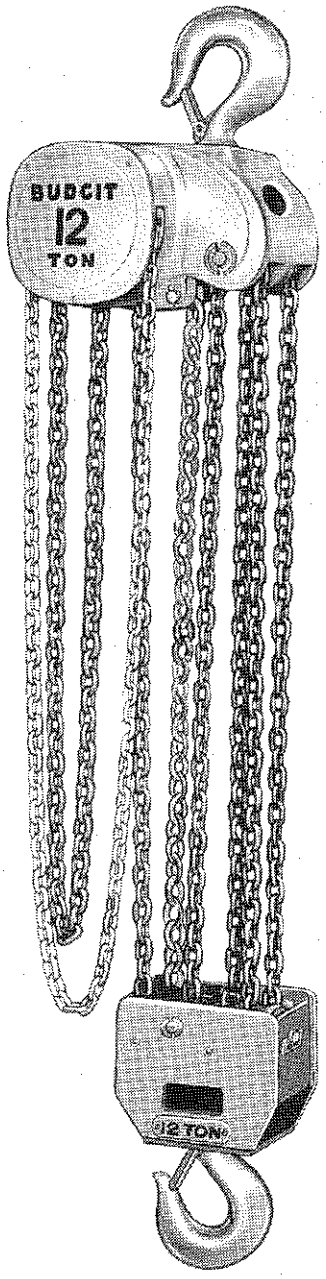

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OPERATION, SERVICE AND PARTS MANUAL

BUDGIT®

ALUMINUM HI-CAP® CHAIN HOISTS

3 TO 12 TON RATED LOADS

STANDARD MODELS

AUDIO LIFT REGULATOR MODELS

LIFTTECH

LIFT-TECH INTERNATIONAL, INC.
CRANE AND HOIST OPERATIONS
MUSKEGON, MICHIGAN 49443

NOVEMBER, 1993

PART NO.113534-3

FOREWORD

This book contains important information to help you operate, maintain and service your new BUDGIT Aluminum HI-CAP Chain Hoist. We recommend that you study its contents thoroughly before putting the hoist into use. Then, through proper application of operating procedures and by practicing recommended maintenance suggestions, you will acquire maximum lifting service from your chain hoist.

It will likely be a long time before parts information is needed; therefore, after becoming familiar with operation and maintenance procedures, we suggest that this book be carefully filed for future reference.

When ordering replacement parts, it will be necessary that you include with your parts order the hoist Model Number and Catalog Number which are stamped on the nameplate located on top of chain hoist frame.

Complete inspection, maintenance and overhaul service is available for HI-CAP chain hoists at any of the Authorized BUDGIT Repair Stations.

The hoists in this manual conform to ANSI B30.16, Overhead Hoists, by American National Standards Institute, Inc., 1430 Broadway, New York, NY 10018.

Information in this book is subject to change without notice.

WARNING

Equipment illustrated and described in this manual is not designed or suitable for lifting or lowering persons.

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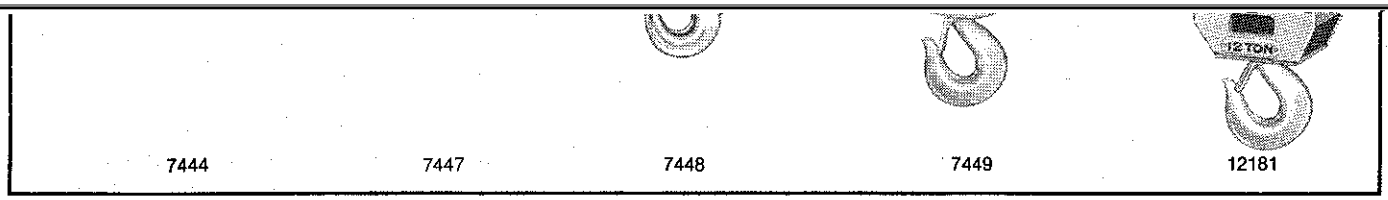


Figure 1. Views of Various Sizes

GENERAL INFORMATION

1. RATED LOADS AND MODELS. BUDGIT Aluminum HI-CAP Chain Hoists are built in seven (7) rated loads (3, 4, 5, 6, 8, 10 and 12-ton) and in three model variations. They are: Standard Models, Audio Lift Regulator Models, and Spark and Corrosion Resistant Models.

a. Standard Models. These are designed for general purpose lifting and have forged steel upper and lower hooks, special alloy steel load chain, and natural finished hand chain. Upper and lower hooks are equipped with spring type latches.

b. Audio Lift Regulator Models. "ALR" models are the same as standard models, except they are equipped with a built-in overload protection device. This device replaces the conventional hand chain wheel and helps provide protection for hoist and operator against dangerous overloads. The Audio Lift Regulator not only warns the operator by audible clicking when the chain hoist begins to exceed its rated load, but also limits the chain hoist's lift capability whenever the overload becomes excessive. These models are identified in two ways: (1) the catalog number on the chain hoist nameplate is prefixed by the letter "R" (Example: R-264), and (2) triangular shaped red labels with wording "Equipped with Audio Lift Regulator" are affixed on end covers at both sides of chain hoist.

c. Spark and Corrosion Resistant Models. "SR" models are designed for service in hazardous atmospheres and areas where resistance to corrosion is vitally important. These models have: bronze alloy hooks, with latches; special chrome nickel stainless steel alloy load chains and bronze alloy hand chains. For identity, the letters "SR" are stamped on the chain block nameplate following the catalog number (Example: 264SR).

2. DIFFERENCES BETWEEN SIZES. All 3 through 12-ton BUDGIT Aluminum HI-CAP Chain Hoists are of the same basic design, differing only in hook sizes, frames, lower blocks and reeving of load chains. See Figure 1. 3 and 4-ton chain hoists are reeved with two (2) parts of chain; 5 and 6-ton have three (3) parts; 8-ton has four (4) parts; 10-ton has five (5) parts; and 12-ton has six (6) parts of chain. Hoisting mechanism (gearing, load brake, load sprocket, hand chain wheel) is common to all sizes.

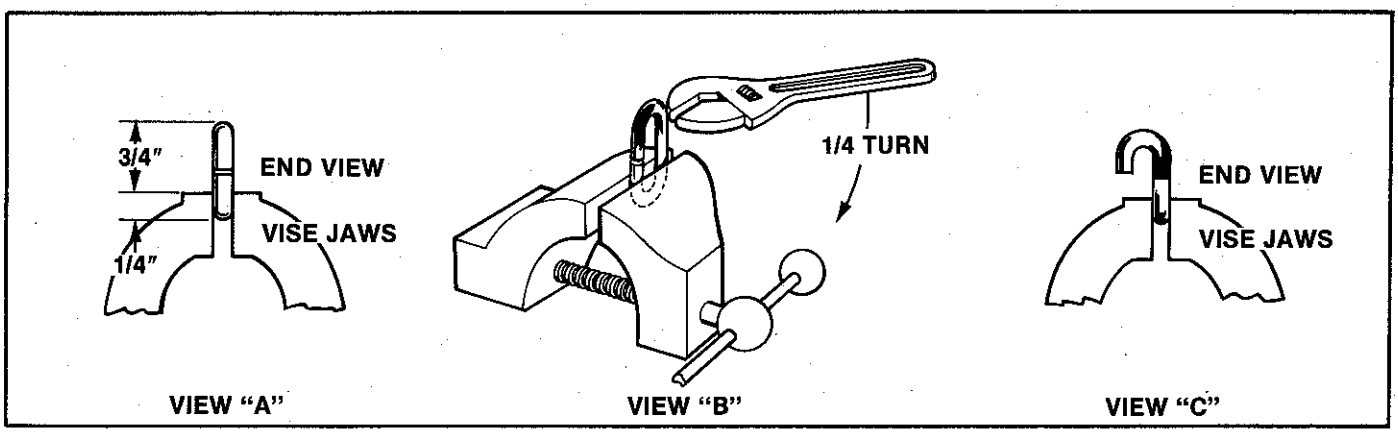


Figure 2. Opening Split Connecting Link

INSTALLATION AND OPERATION

1. INSTALLATION.

a. Install chain hoist by connecting the upper hook to trolley, boom or structural support (one capable of holding combined weight of chain hoist and its rated load). Be certain that upper hook is firmly seated in center of hook saddle and the hook latch is properly closed over hook opening.

NOTE: It may be necessary to remove latch from hook before hook will fit over support. Reinstall latch after hook is engaged.

CAUTION

Do not suspend chain hoist from tip of hook. Hook may open and cause chain hoist to slip from its suspension.

b. Install chain hoist to insure load chain reaches all parts of work area from which lifts will be made.

(1) Load chain must be long enough to reach load to be lifted without placing any load on tail chain anchor. This requires some slack in tail chain.

(2) If load chain is too short, order longer load chain from factory. Do not alter load chain. Use only factory approved load chain.

c. If hand chain is of improper length (chain should hang 1 to 2 feet above floor), modify its length as follows:

(1) Insert split connecting link in a vise so that three-quarters of the link is above the top of the vise jaws as shown in Figure 2A (an adjustable wrench may be used in place of vise if preferred).

(2) Place wrench on top part of link, tighten jaws. Then twist link open wide enough to insert ends of chain to be joined. See Figure 2B.

(3) Insert ends of chain on open link, make sure there is no twist in the chain.

(4) Place wrench on top part of link, tighten jaws and twist back until link is closed.

2. PRE-OPERATIONAL CHECKS.

Check the following before operating chain hoist with a load:

a. Observe load chain for evidence of chain twist, indicating lower block is capsized (turned over). Remove chain twist by swinging lower block over and through strands of chain.

b. Inspect load chain anchor pins in frame and in lower block for good condition. Pins should be secure, not bent or broken, and must solidly anchor chain ends.

c. Check upper and load hook to be sure they have not opened beyond correct opening (see Figure 4) and have not become bent or otherwise damaged. Hook latches must close properly over hook opening, should not be bent or damaged, and springs should not be broken.

d. Make sure load chain is lubricated with a light coat of penetrating oil and graphite.

3. OPERATION.

a. To Raise Load. Facing hand chain side of chain hoist, pull down on right-hand hand chain, rotating chain wheel clockwise.

b. To Lower Load. Facing hand chain side of chain hoist, pull down on left-hand hand chain, rotating chain wheel counterclockwise.

c. HI-CAP chain hoists equipped with BUDGIT Audio Lift Regulators are operated in the normal manner. The regulator will warn the operator (by audible clicking of rollers in detents) when load begins to exceed the rated capacity of the chain hoist. Continued pulling on the right-hand chain (facing chain wheel side of chain hoist) will cause the regulator to release and limit the chain hoist's lift capabilities if overload is excessive. At release (slipping) of regulator, pull on hand chain lessens to about one-third of the amount of pull present prior to release. The load will not drop because it is being held by the load brake.

d. See page 12 for average hand chain pull to lift full load.

4. OPERATING PRECAUTIONS.

Safe operation of an overhead hoist is the operator's responsibility. Listed below are some basic rules that can make an operator aware of dangerous practices to avoid and precautions to take for his own safety and the safety of others. Observance of these rules in addition to frequent examinations and periodic inspection of the equipment may save injury to personnel and damage to equipment.

WARNING

Do not load hoist beyond rated load. See page 12 for average hand chain pull to lift full load.

The user is also here warned that overloading of the hoist can take place by means other than applying a high hand chain force. Proper rigging and observance of the rules listed here can help avoid such external causes of overload. Use good common sense and judgment at all times.

Do not use hoist to lift or lower persons.

Never lift loads over people.

Do not use load chain as a sling or load binder.

Do not operate hoist with twisted, kinked, or damaged load chain.

Never operate hoist with hooks that have opened up.

Inspect hoist regularly and replace worn or damaged parts. Do not operate a damaged or malfunctioning hoist.

Do not operate hoist unless load hook, load chain and hoist frame can be kept in a straight line.

BUDGIT hand chain hoists are intended to be used to lift or lower movable freight loads. Do not use hoist for attempting to free or dislodge stuck objects.

Do not remove or obscure warning labels.

Do read and understand this manual before operating this hoist.

The supporting structure or anchoring means must have a load rating at least equal to that of the hoist.

Hoist must not be used in locations that will not allow operator movement to be free of the load.

The operator shall ensure that he has firm footing or is otherwise secured before operating the hoist.

Before using the hoist, the operator shall be certain that all personnel in the area are clear of the load.

The operator shall not engage in any activity which will divert his attention while operating the hoist.

The load slings or other approved devices must be seated properly in the saddle of the hook and the hook latch must be closed before operating hoist.

Before lifting or pulling a load, the operator must be certain that load is not caught on any obstructions.

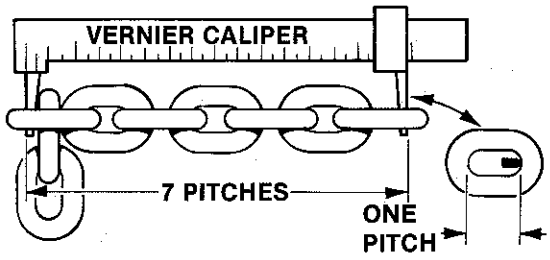
Before lifting or pulling a load, the operator must be certain that hand and load chains are not twisted and are free to take up load.

When starting to lift or pull, the load must be moved a few inches at which time the hoist should be checked for proper load holding action. The operation shall be continued only after the operator is assured that the hoist is operating properly.

The operator must not leave a loaded hoist unattended at the end of a work shift or for extended periods during the work shift. Where operations are such that this condition cannot be avoided, the operator must be assured that the condition does not create a hazard to personnel or property.

MAINTENANCE

1. GENERAL. The following are recommended maintenance services and disassembly-reassembly procedures for HI-CAP chain hoists. The inspections outlined are based on average use of chain hoist. More frequent inspection intervals are recommended for chain hoists subjected to severe service or exposed to adverse environments.



USE ONLY A "KNIFE-EDGE" CALIPER TO ELIMINATE POSSIBILITY OF FALSE READING BY NOT MEASURING FULL PITCH LENGTH.

Figure 3. Checking Coil Load Chain Using Vernier Caliper

2. MONTHLY INSPECTION.

a. Inspect Load Chain.

(1) Operate chain hoist under load and observe operation of chain over load sprocket in both directions of chain travel. Chain should feed smoothly into and away from the sprocket. If chain binds, jumps or is noisy, first see that it is clean, properly lubricated, and free of twists. If trouble persists, inspect chain and mating parts for wear, distortion or other damage.

(2) Clean chain for inspection. Examine visually for gouges, nicks, weld splatter, corrosion or distorted

links. Slacken chain and check bearing surfaces between links for wear. Case hardness of chain is about .015″ deep. Chain must be replaced before the case is worn through. Also check for elongation using a vernier caliper (Figure 3). The chain should be gauged throughout its entire length. The maximum gauge length allowable over 7 pitches is 8-1/16 inches. If chain exceeds this dimension, it must be replaced. Chain with excessively pitted, corroded, nicked, gouged, twisted or worn links should be replaced using factory approved chain. Never weld or attempt to repair coil chain.

NOTE: On spark resistant models, coil load chains are stainless steel and must be inspected for wear and lubricated more frequently than the standard alloy heat treated load chain. Surface hardness treatment is no more than .001″ deep.

CAUTION

It must not be assumed that load chain is safe because it measures below replacement point given herein. Other factors, such as those mentioned in visual check above, may render chain unsafe or ready for replacement long before elongation replacement is necessary.

WARNING

When replacing load chain, use only factory approved chain conforming to factory specifications for material, hardness, strength and link dimensions. Chain not conforming to BUDGIT hoist specifications may be dangerous as it will not fit in the load sprocket and chain guide correctly, causing damage to hoist, and it will wear prematurely, deform and eventually break.

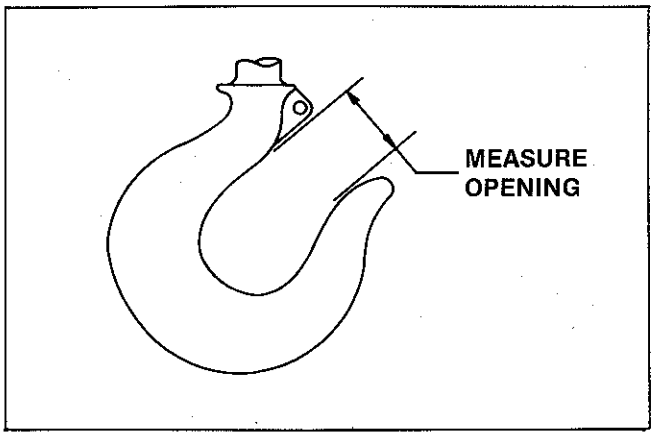
(3) Check connection of tail end of load chain at side of frame. Replace anchor pin if bent or broken.

(4) Check connection of load end of load chain at either frame or lower block (depending upon reeving). Replace bent or broken connecting pin.

(5) Lubricate load chain if required. See paragraph 4, below.

b. Inspect Hand Chain.

(1) Operate unloaded hand chain hoist by overhauling hand chain at slow rate and then at a rapid rate observing operation of chain over hand chain wheel. Follow the instructions outlined in Section 2.a for inspecting hand chain. Hand chain is not case hardened. Check for elongation using a vernier caliper over 7 pitches as shown in Figure 3. The maximum gauge length is 7-5/8 inches over the 7 pitches. If the chain exceeds this dimension it must be replaced.



Hook Size Identification		Hook Throat Opening	
Letter	Number	Normal Opening	Replace Hook if Opening is Greater Than
—	6	1-3/8	1-9/16
I	7	1-1/2	1-11/16
J	9	1-7/8	2-1/8
K	11	2-1/4	2-9/16
L	12	2-1/2	2-7/8
—	13	3	3-7/16
N	14	3-3/8	3-7/8

Either a letter or a number as charted above is cast into body of hook to indicate size. The letters "C," "A," or "B" which may also appear on hook identify hook material. Dimensions given are for standard hooks.

Figure 4. Correct Hook Openings (Upper and Lower Hooks)

c. Inspect Lower Block.

(1) Check for bent or distorted hook. If hook is opened beyond the opening dimension given in Figure 4, or has more than 10 degrees twist from the plane of the unbent hook, it must be replaced. Also check to see that hook swivels. Lubricate if necessary.

(2) Check idler sprockets and bearings in lower blocks for freedom of movement and signs of damage. Lubricate if required. Replace damaged parts.

(3) Check hook latch. Replace damaged or bent latch or broken spring.

CAUTION

Hooks, upper or lower, damaged from chemicals, deformation, cracks or that have been opened beyond the proper hook opening as listed in Figure 4 indicate that an overload condition has occurred. Internal or other damage to chain hoist may have resulted at the time of such overload. Check frame and lower block body for signs of visible damage. If there is evidence of fracture, the chain hoist should be disassembled and inspected for further possible damage from overloading. Refer to paragraph 3, below.

d. Inspect Upper Hook.

(1) Check for bent or distorted hook. If hook is opened beyond the opening dimension given in Figure 4, it must be replaced. Also check to see that hook swivels in frame. Lubricate if necessary.

(2) Check hook latch. Replace damaged or bent latch or broken spring.

3. ANNUAL INSPECTION. Chain hoist must be partially disassembled to perform the following inspections. Refer to paragraph 6, below, for disassembly and reassembly procedure.

a. Inspect Load Brake and Overload Device.

(1) Remove chain wheel guide cover and lift out chain wheel and load brake assembly. Refer to paragraph 6, **b.**, (2). Unscrew load brake flange from hub of hand chain wheel to inspect friction surfaces and ratchet. Check friction surfaces on load brake flange, friction washer, ratchet, and chain wheel hub. Check condition of ratchet teeth, pawl and pawl spring. Replace any parts broken, scored, damaged or badly worn.

(2) On Audio Lift Regulator Models, the overload protection device is built into the hand chain wheel. It is non-adjustable and cannot be disassembled for repair. Refer to paragraph 6, **b.**, (4).

b. Inspect Idler Gears and Load Sprocket Gear.

(1) Remove gear cover, idler gears and pinion shaft as a unit, paragraph 6, **b.**, (9), and then disassemble pinion shaft and idler gears from cover. Clean parts with a suitable cleaning solvent and air dry thoroughly. Inspect teeth on idler gears and check condition of needle bearings in gears. Check teeth and splines on pinion shaft. Replace any parts that are broken, damaged, or badly worn.

(2) Remove load sprocket gear, paragraph 6, **b.**, (10). Clean gear with suitable cleaning solvent and inspect condition of internal gear teeth and splines. Replace if any teeth or splines are broken, damaged or badly worn.

(3) Visually inspect chain pockets in load sprocket. If excessive wear or damage is observed, remove chain stripper, sprocket and chain guide as outlined in paragraphs 6, **b.**, (8) and (11) and replace parts as necessary.

c. Reassemble and Test Chain Hoist. Reassemble chain hoist following assembly steps outlined in paragraphs 6, **d.**, and 7. Lubricate during assembly using lubricants specified in paragraph 4. After assembly is complete, test chain hoist as outlined in paragraphs 8 and 9.

4. LUBRICATION. HI-CAP chain hoists are lubricated internally by the factory at assembly and will normally require no additional lubrication (except load chain, paragraph **d.**, below) until the chain hoist is disassembled for inspection or replacement of parts.

a. Lubricate chain hoist during assembly at the following points.

b. Lubricate upper and lower load hooks with heavy duty graphite grease (Gredag #83 or equivalent) at assembly.

c. Lubricate idler and sprocket gears, pawl shaft, brake hub face and threads on brake flange and hand chain wheel with grease (Shell EP-2 Alvania or equivalent) at assembly. Apply only a light film of grease to brake hub to prevent excess grease from entering brake mechanism.

WARNING

It is extremely important that load brake friction washer be kept dry, as an oily film may cause slippage, thereby, permitting a load to drop.

d. Lubricate load chain periodically with light coat of penetrating oil and graphite.

e. Lubricate needle bearings in load sprocket and idler sprockets with a good grade of bearing grease.

f. Lubricate once each year or every 200 hours of operation.

5. TROUBLE SHOOTING. Common difficulties that are likely to occur in chain hoist operation are listed in the following table along with possible causes and remedies.

TROUBLE	POSSIBLE CAUSE	REMEDY
1. Hoist is hard to operate in hoisting direction.	a. Hoist is overloaded.	a. Reduce load to within hoist rated load.
	b. Load chain is damaged, worn, elongated or binding between load chain sprocket and guide.	b. Check chain for bent or twisted links, gouges or nicks. Check for wear between links and gauge chain per paragraph 2.a.(2). Replace if necessary.
	c. Load chain dry, rusty, corroded or dirty with foreign material adhering to chain.	c. Clean chain by tumble polishing or clean with solvent. Lubricate per paragraph 4.d.
	d. Load chain sprocket worn or clogged with foreign material.	d. Clean and inspect sprocket. Replace if necessary.
	e. Chain twisted.	e. Rereeve chain hoist keeping chain free of twist.

Continued on next page

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TROUBLE	POSSIBLE CAUSE	REMEDY
2. Load brake slips and chain hoist will not support load.	a. Brake friction surfaces coated with excessive oil or friction washers glazed. b. Brake parts worn or damaged. c. Load chain reeved incorrectly.	a. Remove and disassemble brake. Clean and buff friction washers or install new washers. b. Remove brake parts. Inspect brake parts. Replace worn or damaged parts. c. Remove load chain and install correctly. (See Figure 8.)
3. Load brake drags, hard to lower load. (Hand chain is hard to pull.)	a. Dirty or corroded internal parts. b. Brake friction surfaces scored. c. Load gearing damaged from overloading. d. Chain binding.	a. Remove and disassemble brake. Clean and buff surfaces. Install brake. b. Refer to a. above. Replace if scored excessively. c. Remove damaged gears and install new gears. d. See items 1.b., 1.c., and 1.d.
4. Chain hoist works erratically.	a. Load chain incorrectly installed. b. Load brake pawl or ratchet teeth worn or damaged. c. Frame cracked or mutilated.	a. Remove load chain. Install chain correctly. (See Figure 8.) b. Remove load brake parts. Inspect parts. Replace damaged parts. c. Replace frame.
5. Frame damaged.	a. Hoist subjected to overloading. b. Load chain run too far through chain block frame. c. Chain block subjected to extreme angular or side pulls. Causing chain to bind. d. Chain block damaged by dropping or throwing.	a. Load chain hoist only to rated capacity. Replace damaged frame. b. Replace damaged frame. c. Operate chain hoist properly. Replace damaged frame. d. Disassemble chain hoist. Inspect chain hoist. Replace damaged parts and assemble chain hoist.
6. Hooks opened.	a. Chain hoist overloaded	a. Replace opened hooks. Check for other damage from overloading.

6. DISASSEMBLY AND REASSEMBLY.

a. General. HI-CAP chain hoists can be readily disassembled and reassembled using only common tools. All connections are splines. No keys or pressed fits are used.

b. Disassembly. Place chain hoist on suitable work bench with hand chain wheel side facing up and follow steps (1) through (12) below.

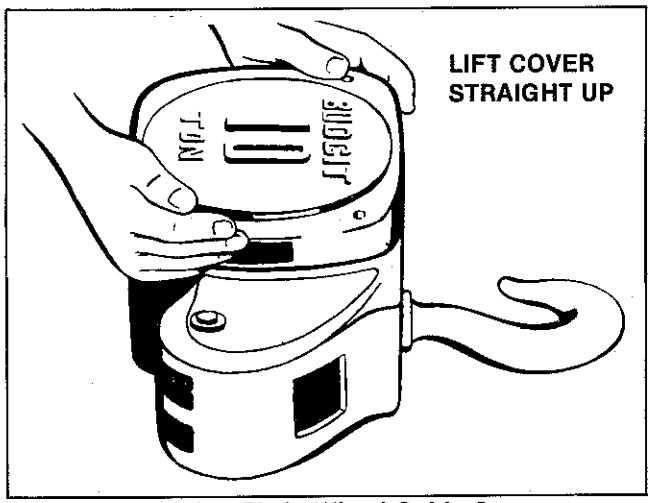


Figure 5. Removing Chain Wheel Guide Cover

(1) Remove three socket head cap screws and lockwashers and lift straight up on chain wheel guide cover. See Figure 5. Remove hand chain from chain wheel.

(2) Remove elastic stop nut from end of pinion shaft and lift off flat washer and brake stop lug. Lift chain wheel and load brake assembly from pinion shaft.

(3) To disassemble load brake, hold brake flange and turn chain wheel counterclockwise, Remove ratchet and friction washer from brake flange.

NOTE: Do not remove needle bearing assembly from bore of ratchet unless bearing is damaged and requires replacement.

(4) On Audio Lift Regulator Models, the chain wheel and regulator assembly is of a riveted construction and is not to be disassembled. If chain wheel is worn or damaged or if test, paragraph 9, shows that regulator is not functioning properly, the complete chain wheel and regulator assembly must be replaced.

(5) Remove brake pawl and shaft from frame. Do not remove pawl spring and stud from frame unless replacement is necessary.

(6) Remove load chain as follows: First disconnect tail

end of chain from anchor at side of frame by removing anchor pin. Next disconnect other end of chain from its anchor at frame or lower block, depending upon chain reeving. See Figure 8.

(a) On 3 and 4-ton models, drive out roll pin securing chain anchor pin in frame and take out anchor pin, freeing end of chain.

(b) On 5 and 6-ton models, remove the retaining rings from ends of anchor pin in lower block body. Remove anchor pin, freeing end of chain.

(c) On 8-ton models, drive out roll pin securing upper idler shaft in frame and remove shaft, freeing upper idler sprocket and chain anchor block. Drive out pin and separate chain from anchor block.

(d) On 10-ton models, drive out roll pin securing anchor pin in lower block body and remove anchor pin, freeing end of chain.

(e) On 12-ton models, remove cotter pins from ends of chain anchor pin at bottom of frame and remove anchor pin, freeing end of chain.

(f) With both ends of load chain disconnected, pull chain through frame and lower block to remove it.

(7) Remove upper idler sprockets from frame (5, 6, 8, 10 and 12-ton models) by driving out roll pins securing idler shafts in frame. Push out shafts to remove sprockets and washers. DO NOT remove needle bearings from idler sprockets unless inspection reveals replacement is necessary.

(8) Remove two screws and lockwashers fastening chain stripper to load chain guide and lift out stripper.

> NOTE: The load chain sprocket cannot be removed from frame until stripper is removed from guide.

(9) Remove four socket head cap screws securing gear cover to frame and remove gear cover by tapping pinion shaft with a soft face hammer to free cover. Idler gears and pinion shaft will come off with cover. Remove shaft and then disassemble idler gears by removing idler gear retaining plate. DO NOT remove needle bearings from idler gears unless inspection reveals replacement is necessary.

(10) Place frame, gear side up, on bench. Remove spiral-type external retaining ring from shaft of load chain sprocket and lift off sprocket gear.

(11) Remove spiral-type internal retaining ring holding load chain sprocket bearing assembly in frame. Turn frame over on gear side and tap gently on bench to remove load sprocket and bearings from frame. Remove chain guide from frame.

(12) Disassemble lower block assembly as follows, based on chain hoist rated load.

(a) On 3 through 6-ton models, drive out roll pin and remove idler shaft from body. Remove idler sprocket and two washers.

(b) On 8 and 10-ton models, drive out two roll pins and remove two idler shafts, two idler sprockets and four spacer washers from body.

(c) On 12-ton model, remove key plate holding idler shaft in end of lower block body, remove shaft and lift out idler sprocket and two washers. Drive roll pin from idler shaft at one side of lower block body and remove shaft, two idler sprockets and four spacer washers.

> NOTE: Do not remove needle bearings from idler sprockets unless inspection reveals replacement is necessary.

(d) To remove lower hook from body, remove cotter pin (drive pin on 12-ton model) from hook nut, unscrew hook from nut and separate hook, thrust bearing, load washer and hook nut from lower block body.

c. Cleaning and Inspection. Before reassembly, all parts except brake friction washer and sealed bearings should be thoroughly cleaned with a suitable cleaning solvent. Inspect all parts to determine their serviceability. Replace any parts that are excessively worn, corroded or damaged.

(1) Check frame, covers and lower block body for cracks or other damage. Check upper and lower hooks for distortion, nicks, elongated or bent shanks, or too wide throat openings (Figure 4). Inspect hooks for cracks using dye penetrant, magnetic particle or other suitable crack detecting method.

(2) Inspect load chain as outlined in paragraph 2, **a.**, under "MAINTENANCE."

(3) Inspect brake friction washer for glazing and wear. Inspect faces of brake flange and ratchet for scoring and hand wheel for wear or damage. Check pawl spring for proper action and tension. Inspect acme thread on brake flange and in hand chain wheel hub for damage. Inspect hand chain wheel hub surface. Hard chrome must be continuous and smooth. If scored or worn, replace hub.

(4) Inspect pinion shaft and gears for wear and damage. Check chain sprocket and stripper for wear, distortion, and damage.

d. Reassembly. The procedure to be followed to reassemble chain hoist is in reverse order of the disassembly steps outlined in paragraph **b.**, above. Listed below are special assembly precautions which should be observed to assure proper assembly. Lubricate chain hoist parts during assembly using lubricants specified under "LUBRICATION."

(1) Lower Block Assembly. When installing load hook in lower block body, the load washer (3 through 6-ton models) must be positioned over the hook shank with beveled and recessed side facing down as shown in

Figure 6. The thrust bearing must be installed over load washer with stamped shield side facing up. Lubricate shank of hook and thrust bearing.

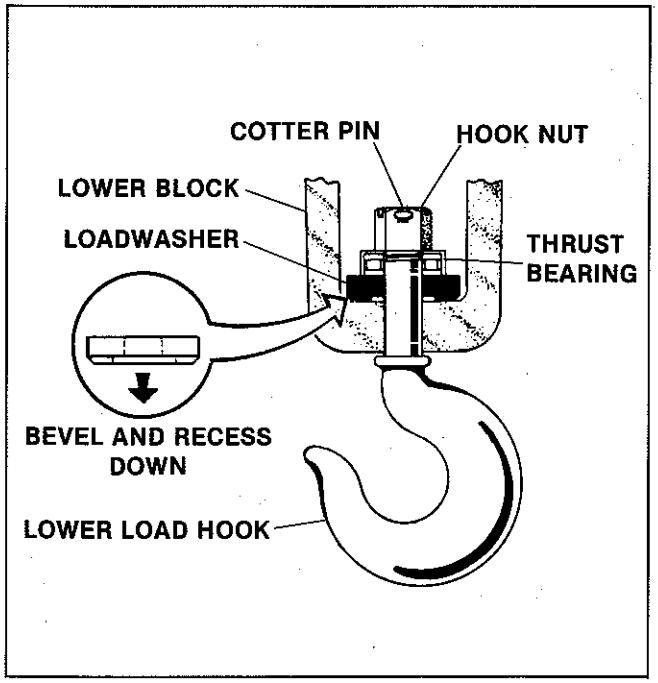


Figure 6. Installation of Load Washer (3 Through 6-Ton)

(2) Load brake and hand chain wheel should be installed in the following manner:

(a) If pawl spring and stud were removed, install new spring and stud in frame. Install brake pawl on pawl shaft and insert shaft in frame.

(b) Apply a light film of grease to acme thread on brake flange and install flange on pinion shaft in frame. Wipe off any excess grease. Position friction washer over flange.

(c) Press needle bearing (if removed) into bore of brake ratchet and lightly grease. Install ratchet on flange over friction washer. Teeth on ratchet must face in proper direction to engage brake pawl. Apply a light film of graphite grease to ratchet teeth.

> NOTE: Use care when assembling and greasing brake parts to prevent any grease from getting onto friction washer and mating surfaces on flange and ratchet.

(d) Lube hub face lightly, allowing counterbores to accumulate reserve amount. Screw hand chain wheel and hub assembly onto acme thread of brake flange by turning clockwise until brake pawl and ratchet click. Continue turning until boss on chain wheel hub is at its closest position to upper hook.

(e) Install brake stop lug on pinion shaft, positioned so that gap between lug and boss on hub is 1/4" to 3/8" wide, as shown in Figure 7. It may be necessary to remove stop lug and turn it over on shaft to achieve the required gap.

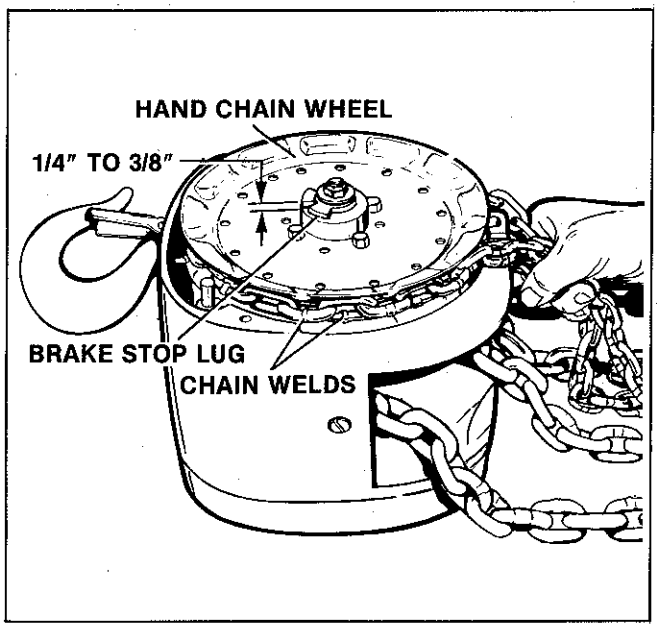


Figure 7. Positioning Brake Stop Lug

CAUTION

The lug must be counterclockwise of the boss, as shown in Figure 7, for proper brake action.

(f) Install flat washer and elastic stop nut on threaded end of pinion shaft to secure stop lug. Early model chain blocks have external retaining ring in place of the flat washer and stop nut.

(3) When installing hand chain on chain wheel, position chain so that welds, Figure 7, are away from bottom of chain pockets as shown. Hold hand chain in place on chain wheel and install chain wheel guide cover. Secure cover to frame with three socket head cap screws and lockwashers.

7. REEVING LOAD CHAIN. If the load chain has been removed from chain hoist during disassembly or for replacement it must be reeved using the following sequence.

a. Insert tail end of load chain into pockets of the load chain sprocket from the load side. Make sure the welded side of links is facing outward from the sprocket.

b. Fasten the tail end of load chain to frame by inserting the screw type anchor pin at position "A" in illustrations.

c. Now, using the lead end of the load chain, continue reeving according to the illustration in Figure 8, applicable to your chain hoist. Make sure there is absolutely no twist in the chain.

d. Anchor the lead end of the chain at point "B" indicated in the illustrations. In order that the last link falls in the correct position to be anchored, you must make sure the number of links in the chain agrees with the following:

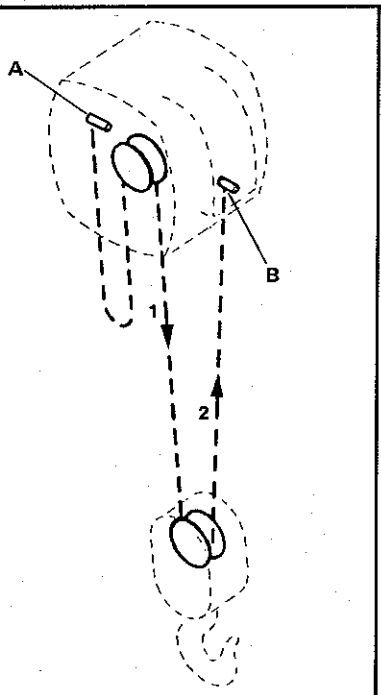


DIAGRAM A
3 & 4-TON

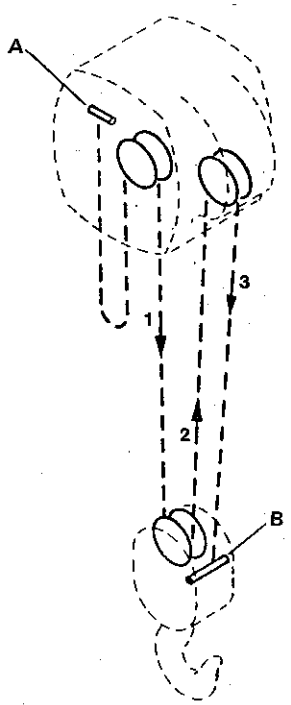


DIAGRAM B
5 & 6-TON

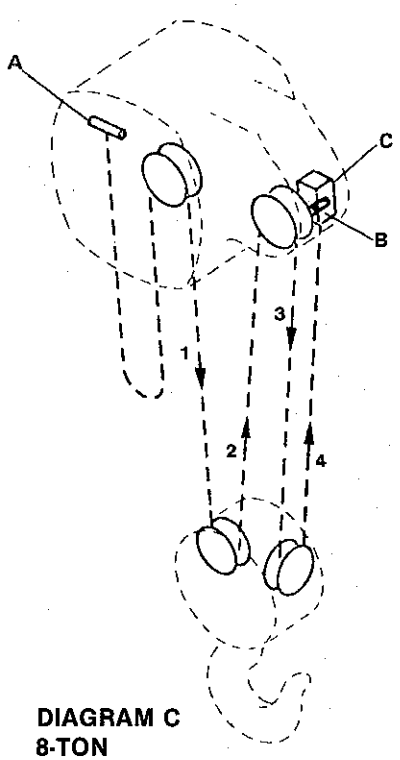


DIAGRAM C
8-TON

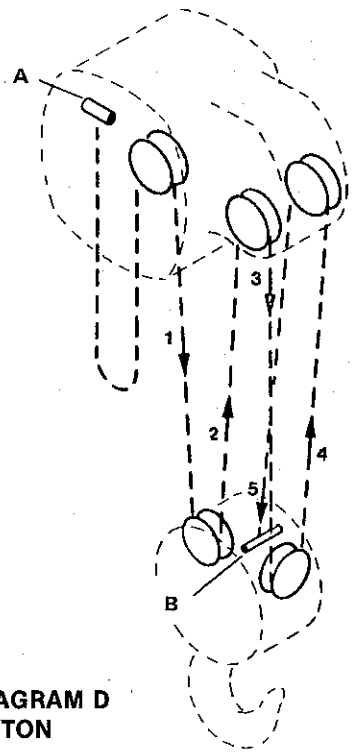


DIAGRAM D
10-TON

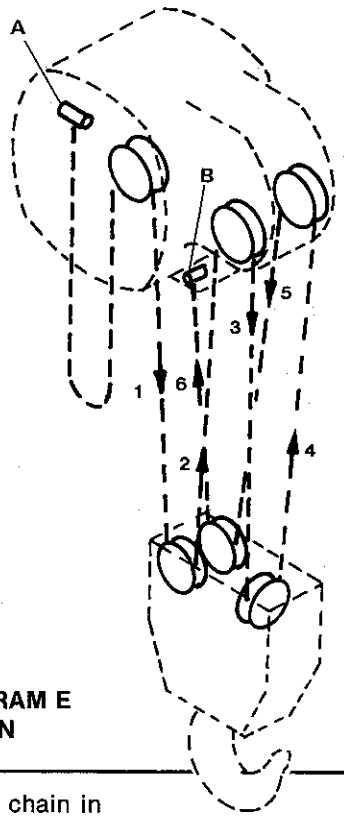


DIAGRAM E
12-TON

NOTE: To anchor the lead end of the chain in the 8-ton chain hoist, it is necessary to pull the idler sprocket shaft part way out. This allows the chain anchor lug "C" to drop down so the chain can be fastened to it. Then, place the anchor lug into position and push the idler shaft back into place and install roll pin.

Figure 8. Reeving Diagrams

3 and 4-Ton	—	Odd number of links
5 and 6-Ton	—	Even number of links
8-Ton	—	Even number of links
10-Ton	—	Even number of links
12-Ton	—	Even number of links

NOTE: The chain used in BUDGIT chain hoists was developed especially for hoisting. Ordinary chain is unsatisfactory for use with BUDGIT chain hoists, and if used, would be dangerous. When replacing load chain, use only factory approved chain.

8. TESTING CHAIN HOIST.

a. General. After completion of reassembly and before placing chain hoist in service, chain hoist should be tested to insure proper operation. To test: Suspend chain hoist from an overhead supporting member of sufficient strength to carry combined weight of chain hoist and test weight and make the following checks:

b. Check Operation.

(1) Pull hand chain rapidly in both directions. Hand chain and wheel should spin freely and load chain should operate smoothly through chain hoist in both directions of travel.

(2) Apply a light load (100 to 200 pounds) to load hook. Pull hand chain to raise load. Lift load a short distance off floor and release hand chain. Observe if brake locks instantly and does not allow load to drift. Pull hand chain to lower load and release chain. Observe if brake stops load instantly and does not allow it to drift.

(3) Apply a rated capacity load to chain hoist and check for smooth and proper operation in both raise and lower directions.

WARNING

Do not lift more than rated load except for test purposes. If any load sustaining parts have been altered, replaced or repaired, hoist should be load tested at 125% of rated capacity by a designated, qualified person, with a written report recording test load, as recommended in ANSI B30.16 Safety Standards.

9. TEST PROCEDURE FOR AUDIO LIFT REGULATOR MODELS.

a. General. The Audio Lift Regulator overload device is manufactured and preset for your particular chain hoist. There are no adjustments to be made and the regulator is lubricated with special long lasting high graphite content grease. Observance of the following suggested test procedure will assist you to operate your chain hoist properly so as to permit you to obtain full benefit from its overload protection. It is recommended that the test be performed at regular intervals based on type service to which chain hoist is subjected. For light service, annual testing will be adequate. For medium service, test every six months; and for heavy service, test every 90 days or oftener depending on severity of service.

b. Test Procedure.

(1) Suspend chain hoist on an overhead structure capable of supporting weight of chain hoist and test load specified in Figure 9.

(2) Attach load hook to a test load of the weight specified in chart for the capacity of the chain hoist being tested. Operate chain hoist in raising direction to take slack out of load chain.

(3) Attach a spring scale to R.H. hand chain (as viewed facing hand chain wheel cover) and pull on scale. If regulator is operating properly, it will release at or before the pounds-pull value listed in the "Maximum Hand Chain Pull At Initial Release" column in Figure 9.

CAUTION

If regulator does not release at or before the maximum hand chain pull value, DO NOT continue to pull. The regulator assembly is not operating and must be replaced. Pull beyond that listed for initial release will greatly increase overload and may cause damage to chain hoist or other equipment.

(4) If regulator releases before lifting rated hoist capacity the regulator assembly must be replaced.

REPLACEMENT PARTS

The following parts illustrations and parts lists, cover standard model and Audio Lift Regulator model BUDGIT Aluminum HI-CAP Chain Hoists. These parts lists are also applicable to spark and corrosion resistant models except for special hooks, load chains and hand chains. Part numbers and prices for the special parts must be obtained from the factory.

NOTE: When ordering replacement parts, include with the order the exact Catalog Number and Model Number from the chain hoist nameplate.

The numbers assigned to the parts of our various assemblies in our parts lists are not the part numbers used in manufacturing the part. They are identification numbers, that when given with the hoist serial number, permit us to identify, select or manufacture, and ship the correct part needed for any hoist.

Rated Hoist Load (Tons)	Hoist Catalog Number	Average Hand Chain Pull, Hoisting (Lbs.)	Maximum Hand Chain Pull At Initial Release (Lbs.)	Recommended Test Load (Lbs.)
3	R264	63	109	9000
4	R265	84	145	12000
5	R266	72	124	15000
6	R267	86	148	18000
8	R268	89	154	24000
10	R269	92	159	30000
12	R270	105	APPLY TO FACTORY	APPLY TO FACTORY

Figure 9. Audio Lift Regulator Test Data

NOTES

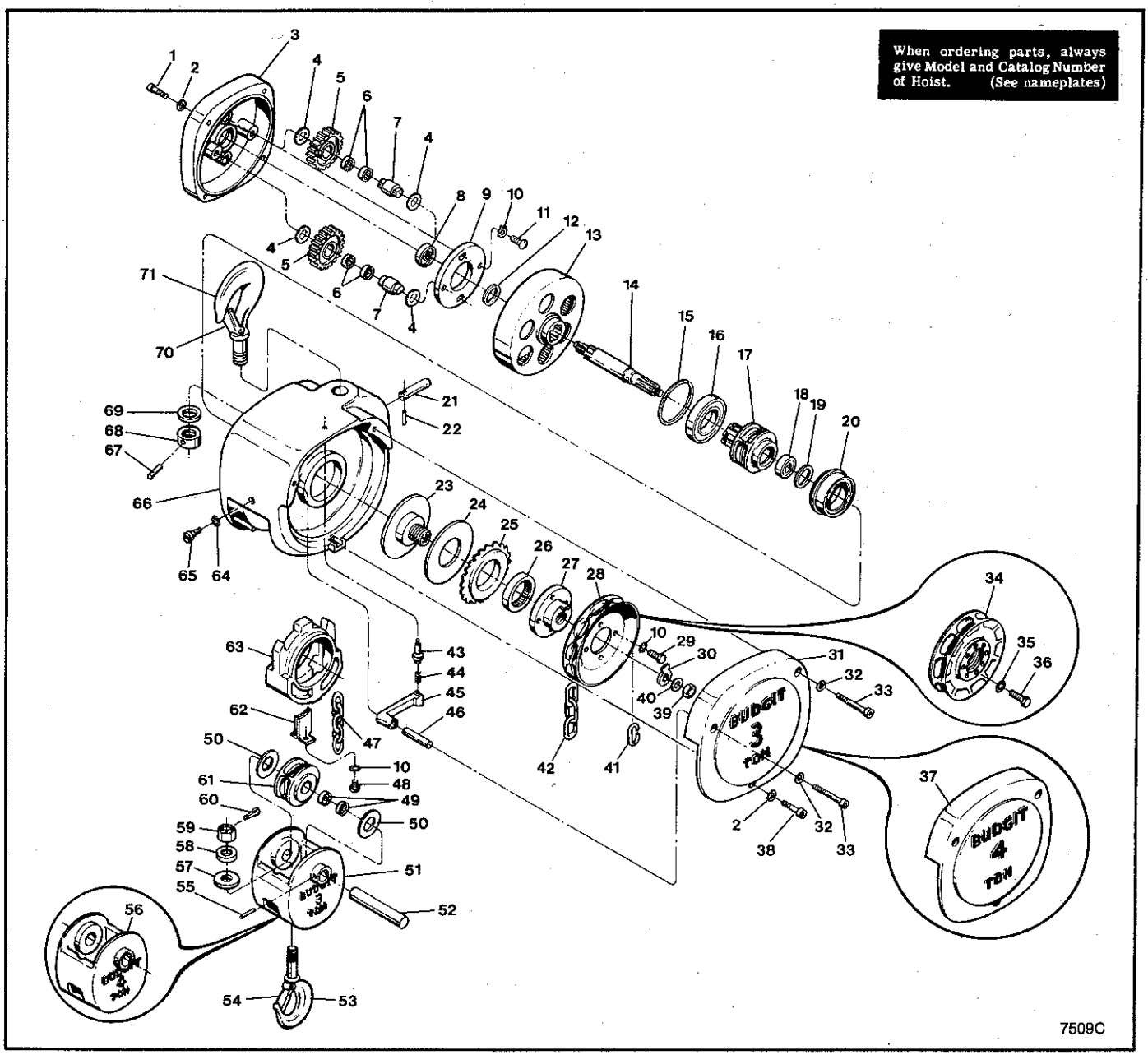


Figure 10. 3 and 4-Ton Chain Hoist Parts

Ref. No.	Part Number	Part Name	Qty. Reqd.
1	CB-301	Screw — Cap, socket head	4
2	CB-380	Lockwasher — 1/4", special	5
3	CB-303	Cover — Gear	1
4	CB-305	Washer — Spacer, idler gear	4
5	CB-306	Gear — Idler	2
6	CB-307	Bearing Assembly — Needle, idler gear	4
7	CB-308	Shaft — Idler Gear	2
8	CB-309	Bearing Assembly — Ball, pinion shaft	1
9	CB-310	Plate — Retaining, idler gear	1
10	CB-311	Lockwasher — Shakeproof, external tooth	8
11	CB-312	Screw — Cap, button head	2
12	CB-313	Ring — Retaining, spiral type	1
13	CB-314	Gear — Sprocket	1
14	CB-315	Shaft — Pinion	1
15	CB-316	Ring — Retaining, spiral type	1
16	CB-317	Bearing Assembly — Ball, sprocket (large)	1
17	CB-318	Sprocket — Load Chain	1

Ref. No.	Part Number	Part Name	Qty. Reqd.
18	CB-319	Bearing Assembly — Ball, pinion shaft	1
19	CB-320	Ring — Retaining, spiral type	1
20	CB-321	Bearing Assembly — Ball, sprocket	1
21	CB-336	Pin — Anchor, load chain	1
22	CB-337	Pin — Roll	1
23	CB-335	Flange — Load Brake	1
24	CB-334	Washer — Friction, load brake	1
25	CB-333	Ratchet — Load Brake	1
26	CB-332	Bearing Assembly — Needle, ratchet	1
27	CB-331	Hub — Chain Wheel	1
28	CB-330	Wheel — Hand Chain	1
29	CB-329	Bolt — Tap, hex head	4
30	CB-328	Lug — Stop, load brake	1
31	CB-323	Cover — Guide, chain wheel (3-ton)	1
32	CB-381	Lockwasher — 5/16", special	2
33	CB-324	Screw — Cap, hex socket	2
**34	CB-382	Regulator and Wheel Assembly — Load, audio lift (3-ton)	1
	CB-382A	Regulator and Wheel Assembly — Load, audio lift (4-ton)	1
35	CB-383	Lockwasher — Shakeproof, internal tooth	4
36	CB-384	Screw — Cap, hex head	4
37	CB-322	Cover — Guide, chain wheel (4-ton)	1
38	CB-326	Screw — Cap, socket head	1
39	CB-327	Nut — Stop, elastic	1
40	CB-378	Washer — Flat	1
41	CB-347	Link — Connecting, hand chain	1
42	CB-346	Chain — Hand (15/64")	1
43	CB-339	Stud — Pawl Spring	1
44	CB-340	Spring — Pawl, load brake	1
45	CB-341	Pawl — Load Brake	1
46	CB-342	Shaft — Pawl, load brake	1
47	CB-348	Chain — Load (3/8" alloy, heat treated)	1
48	CB-345	Screw — Machine, round head	2
49	CB-351	Bearing Assembly — Needle, idler sprocket	2
50	CB-350	Washer — Spacer, idler sprocket	2
51	CB-363	Body — Lower Block (3-ton)	1
52	CB-352	Shaft — Idler, sprocket	1
53	CB-355	Hook Assembly — Lower (includes item 54) (3-ton)	1
	CB-356	Hook Assembly — Lower (includes item 54) (4-ton)	1
54	CB-385	Latch Kit — Lower Hook (3-ton)	1
	CB-386	Latch Kit — Lower Hook (4-ton)	1
55	CB-357	Pin — Roll	1
56	CB-364	Body — Lower Block (4-ton)	1
57	CB-377	Washer — Load, lower hook	1
58	CB-358	Bearing Assembly — Thrust, lower hook	1
59	CB-360	Nut — Slotted, lower hook	1
60	CB-362	Pin — Cotter, lower hook	1
61	CB-349	Sprocket — Idler	1
62	CB-344	Stripper — Load Chain	1
63	CB-343	Guide — Load Chain	1
64	CB-366	Lockwasher — Shakeproof, external tooth	1
65	CB-365	Pin — Shear, chain anchor	1
†66	CB-375	Frame Assembly — 3-Ton (includes item 43)	1
	CB-376	Frame Assembly — 4-Ton (includes item 43)	1
67	CB-387	Pin — Straight, grooved	1
68	††	Nut — Upper Hook	1
69	CB-373	Washer — Thrust, upper hook (3-ton)	1
	CB-373A	Washer — Thrust, upper hook (4-ton)	1
70	CB-388	Latch Kit — Upper Hook (3-ton)	1
	CB-389	Latch Kit — Upper Hook (4-ton)	1
71	CB-369	Hook Assembly — Upper (3-ton, includes items 67 thru 70)	1
	CB-370	Hook Assembly — Upper (4-ton, includes items 67 thru 70)	1

** Audio Lift Regulator and Wheel Assembly (34) replaces hand chain wheel (28) on chain hoists having catalog numbers beginning with the letter "R."

† When ordering replacement frame for early model with welded upper hook nut, also order replacement upper hook assembly (71).

†† Upper hook nut (68) is drilled in place on hook shank and is not available separately.

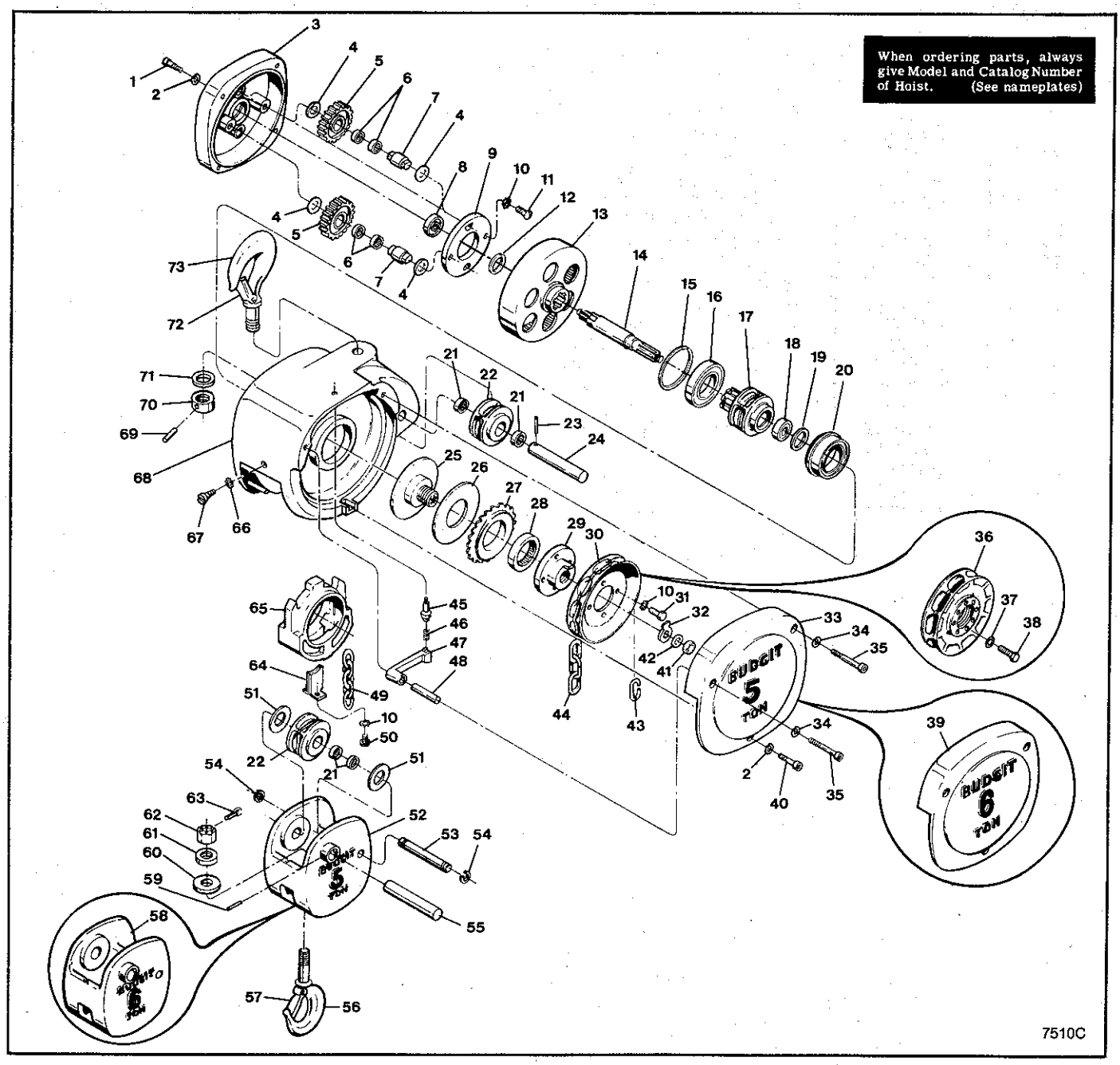


Figure 11. 5 and 6-Ton Chain Hoist Parts

Ref. No.	Part Number	Part Name	Qty. Reqd.
1	CB-401	Screw – Cap, socket head	4
2	CB-483	Lockwasher – 1/4", special	5
3	CB-403	Cover – Gear	1
4	CB-405	Washer – Spacer, idler gear	4
5	CB-406	Gear – Idler	2
6	CB-407	Bearing Assembly – Needle, idler gear	4
7	CB-408	Shaft – Idler Gear	2
8	CB-409	Bearing Assembly – Ball, pinion shaft	1
9	CB-410	Plate – Retaining, idler gear	1
10	CB-412	Lockwasher – Shakeproof, external tooth	8
11	CB-413	Screw – Cap, button head	2
12	CB-411	Ring – Retaining, spiral type	1
13	CB-414	Gear – Sprocket	1
14	CB-415	Shaft – Pinion	1
15	CB-416	Ring – Retaining, spiral type	1
16	CB-417	Bearing Assembly – Ball, sprocket (large)	1
17	CB-418	Sprocket – Load Chain	1

Ref. No.	Part Number	Part Name	Qty. Reqd.
18	CB-419	Bearing Assembly – Ball, pinion shaft	1
19	CB-420	Ring – Retaining, spiral type	1
20	CB-421	Bearing Assembly – Ball, sprocket	1
21	CB-448	Bearing Assembly – Needle, idler sprocket	4
22	CB-449	Sprocket – Idler	2
23	CB-472	Pin – Roll	1
24	CB-471	Shaft – Idler Sprocket, upper	1
25	CB-437	Flange – Load Brake	1
26	CB-436	Washer – Friction, load brake	1
27	CB-435	Ratchet – Load Brake	1
28	CB-434	Bearing Assembly – Needle, ratchet	1
29	CB-433	Hub – Chain Wheel	1
30	CB-431	Wheel – Hand Chain	1
31	CB-429	Bolt – Tap, hex head	4
32	CB-428	Lug – Stop, load brake	1
33	CB-423	Cover – Guide, chain wheel (5-ton)	1
34	CB-484	Lockwasher – 5/16" Special	2
35	CB-424	Screw – Cap, socket head	2
**36	CB-485	Regulator and Wheel Assembly – Load, audio lift (5-ton)	1
	CB-485A	Regulator and Wheel Assembly – Load, audio lift (6-ton)	1
37	CB-486	Lockwasher – Shakeproof, internal tooth	4
38	CB-487	Screw – Cap, hex head	4
39	CB-422	Cover – Guide, chain wheel (6-ton)	1
40	CB-426	Screw – Cap, hex socket	1
41	CB-427	Nut – Stop, elastic	1
42	CB-482	Washer – Flat	1
43	CB-473	Link – Connecting, hand chain	1
44	CB-432	Chain – Hand (15/64")	1
45	CB-469	Stud – Pawl Spring	1
46	CB-468	Spring – Pawl, load brake	1
47	CB-467	Pawl – Load Brake	1
48	CB-466	Shaft – Pawl; load brake	1
49	CB-443	Chain – Load (3/8" alloy, heat treated)	1
50	CB-445	Screw – Machine, round head	2
51	CB-447	Washer – Spacer, idler sprocket	4
52	CB-454	Body – Lower Block (5-ton)	1
53	CB-450	Pin – Anchor, load chain	1
54	CB-451	Ring – Retaining, external	2
55	CB-452	Shaft – Idler Sprocket, lower block	1
56	CB-459	Hook Assembly – Lower (includes item 57) (5-ton)	1
	CB-460	Hook Assembly – Lower (includes item 57) (6-ton)	1
57	CB-488	Latch Kit – Lower Hook (5-ton)	1
	CB-489	Latch Kit – Lower Hook (6-ton)	1
58	CB-465	Body – Lower Block (6-ton)	1
59	CB-453	Pin – Roll	1
60	CB-481	Washer – Load, lower hook (5-ton)	1
	CB-481A	Washer – Load, lower hook (6-ton)	1
61	CB-463	Bearing Assembly – Thrust, lower hook (5-ton)	1
	CB-464	Bearing Assembly – Thrust, lower hook (6-ton)	1
62	CB-455	Nut – Slotted, lower hook (5-ton)	1
	CB-474	Nut – Slotted, lower hook (6-ton)	1
63	CB-456	Pin – Cotter	1
64	CB-444	Stripper – Load Chain	1
65	CB-442	Guide – Load Chain	1
66	CB-441	Lockwasher – Shakeproof, external tooth	1
67	CB-440	Pin – Shear, chain anchor	1
†68	CB-475	Frame Assembly – 5-ton (includes item 45)	1
	CB-476	Frame Assembly – 6-ton (includes item 45)	1
69	CB-490	Pin – Straight, grooved (5-ton)	1
	CB-491	Pin – Straight, grooved (6-ton)	1
70	††	Nut – Upper Hook	1
71	CB-479	Washer – Thrust, upper hook (5-ton)	1
	CB-479A	Washer – Thrust, upper hook (6-ton)	1
72	CB-492	Latch Kit – Upper Hook (5-ton)	1
	CB-493	Latch Kit – Upper Hook (6-ton)	1
73	CB-461	Hook Assembly – Upper (5-ton, includes items 69 thru 72)	1
	CB-462	Hook Assembly – Upper (6-ton, includes items 69 thru 72)	1

** Audio Lift Regulator and Wheel Assembly (36) replaces hand chain wheel (30) on chain hoists having catalog numbers beginning with the letter "R."

† When ordering replacement frame for early model with welded upper hook nut, also order replacement upper hook assembly (73).

†† Upper hook nut (70) is drilled in place on hook shank and is not available separately.

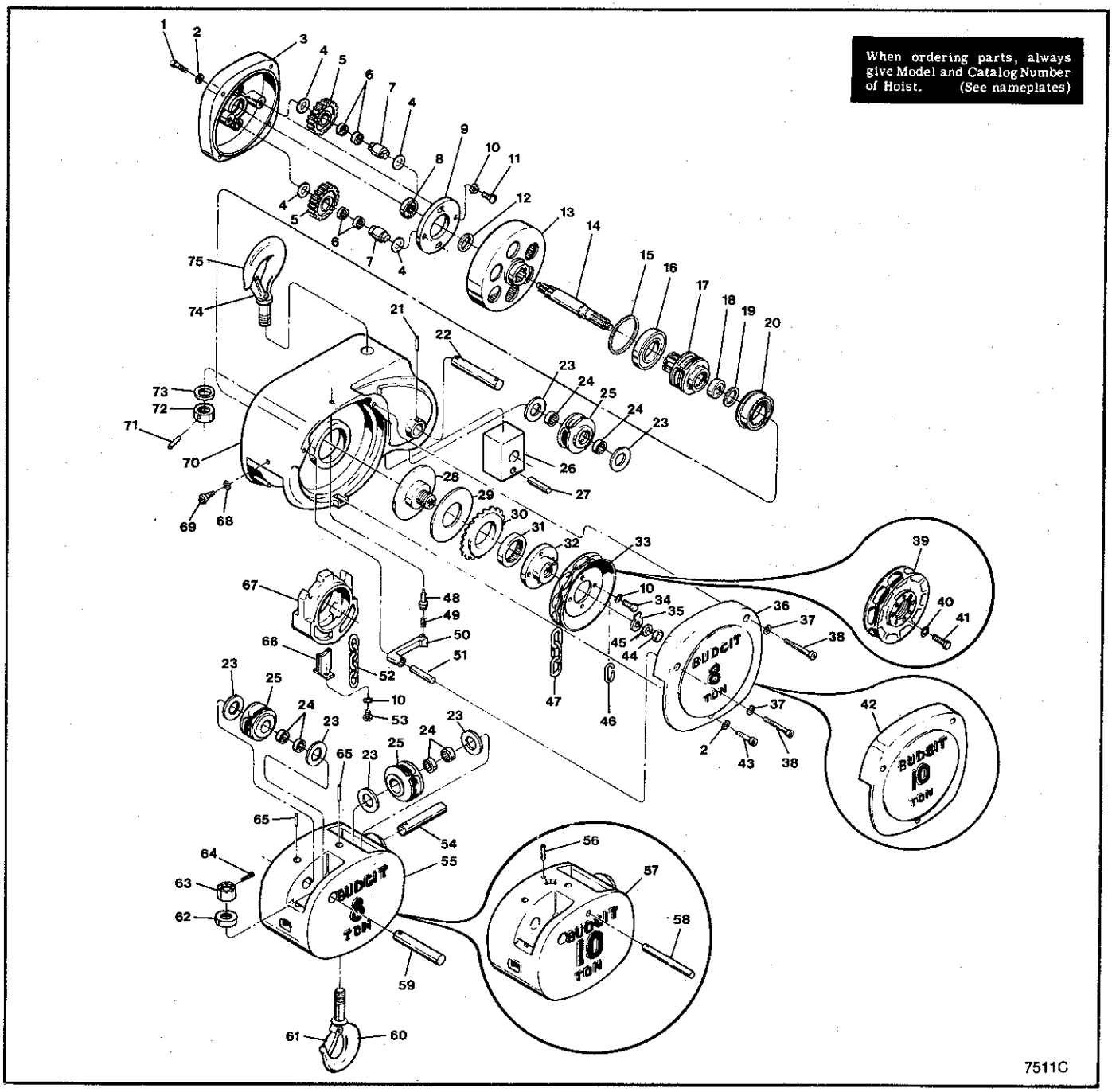


Figure 12. 8 and 10-Ton Chain Hoist Parts

Ref. No.	Part Number	Part Name	Qty. Reqd.
1	CB-577	Screw – Cap, socket head	4
2	CB-587	Lockwasher – 1/4", special	5
3	CB-501	Cover – Gear	1
4	CB-505	Washer – Spacer, idler gear	4
5	CB-503	Gear – Idler	2
6	CB-504	Bearing Assembly – Needle, idler gear	4
7	CB-506	Shaft – Idler Gear	2
8	CB-507	Bearing Assembly – Ball, pinion shaft	1
9	CB-508	Plate – Retaining, idler gear	1
10	CB-509	Lockwasher – Shakeproof, external tooth	8
11	CB-510	Screw – Cap, button head	2
12	CB-511	Ring – Retaining, spiral type	1
13	CB-512	Gear – Sprocket	1
14	CB-513	Shaft – Pinion	1
15	CB-514	Ring – Retaining, spiral type	1

Ref. No.	Part Number	Part Name	Qty. Reqd.
16	CB-515	Bearing Assembly – Ball, sprocket (large)	1
17	CB-516	Sprocket – Load Chain	1
18	CB-517	Bearing Assembly – Ball, pinion shaft	1
19	CB-518	Ring – Retaining, spiral type	1
20	CB-519	Bearing Assembly – Ball, sprocket	1
21	CB-524	Pin – Roll	1
22	CB-523	Shaft – Idler Sprocket, upper	1
23	CB-520	Washer – Spacer, idler sprocker (8-ton)	6
	CB-520	Washer – Spacer, idler sprocket (10-ton)	8
24	CB-521	Bearing Assembly – Needle, idler sprocket (8-ton)	6
	CB-521	Bearing Assembly – Needle, idler sprocket (10-ton)	8
25	CB-522	Sprocket – Idler (8-ton)	3
	CB-522	Sprocket – Idler (10-ton)	4
26	CB-525	Block – Anchor, load chain (8-ton)	1
27	CB-526	Pin – Anchor, load chain (8-ton)	1
28	CB-527	Flange – Load Brake	1
29	CB-528	Washer – Friction, load brake	1
30	CB-529	Ratchet – Load Brake	1
31	CB-530	Bearing Assembly – Needle, ratchet	1
32	CB-531	Hub – Chain Wheel	1
33	CB-532	Wheel – Hand Chain	1
34	CB-534	Bolt – Tap, hex head	4
35	CB-535	Lug – Stop, load brake	1
36	CB-537	Cover – Guide, chain wheel (8-ton)	1
37	CB-588	Lockwasher – 5/16", special	2
38	CB-539	Screw – Cap, socket head	2
**39	CB-589	Regulator and Wheel Assembly – Load, audio lift (8-ton)	1
	CB-589A	Regulator and Wheel Assembly – Load, audio lift (10-ton)	1
40	CB-590	Lockwasher – Shakeproof, internal	4
41	CB-591	Screw – Cap, hex head	4
42	CB-538	Cover – Guide, chain wheel (10-ton)	1
43	CB-541	Screw – Cap, socket head	1
44	CB-536	Nut – Stop, elastic	1
45	CB-557	Washer – Flat	1
46	CB-542	Link – Connecting, hand chain	1
47	CB-543	Chain – Hand (15/64")	1
48	CB-546	Stud – Pawl Spring	1
49	CB-545	Spring – Pawl, load brake	1
50	CB-570	Pawl – Load Brake	1
51	CB-544	Shaft – Pawl, load brake	1
52	CB-552	Chain – Load (3/8" alloy heat treated)	1
53	CB-551	Screw – Machine, round head	2
54	CB-553	Shaft – Idler Sprocket, lower block	1
55	CB-555	Body – Lower Block (8-ton)	1
56	CB-559	Pin – Roll (10-ton)	1
57	CB-556	Body – Lower Block (10-ton)	1
58	CB-558	Pin – Anchor, load chain (10-ton)	1
59	CB-560	Shaft – Idler Sprocket, lower block	1
60	CB-563	Hook Assembly – Lower (8-ton capacity, includes item 61)	1
	CB-564	Hook Assembly – Lower (10-ton capacity, includes item 61)	1
61	CB-592	Latch Kit – Lower Hook (8-ton)	1
	CB-593	Latch Kit – Lower Hook (10-ton)	1
62	CB-565	Bearing Assembly – Thrust, lower hook	1
63	CB-567	Nut – Slotted, lower hook (8-ton)	1
	CB-568	Nut – Slotted, lower hook (10-ton)	1
64	CB-569	Pin – Cotter	1
65	CB-554	Pin – Roll	2
66	CB-549	Stripper – Load Chain	1
67	CB-548	Guide – Load Chain	1
68	CB-571	Lockwasher – Shakeproof, external tooth	1
69	CB-572	Pin – Shear, chain anchor	1
†70	CB-585	Frame Assembly – 8-ton (includes item 48)	1
	CB-586	Frame Assembly – 10-ton (includes item 48)	1
71	CB-594	Pin – Straight, grooved (8-ton)	1
	CB-595	Pin – Straight, grooved (10-ton)	1
72	††	Nut – Upper Hook	1
73	CB-581	Washer – Thrust, upper hook	1
74	CB-596	Latch Kit – Upper Hook (8-ton)	1
	CB-597	Latch Kit – Upper Hook (10-ton)	1
75	CB-575	Hook Assembly – Upper (8-ton, includes items 71 thru 74)	1
	CB-576	Hook Assembly – Upper (10-ton, includes items 71 thru 74)	1

** Audio Lift Regulator and Wheel Assembly (39) replaces hand chain wheel (33) on chain hoists having catalog numbers beginning with the letter "R."

† When ordering replacement frame for early model with welded upper hook nut, also order replacement upper hook assembly (75).

†† Upper hook nut (72) is drilled in place on hook shank and is not available separately.

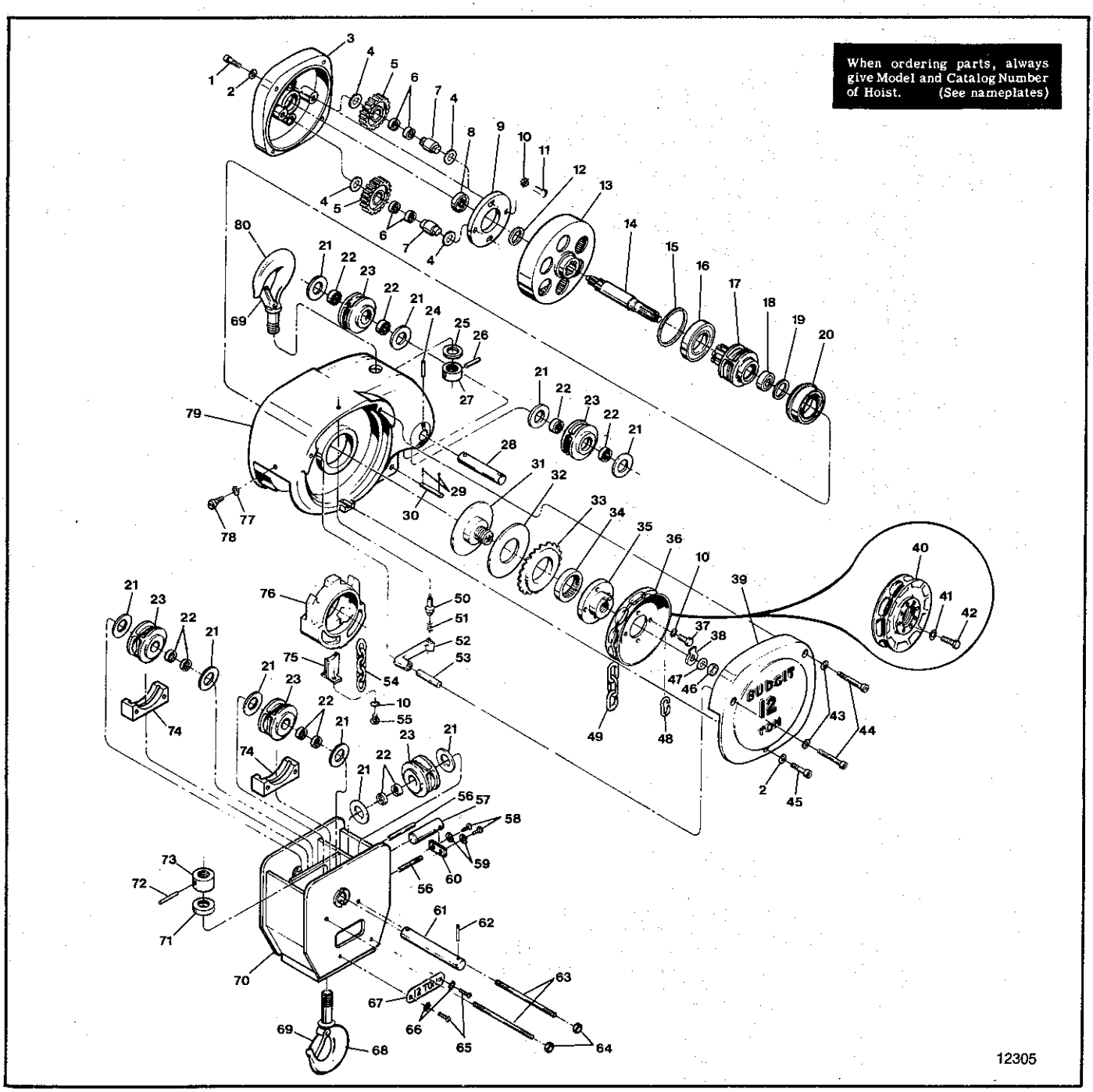


Figure 13. Twelve Ton Chain Hoist Parts

Ref. No.	Part Number	Part Name	Qty. Reqd.
1	CB-601	Screw — Cap, socket head	4
2	CB-602	Lockwasher — 1/4", special	5
3	CB-603	Cover — Gear	1
4	CB-604	Washer — Spacer, idler gear	4
5	CB-605	Gear — Idler	2
6	CB-606	Bearing Assembly — Needle, idler gear	4
7	CB-607	Shaft — Idler Gear	2
8	CB-608	Bearing Assembly — Ball, pinion shaft	1
9	CB-609	Plate — Retaining, idler gear	1
10	CB-610	Lockwasher — Shakeproof, external tooth	8
11	CB-611	Screw — Cap, button head	2
12	CB-612	Ring — Retaining, spiral type	1
13	CB-613	Gear — Sprocket	1

Ref. No.	Part Number	Part Name	Qty. Reqd.
14	CB-614	Shaft — Pinion	1
15	CB-615	Ring — Retaining, spiral type	1
16	CB-616	Bearing Assembly — Ball, sprocket (large)	1
17	CB-617	Sprocket — Load Chain	1
18	CB-618	Bearing Assembly — Ball, pinion shaft	1
19	CB-619	Ring — Retaining, spiral type	1
20	CB-620	Bearing Assembly — Ball, sprocket	1
21	CB-621	Washer — Spacer, idler sprocket	10
22	CB-622	Bearing Assembly — Needle, idler sprocket	10
23	CB-623	Sprocket — Idler	5
24	CB-624	Pin — Roll	1
25	CB-625	Washer — Thrust, upper hook	1
26	CB-626	Pin — Straight, grooved	1
27	*	Nut — Upper Hook	1
28	CB-628	Shaft — Idler Sprocket, upper	1
29	CB-629	Key — Cotter	2
30	CB-630	Pin — Anchor, load chain (Model 508989-1)	1
	CB-630A	Pin — Anchor, load chain (Models 508989-12 thru -19)	1
31	CB-631	Flange — Load Brake	1
32	CB-632	Washer — Friction, load brake	1
33	CB-633	Ratchet — Load Brake	1
34	CB-634	Bearing Assembly — Needle, ratchet	1
35	CB-635	Hub — Chain Wheel	1
36	CB-636	Wheel — Hand Chain	1
37	CB-637	Bolt — Tap, hex head	4
38	CB-638	Lug — Stop, load brake	1
39	CB-639	Cover — Guide, chain wheel	1
**40	CB-640	Regulator and Wheel Assembly — Load, audio lift	1
41	CB-641	Lockwasher — Shakeproof, internal tooth	4
42	CB-642	Screw — Cap, hex head	4
43	CB-643	Lockwasher — 5/16", special	2
44	CB-644	Screw — Cap, socket head	2
45	CB-645	Screw — Cap, socket head	1
46	CB-646	Nut — Stop, elastic	1
47	CB-647	Washer — Flat	1
48	CB-648	Link — Connecting, hand chain	1
49	CB-649	Chain — Hand (15/64")	1
50	CB-650	Stud — Pawl Spring	1
51	CB-651	Spring — Pawl, load brake	1
52	CB-652	Pawl — Load Brake	1
53	CB-653	Shaft — Pawl, load brake	1
54	CB-654	Chain — Load (3/8" alloy, heat treated)	1
55	CB-655	Screw — Machine, round head	2
56	CB-656	Pin — Roll	2
†57	CB-657	Shaft — Idler Sprocket, lower block (Model 508989-1)	1
	CB-657A	Shaft — Idler Sprocket, lower block (Models 508989-12 thru -19)	1
†58	CB-658	Screw — Cap, socket head	2
†59	CB-659	Lockwasher — Spring	2
†60	CB-660	Plate — Key	1
†61	CB-661	Shaft — Idler Sprocket, lower block (Model 508989-1)	1
	CB-661A	Shaft — Idler Sprocket, lower block (Models 508989-12 thru -19)	1
62	CB-662	Pin — Roll	2
63	CB-663	Stud — 1/4-20 x 6-1/2"	2
64	CB-664	Nut — Hex, self locking	4
65	CB-665	Screw — Machine, round head	4
66	CB-666	Lockwasher — Shakeproof, internal tooth	4
67	CB-667	Plate — (12-ton capacity)	2
68	CB-668	Hook Assembly — Lower (includes item 73)	1
69	CB-669	Latch Kit — Hook, upper and lower	2
70	CB-670	Body — Lower Block (Model 508989-1)	1
	CB-670A	Body — Lower Block (Models 508989-12 thru -19)	1
71	CB-671	Bearing Assembly — Thrust, lower hook	1
72	CB-672	Pin — Straight, grooved	1
73	*	Nut — Lower Hook	1
74	CB-674	Guide — Load Chain, lower block	3
75	CB-675	Stripper — Load Chain	1
76	CB-676	Guide — Load Chain, frame	1
77	CB-677	Lockwasher — Shakeproof, external tooth	1
78	CB-678	Pin — Shear, chain anchor	1
***79	CB-679	Frame Assembly — (includes item 50)	1
80	CB-680	Hook Assembly — Upper (includes item 27)	1

* Upper and lower hook nuts (27 and 73) are drilled in place on hook shank and are not available separately.

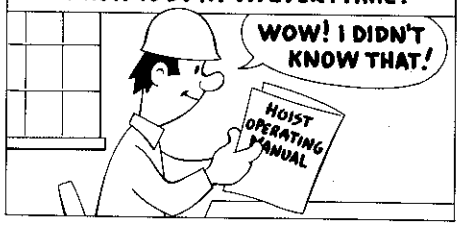
** Audio Lift Regulator and Wheel Assembly (40) replaces hand chain wheel (36) on chain hoists having catalog numbers beginning with the letter "R."

*** When ordering replacement frame for early model with welded upper hook nut, also order replacement upper hook assembly (80).

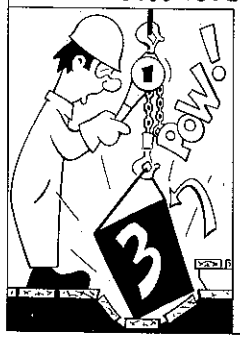
† On Models 508989-12 thru -19, shaft 57 is fixed by one roll pin 62 in place of items 58, 59 and 60. Also shaft 61 is fixed by one roll pin 62 instead of two.

NOTES

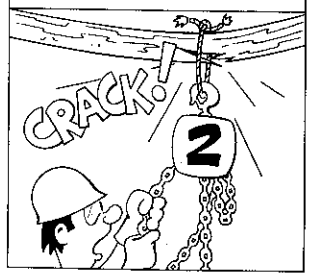
SAFE IS...KNOWING YOUR HOIST!
STUDY MANUFACTURER'S OPERATING INSTRUCTION MANUAL FOR CORRECT HOIST OPERATION. KNOW WHAT TO DO. -AND HOW TO DO IT! ... EVERYTIME!



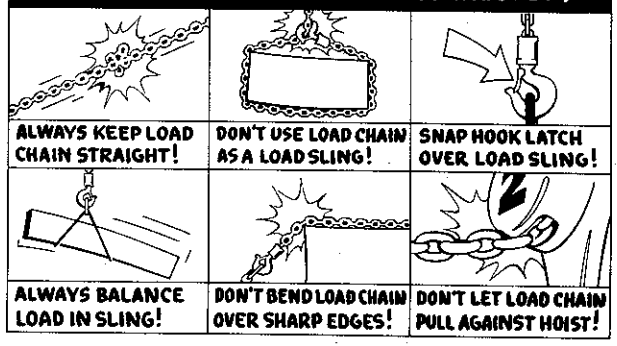
SAFE IS... NEVER OVERLOADING!
ALWAYS BE SURE TO USE PROPER CAPACITY HOIST. ...IN DOUBTFUL WEIGHT SITUATIONS USE HOISTS WITH *OVERLOAD PROTECTION DEVICES* WHICH WILL REJECT DANGEROUS OVERLOADS.



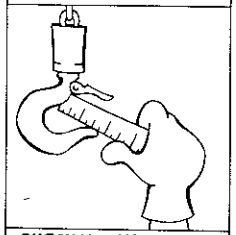
SAFE IS... MAKING SURE UPPER SUSPENSION WILL HOLD THE LOAD!



SAFE IS... RIGGING THE HOIST CORRECTLY!



SAFE IS...
NEVER USING A HOIST WITH "OPENED" HOOKS!



CHECK HOOKS OFTEN WITH SCALE OR GAUGE!

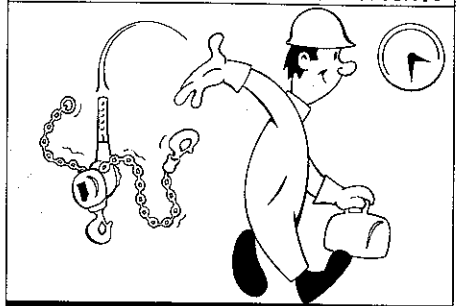
SAFE IS...
NEVER USING A HOIST WITH SLIPPING BRAKE!

CHECK LOAD BRAKE OPERATION OFTEN!

SAFE IS...
NEVER USING A DAMAGED HOIST!

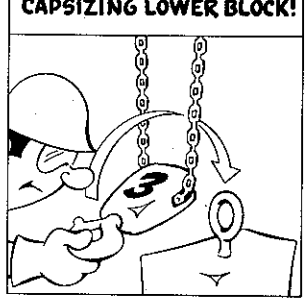
VISUALLY CHECK HOIST CONDITION!

SAFE IS...USING GOOD JUDGMENT!

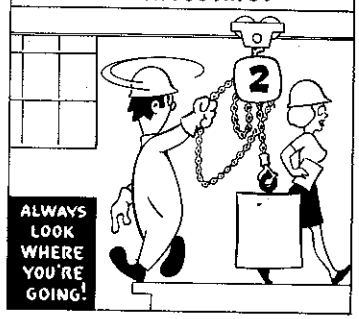


NEVER THROW OR DROP A HOIST!

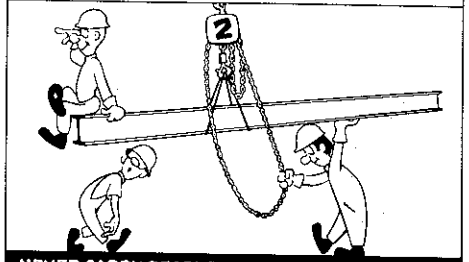
SAFE IS... NEVER TWISTING CHAIN BY CAPSIZING LOWER BLOCK!



SAFE IS... ALWAYS MAKING SURE OF YOUR FOOTING!

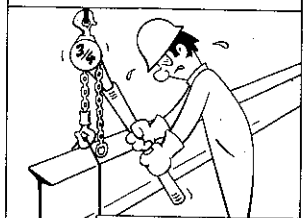


SAFE IS... ALWAYS STAYING OUT FROM UNDER A SUSPENDED LOAD!



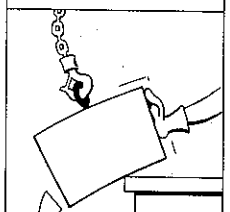
NEVER CARRY PEOPLE ON A HOIST OR THE LOAD. NEVER CARRY LOADS OVER PEOPLE!

SAFE IS.... NEVER USING A PIPE (CHEATER) ON LEVER HOIST HANDLE!



SAFE IS...NEVER PERMITTING A WELDING TORCH TO HEAT LOAD CHAIN!

SAFE IS...NEVER APPLYING SHOCK LOAD TO CHAIN SUDDENLY!



SAFE IS... ALSO

- ○ NEVER DRAGGING A LOAD CHAIN FROM UNDER THE LOAD!
- ○ BEING A THOUGHTFUL, COURTEOUS WORKER!

Safe is Beautiful

Recommended Spare Parts for Your BUDGIT Chain Hoist

Certain parts of your hoist will, in time, require replacement under normal wear conditions. It is suggested that the following parts be purchased for your hoist as spares for future use.

- Friction Washer
- Hand Chain Wheel
- Hand Chain
- Load Chain
- Lower Hook Assembly
- Chain Wheel Guide
- Load Brake Pawl
- Pinion Shaft
- Elastic Stop Nut
- Upper Hook Kit
- Hook Latches

NOTE: When ordering parts always furnish Model Number, Catalog Number, capacity, and lift of hoist on which the parts are to be used.

Parts for your hoist are available from your local authorized BUDGIT repair station. For the location of your nearest repair station, write:

	In USA	**In Canada**
	LIFT-TECH INTERNATIONAL INC P O BOX 769 MUSKEGON MI 49443-0769	Lift-Tech International Cranes & Hoists, Inc. 53-D Cowansview Road Cambridge, Ontario N1R 7L2
or phone:	**616-733-0821**	**519-621-3201**

WARRANTY

WARRANTY AND LIMITATION OF LIABILITY

A. Seller warrants that its products and parts, when shipped, and its work (including installation, construction and start-up), when performed, will meet applicable specifications, will be of good quality and will be free from defects in material and workmanship. All claims for defective products or parts under this warranty must be made in writing immediately upon discovery and, in any event, within one (1) year from shipment of the applicable item unless Seller specifically assumes installation, construction or start-up responsibility. All claims for defective products or parts when Seller specifically assumes installation, construction or start-up responsibility, and all claims for defective work must be made in writing immediately upon discovery and, in any event, within one (1) year from completion of the applicable work by Seller, provided; however, all claims for defective products and parts must be made in writing no later than eighteen (18) months after shipment. Defective items must be held for Seller's inspection and returned to the original f.o.b. point upon request. THE FOREGOING IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES WHATSOEVER, EXPRESS, IMPLIED AND STATUTORY, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS.

B. Upon Buyer's submission of a claim as provided above and its substantiation, Seller shall at its option either (i) repair or replace its product, part or work at either the original f.o.b. point of delivery or at Seller's authorized service station nearest Buyer or (ii) refund an equitable portion of the purchase price.

C. This warranty is contingent upon Buyer's proper maintenance and care of Seller's products, and does not extend to fair wear and tear. Seller reserves the right to void warranty in event of Buyer's use of inappropriate materials in the course of repair or maintenance, or if Seller's products have been dismantled prior to submission to Seller for warranty inspection.

D. The foregoing is Seller's only obligation and Buyer's exclusive remedy for breach of warranty, and is Buyer's exclusive remedy hereunder by way of breach of contract, tort, strict liability or otherwise. In no event shall Buyer be entitled to or Seller liable for incidental or consequential damages. Any action for breach of this agreement must be commenced within one (1) year after the cause of action has accrued.

LIFTTECH
LIFT-TECH INTERNATIONAL, INC.
CRANE AND HOIST OPERATIONS
MUSKEGON, MICHIGAN 49443