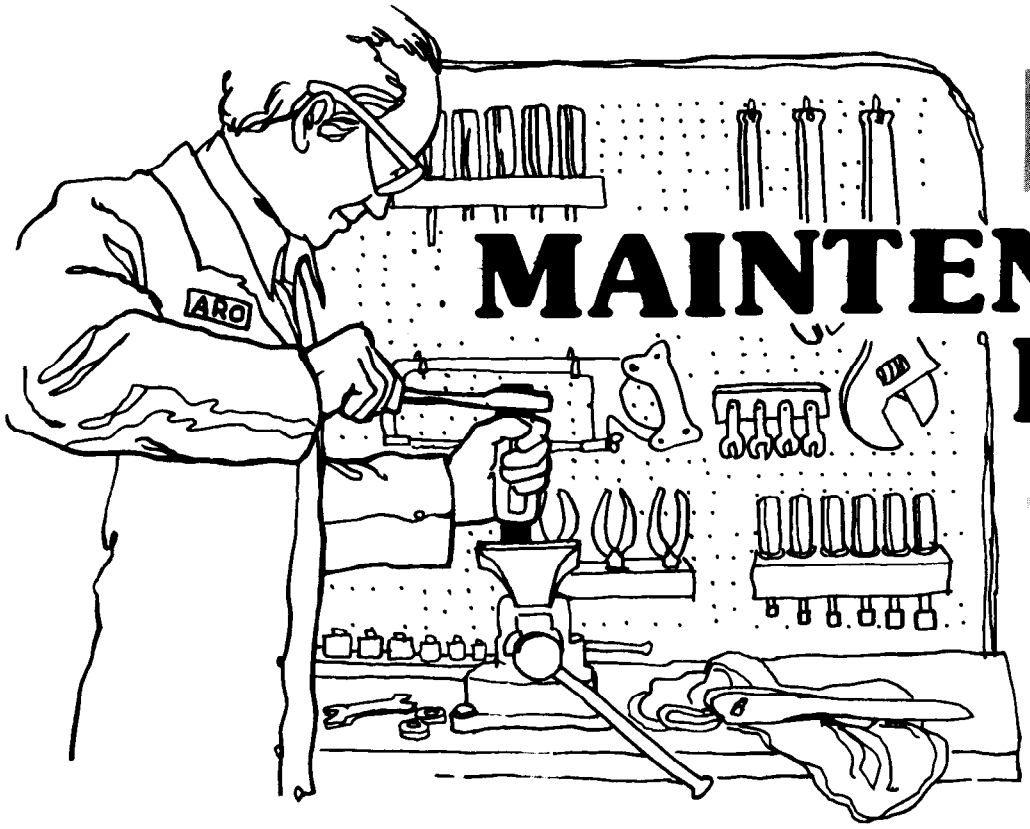


ARO

MAINTENANCE/ REPAIR

training program

FORM 2196-2

PRINTED IN USA

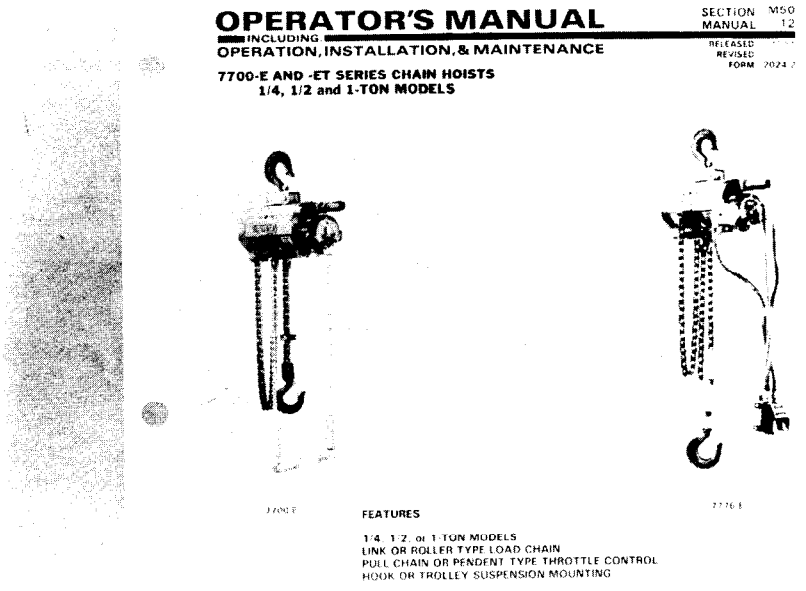
"7700-E" SERIES HOIST

REPAIR PROGRAM

7700-E SERIES HOIST

SLIDE 1

The following program is concerned with the maintenance and repair procedures for the ARO 7700-E series hoists. The first portion reviews the disassembly, inspection and repair procedures and the second portion, the assembly procedures for the hoist.


OPERATOR'S MANUAL
INCLUDING
OPERATION, INSTALLATION, & MAINTENANCE
7700-E AND -ET SERIES CHAIN HOISTS
1/4, 1/2 and 1-TON MODELS
SECTION M50
MANUAL 12
RELEASED
REVISED
FORM 2024.7
FEATURES
1/4, 1/2, or 1-TON MODELS
LINK OR ROLLER TYPE LOAD CHAIN
PULL CHAIN OR PENDENT TYPE THROTTLE CONTROL
HOOK OR TROLLEY SUSPENSION MOUNTING

SLIDE 2

For a detailed description of the hoist, its operation, lubrication requirements, inspection and maintenance procedures, refer to the Operators Manual for your specific hoist. These manuals are shipped with each hoist and are available from The Aro Corporation upon request. Order either by section/manual number or by form number.

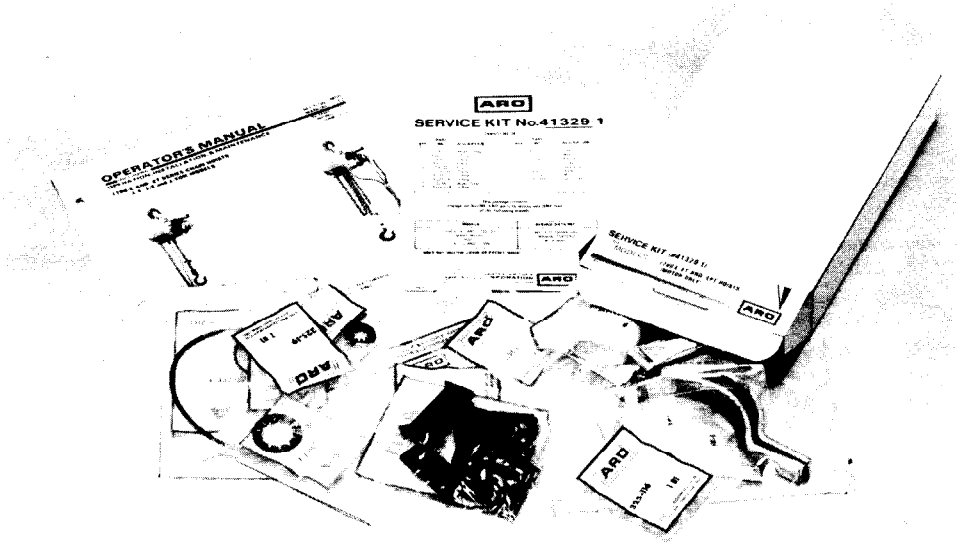
KEEP IN MIND . . .

- DON'T APPLY EXCESSIVE PRESSURE
- APPLY EVEN PRESSURE ON PRESS FIT
- USE PROPER TOOLS
- WASH ALL PARTS AT THE SAME TIME
- RIGHT HAND THREADS
- INSPECT FOR WEAR
- USE ONLY ARO REPLACEMENT PARTS

SLIDE 3

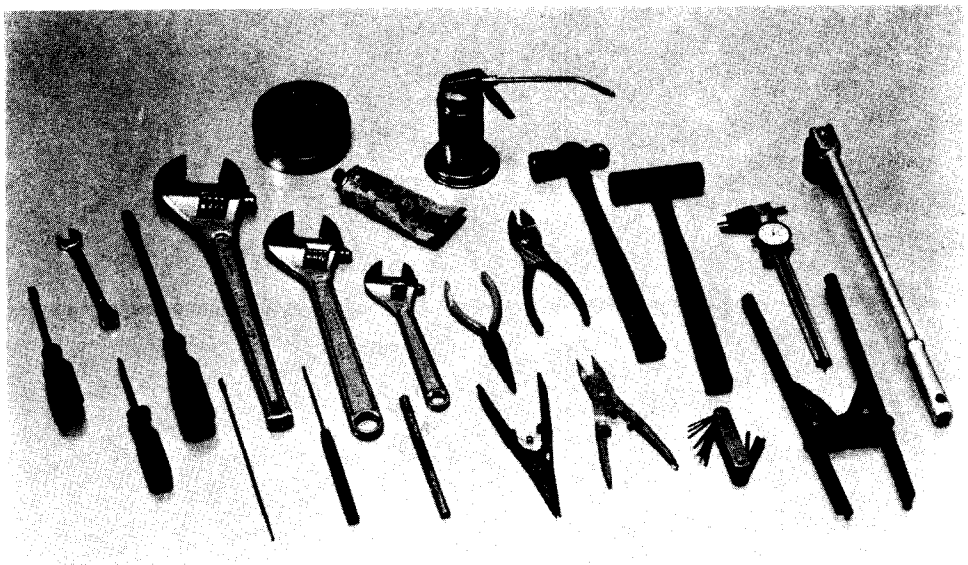
While repairing your ARO hoist there are several things to keep in mind:

1) Whenever clamping parts, never apply excessive pressure that may cause distortion.
2) For parts with a press fit, apply pressure evenly when assembling.
3) Use only correct size tools.
4) Wash parts only after the tool is fully disassembled.
5) All threads in the hoist are right-handed.
6) Inspect all parts for wear as pointed out in this program.
7) Replace parts with Aro specified parts.



SLIDE 4

In order to restore the hoist to its original quality, a service kit for the hoist is recommended. This kit contains items normally replaced during the repair procedure and is available from The Aro Corporation. The kit number for the basic hoist, is 41329-1, which does not include the chain, pocket wheel or sprocket. For roller chain hoists, the sprocket wheel and chain guide are available as kit number 41335. For link chain hoists the pocket wheel and chain guide are available as kit number 41336. Chain is not included in these kits and should be ordered separately. To order chain consult your Operators Manual.

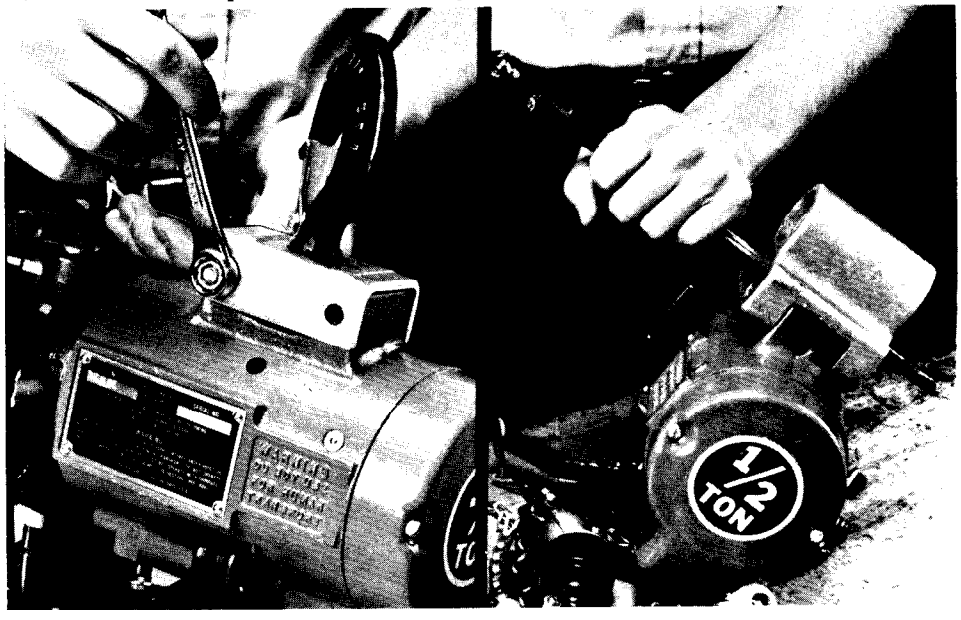


SLIDE 5

The tools needed for the repair of the hoists are:

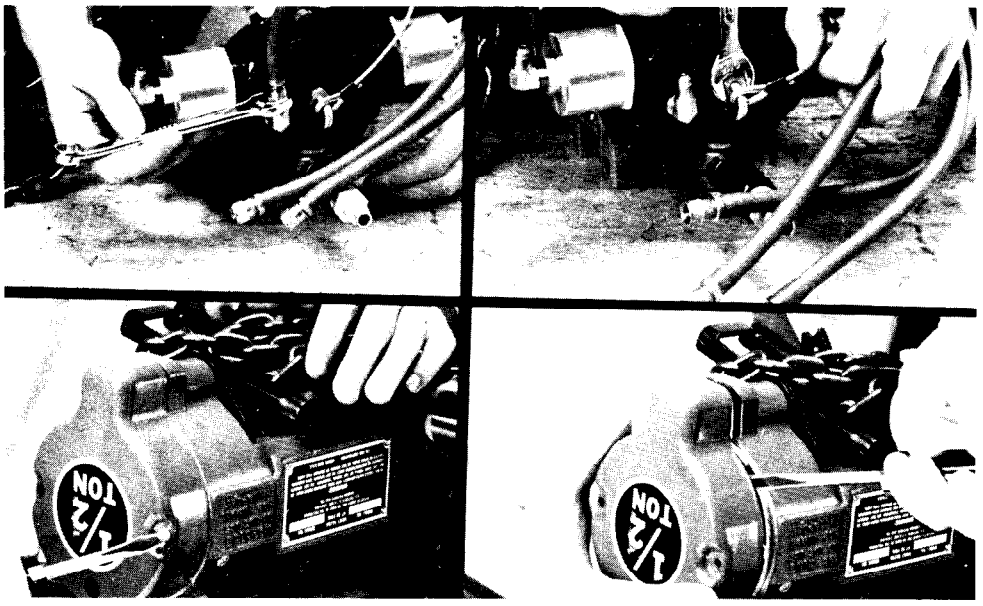
1 smooth face vise
1 set combination wrenches
1 medium size flat bladed screwdriver
1 large size flat bladed screwdriver
1 medium size Phillips screwdriver
1 brass rod (3/8" diameter x 6" long)
1 8", 12" and 16" adjustable wrench
1 small pin punch
1 ball peen hammer
1 pair of duckbill pliers
1 soft-faced mallet
1 pair pliers
1 1" socket
1 pair number 3 internal and external snap ring pliers
1 brake spring spreader (No. 33541)
1 o-ring pick
1 vernier caliper (for chain suspension)
1 arbor press
1 torque wrench

Also needed are a can of of spindle oil (29665), gear and bearing grease (33153), and o-ring lubricant (36460).



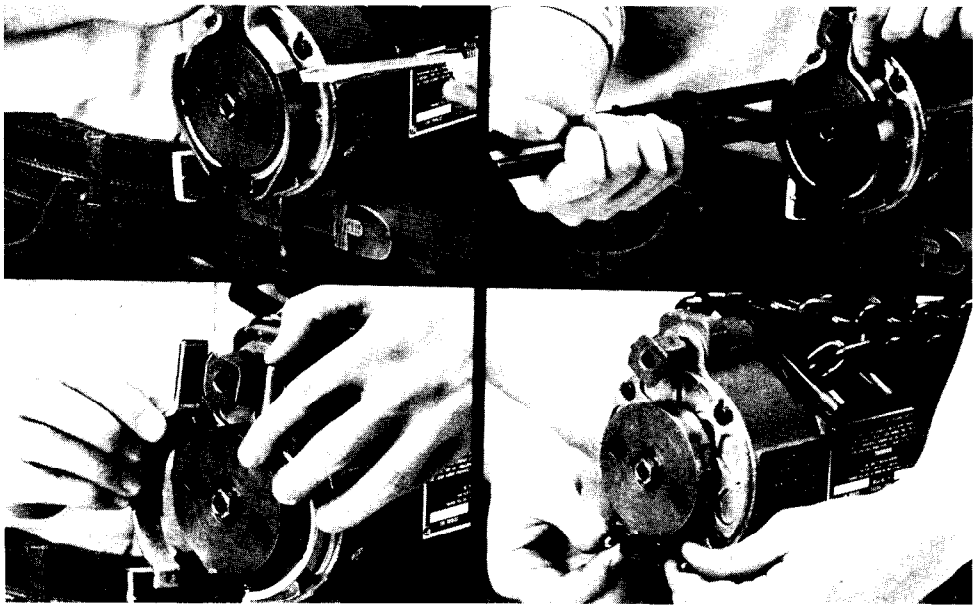
SLIDE 6

If your hoist is still operative, run the chain down as far as possible. Now remove your hoist from the hook mount or trolley. If your hoist is hook mounted, remove the upper hook assembly from the housing by removing the two 9/16" bolts and nuts. If your hoist is trolley mounted remove the trolley adapter by driving the two roll pins out with the pin punch and ball peen hammer.



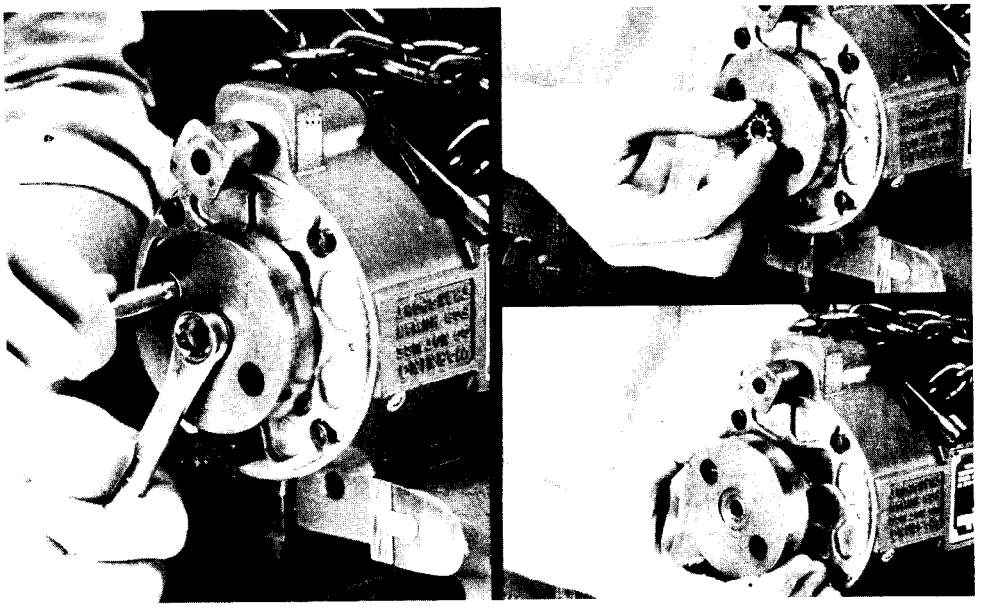
SLIDE 7

For hoists with pendent controls, remove the three hoses and the u-bracket with the 9/16'' wrench and set the pendent control aside. For pull chain control hoists, remove the S-hooks from the control arm using the pliers. Tightly clamp the hoist upside down in the vise on the upper hook mounting lug. Remove the two screws on the brake-cap with the flat head screwdriver and pull the brake cap from the hoist.



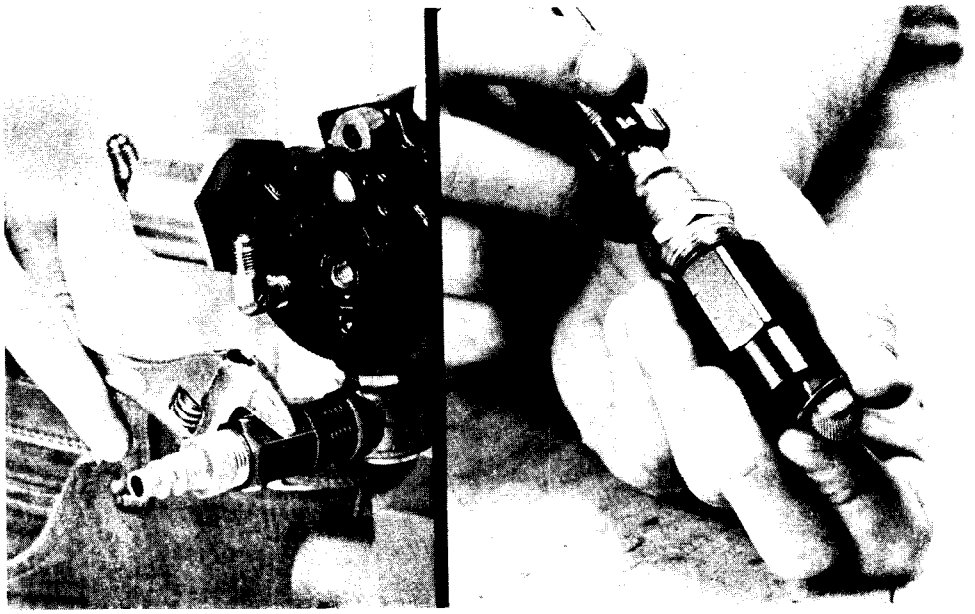
SLIDE 8

Now use a flat-bladed screwdriver to slide the brake spring from the brake shoes just far enough to grip it with the brake spring spreader. Then, hold the brake shoes, as shown, and carefully remove the brake spring with the brake spring spreader. Exercise extreme caution when removing the brake spring as it has considerable tension. Now remove the brake shoes and the two balls behind them.



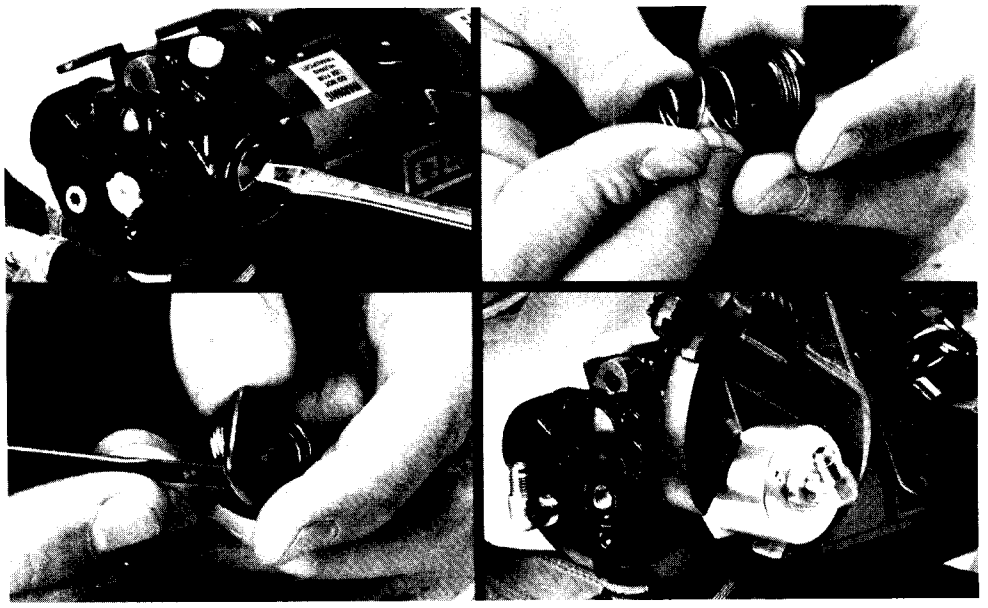
SLIDE 9

To remove the brake wheel, insert a brass rod in either of the holes and rotate the wheel until the brass rod butts against one of the ribs in the gearing plate. Use the 9/16" wrench to remove the nut and washer then pull the brake wheel off.



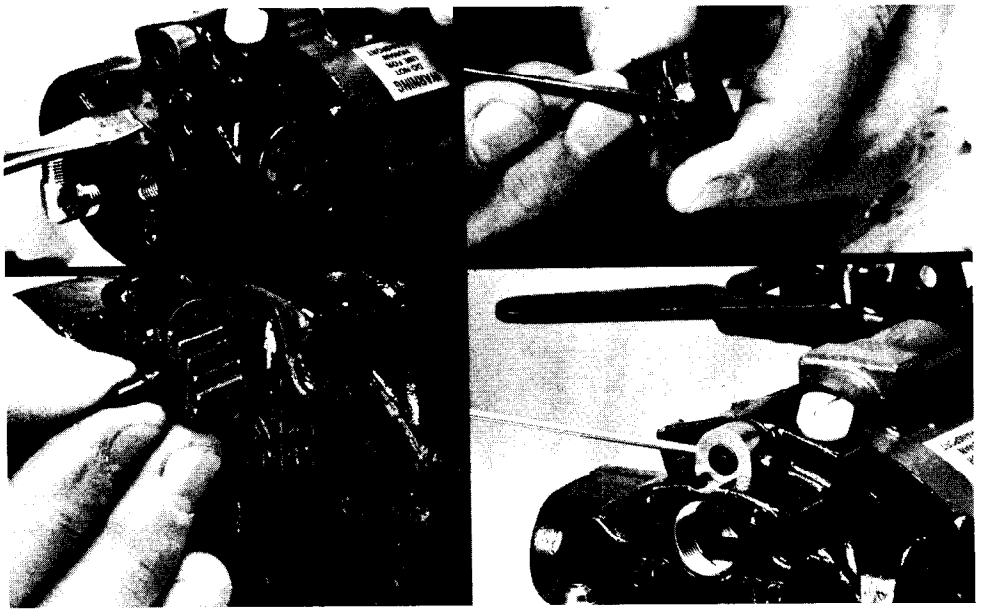
SLIDE 10

Remove the air inlet adapter from the hoist as shown. Push the screen through and inspect it for dirt or clogging. Screens may be cleaned in solvent if necessary but in extreme cases they should be replaced.



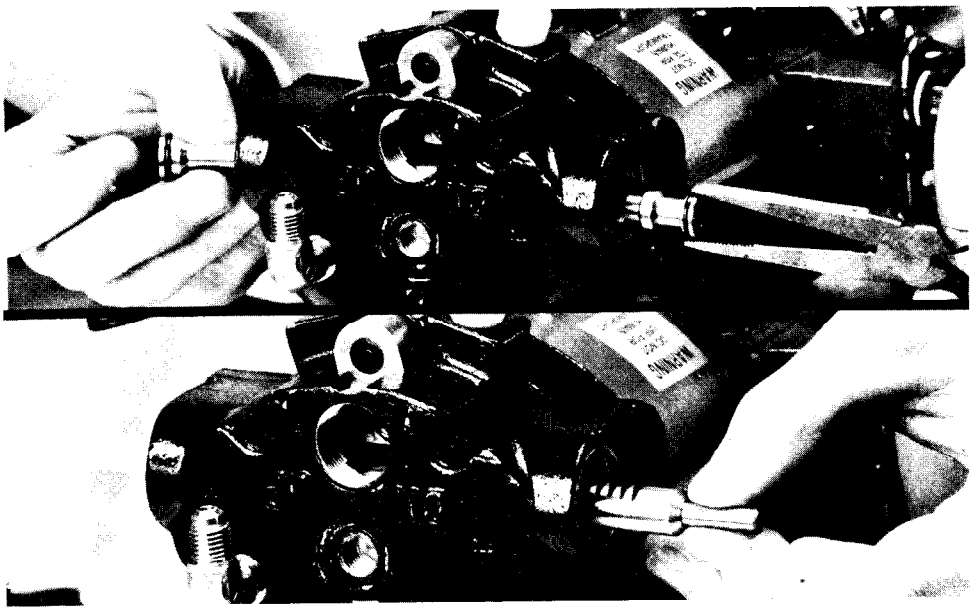
SLIDE 11

Next for pull chain hoists remove the two valve caps on the side of the head with the large flat-bladed screwdriver and remove the spring located behind each valve cap. Also remove the o-ring from each valve cap. For hoists with pendent control remove the two cylinder assemblies from each side of the head with an adjustable wrench and remove the o-ring from them. Pendent control hoists will not have springs.



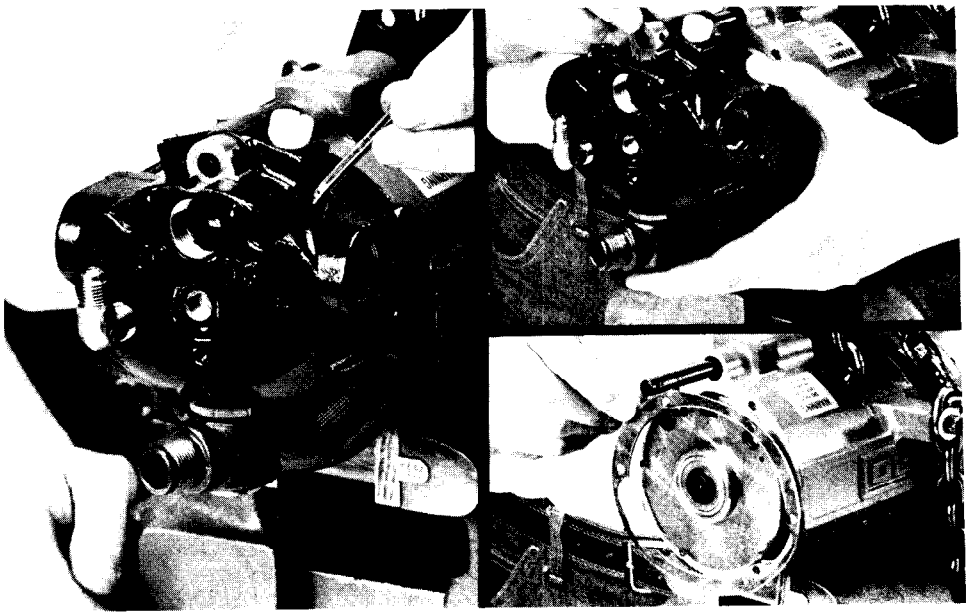
SLIDE 12

Remove the lock screw from the head with the large flat-bladed screwdriver and remove the o-ring from it. Now remove the gear and shaft from inside the head. Next, use a small pin punch to drive the roll pin out of the gear and control rod.



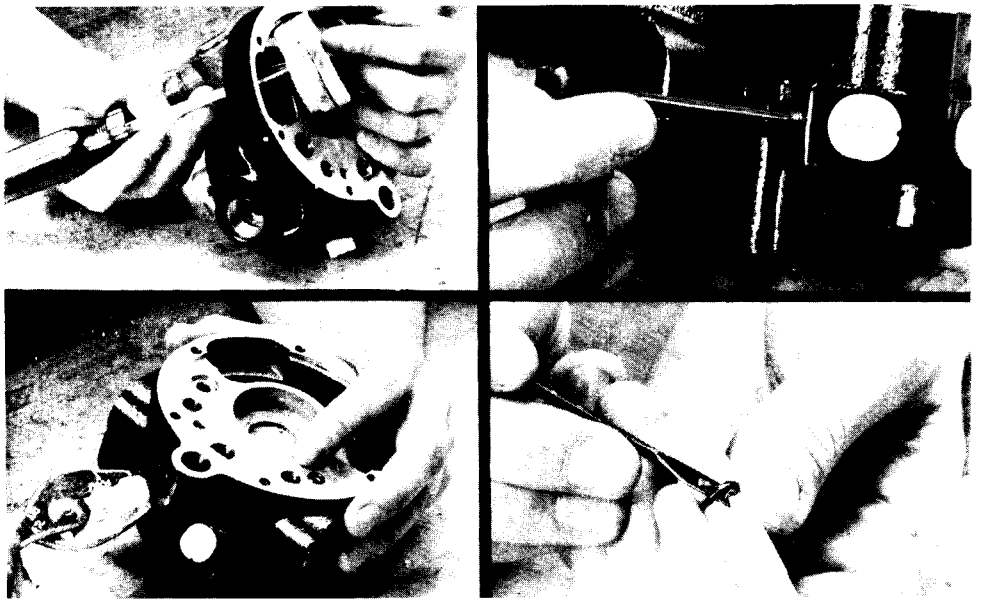
SLIDE 13

Remove the valve and the lift valve from inside the head with the duckbill pliers being careful not to scratch or score them. Use the brass rod to push the valve body out of the head in either direction. Also remove the o-rings from the valve and the lift valve.



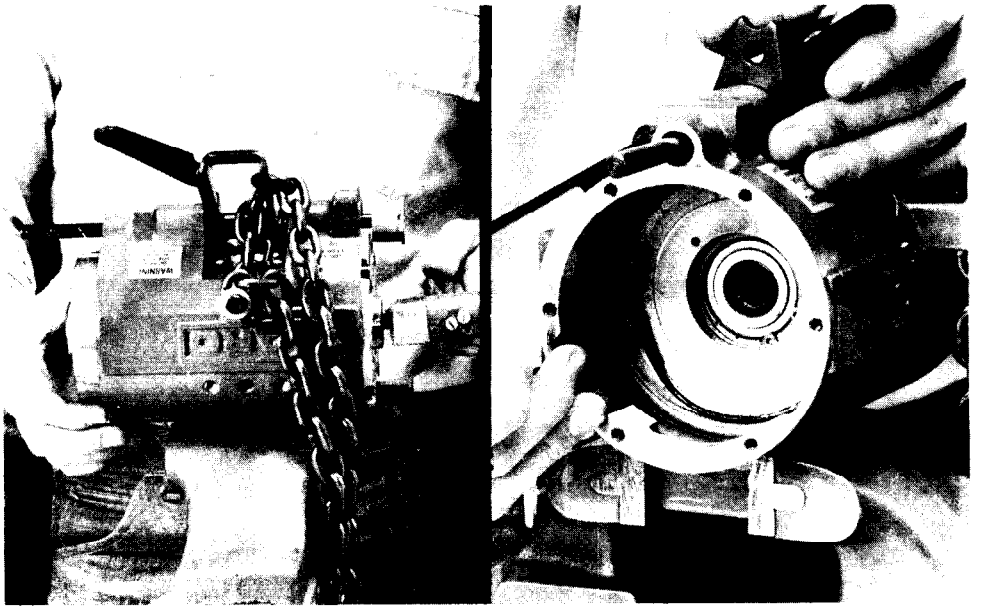
SLIDE 14

Remove the head from the hoist by unthreading the six cap screws and washers with a 5/32" allen wrench. If the head resists removal, tap it with a soft-faced mallet then pull it off. Also remove the gear from the head and the gasket from the head or housing.



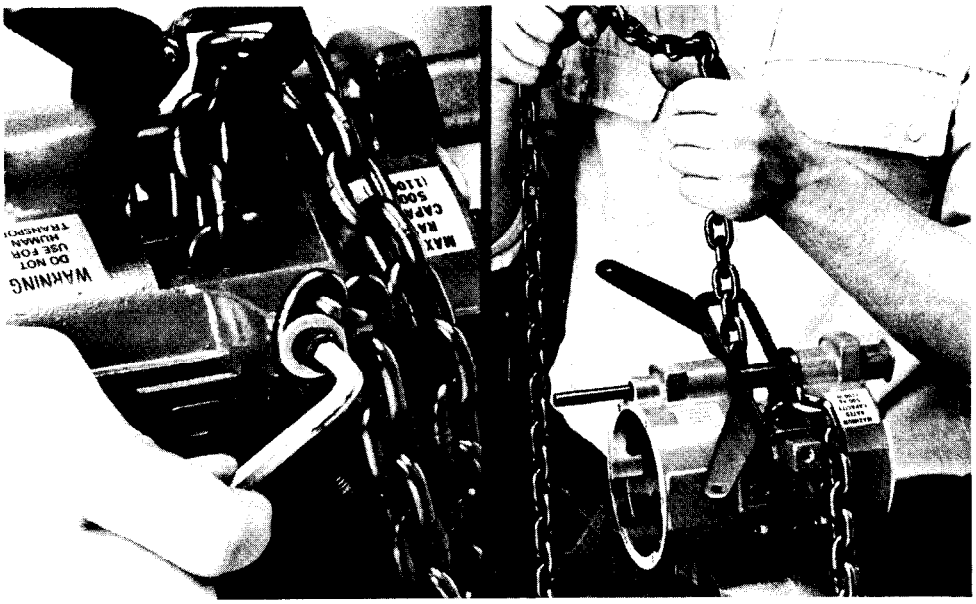
SLIDE 15

Remove the three fillers and screen from the head. If these components are dirty replace them with new ones during reassembly. Remove the two valve bodies by first unthreading the 3/32" set screws in the head. Now carefully pull the valve bodies out with a pair of pliers and remove the o-ring from each. Do not remove these valves on spark resistant hoists as they are preset.



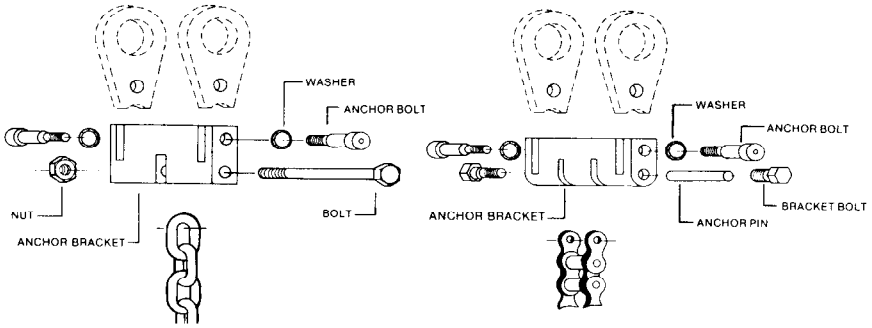
SLIDE 16

Tap the spline end of the motor with a soft-faced mallet at the brake end of the hoist. This will expose the motor at the other end of the hoist so it can be removed along with the o-ring located behind it.



SLIDE 17

Now remove the 1/4'' screw that anchors the chain to the hoist housing. On link chain hoists only, remove the washer with this screw. Now pull the chain out by hand. Be sure the links don't twist inside the hoist as this will cause it to jam.

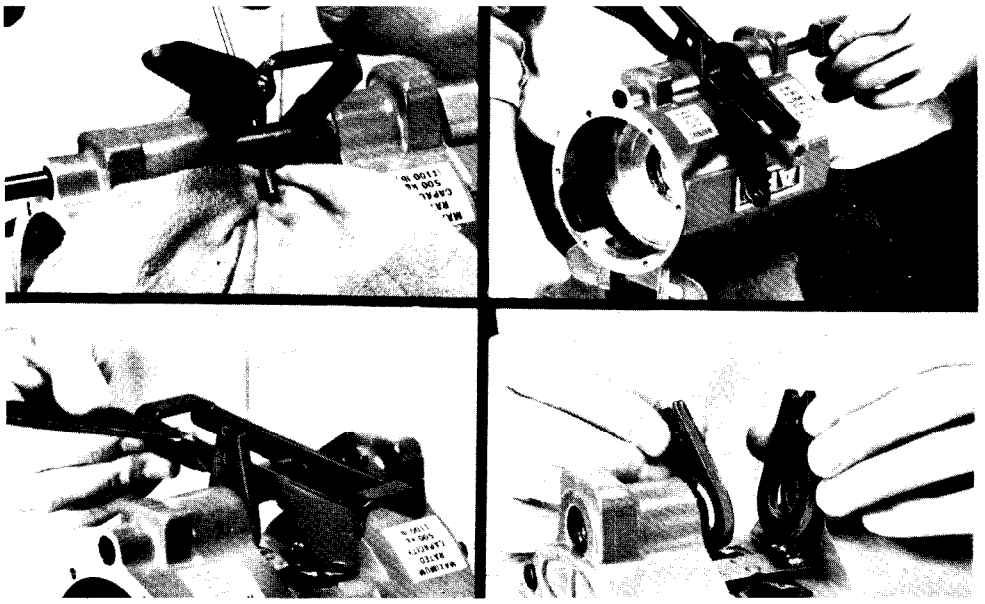


LINK CHAIN ROLLER CHAIN

SLIDE 18

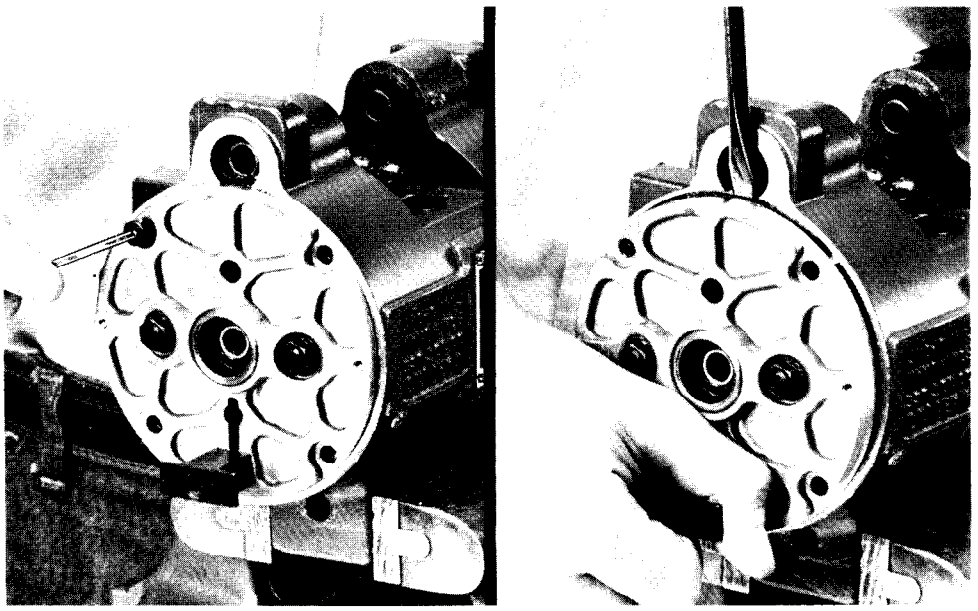
For 1 ton link chain hoists use the 1/2'' wrench to remove the bolt and nut from the anchor bracket which allows the chain to be removed. Now unthread the two anchor bolts and remove them with the washer on each. This will allow the anchor bracket to be removed from the hangers.

For 1 ton roller chain hoists remove the two bracket bolts with the 8'' adjustable wrench. Drive the roll pin from the bracket bolt hole with a pin punch and ball peen hammer. Now unthread the two anchor bolts and remove them with a washer on each. This will allow the anchor bracket to be removed.



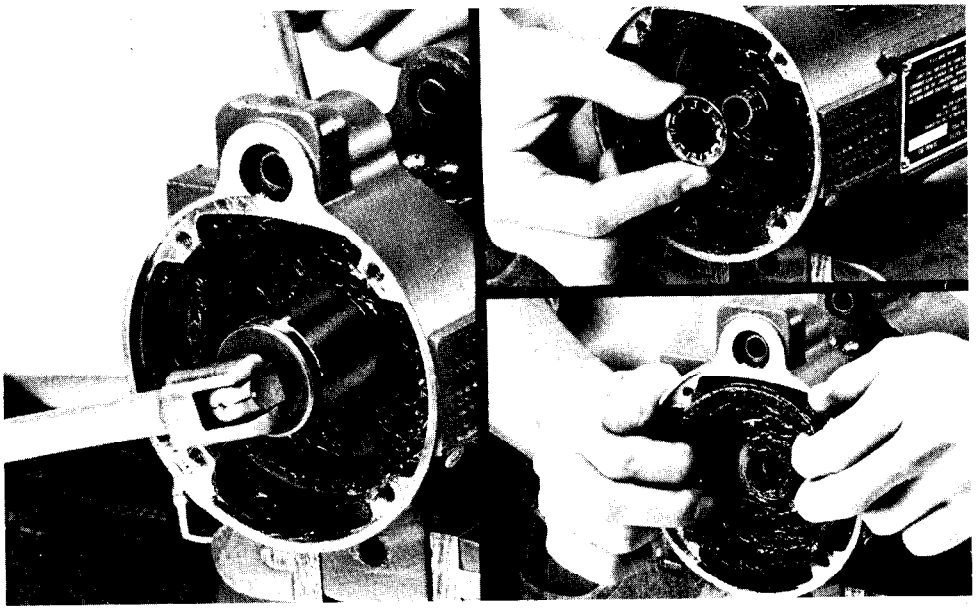
SLIDE 19

Next drive the roll pin from the control arm and rod. Use a shop towel to keep the roll pin from dropping down into the pocket wheel. Now pull the control rod and brake block from the hoist body. This will also allow removal of the control arm and the two hangers.



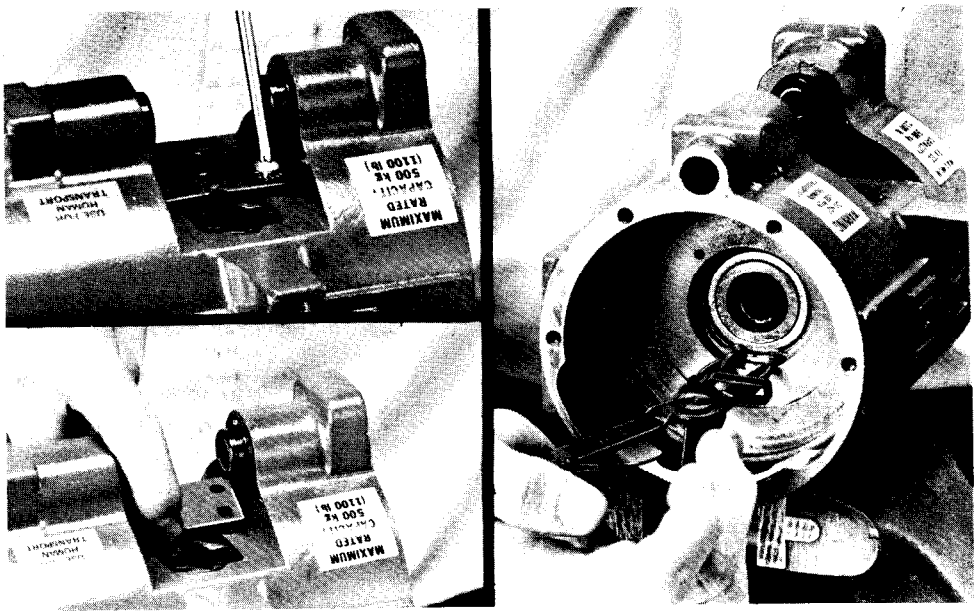
SLIDE 20

Now remove the four screws and washers from the end plate with the 1/8" allen wrench. Pull the gearing section from the hoist. It may be necessary to carefully pry the gearing out with a flat-bladed screwdriver as shown.



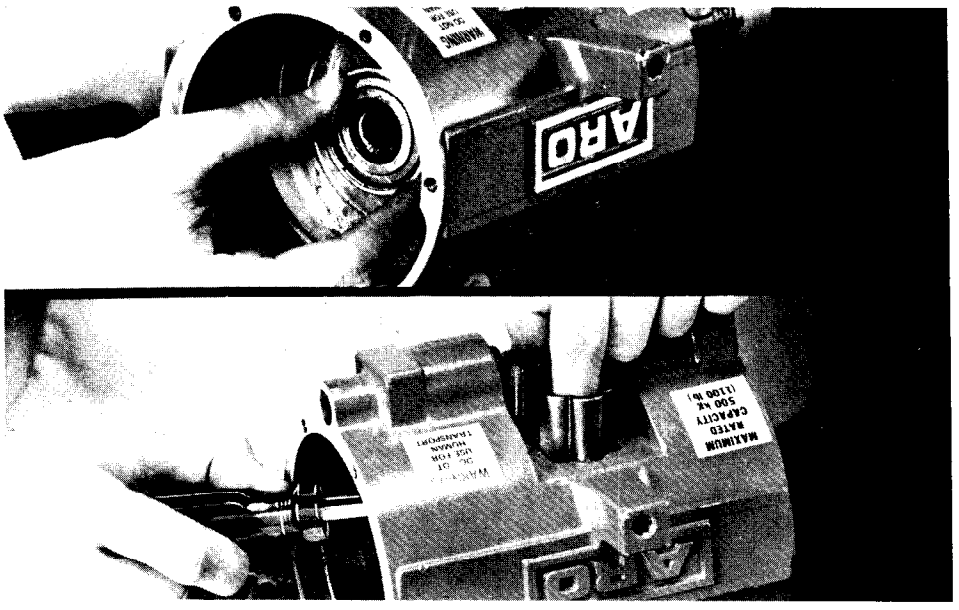
SLIDE 21

Remove the nut holding the ring gear using a 1" socket and place the brass rod in the pocket wheel or sprocket as shown, to keep it from turning. Also remove the washer located behind the nut. Now pull the ring gear straight out and set it aside.



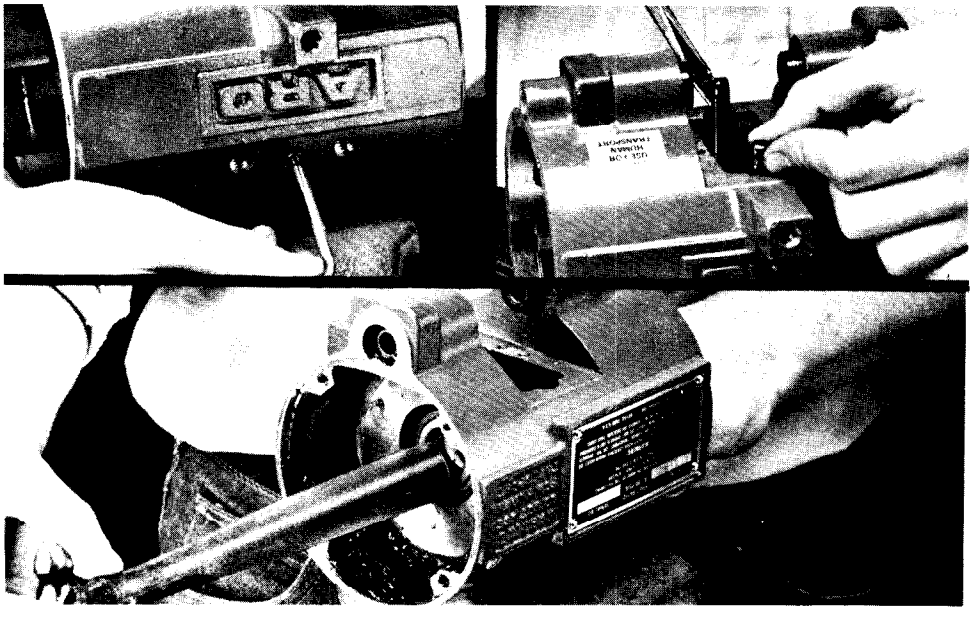
SLIDE 22

Next unscrew and remove the four phillips head screws and remove the chain plate from the housing. Now remove the retaining ring from the motor end of the hoist using the number 3 internal snap ring pliers.



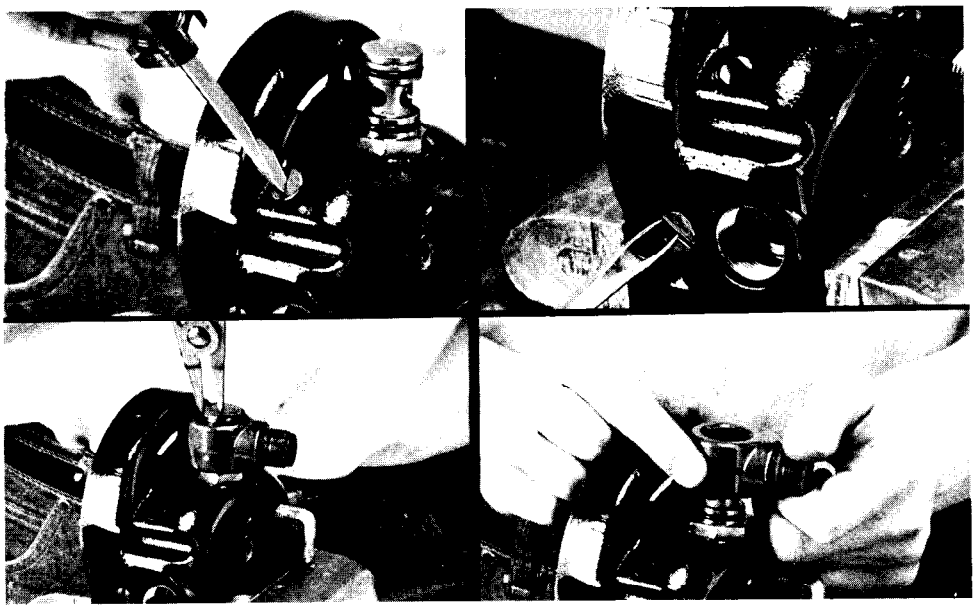
SLIDE 23

Remove the sprocket or shaft by carefully tapping the exposed threaded end of it with a soft-faced mallet. The bearing at the motor end of the hoist will come out with the sprocket or shaft. For link chain hoists pull up on the chain guide and pocket wheel to remove them both from the hoist.



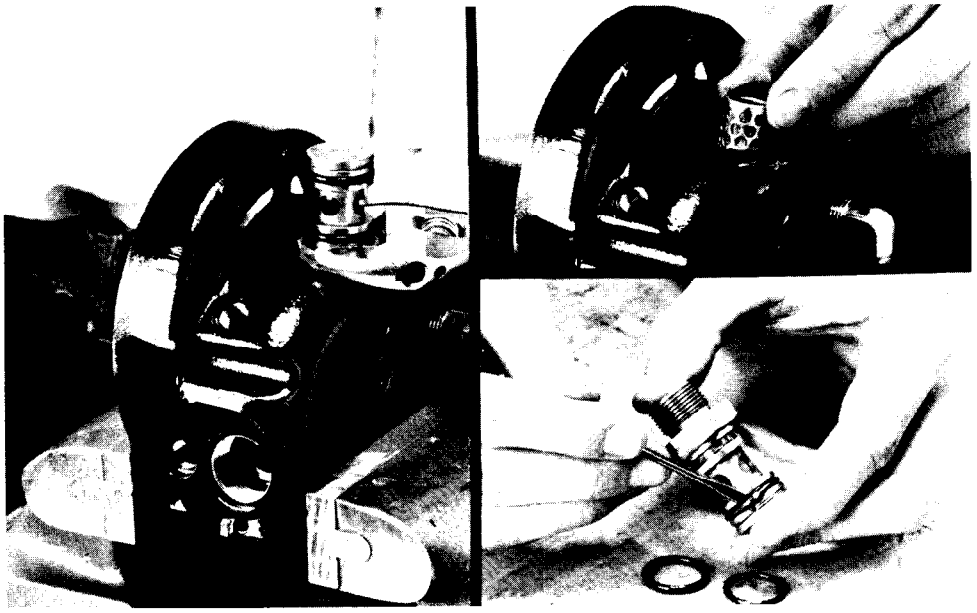
SLIDE 24

For roller chain hoists remove the two 5/32'' screws and washers on each side of the housing, then the chain guide. In both link and roller chain models remove the bearing in the hoist by tapping on the inner race with the hammer handle from the gearing end of the hoist.



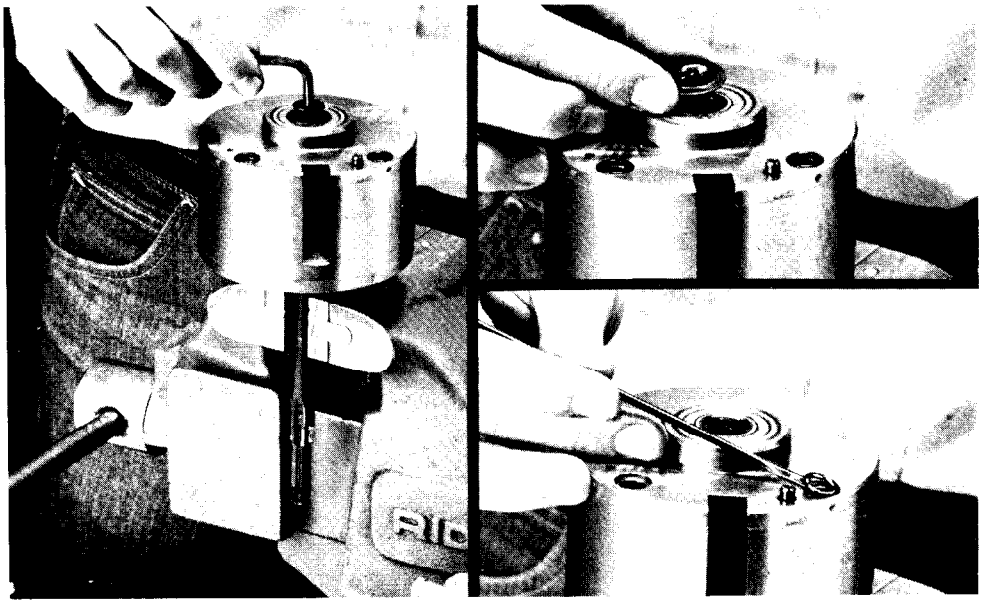
SLIDE 25

Carefully mount the hoist head in the vise as shown. Do not clamp excessively tight as this could cause the head to leak after reassembly. Remove the two oil screws and washers from the hoist head with a flat-bladed screwdriver. Now remove the retaining ring from the top of the swivel body with the external snap ring pliers. Remove the swivel by pulling up while turning.



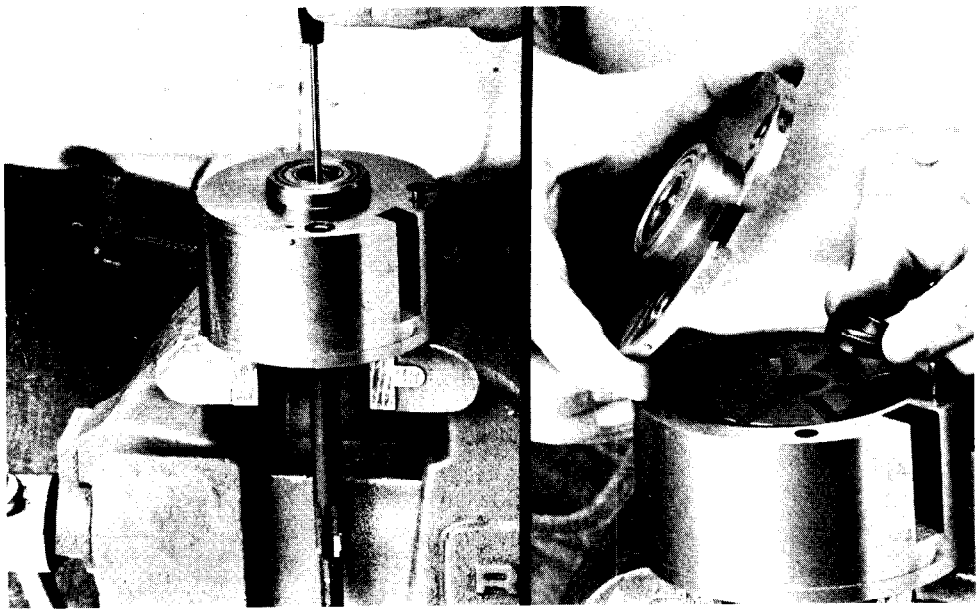
SLIDE 26

Remove the swivel body using the 8'' adjustable wrench. Now remove the screen from inside the hoist head. Also remove the three o-rings from the swivel body. Inspect the screen for dirt and if it is plugged clean it in a wash solvent and if it is still plugged replace it with a new one during reassembly.



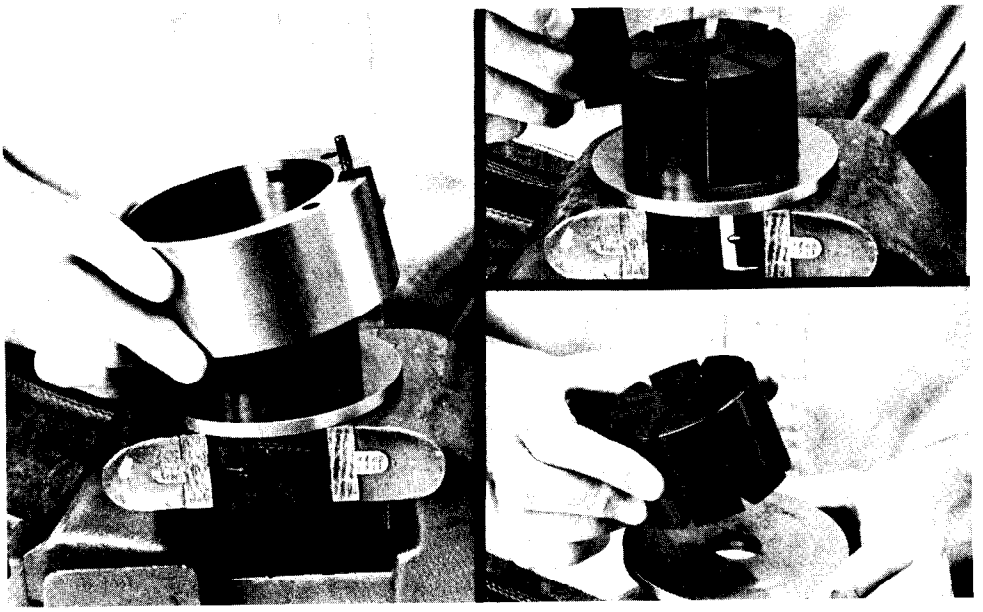
SLIDE 27

Now clamp the motor section in the vise with the smooth part of the motor spindle in the vise jaws. Use the 3/16" allen wrench to remove the cap screw from the motor then remove the washer. Also remove the two o-rings from the end plate.



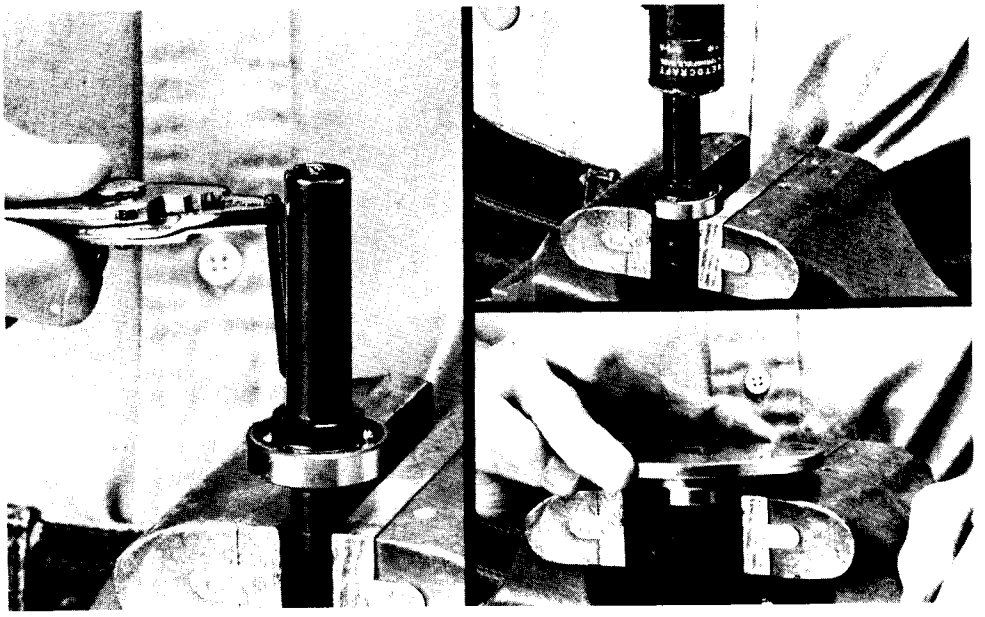
SLIDE 28

Adjust the motor in the vise so it rests on the end plate. Don't tighten the vise. With a pin punch and ball peen hammer drive the spindle down through the motor being sure not to damage the threads inside the spindle. Remove the end plate and spacer from the motor.



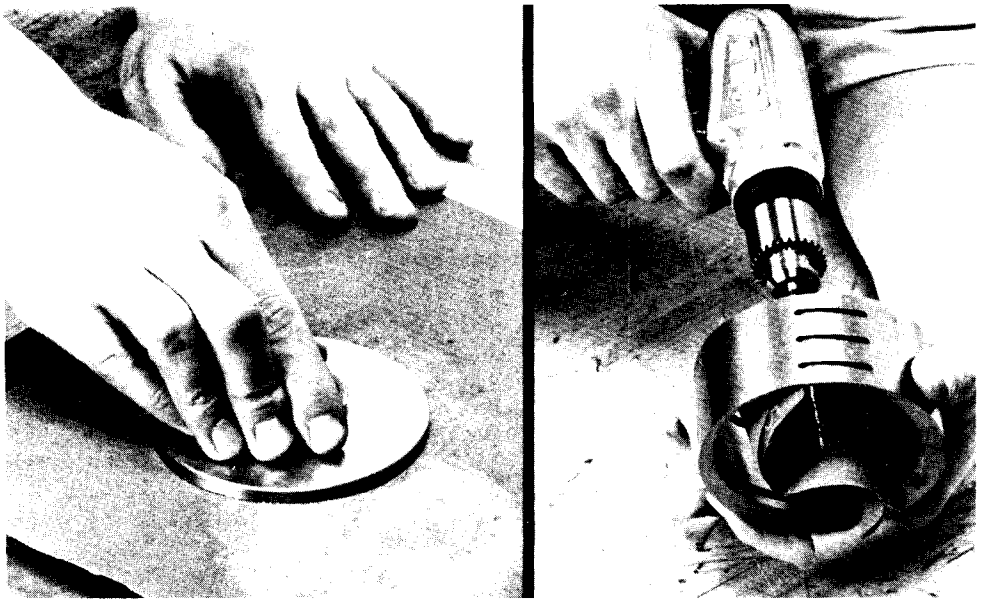
SLIDE 29

Pull the cylinder off and remove the eight blades from the rotor. Also remove the rotor and front end plate.



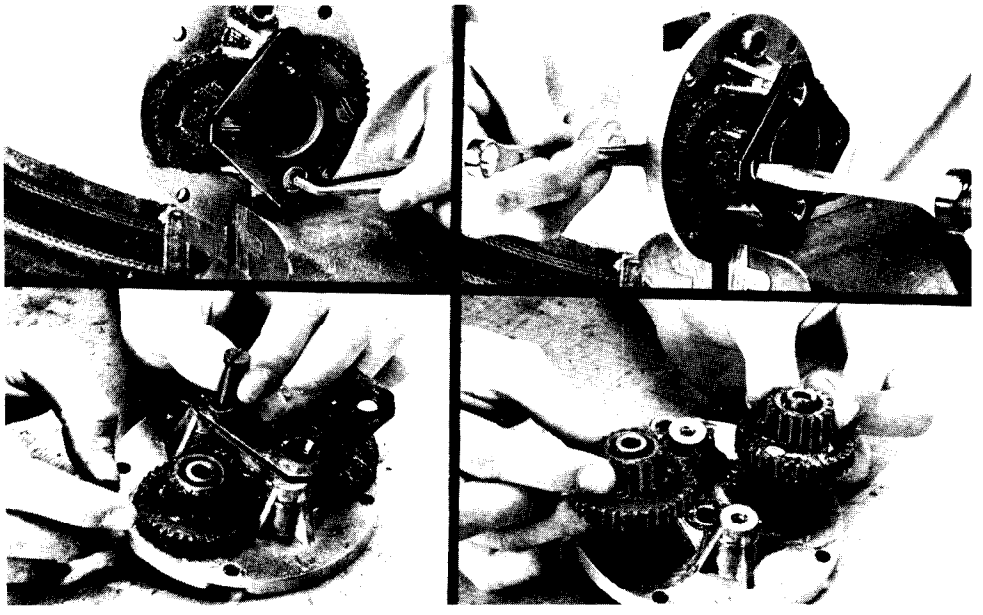
SLIDE 30

Mount the spindle in the vise as shown and remove the key from the keyway with the pliers. To remove the bearing from the spindle, place the bearing on the vise jaws and without tightening the vise tap on the spindle with a soft-faced mallet. The spacer should also come off with the bearing. The bearing in the rear end plate can be removed by tapping the end plate upside down, against open vise jaws as shown. Inspect the bearings for roughness or side play. If one bearing is bad they must both be replaced since these are paired bearings.



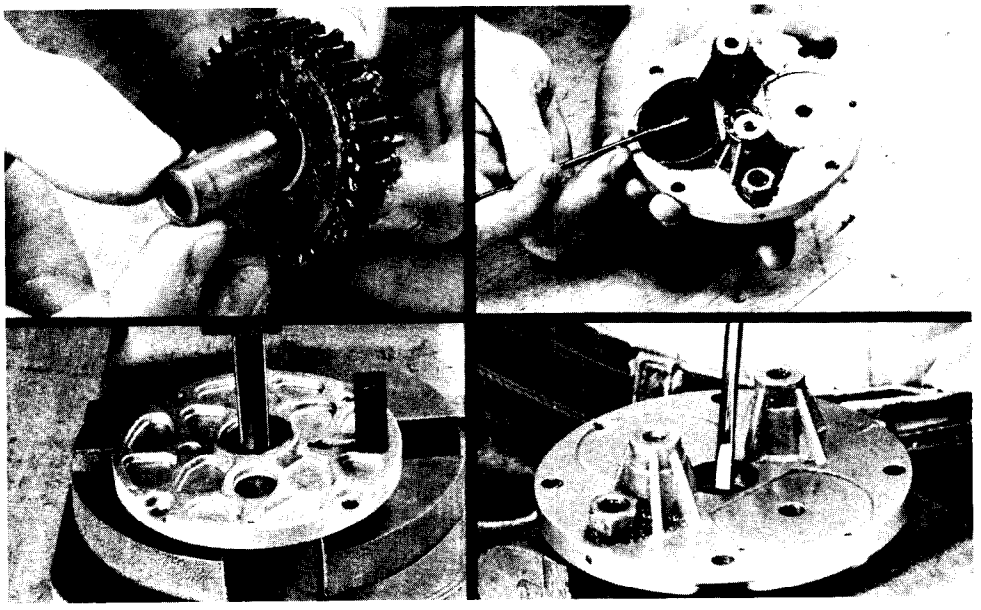
SLIDE 31

Next, visually inspect the flat surfaces of the end plates and the interior of the cylinder for scoring. If mild scoring of the end plates has taken place, hand lap the end plates using 150 grit emery-cloth sandpaper and finishing with 400 grit wet/dry abrasive on a flat surface. Mild scoring of the cylinder can be removed with a flybur tool. If severe scoring in excess of .005" is apparent, the part must be replaced. Also inspect the splines on the motor spindle for excessive wear which would require replacement.



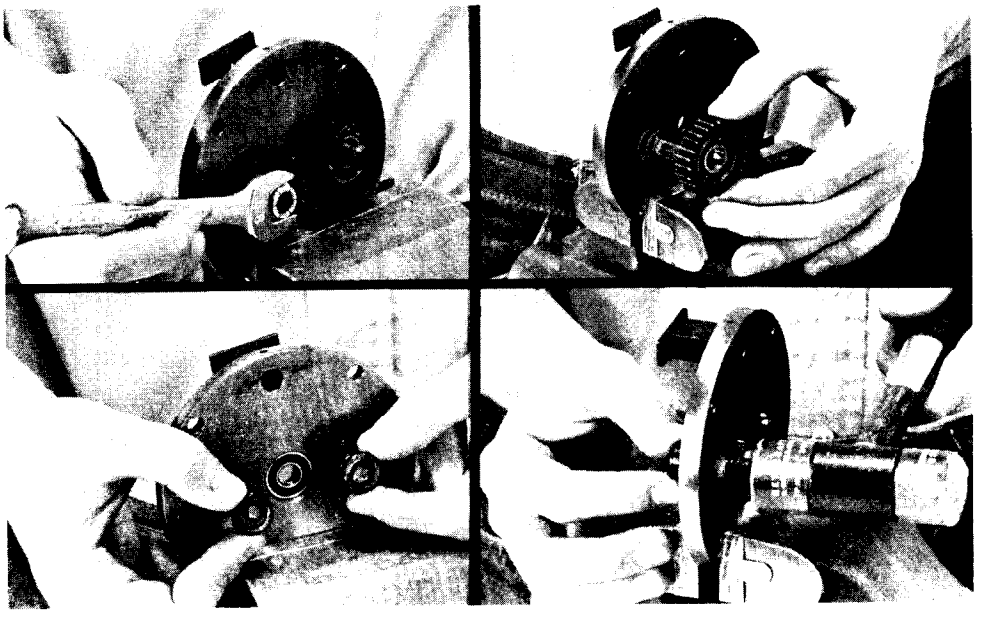
SLIDE 32

Inspect the gearing assembly for broken or chipped teeth and smoothness of operation. Normally this gearing need not be disassembled so if no wear is present set the gearing aside and disregard this and the next three slides. If disassembly is required the gearing assemblies used in 1/2 ton and 1 ton models should be mounted in the vise as shown and the two screws removed with the 5/32" allen wrench. Now remove the washers and nuts using the flat-bladed screwdriver and the 7/16" open end wrench. Carefully remove the support ring and bolts working over the bench. Finally, remove the gear and bearing assemblies.



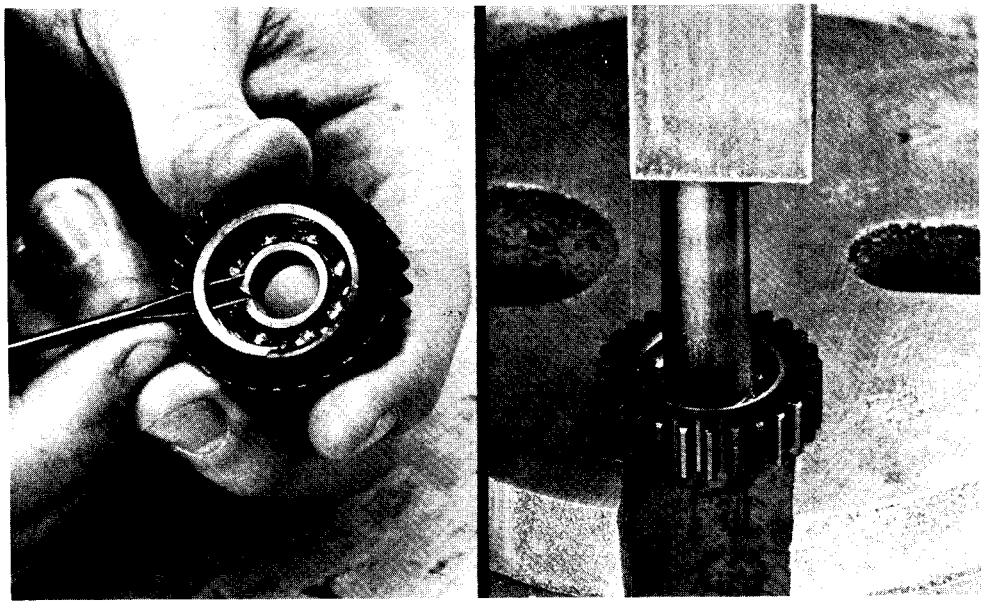
SLIDE 33

On 1/2 ton and 1 ton models remove the bushing inside each gear. Also remove the two wear plates from the end plate with the o-ring pick. These wear plates may have come off with the gears. For all gearing assemblies, including 1/4 ton models, inspect the bearing for smoothness of operation and the seal for any distortion or damage. Normally these components need not be removed, but if they are bad use the arbor press to remove the bearing and a flat-bladed screwdriver to remove the seal as shown.



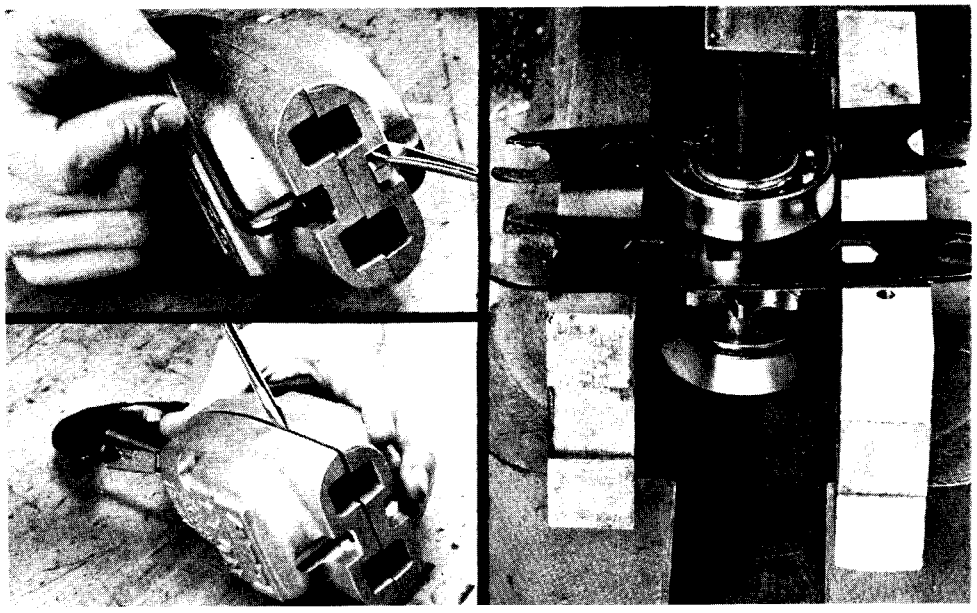
SLIDE 34

For 1/4 ton models disassemble the gearing by first unthreading the two nuts with the 5/8" wrench. Slide the gears from the screws then remove the two spacers. Remove the two screws using the soft-faced mallet if necessary. Press the lip seal and bearing out only if they are bad. Remove the bearing with the arbor press and the seal with a screwdriver as was pointed out in the previous slide.



SLIDE 35

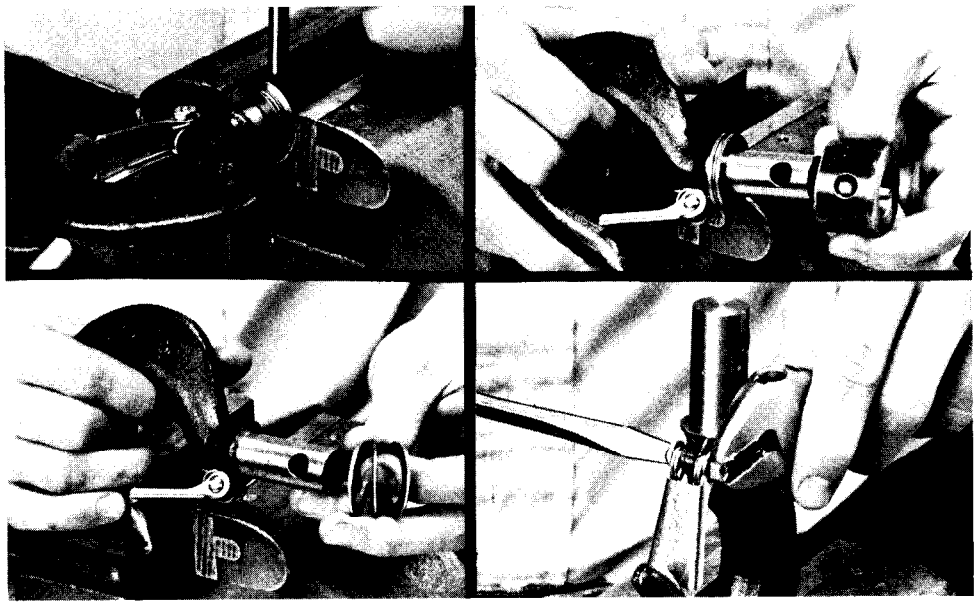
Remove one of the two retaining rings from each gear by carefully prying on it with an o-ring pick as shown. Use the arbor press to force the bearing out the same side the retaining ring was removed from. Be sure to inspect the idler gear for excessive wear or broken gear teeth.



SLIDE 36

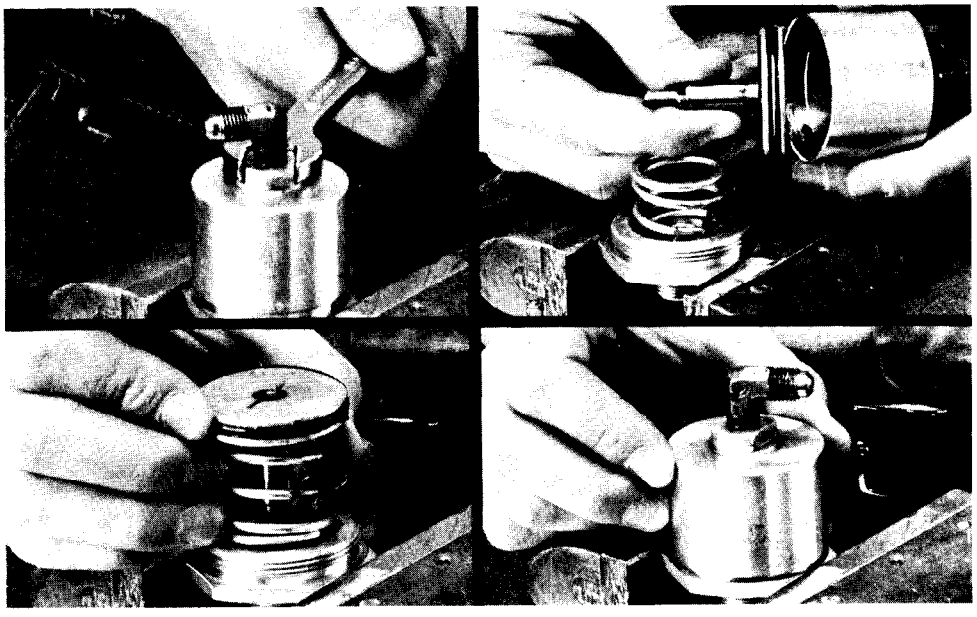
On 1 ton hoists disassemble the sheave block assembly at this time. To do so, slide the chain stop from the chain and pull the chain from the lower hook assembly. Remove three screws and washers from the shroud with the 3/16'' allen wrench.

Now separate the two shroud halves using a sharp flat-bladed screwdriver. If one or both of the bearings remained in the shroud remove it by tapping on the inside face of the shroud with the soft-faced mallet. Use the arbor press and flat wrenches to separate the bearings from the sheave or sprocket then inspect these parts for wear.



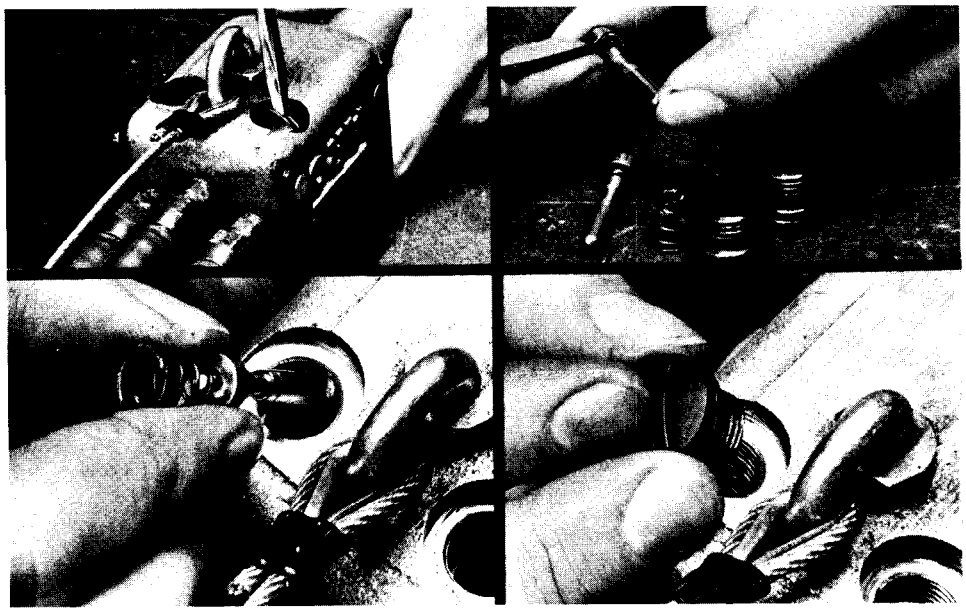
SLIDE 37

Inspect the thrust bearing for wear or broken parts and if disassembly is required force the roll pin out of the sleeve with a pin punch and ball peen hammer. Slide the sleeve off. Now remove the two thrust races and the thrust bearing. Inspect the hook latch for wear and if disassembly is required use the flat-bladed screwdriver and 8'' adjustable wrench.



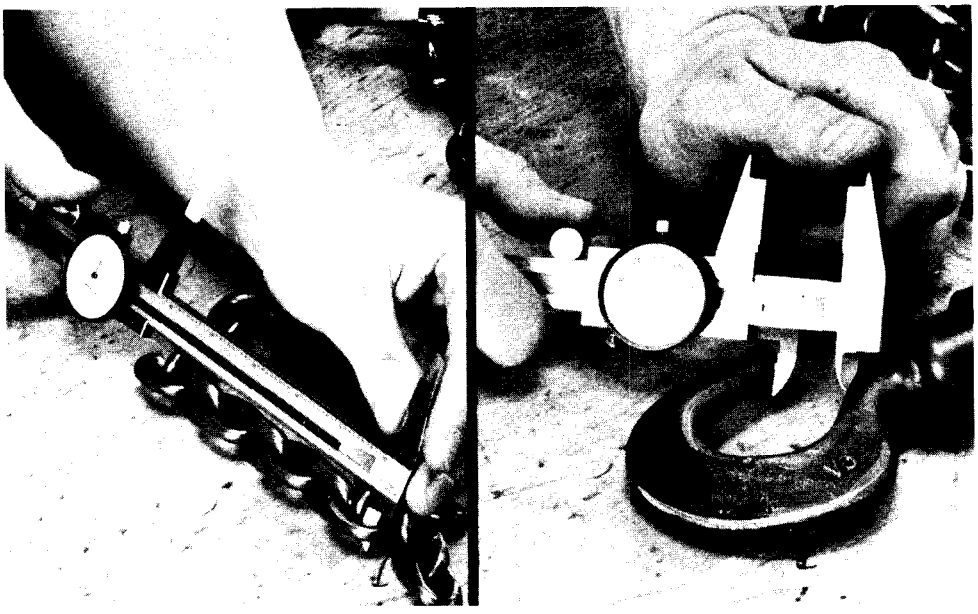
SLIDE 38

Also, on pendent control hoists, disassemble the cylinder. To do so, clamp the adapter in the vise by the flats and turn the cylinder counter-clockwise with a 5/8'' wrench. Pull the piston from the cylinder. Now, for reassembly, lubricate and install the new o-ring on the piston and in the adapter. Place the spring on the piston and the piston into the adapter. Finally thread the cylinder onto the adapter.



SLIDE 39

For pendent controls, remove the two screws from the back of the pendent control handle. Remove the two valves and springs. For reassembly lubricate and replace the o-rings on the valves and screws with new ones. Then place the valves and springs back into the control handle. Be sure to place the springs into the handle small end first. Secure the valves and springs by replacing the screws. Inspect the hoses for cracks or wear. If the hoses show signs of excessive wear they should be replaced.



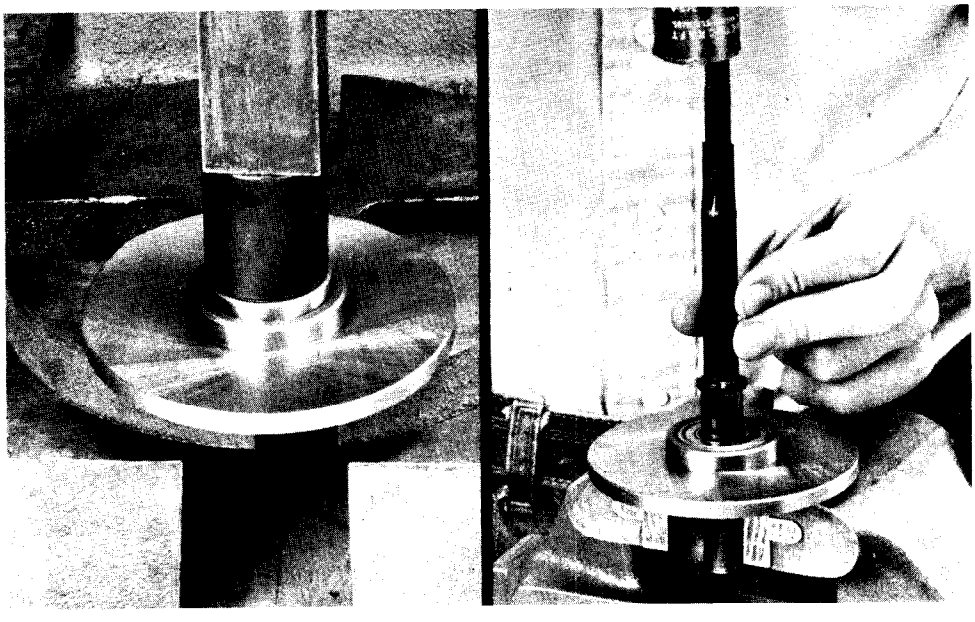
SLIDE 40

Inspect the chain and hooks for signs of wear. Carefully follow the inspection procedures on page 6 of the Operators Manual. The chain and hooks must be inspected each time the hoist is repaired and more often where the hoist is used heavily. If the chain needs to be replaced, replace the pocket wheel or sprocket as well. Never use new chain with an old pocket wheel or sprocket.

1. WASH PARTS IN CLEAN SOLVENT
2. AVOID WASHING SEALED BEARINGS
3. DO NOT ALLOW OPEN BEARINGS TO SPIN WHILE DRYING
4. INSPECT ALL PARTS
5. REPLACE WITH ARO SPECIFIED PARTS

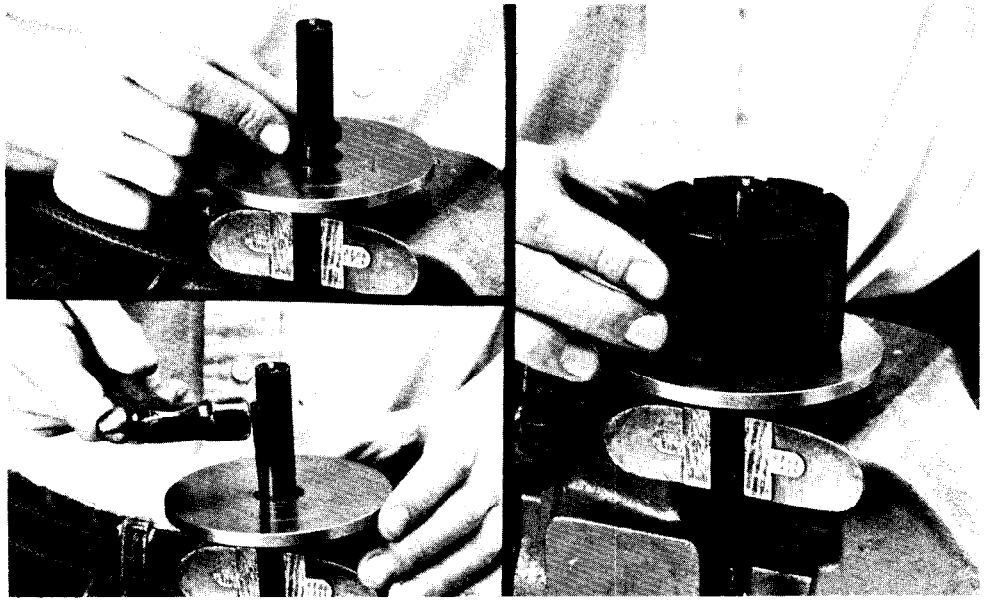
SLIDE 41

Now that the hoist has been disassembled, thoroughly wash all parts in solvent except for sealed ball bearings. Open ball bearings may be washed in a clean solvent but should not be allowed to spin while being blown dry. Inspect all parts for wear. Also, obtain new o-rings, gaskets and rotor blades to replace those removed from the tool. If you are using a service kit, these items will be included. Always replace parts with ARO specified parts.



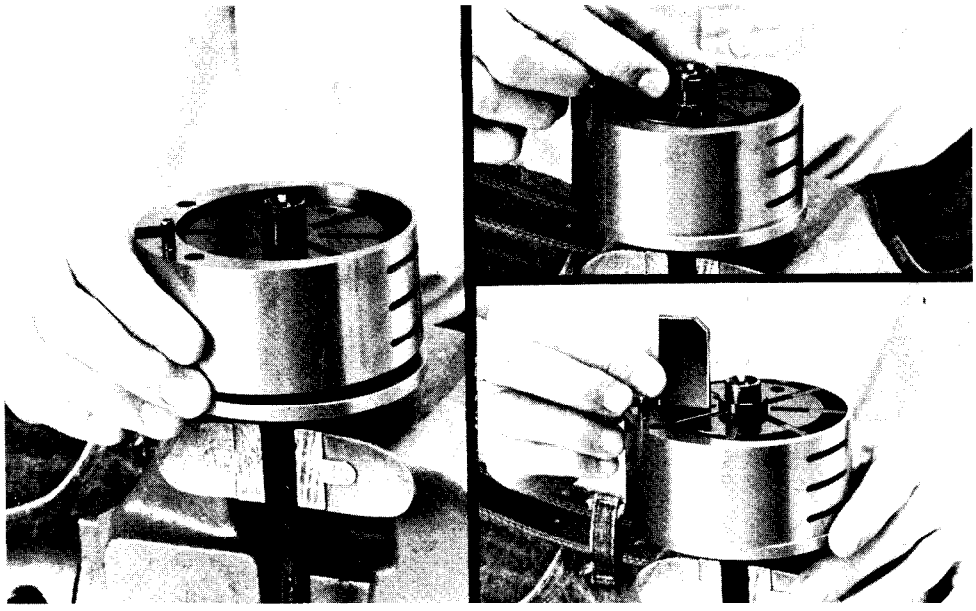
SLIDE 42

To begin the reassembly procedure, apply a small amount of grease to the open side of the motor bearing and obtain the end plate which has no porting or locating holes. Install the bearing into the end plate using the arbor press with the shielded side out and press only on the outer race. Remember, if one new bearing is used they must both be replaced since they are a paired set. Now with the front end plate on the vise with the bearing up, carefully tap the motor spindle into the bearing with the soft-faced hammer until the shoulder of the spindle seats against the bearing.



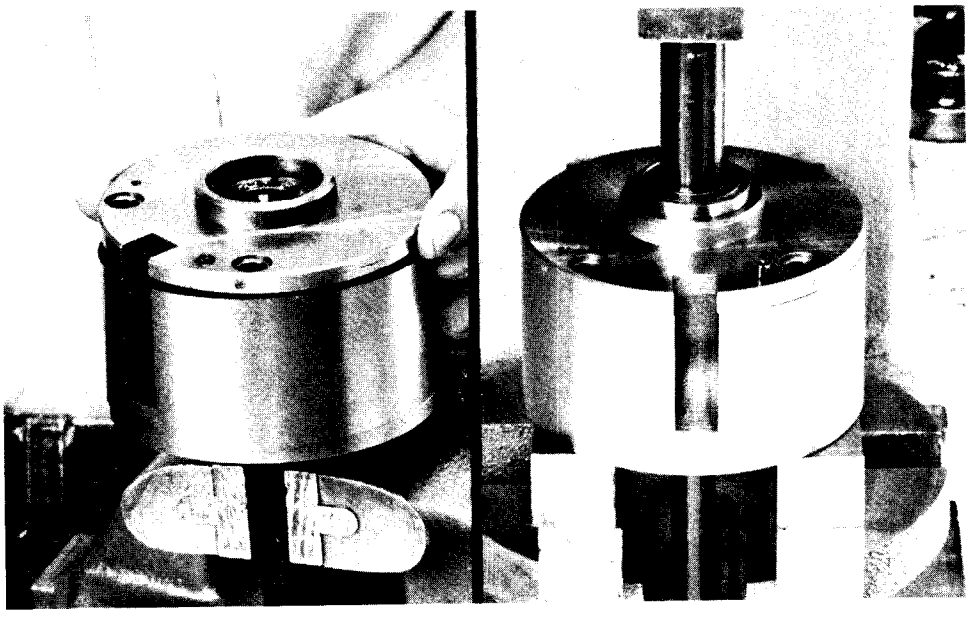
SLIDE 43

Clamp the motor spindle in the vise as shown and slide the spacer over the spindle from the top and into the end plate. Now replace the key in the keyway of the spindle. Slide the rotor down over the spindle, with the 1/4" dimple up or away from the splined end of the spindle. Be sure to align the key with the keyway in the rotor.



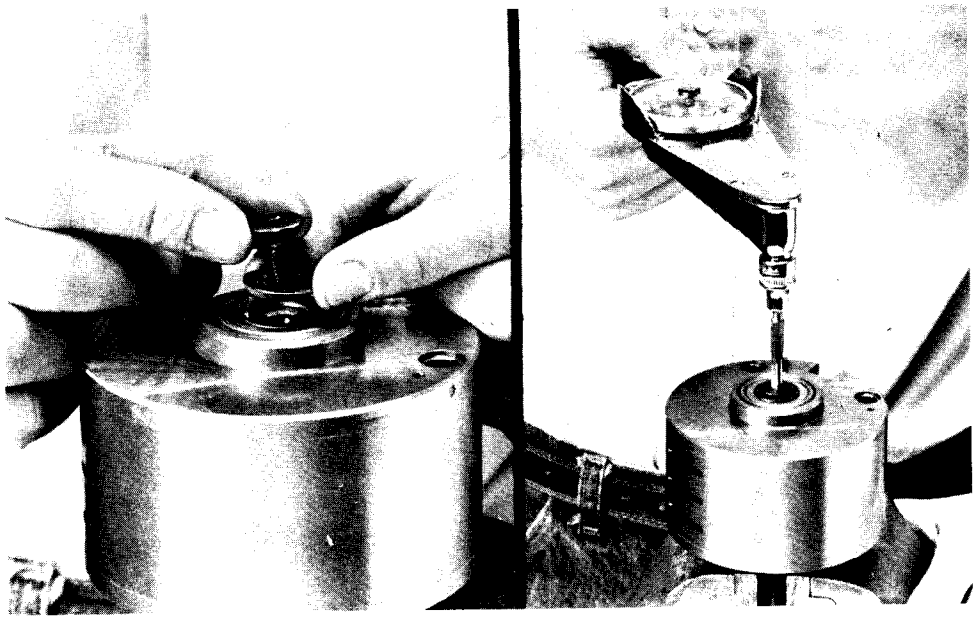
SLIDE 44

Place the cylinder into position with the roll pin up or away from the splined end of the shaft. Slide the other spacer over the rear end of the spindle against the rotor. Now replace the eight blades, with the flat edge against the cylinder.



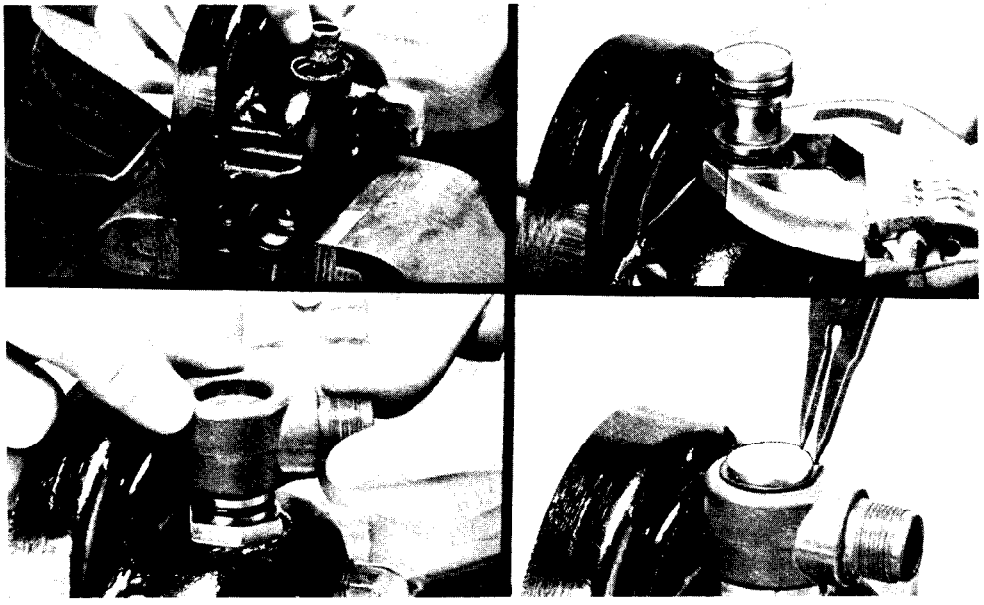
SLIDE 45

Now align the small hole in the rear end plate with the roll pin in the motor cylinder and place the end plate down against the cylinder. Now grease and replace the second paired bearing in the end plate with the shielded side out. Remember to press only on the inner race.



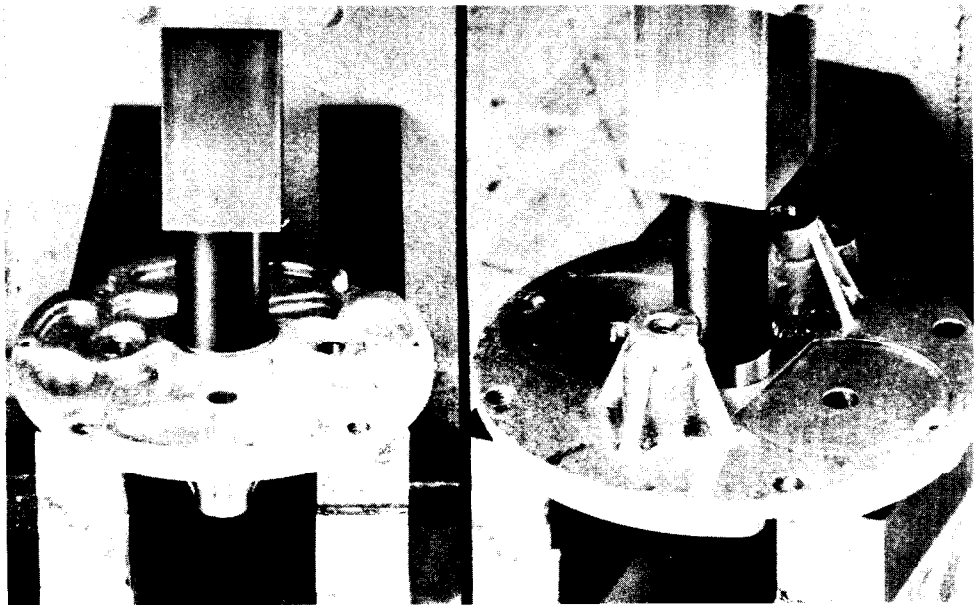
SLIDE 46

Place a new star washer on the bearing and replace the 3/16" cap screw. This cap screw should be tightened to 90 to 110 inch pounds of torque. Be sure to replace the star washer with a new one whenever the motor is disassembled to be sure it gets loaded properly.



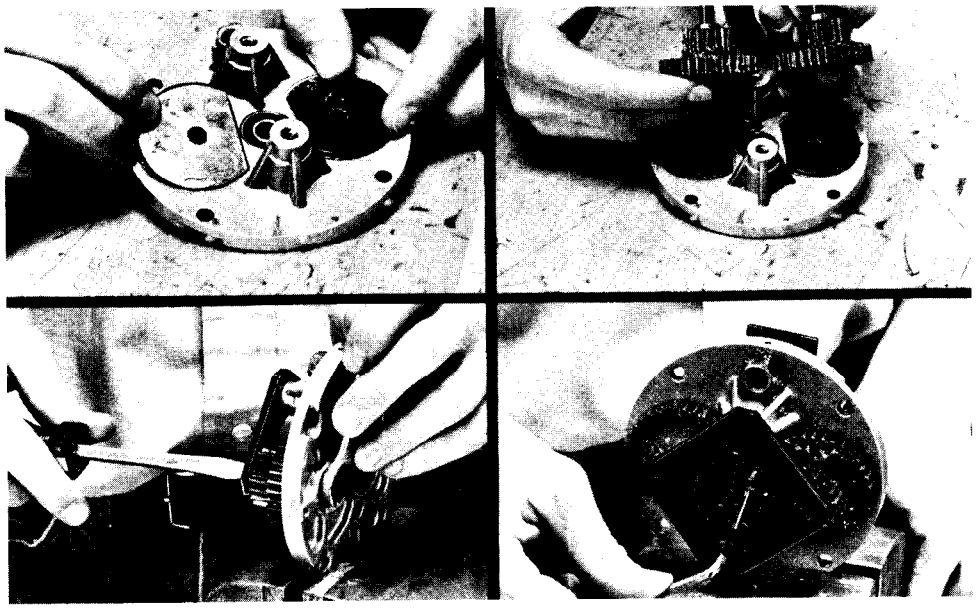
SLIDE 47

Now clamp the valve head in the vise as shown. Be careful not to dent the smooth face of the valve head by over tightening the vise. Now install the screen with the metal rim up as shown. Grease and install the three o-rings, on the swivel body and screw it into the valve head, tightening it with the adjustable wrench. Apply grease inside the swivel and slide it over the swivel body then secure it with the retaining ring. Now remove the valve head from the vise.



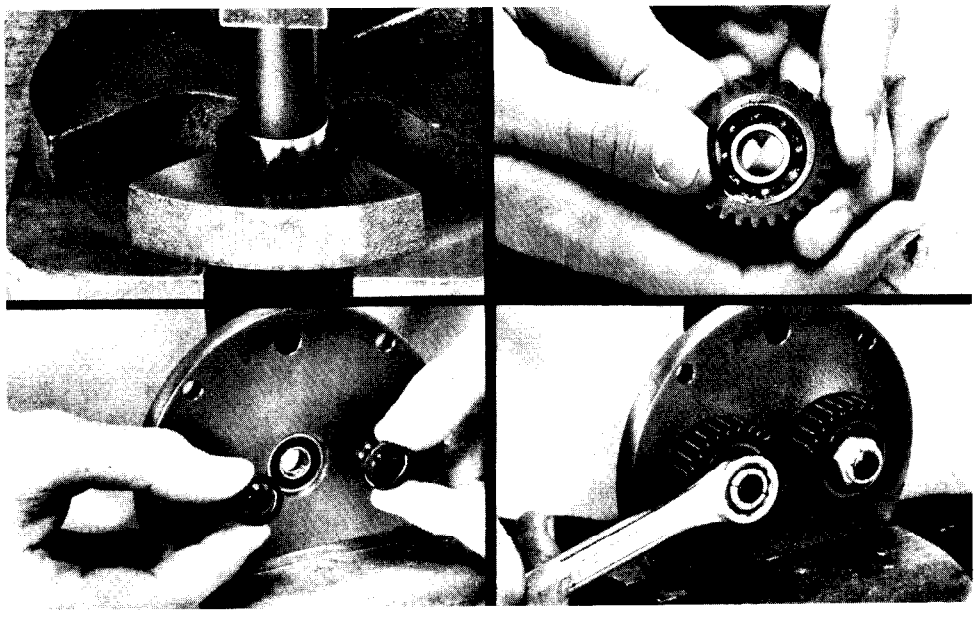
SLIDE 48

Using the arbor press replace the seal in the end plate of the gearing if it was removed. Press this new seal in against the shoulder so the lips will point toward the inside of the hoist when assembled. Now press the new bearing in place in the end plate if it was removed. Press only on the outer race of this bearing. The bearing should be located so it is flush with the inside of the end plate.



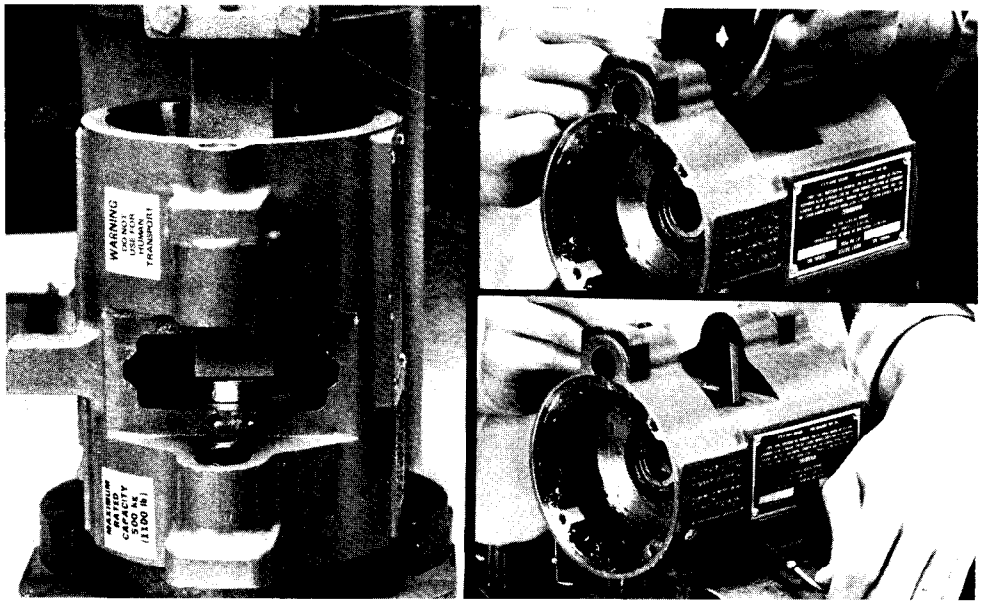
SLIDE 49

Begin reassembly of gearing by obtaining new parts to replace those that were worn. For 1/2 and 1 ton hoists grease and replace the wear plates in the detents. Slide one bushing into each gear and replace these gears with the larger one against the wear plates. Place the two bolts first through the two holes in the support ring having the counterbore then through the bushing and into the holes in the end plate. For 1/2 ton and 1 ton hoists place the end plate in the vise as shown. Place a washer and nut on the end and tighten using the 1/2" open end wrench and the flat-bladed screwdriver. Now replace the two cap screws using the 5/32" allen wrench. Be sure the gears turn freely.



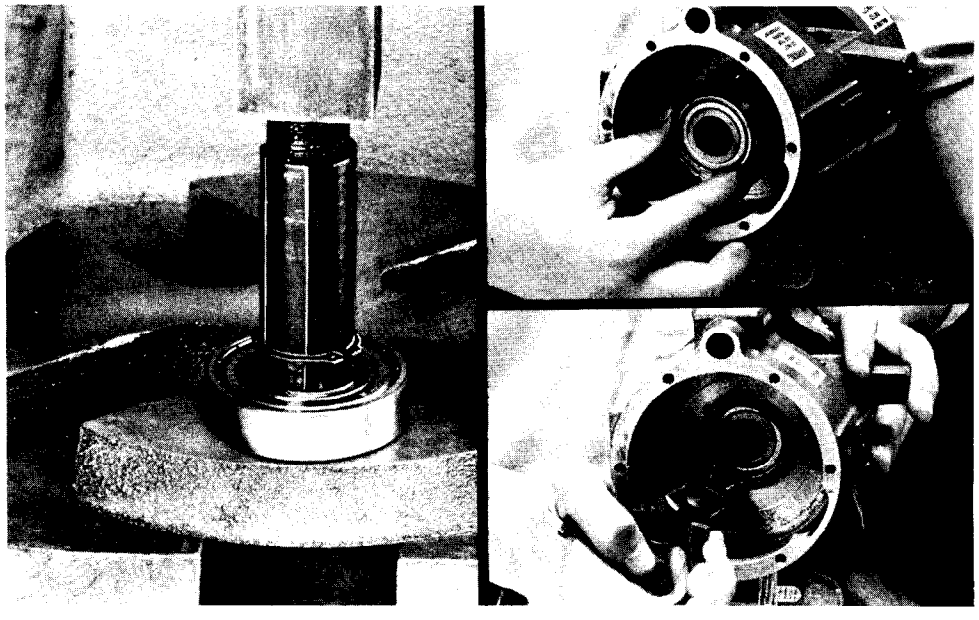
SLIDE 50

For 1/4 ton hoists press the bearing into the gear against the retaining ring being sure to press only on the outer race. Next, replace the retaining ring inside the gear securing the bearing. Place the two screws through the holes in the end plate and slide a spacer on each. Now slide the gearing assemblies on and secure them with replacement of the two nuts.



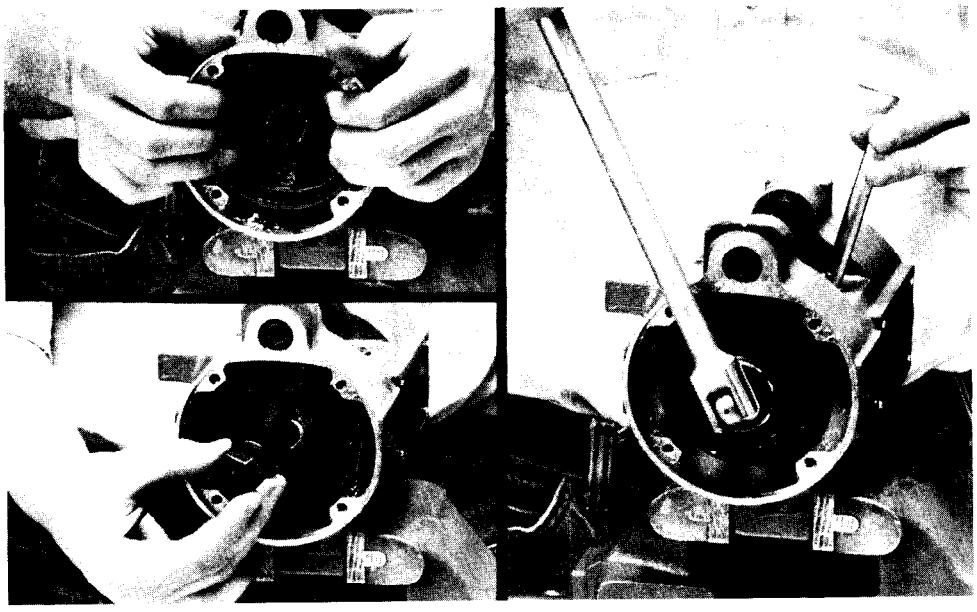
SLIDE 51

Press the bearing into the gearing end of the hoist using the arbor press as shown. Remember to press on the outer race and be sure the bearing seats against the snap ring inside the housing. Clamp the hoist housing in the vise on the mounting lug. For link chain models place the chain guide and pocket wheel into the hoist body. The pocket wheel must be installed with the part number stamped on the side of the wheel facing toward the brake or gearing end of the housing. For roller chain hoists replace the chain guide and secure it with the two screws and washers. The hole nearest the end of the chain guide should go closest to the mounting lug for the chain.



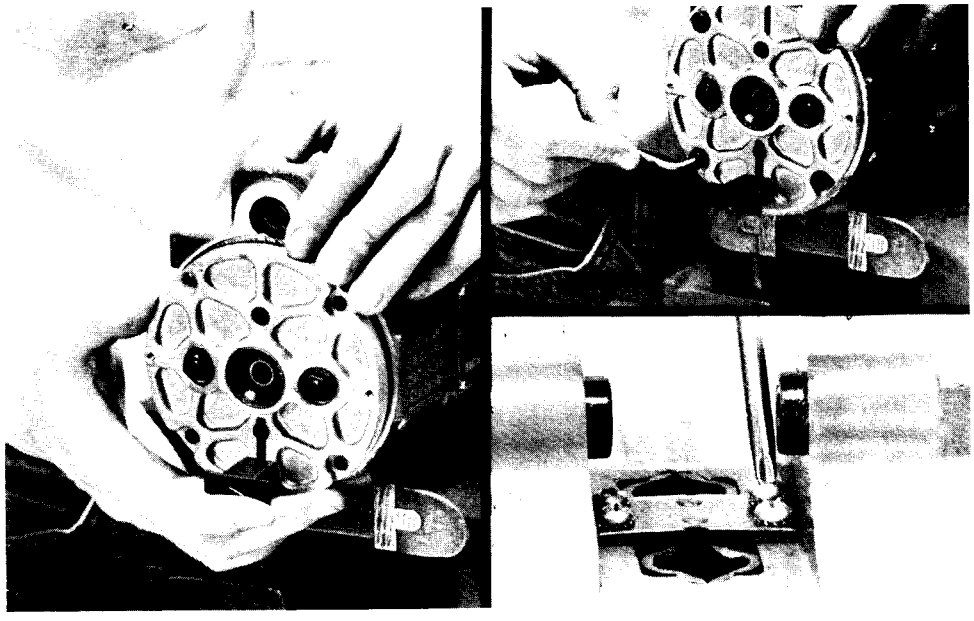
SLIDE 52

Press the bearing onto the end of the sprocket or shaft opposite the threads. Be sure to press on the inner race and use an arbor press if possible. Now install the shaft and bearing into the hoist housing from the motor end of the hoist as shown. Be sure to mesh the gears of the spline with those of the pocket wheel for link chain hoists and tap the spline in with the wooden handle of a hammer. Now install the snap ring to hold it in place.



SLIDE 53

Place the ring gear into the gearing end of the hoist being sure to mesh the gears of the spline with those of the ring gear. The gear teeth of the ring gear should point out. Now install the star washer over the shaft. Place the brass rod in against the pocket wheel or sprocket to keep it from turning while tightening the nut with the 1" socket.

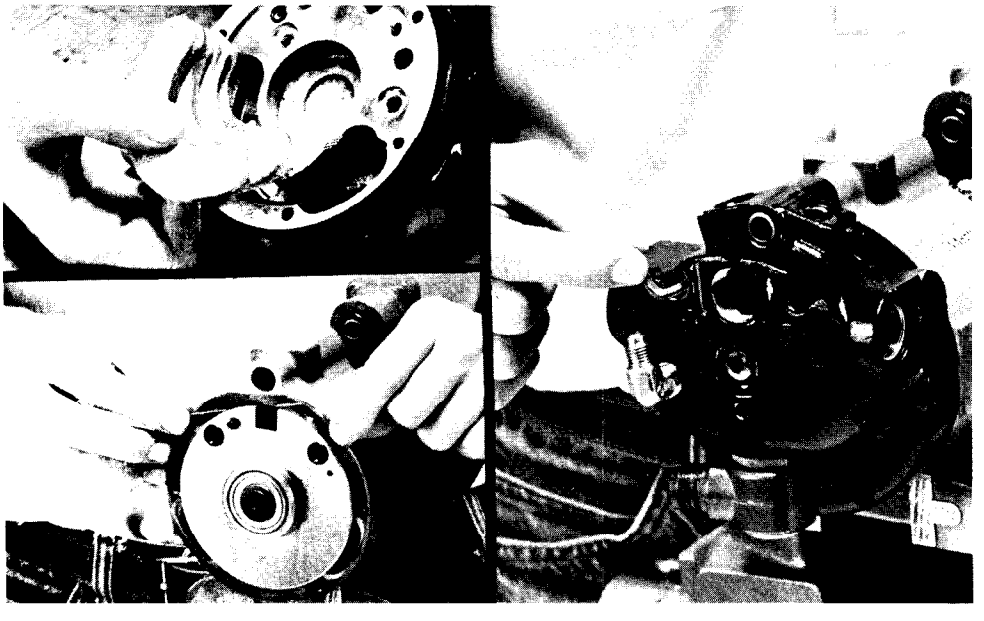


SLIDE 54

Grease the gearing assembly well and slide it into the ring gear against the hoist housing. Be sure the four outside screw holes align and the brake block is down or directly opposite the hole for the control rod in the hoist housing. Place a washer on each of the four cap screws and replace them using the 1/8" allen wrench. For link chain models replace the plate and secure it with the four phillips screws. For roller chain hoists install the chain stripper, extension down, and secure it with the four screws.

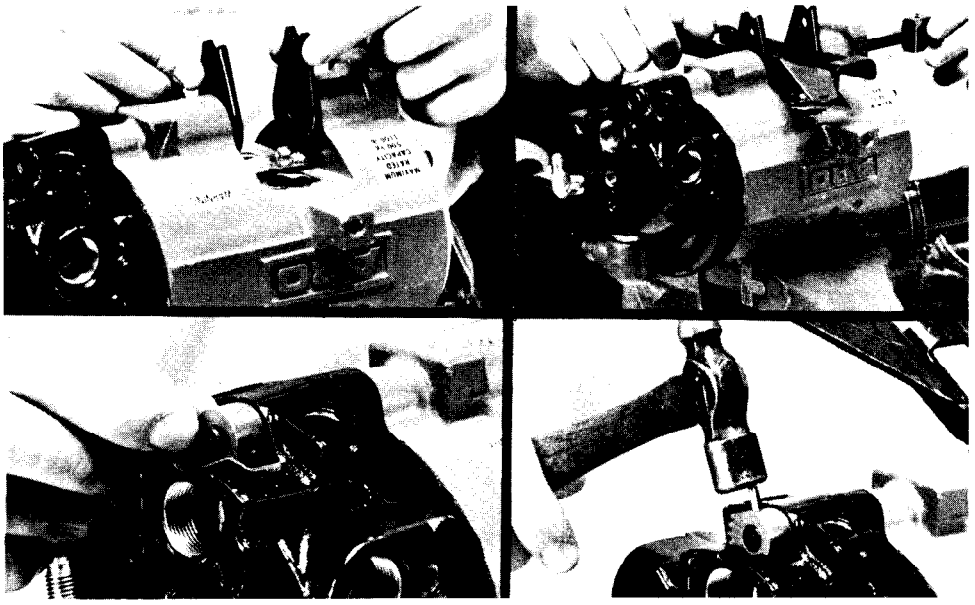
SLIDE 55

Apply o-ring lube to the o-ring and install it in the hoist housing. Grease and replace the two o-rings on the end plate. Now slide the motor into the hoist body. Align the machined groove in the motor with the control rod hole in the hoist housing. To help mesh the gears while replacing the motor use an allen wrench in the screw and turn it while replacing the motor. When properly positioned the motor should stick out of the housing approximately 3/16".



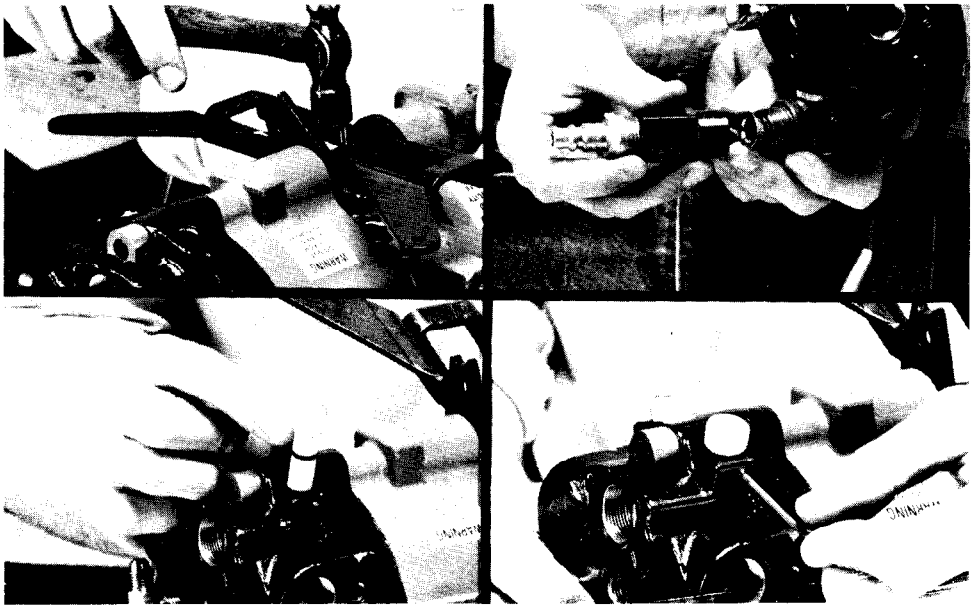
SLIDE 56

Now install the screen and three new fillers in the valve head, screen first. Grease and replace the new gasket on the hoist housing being sure the exhaust openings on the gasket align with those in the housing, as shown. Place the valve head against the gasket and secure the head with the six 5/32" cap screws and washers tightening evenly.



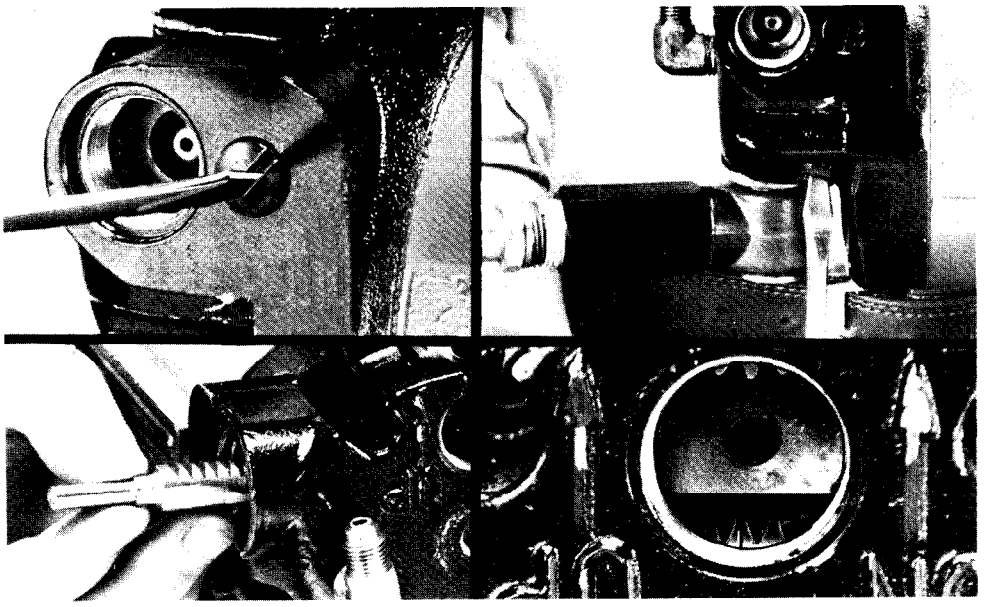
SLIDE 57

Replace the two basket hangers on the hoist body as shown. Place the control arm between the basket hangers and push the control rod through the hangers and control arm. Then place the gear back into the head. Push the control rod into the gear and insert the roll pin through the gear and control rod.



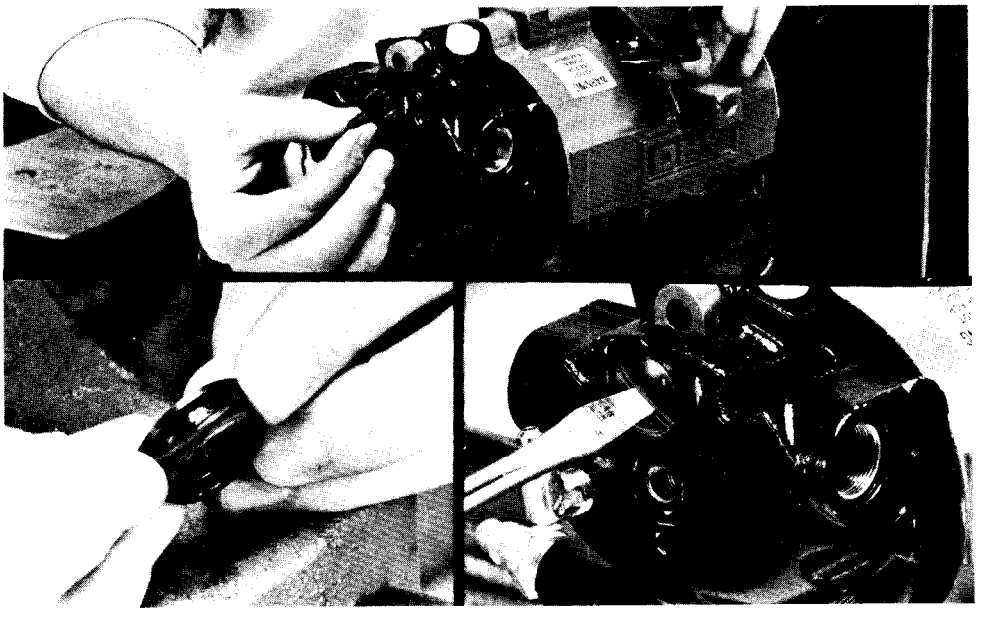
SLIDE 58

Be sure the teeth on the gear are pointing down into the valve body then align the holes in the control rod and control arm and drive the roll pin into place. Now install the screen in the swivel and secure it by installing the adapter with the adjustable wrench. Also grease and replace the two speed controls in the head. Be sure the groove in the speed control aligns with the screw hole then replace the screws with the 3/32" allen wrench.



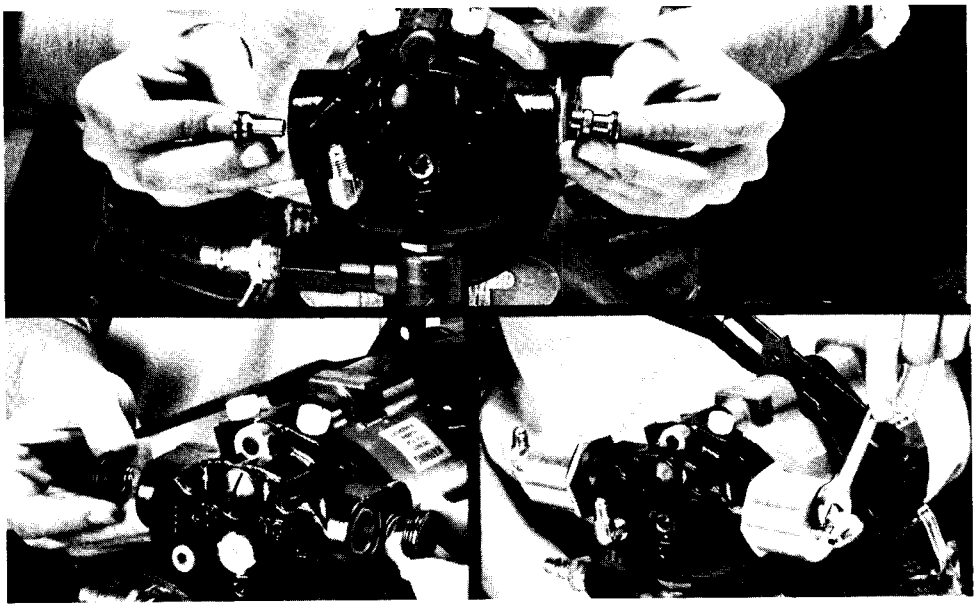
SLIDE 59

Replace the two oil screws and washers in the holes in the head. Now insert the valve body into the head so the X on the end of the valve body is to the side of the head marked with the X. Also be sure the valve body is inserted with the teeth facing up, as shown. Position the valve body so the identification mark on it is in the exact center of the hole as shown. If the valve body is in correctly the ends should be equal distance from the edge of the brass bushing. Also be sure the gear teeth are still on top.



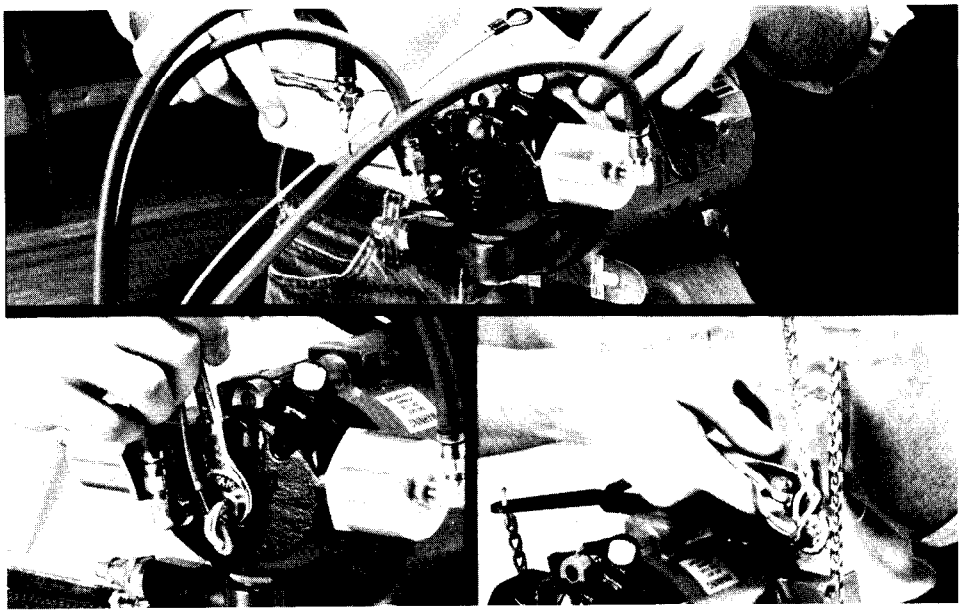
SLIDE 60

To complete the timing of the hoist, position the control arm in a horizontal position or parallel with the valve body. Double check to see that the valve body is still positioned properly then replace the shaft and gear. Hold this gear in place and move the control arm up and down a few times and return it to a horizontal position. Now check the identification mark on the valve body to see that it is in the center of the hole. Now install the o-ring on the lock screw then install them using the large flat-bladed screwdriver.



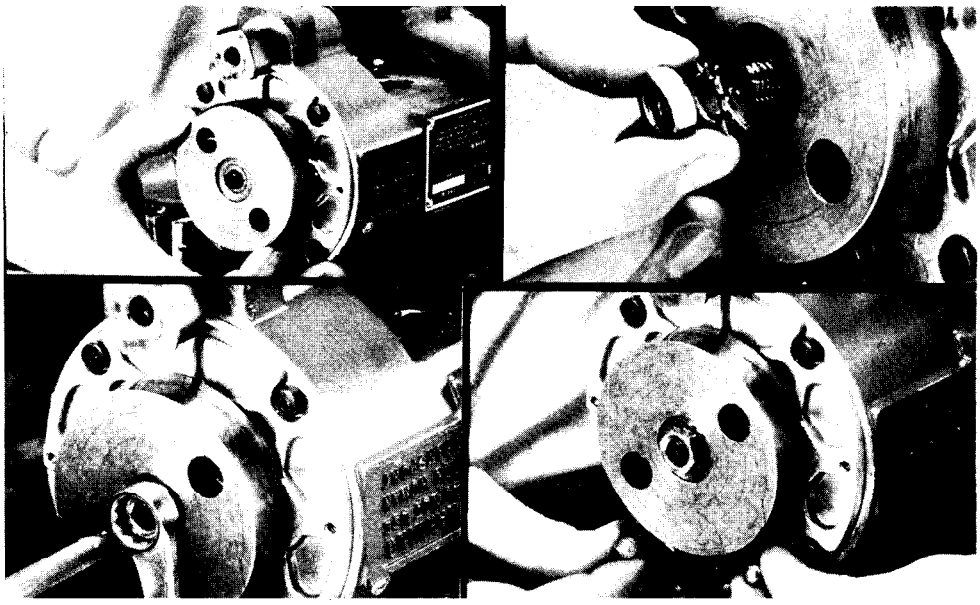
SLIDE 61

Install the o-rings on the valve and the lift valve and lubricate them. Place the valve in the side of the head marked with the "X" and onto the end of the valve body. The lift valve then goes on the other side. For hoists with pull chain controls place a spring on each side, small end first, and then the valve caps with new o-rings. For pendent control hoists replace the two cylinder assemblies with the 5/8" wrench.



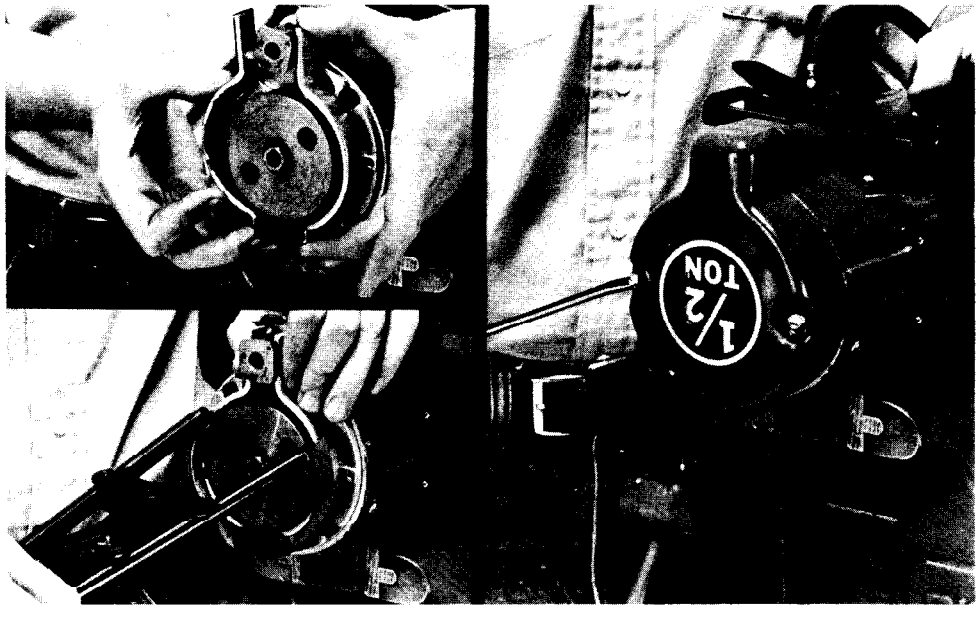
SLIDE 62

For pendent control hoists connect the three hoses to the cylinders and the valve head. The hose nearest the "UP" lever on the pendent control goes on the cylinder nearest the X in the valve head. The hose nearest the "DOWN" lever goes to the other cylinder. Also replace the u-bracket with restraining cable to the valve head with the 9/16" wrench. For pull chain hoists, reassemble the S hooks on the sash chain to the control arm. The "UP" sash chain goes on the same side of the control arm as the "X" on the valve head.



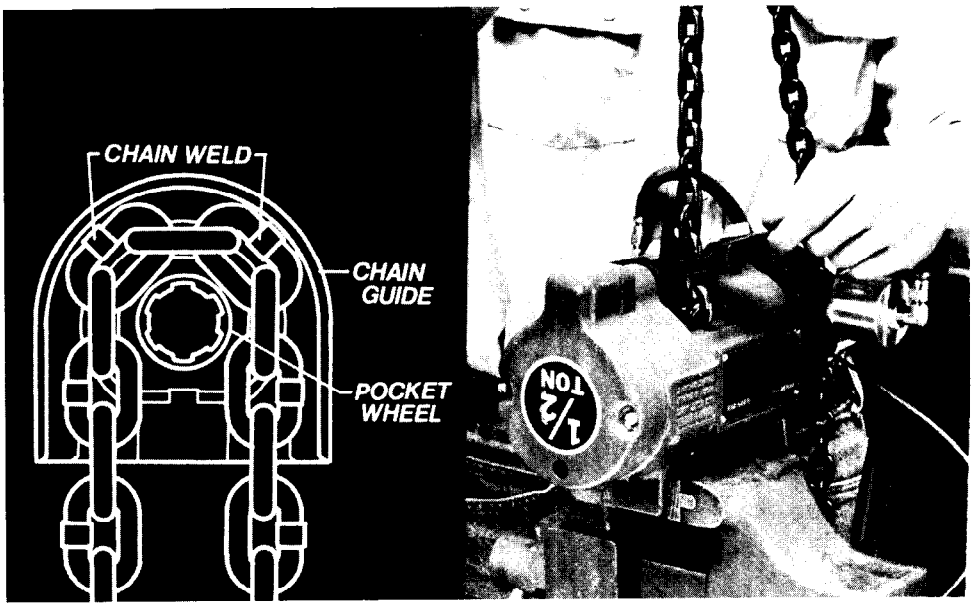
SLIDE 63

Place the brake wheel on the splined shaft with the smooth face of the brake wheel out. Place the nut and new spur washer on the shaft and tighten them using the brass rod and 9/16" wrench. Now replace the two balls into the detents of the bracket. Apply grease to the balls to hold them in place. Be sure not to get grease on the brake wheel.



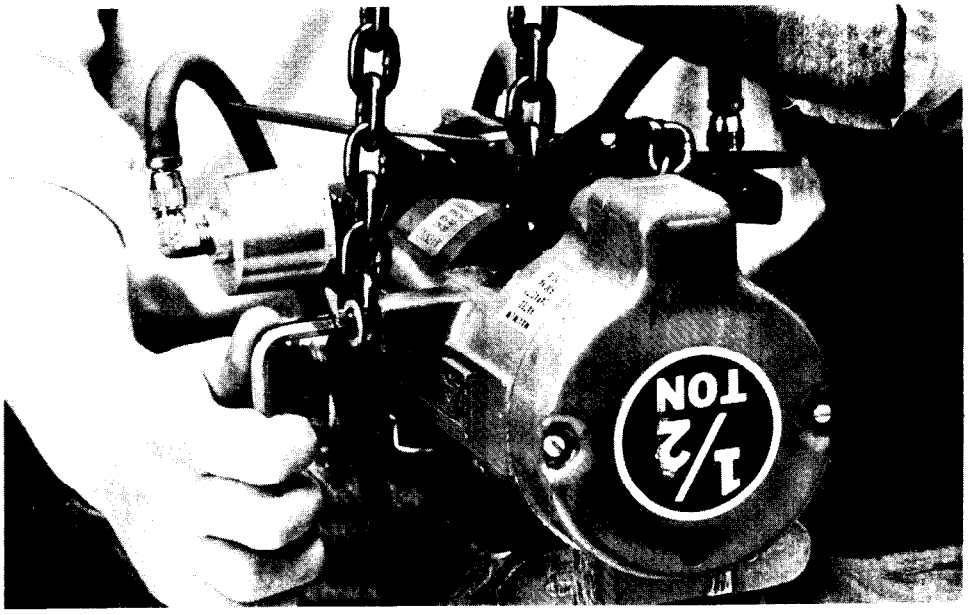
SLIDE 64

Place the new brake shoes around the brake wheel as shown. Now, using the brake spring spreader, carefully replace the brake spring. Remember to use extreme caution when handling the brake spring as it is under considerable tension during installation. Tap the brake spring into place so it won't stick out from the brake wheel and also so it is centered equally on both sides of the brake shoes. Screw the brake adjustment screw in flush the the bracket then replace the brake cap with the two screws.



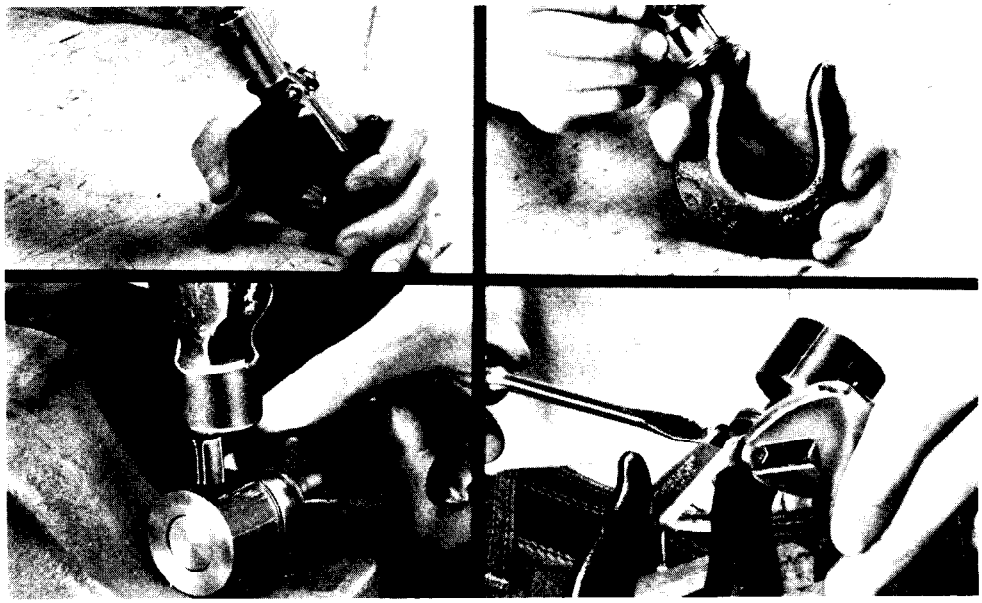
SLIDE 65

To install chain, the weld joints of the links should be away from the pocket wheel, or the smooth side against the pocket wheel. Roller chain is installed with either side against the sprocket. Connect an air supply of about 35 p.s.i. to the hoist and drop the chain into the chain guide on the side of the hoist opposite the chain lug. By carefully and slowly pushing down on the control arm the chain can be fed through the pocket wheel assembly. Be very cautious when pushing down on the control arm so as not to feed the chain through at a very fast rate. Feed enough chain through so that about one foot extends from the hoist.



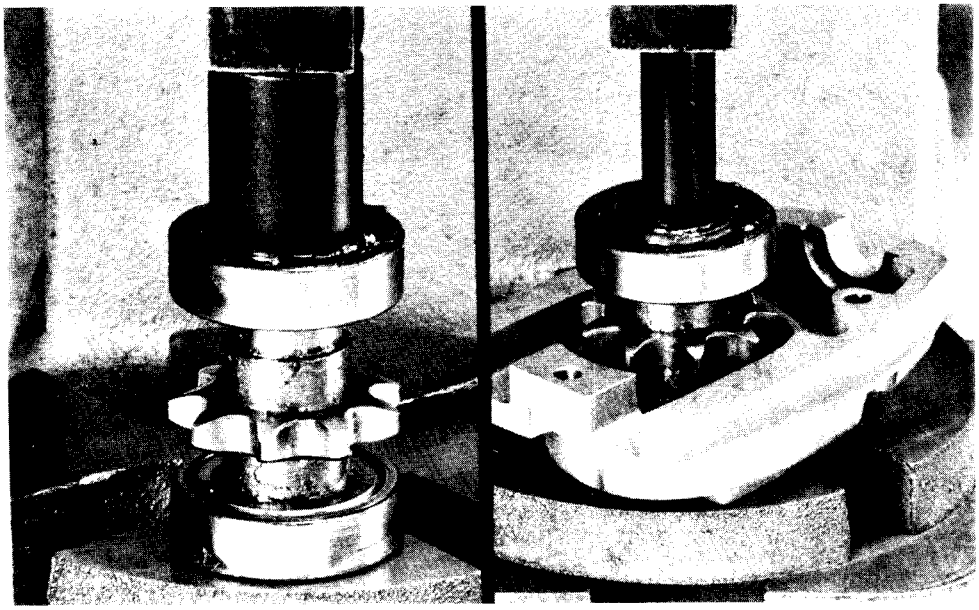
SLIDE 66

For 1/4 and 1/2 ton hoists only, feed the chain through the control arm. Be sure the chain is not twisted and then fasten the last link to the hoist chain lug with the screw.



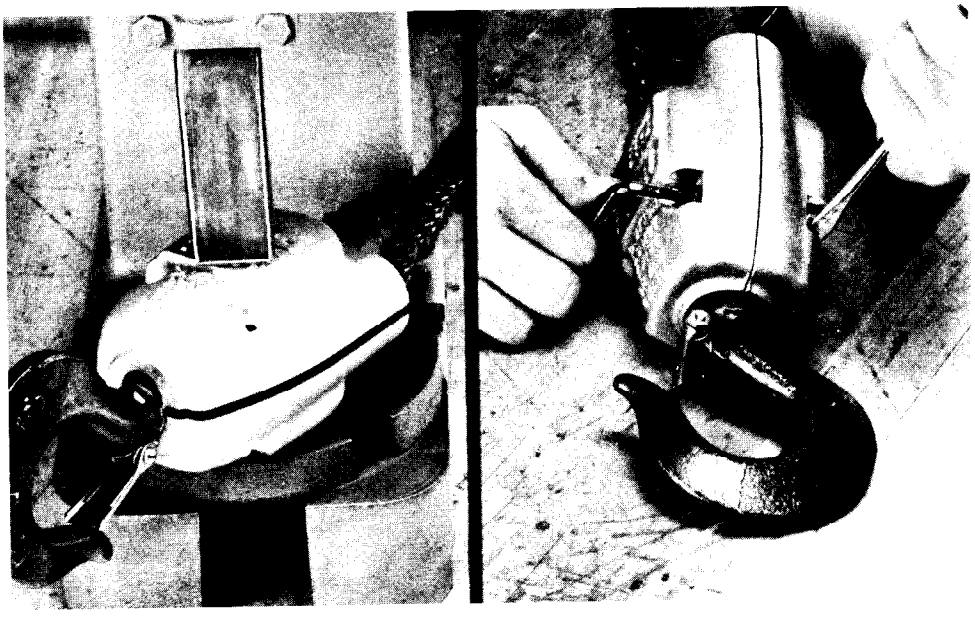
SLIDE 67

To reassemble the sheave block for 1 ton hoists, replace the thrust race then the new thrust bearing followed by the second thrust race onto the hook. Slide the sleeve over the hook with the beveled edge up or away from the hook. Align the holes in the sleeve with those in the hook and install the roll pin. Be sure this roll pin is replaced with the split side vertical with the hook or, in other words, so the split is either up or down.



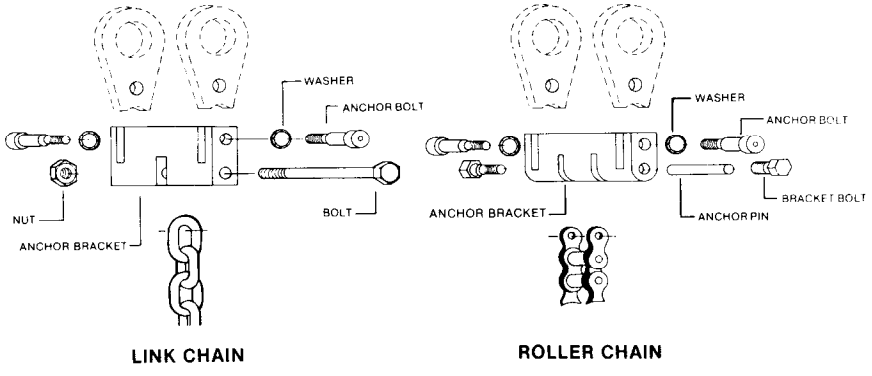
SLIDE 68

Install the two greased bearings on the sheave or sprocket. Be sure the shielded side of the bearings face toward the sheave or sprocket and remember to press only on the inner race. Press one bearing into one shroud using the arbor press. Slide the chain stop onto the chain and feed the chain around the sprocket or sheave. On link chain hoists be sure the welds ride away from the sheave or sprocket.



SLIDE 69

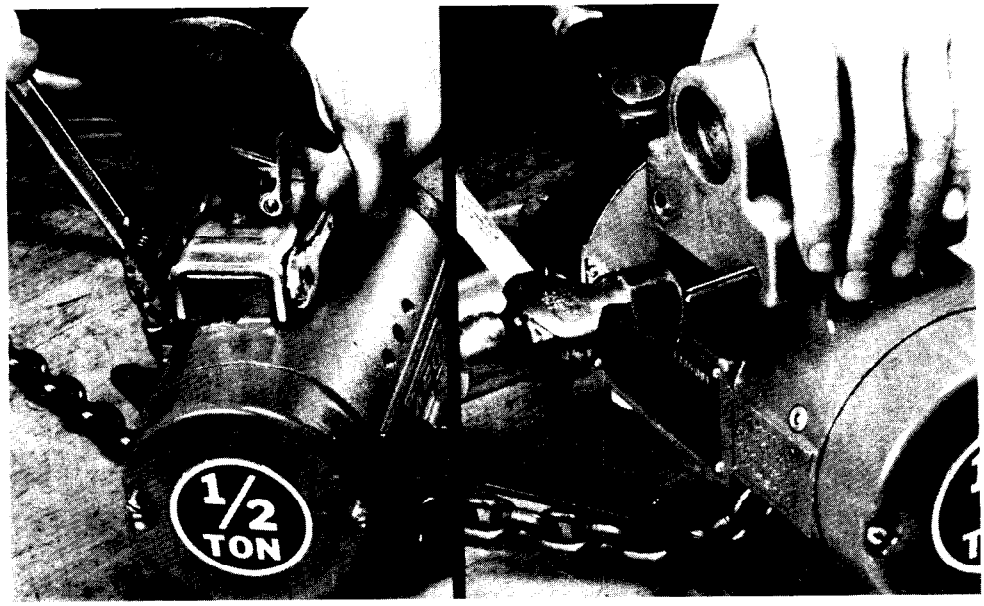
Press the other shroud on using the arbor press while holding the chain in place, and secure it with the three screws, washers and nuts. Be careful not to let the chain slip out of the sheave block.



LINK CHAIN ROLLER CHAIN

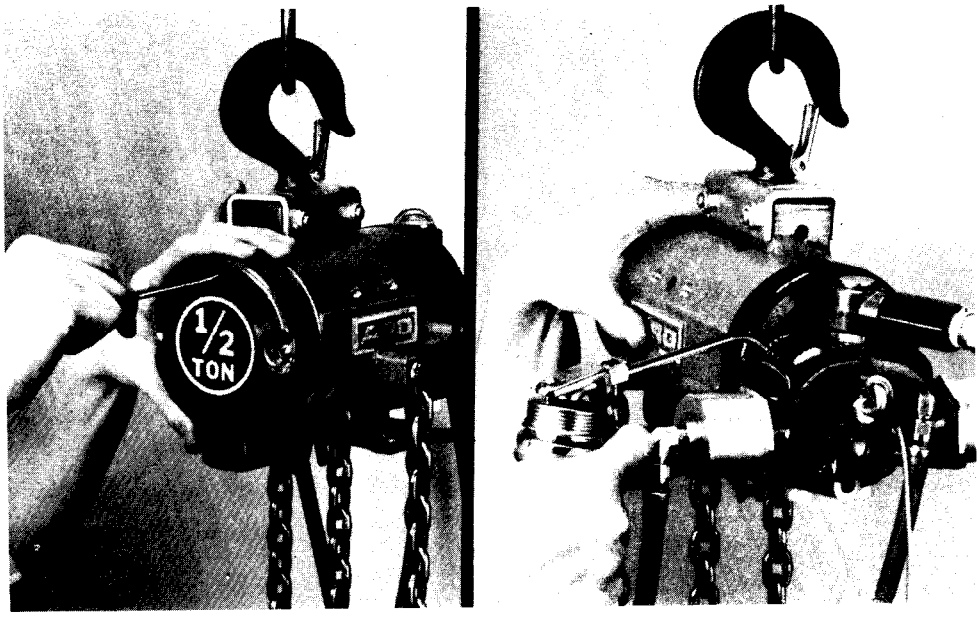
SLIDE 70

For 1 ton hoists align the holes in the anchor bracket with those in the hangers and replace the two anchor bolts and washers. For link chain hoists be sure the chain is not twisted then position the last link in the anchor bracket. Push the bolt into the bracket and through the link then secure it with the nut. For roller chain hoists place the last link in the anchor bracket, align the holes and replace the anchor pin. Secure the anchor pin by replacing the two bracket bolts.



SLIDE 71

For hoists with an upper hook replace it using the two bolts and nuts. For hoists on trolleys replace the two roll pins using the ball peen hammer. Replace the roll pins so the slits are either up or down as shown.



SLIDE 72

At this point the hoist should be hung from a suitable support. Fill the oil reservoir in the head with a lightweight spindle oil before operating. Attach an air supply to the hoist inlet and attach the rated load to the lower hook. Raise the load a few inches from the floor. Carefully turn the brake adjustment screw clockwise 3 to 4 clicks. Again raise the load a few inches. The load should stay in position. Then very slowly pull on the "UP" handle or push the "UP" valve. The hoist should not allow the load to slip downward before raising it. If it does, turn the adjustment screw counter-clockwise until no slippage is evident. Lift and lower the load several times to make sure the hoist is working properly.

Finally check the work station where the hoist will be used to insure that the proper size filter, regulator, and lubricator are being used, and that the filter bowl is not filled with water or dirt. Also check the lubricator to be sure it is filled with oil.

ARO

MAINTENANCE/ REPAIR

7700-E SERIES HOIST

SLIDE 73

This completes the general repair program for the ARO 7700-E series hoist. If there are any specific problems you may have had during the repair of your hoist please refer to the Operator's Manual for your specific model.

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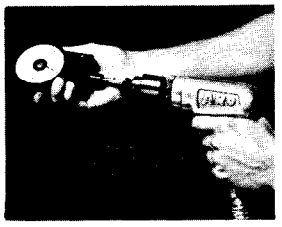
If you are presently servicing your ARO air tools in your own facilities we offer to you the following:

Genuine ARO SERVICE KITS

These kits are available for all of ARO's most popular portable tools, fixtured tools, and hoists. They contain all of the replacement parts necessary to properly perform preventative maintenance on a tool.

ARO's 5-POINT SERVICE PROGRAM



Factory trained distributor repairmen provide Fast, Complete repair service for your Aro air tools, hoists and self-feed drills, including teardown, inspection, rebuilding, testing and a new warranty.

ARO Air Tool Maintenance Seminar for Customers

The ARO Corporation offers regularly scheduled air tool maintenance schools at its main office in Bryan, Ohio. This two-day program is designed to review the proper repair procedures on the specific ARO air tools in your facilities.