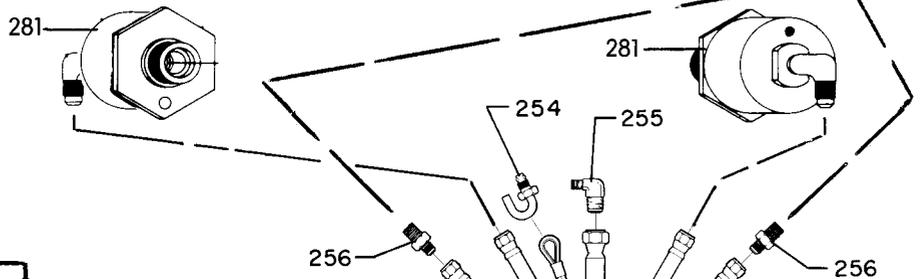
PART NUMBER FOR ORDERING

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200	Wheel, non-geared, for use with "I" type beam (2 req'd.)	45623	241	Rotor	45605
	Wheel, non-geared, for use with "H" type beam (flat tread type) (2 req'd.)	45738	242	Blade (4 req'd.)	30741
201	Wheel, geared, for use with "I" type beam (2 req'd.)	45622	243	End Plate	31601
	Wheel, geared, for use with "H" type beam (flat tread type) (2 req'd.)	45735	244	Bearing	Y65-7
202	Spacer (12 req'd.)	41022		MOTOR ASSEMBLY, includes items 236 thru 244	45612
203	Lock Washer (8 req'd.)	Y14-750	245	Muffler	43874-1
204	Nut (4 req'd.)	Y12-12	246	Elbow	Y43-3-C
205	Side Plate	45611	247	Label	76101
206	Side Plate	45610	248	Label	45621
207	Spacer (84 req'd.)	43014	249	Pipe Plug (2 req'd.)	Y227-2
208	Shaft (2 req'd.)	43009	250	Motor Housing, includes needle bearing 30316, needle bearing (2) 42866, grease fitting 35631 and dowel pin (2) Y148-14	45613
209	Warning Label	43640	251	Spring (2 req'd.)	45793
210	Grease Fitting (included with 200 & 201)	6069	252	Piston (2 req'd.)	45603
211	Nameplate	45627	253	Inlet Adapter (2 req'd.)	45609
212	Retaining Ring (2 req'd.)	Y145-18	254	U-bracket	33989
213	Gear	45624	255	Elbow	Y54-27
214	Retaining Ring	Y147-16	256	Connector (4 req'd.)	Y54-3
215	Bearing	39163	257	Hose Assembly (6 ft. long), includes strain cable 33987-6, ties 44560 (5)	45602-6
216	Key (2 req'd.)	37142	258	Connector (main air supply)	Y54-7
217	Spindle	45606	259	Connector (2 req'd.)	Y54-2
218	Cap Screw (4 req'd.)	Y99-42	260	Pin	44843
219	Lock Washer (4 req'd.)	Y14-416-C	261	Retaining Ring (2 req'd.)	43250
220	Plate (includes needle bearing (2) 42866)	45614	262	Lever (left)	45616-4
221	Washer (4 req'd.)	Y48-14	263	Lever (up)	45616-2
222	Gear	44768	264	Lever (down)	45616-1
223	Gear	44020-1	265	Lever (right)	45616-3
224	Gear	44767	266	Guard, includes warning label 44197 and rivet (4) 45119	45596
225	Thrust Race	42384	267	Handle, includes bushing (2) 45593 and bushing (2) 40128	45598
226	Nut	Y192-1-Z	268	Screw (4 req'd.)	37511
227	Pinion	45608	269	Spring (4 req'd.)	32858
228	Spacer	37128	270	O-Ring (2 req'd.)	Y325-7
229	Washer	73473	271	Valve (2 req'd.)	36602
230	O-Ring	Y325-13	272	Screw (4 req'd.)	Y61-85-C
231	Finger Spring	30297	273	O-Ring (4 req'd.)	Y325-111
232	Brake Lining	45619	274	O-Ring (2 req'd.)	Y325-6
233	Brake Cone	45617	275	Valve (2 req'd.)	34757
234	Cap Screw (4 req'd.)	Y154-52	276	Fastener (2 req'd.)	33330
235	Locating Pin	32814	277	U-bracket	45599
236	Bearing	30469	278	Cap Screw (4 req'd.)	Y99-53
237	End Plate	45620	279	Washer (4 req'd.)	Y14-516-C
238	Spacer	30437	280	Nut (4 req'd.)	46049
239	Roll Pin (2 req'd.) included with Cylinder, item 240	Y178-20	281	Cylinder Assembly (2 req'd.) NOTE: cylinder parts break-down shown in manual M50/21	43017
240	Cylinder (includes item 239)	37683			

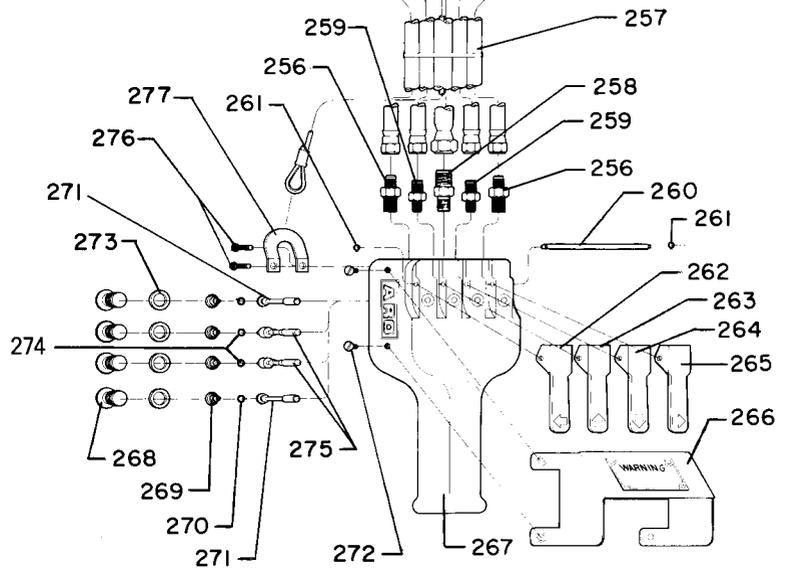


\* TIGHTEN 25 TO 30 FT. LBS. TORQUE.



PART NUMBER FOR ORDERING

POWER UNIT ASSEMBLY includes items 212 thru 253	45615
PENDENT CONTROL HANDLE ASSEMBLY, includes items 256 (2), & 258 thru 275	45597
POWER TROLLEY ASSEMBLY/TAPERED TREAD WHEELS (for "I" type beams), includes items 200 (part no. 45623) thru 211, 254, 255, and 276 thru 281	7797-2
POWER TROLLEY ASSEMBLY/FLAT TREAD WHEELS (for "H" type beams), includes items 200 (part no. 45738) thru 211, 254, 255, and 276 thru 281	7797-FT-2



## DISASSEMBLY/ASSEMBLY INSTRUCTIONS

- Disconnect air supply from hoist before performing maintenance or service procedures.
- Never apply excessive pressure by a holding device which may cause distortion of a part.
- Apply pressure evenly to parts which have a press fit.
- Apply even pressure to the bearing race that will be press fitted to the mating part.
- Use correct tools and fixtures when servicing this hoist.
- Don't damage "O" rings when servicing hoist.
- Use only genuine ARO replacement parts for this hoist. When ordering specify part number, description, hoist model number and serial number.

### POWER UNIT DISASSEMBLY

- Disconnect air hoses from power unit.
- Remove cap screws (278) and washers (279).
- Remove power unit from side plate.
- Remove cap screws (218) and washers (219).
- Remove plate (220) and gears from housing.
- Spindle (217) and components should not be removed unless damage is evident.
- To disassemble components from spindle; remove retaining ring (212), gear (213), and retaining ring (214).
- Tap end of spindle (217) thru gear (223); spindle, with bearing (215) will loosen from plate. Bearing (215) is press fit on spindle (217).
- Remove nut (226) to disassemble brake components.
- Remove cap screws (234) and brake cone (233).
- Remove motor assembly from housing.
- Grasp cylinder (240) and tap splined end of rotor with a soft faced hammer; motor will come apart.

### POWER UNIT ASSEMBLY

- Assemble bearing (244) and end plate (243) to rotor (241). Press on inner bearing race.
- Coat i.d. of cylinder (240) with spindle oil 29665 and assemble over rotor. Align air inlet slots of cylinder and end plate.
- Coat rotor blades (242) with spindle oil and insert into blade slots of rotor – straight side out.

- Assemble spacer (238) and end plate (237) to rotor.
- Lubricate bearing (236) with ARO 33153 grease and assemble to rotor and end plate. Press on inner bearing race.
- Be sure rotor turns without binding. If rotor binds, tap splined end lightly to loosen.
- Assemble locating pin (235) to end plate and assemble motor to housing aligning pin (235) with groove in housing.
- Assemble brake cone (233) to housing and secure with cap screws (234).
- Assemble brake lining (232) to brake cone.
- Assemble spacer (228) – if used, washer (229), o-ring (230), and finger spring (231) – assemble with fingers facing out – to pinion (227).
- Assemble pinion to motor spindle and secure with nut (226).

SPECIAL NOTE: brake components must be so assembled as to require a torque of 30 to 50 in. oz. (2 to 3 in. lbs.) to rotate spindle of rotor in either direction. It may be necessary to use the .010 thick spacer (228) to achieve required torque. In some cases the spacer (228) may not be necessary for proper torque setting.

- Lubricate bearing (215) with ARO 33153 grease and assemble to spindle (217). Press on inner race.
- Assemble spindle and bearing to plate (220) and secure with retaining ring (214).
- Assemble key (216), gear (213), and retaining ring (212) to spindle.
- Lubricate needle bearings in plate with ARO 33153 grease.
- Assemble spacers (221) to gear (222) and assemble gear to plate.
- Assemble retaining ring (212), gear (223) and thrust race (225) to spindle.
- Assemble spacers (221) to gear (224) and assemble to plate.
- Lubricate gears liberally with ARO 33153 grease.
- Assemble plate and gears to housing (250) and secure with washers (219) and cap screws (218).
- Apply ARO 33153 grease to splines of gear (213) and assemble power unit to trolley side plate. Secure with washers (279) and cap screws (278).