

# COFFING<sup>®</sup>

## HOISTS

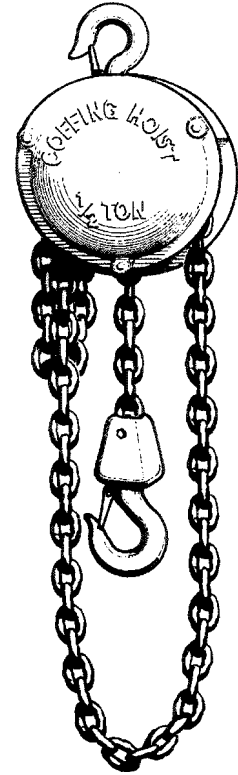
# OPERATING & MAINTENANCE INSTRUCTIONS WITH PARTS LIST

Publication Part No. CA-680-1

## CA - Aluminum Hand Chain Hoist

*For Capacities:*

1/2 Ton



### IMPORTANT – CAUTION

To safeguard against the possibility of personal injury or property damage, follow the recommendations and instructions of this manual. This manual contains important information for the correct installation, operation, and maintenance of this equipment. All persons involved in the installation, operation, and maintenance of this equipment should be thoroughly familiar with the contents of this manual. Keep this manual for reference and further use.

### ⚠ WARNING

To prevent personal injury, do not use the equipment shown in this manual to lift, support, or otherwise transport people, or to suspend unattended loads over people.

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# WARRANTY

Every hoist is thoroughly inspected and tested prior to shipment from the factory. Should any problems develop, return the complete hoist prepaid to your nearest Duff-Norton Authorized Warranty Repair Station. If inspection reveals that the problem is caused by defective workmanship or material, repairs will be made without charge and the hoist will be returned, transportation prepaid.

This warranty does not apply where: (1) deterioration is caused by normal wear, abuse, improper or inadequate power supply, eccentric or side loading, overloading, chemical or abrasive actions, improper maintenance or excessive heat; (2) problems resulted from repairs,

modifications or alterations made by persons other than factory or Duff-Norton Authorized Warranty Repair Station personnel; (3) the hoist has been abused or damaged as a result of an accident; (4) repair parts or accessories other than those supplied by Duff-Norton Company are used on the hoist. Equipment and accessories not of the seller's manufacture are warranted only to the extent that they are warranted by the manufacturer. EXCEPT AS STATED HEREIN, DUFF-NORTON COMPANY MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

## SECTION I INTRODUCTION

### 1-1. GENERAL INFORMATION.

1-2. This manual provides necessary and proper information for persons engaged in the operation and maintenance of this Coffing CA Hand Chain Hoist. All persons operating or maintaining this hoist must be familiar with the information contained herein. Adherence to the precautions, procedures and maintenance practices described herein should ensure long and satisfactory use of your hoist with minimum danger to life, limb and property. The information contained herein applies to hoists used in normal service conditions. If any operating or maintenance information herein seems inadequate for your particular application please call or write our service engineers. We solicit your suggestions for improvements to this manual.

1-3. All persons concerned with the installation, operation, inspection and maintenance of this hoist are urged to read American National Standard ANSI B30.16. That standard contains important rules (some mandatory and some of an advisory nature) designed primarily to prevent or minimize injury and otherwise protect life, limb and property. You should especially be aware of the mandatory rules pertaining to inspection requirements and the advisability of maintaining written, dated and signed inspection reports and records.

### 1-4. HOIST CONSTRUCTION.

1-5. This Coffing Hoist has a strong, lightweight aluminum housing for portability. Gearing is made from alloy steel forgings. Hooks are steel forgings and the load chain is heat-treated alloy steel. The hand chain wheel is one piece construction of aluminum alloy.

### 1-6. LEADING PARTICULARS.

1-7. The operator should be aware of the capabilities of his hoist. He must refrain from overloading. Overloading not only can cause damage to the hoist, but presents serious threats to persons around the hoist. See Table I for some leading particulars with which the operator should be familiar.

**TABLE I. LEADING PARTICULARS.**

Capacity . . . . .	1000 Pounds
Weight With Standard Chain . . . . .	22 Pounds
Standard Lift . . . . .	8 Feet
Pull on Hand Chain To Raise Load (Approx.) . . . . .	58 Pounds
Pull on Hand Chain To Lower Load (Approx.) . . . . .	7 Pounds
Hand Chain Overhaul for One Foot Lift . . . . .	18 Feet
Throat Opening of Standard Hook . . . . .	1 Inch
Maximum Distance Between Hooks . . . . .	110-5/8 Inches
Minimum Distance Between Hooks . . . . .	13-1/4 Inches

## SECTION II PREPARATION FOR USE

### 2-1. INSPECTION PRIOR TO INITIAL USE.

2-2. Any new or repaired hoist, as well as the working area, shall be carefully inspected prior to initial installation and use. The inspection shall be made by or under the direction of a person familiar with hoist operations and industrial safety standards.

2-3. The following inspection criteria are recommended prior to initial installation and use. Additional inspection items should be added to satisfy local usage and safety requirements. All inspections of any kind should be logged or recorded, dated, signed and filed for reference purposes.

a. Ensure that the supporting structures are strong enough to carry the intended loads. The supporting structure shall have a safe load rating at least equal to that of the hoist. The supporting structure must be rigid and not subject to weakening due to repeated stresses from the hoist.

b. Ensure that there is adequate working space to permit hoist operation in the hanging position only. Normal operation should not require pulling or tugging around corners or obstructions. Also, there must be adequate space to permit the operator to stand clear of the load and adjacent structures.

c. Watch out for makeshift or compromising prac-

tices either during installation or subsequent operation of the hoist. Sometimes the "temporary" fix remains until an accident occurs.

d. Perform both the frequent and the periodic inspections specified herein on a repaired hoist prior to initial use. Perform the frequent inspections specified herein on a new hoist prior to initial use.

### 2-4. INSTALLATION.

2-5. Secure the hoist to a suitable supporting member by use of the top hook. Make sure that the hook latch is closed. Apply a small amount of lubriplate or equivalent between the hook and supporting member.

### 2-6. TESTING.

2-7. Check the hoist through a few lifting and lowering cycles with no load on the hook. Attach a load of fifty pounds to the hook and check the hoist through a few lifting and lowering cycles. Check for hook drift. The hook shall not drift more than one inch. If brake operation is normal with this light load, test the hoist for operation with rated load (1000 pounds), and then with 125 percent of rated load (1250 pounds). The hoist shall operate smoothly and the brake shall prevent hook drift in excess of one inch at both rated load and 125 percent of rated load.

## SECTION III OPERATION

### 3-1. SAFETY CONSIDERATIONS.

3-2. This hoist is designed for proper operation within the limits of its rated capacity. The hoist has features designed to minimize the potential for injury due to the failure of the hoist itself. However, here are some additional pointers which should be followed in order to ensure proper operation.

- a. Do not overload the hoist.
- b. Avoid side loading. Always pull in a straight line between hooks. Side loading over a sharp corner may fracture the hoist housing.
- c. Be sure there are no twists in the load chain.
- d. Before raising a load, always check to see that it is held securely in the hook or sling chains, etc. Raise the load only until the load chain is taut and then recheck the rigging before continuing to raise the load.
- e. Make sure that the slings and other rigging have sufficient capacity to support the load, are in good condition and securely attached to hoist and load.
- f. **DO NOT STAND BENEATH A LOAD!** Do not move a load in such a manner as to endanger personnel.
- g. Never leave a suspended load unattended.
- h. Do not wrap the load chain around a load, **USE A SLING!**
- i. Do not **TIP-LOAD** any hook, as this will exert undue strain in the hook, resulting in hook failure.
- j. The CA Hand Chain Hoist is designed for manual operation. Do not operate hoist with other than manual power.
- k. **DO NOT USE HOIST TO LIFT, SUPPORT OR OTHERWISE TRANSPORT HUMAN CARGO.**

### 3-3. OPERATION.

3-4. The hoist should be operated by qualified personnel only. The operator shall familiarize himself with the hoist and its proper care. If adjustments or repairs are necessary or any damages known or suspected, he shall report the same promptly to the person authorized to correct the problem. He shall also notify the next operator of the damages upon changing shifts. If an "Out-of-Order" tag is on the hoist, the operator shall not start operation until the tag has been removed by an authorized person. The operator should not engage in any practice which will divert his attention while operating the hoist.

3-5. **ATTACHING THE LOAD.** Attach the load to the hook by means of slings or other approved devices. Make sure the slings or other devices are seated properly in the saddle of the hook before lifting. Be sure the hook latch is closed and working properly. Never wrap the load chain around the load.

3-6. **LIFTING THE LOAD.** To raise the load, pull hand chain downward in a clockwise direction while facing the hand chain wheel housing. To lower the load, pull hand downward in a counterclockwise direc-

tion while facing the hand chain wheel housing. See figure 3-1. Lift the load as follows.

- a. Before lifting, make sure the hand chain is properly seated in the hand chain wheel.
- b. Lift the load a few inches and check to see that it is well balanced in the sling or other lifting device. Make sure the load chain is not kinked or twisted or that the load does not contact any obstruction.
- c. Test the brakes each time a load approaching the rated load (1000 pounds) is handled by raising the load just enough to clear the floor, or supports, and checking for brake action.
- d. Lift the load to the desired height. Do not leave the load suspended in the air for extended or unattended periods.

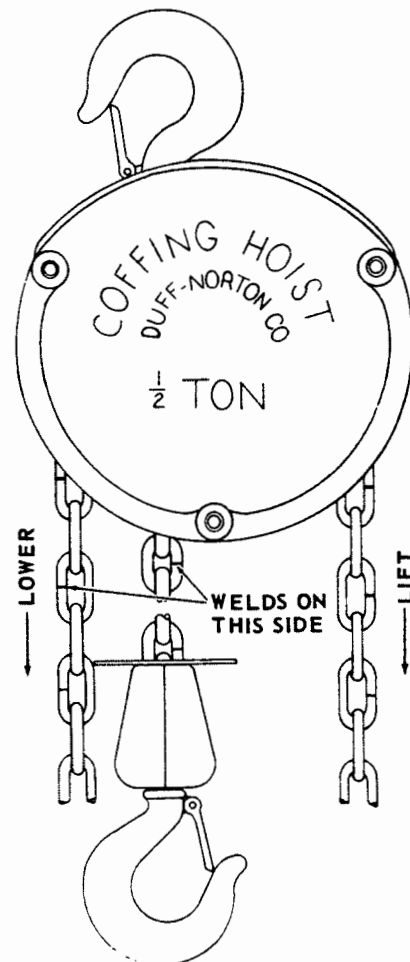


FIGURE 3-1. HAND CHAIN DIRECTION.

## SECTION IV MAINTENANCE

### 4-1. INSPECTIONS.

4-2. A planned inspection routine should be established for this hoist based upon frequency of use, severity of use, and environmental conditions. (Reference American National Standard ANSI B30.16) Some inspections should be made frequently (daily to monthly) and others periodically (monthly to yearly). It is strongly recommended that an Inspection and Maintenance Check List and an Inspector's Report similar to those shown in figures 4-7 and 4-6 be used and filed for reference. All inspections should be made by, or under the direction of a designated inspector. Special inspections should be made following any significant repairs or any operating occurrence leading one to suspect that the hoist's capabilities may have been impaired. Refer to paragraphs 4-13 and 4-17 for assistance in any disassembly and assembly necessary for inspections and subsequent replacement or repair. Prior to inspection, clean parts as required. See paragraph 4-15.

### 4-3. FREQUENT INSPECTIONS.

4-4. Perform the following inspections daily prior to initial use of the hoist. Also, observe during operation for any damage which might appear between regular inspections.

**CAUTION:** Any unsafe condition disclosed by the inspection shall be corrected before operation of the hoist is resumed. Adjustments and repairs shall be done only by designated personnel.

a. Inspect the hooks for deformations, chemical damage or cracks. Hooks damaged from chemicals, deformation or cracks, or having throat openings greater than 1.15 inch must be replaced. See figure 4-1. If the hook is twisted more than 10 degrees from the unbent hook, it must be replaced.

**NOTE:** Any hook that is twisted or has throat openings in excess of 1.15 inch indicates abuse or overloading of the hoist. Other load bearing components should be inspected accordingly.

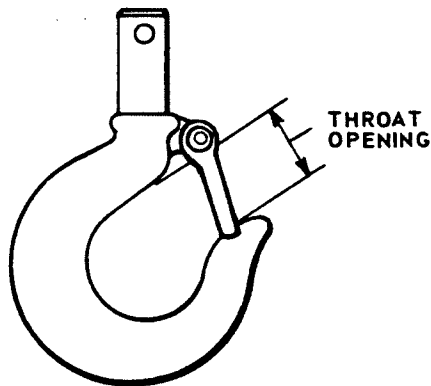


FIGURE 4-1. HOOK THROAT OPENING.

b. Check that both hooks swivel freely.

c. Check the brakes for slippage under load. When properly operating, the braking mechanism will automatically stop and hold up to 125 percent of hoist capacity when the hand chain is released.

d. Check load chain for wear, twist and distortion and ensure that dead end connection is secure. Also check for presence of foreign material and adequate lubrication.

### 4-5. PERIODIC INSPECTIONS.

4-6. It is recommended that the following inspections be performed at one to 12 month intervals. The exact period of inspection will depend on frequency and type of usage. Determination of this period will be based on the user's experience. It is recommended that the user begin with a monthly inspection and extend the periods to quarterly, semi-annually or annually based on his monthly experience.

**CAUTION:** Any unsafe condition disclosed by the inspection shall be corrected before operation of the hoist is resumed. Adjustments and repairs shall be done only by designated personnel.

a. Perform all the frequent inspections listed in paragraph 4-4.

b. Check nuts, bolts and other hardware for looseness, stripped or damaged threads.

c. Check load sheave, hand chain wheel and chain attachments for distortion, cracks and excessive wear.

d. Check brake discs for excessive wear, glazing and oil contamination. Replace discs worn to a thickness of 5/64 inch or less.

e. Check pawl for excessive wear, binding and worn bearing.

f. Check pawl spring for breaks, corrosion and stretch.

g. Check load flange for excessive wear and scoring.

h. Check pawl stud for excessive wear and pawl retention.

i. Inspect gear and pinion shaft for inadequate lubrication, cracks, distortion, worn or broken teeth and damaged threads.

j. Inspect bearings for inadequate lubrication, distortion, binding and excessive wear.

k. Check housing, covers and swivel frames for cracks, distortion and damaged threads.

l. Inspect supporting structure and trolley (if used) for continued ability to support imposed loads.

m. Inspect warning label for legibility.

n. Inspect the load chain for gouges, nicks, weld splatter, corrosion and distorted links. Slacken the chain and inspect for wear at contact points. If wear is observed, or if stretching is suspected, measure the chain per paragraph 4-10. If any portion of the chain

is worn, nicked, twisted or stretched, replace the whole chain.

**CAUTION:** Do not attempt to reweld sections of the chain and do not try to add on to the chain. Use only chain supplied by our company; it is specially manufactured to very close tolerances of dimension, composition and heat treatment. A substitute chain may damage the load sheave. Never use "missing links" because they will jam in the load sheave.

d. Check hooks for cracks using dye penetrant, magnetic particle or other suitable detection method.

**4-7. INSPECTION OF HOISTS NOT IN REGULAR USE.**

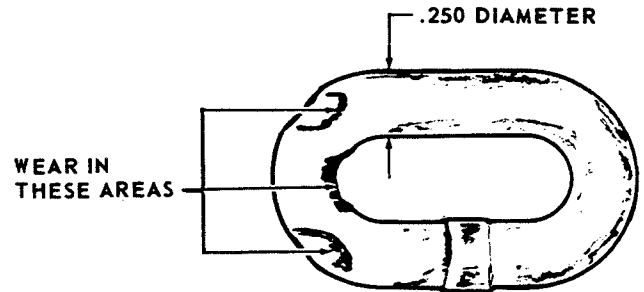
4-8. If the hoist has been idle for one month or more, perform the inspections listed in paragraph 4-4. If the hoist has been idle more than six months, perform the inspections listed in paragraph 4-6.

**4-9. CHECKING CHAIN FOR WEAR.**

4-10. Chain inspection and evaluation is a very important phase of hoist maintenance. In general, removal of the load chain from the hoist is not necessary. To check the load chain for excessive wear, proceed as follows:

a. Inspect the chain for "elongation", which is a condition caused by overloading or wear. Table II shows the normal and reject lengths for CA hoist chain. A chain gauge similar to that shown in figure 4-2 or a Vernier caliper may be used. Hang the chain up or stretch it out on a work table in a taut position. Place one edge of the gauge or caliper over the end of a chain link. The number of links within the gauge limits will correspond to the "Number of Links" as indicated in Table II. If the last link, which should be within the gauge limits, makes contact or extends past the inside edge of the gauge, or if the reading of the Vernier caliper is equal to or greater than the "Reject

Length", the entire chain shall be replaced. If the last link does not contact the edge of the gauge, or the Vernier caliper reading is less than the "Reject Length", check the chain along its entire length. If all readings are within tolerance, the chain shall be free of elongation.



**FIGURE 4-3. TYPICAL WEAR ON LINKS.**

b. Inspect each individual chain link for wear to diameter of the link. See figure 4-3. The nominal diameter of the link is .250 inch. If the diameter of any link in the entire chain is below .200 inch, replace the entire chain.

**4-11. LUBRICATION.**

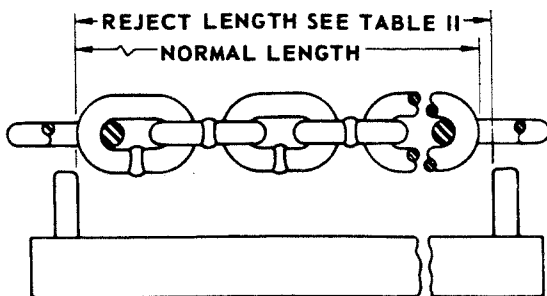
4-12. Proper lubrication is necessary for a long and relatively trouble-free hoist operation. Refer to the following and to Figure 4-6, Recommended Lubrication Schedule, for lubrication points, type of lubricant and frequency of lubrication.

a. **LOAD CHAIN.** Clean the load chain with acid-free solvent and coat with Coffing Chain Lubricant No. H-7595, or equivalent. Allow oil to work into each link end and be carried into the sheave pockets. Wipe excess oil to prevent dripping.

b. **GEAR AND PINION SHAFT.** After each periodic inspection during reassembly coat teeth of gear and pinion shaft with Coffing Lubricant No. H-7577, or equivalent.

c. **PINION SHAFT ROLLER BEARING.** After each periodic inspection during reassembly coat rollers with Coffing Lubricant No. H-7577, or equivalent.

d. **SHEAVE BEARINGS.** After each periodic inspection coat balls with a light coat of Coffing Lubricant No. H-7577, or equivalent.



**FIGURE 4-2. CHAIN SALVAGE GAUGE.**

**TABLE II. LOAD CHAIN LENGTH.**

CAPACITY (TONS)	CHAIN PART NO.	NOM. DIA.	NO. OF LINKS	NORMAL LGTH FOR NO. LINKS	REJECT LGTH FOR NO. LINKS	GAUGE NUMBER
1/2	C-19-8	.250	19	14.766	14.957	GA-3441

e. **BOTTOM HOOK BEARING.** Allow a few drops of SAE 20-30 oil to run down the hook shank and into the swivel.

f. **TOP HOOK THRUST WASHER.** Allow a few drops of SAE 20-30 oil to run down between the housing and hook shank.

#### 4-13. **DISASSEMBLY.**

4-14. Disassemble the hoist as follows while referencing figure 5-1.

a. Remove dead end screw (36) and washers (2 and 37). While holding the free end of load chain (25) to assist in alignment of chain with load sheave, work chain through the hoist by pulling hand chain in the lowering direction.

b. Remove screw (27) and lock washer (28) and separate swivel frames (29 and 30). Remove warning label (26) from load chain (25). Press drive-lok pin (32) from hook collar (31) and remove hook collar and bearing (33) from bottom hook (34). Do not remove latch (35) from bottom hook unless replacement is required.

c. Remove three screws (1) and lock washers (2). Remove chain wheel cover (3).

d. Remove retaining ring (5) and thread stop (6), from pinion shaft (43).

e. Remove hand chain wheel (7) by turning wheel counterclockwise. Remove hand chain (8) from wheel. Remove roll pin (4) from wheel.

f. Remove front brake disc (9), bearing (10), brake ratchet (11), rear brake disc (12), load flange (13) and pin key (16) from pinion shaft (43). Do not remove bearing from brake ratchet.

g. Remove retaining ring (18) and pawl (19) from pawl stud (21). Remove pawl spring (17) from pawl. Do not remove spring anchor pin (20) from pawl.

h. Unscrew pawl stud (21) and remove pawl stud and lockwasher (22) from housing (39).

i. Remove two screws (45) and lock washers (2) and remove gear cover (44).

j. Remove retaining ring (46) and gear (47). Remove pinion shaft (43), and washer (42).

k. Remove retaining ring (24) from load sheave (48). Remove two sheave bearings (23), load sheave and chain wear strip (38) from housing (39).

l. Remove roll pin (49), nut (50), washer (51), and top hook (40) from housing (39). Do not remove latch (35) from hook unless replacement is required.

m. Remove roll pin (15) from housing (39). If necessary for inspection press bearings (14 and 41) from housing.

#### 4-15. **CLEANING.**

4-16. All parts, except brake discs (9 and 12, figure 5-1), and bearings (10 and 14), may be cleaned by immersing in an acid-free solvent and dried with compressed air or a clean, lintless cloth. Wipe brake discs (9 and 12) and bearings (10 and 14) with a clean cloth dampened with solvent. Stubborn deposits of

dirt and grease may be removed from gears, housings, chains, etc., by using a stiff-bristled brush dipped in an acid-free solvent.

**CAUTION:** Ensure that adequate ventilation is provided when using cleaning solutions. Wear protective clothing, and avoid prolonged contact with solvents.

#### 4-17. **ASSEMBLY.**

4-18. Assemble the hoist as follows while referencing figure 5-1.

a. If bearings (14 and 41) were removed for inspection, press bearings into housing (39) until outer edges of bearings are flush with housing. Apply a light coat of Cofing No. H-7579 grease, or equivalent, to rollers of bearing (41). Press roll pin (15) into housing if it has been removed.

b. Assemble top hook (40), nut (50) and washer (51) in housing (39). Screw nut on hook until approximately 1/64 inch vertical play (to allow hook to swivel freely) remains. Align pin hole in hook and slot in nut and insert roll pin (49).

c. Place wear strip (38) in housing (39). Apply a light coat of Cofing No. H-7577 grease, or equivalent to balls of sheave bearings (23). Insert load sheave (48) in housing and install sheave bearings. Install retaining ring (24) on load sheave.

d. Install washer (42) on pinion shaft (43) and insert pinion shaft in housing (39). Place gear (47) on load sheave (48) and install retaining ring (46).

e. Attach gear cover (44) to housing (39) with two lock washers (2) and screws (45).

f. Apply Cofing No. H-7502 Loctite, or equivalent, to threads of pawl stud (21) and install lock washer (22) and pawl stud.

g. Attach pawl spring (17) to pawl and place pawl on pawl stud (21). Install retaining ring (18). Place the loose end of reverse ring spring on roll pin (15).

h. Place pin key (16) in hole in pinion shaft (43). Install load flange (13), rear brake disc (12) (asbestos material), brake ratchet, and front brake disc (9) (metal) on pinion shaft.

i. Press roll pin (4) in hand chain wheel (7). Place hand chain (8) on wheel with the weld on up-standing links facing away from wheel. See location of weld in figure 3-1. Install wheel on pinion shaft (43) by turning wheel clockwise until ratcheting occurs. Do not back off. Install thread stop (6) on pinion shaft spline so that the projection of the thread stop is 1/8 inch minimum to 1/4 inch maximum from roll pin. See figure 4-4. Install retainer ring (5).

j. Attach chain wheel cover (3) with three screws (1) and lock washers (2).

k. Invert the hoist on a work table. Drop loose end of the load chain (25) into the side of the load sheave (48) away from dead end screw (36) location. The first link of the chain should be flat in the load sheave pocket with the weld on the next link facing away from the load sheave. See location of weld in

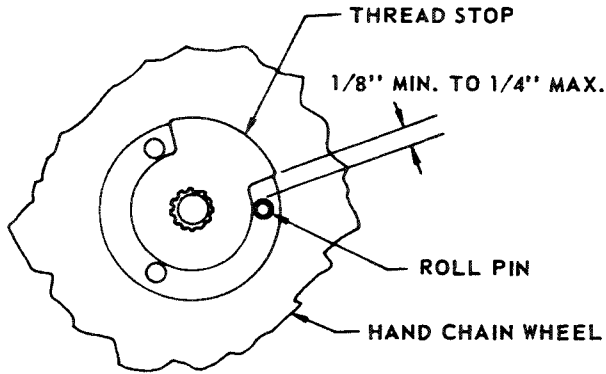


FIGURE 4-4. LOCATION OF THREAD STOP.

figure 3-1. The second link of chain should ride in one of the load sheave pockets. Turn the wheel in the lifting direction. As the end of the load chain moves around load sheave, turn hoist upright so load chain will move around load sheave correctly and out of housing. Attach the first link of load chain to housing using dead end screw and washers (2 and 37).

1. Install bearing (33) and hook collar (31) on bottom hook (34). Align holes in hook and hook collar and press drive-lok pin (32) in place. Install warning label (26) on lower end of load chain (25). Place end link of load chain and bottom hook-bearing-hook collar assembly in swivel frames (29 and 30). Install screw (27) and lock washer (28) in swivel frames. Perform frequent inspections per paragraph 4-3.

m. Lubricate hoist per paragraph 4-11. and test per paragraph 2-6 before placing hoist in use.

INSPECTOR'S REPORT	
ITEM	REMARKS (LIST DEFICIENCIES AND RECOMMENDED ACTION)
INSPECTORS SIGNATURE	DATE INSPECTED
	APPROVED BY
	DATE

FIGURE 4-5. RECOMMENDED INSPECTOR'S REPORT.

RECOMMENDED LUBRICATION SCHEDULE* MODEL CA HAND OPERATED CHAIN HOIST					
FIGURE 5-1 INDEX NO.	COMPONENT	TYPE OF LUBRICANT	TYPE OF SERVICE AND FREQUENCY OF LUBRICATION		
			HEAVY	NORMAL	INFREQUENT
25	Load Chain	D-N No. H-7595 penetrating oil with graphite or moly additive Alternate - SAE 20-30 gear oil	Daily	Weekly	Monthly
43 & 47	Pinion Shaft and Gear	D-N No. H-7577 grease Alternate - multi-purpose lithium base bearing grease	At periodic inspection (See Figure 4-6)		
41	Pinion Shaft Roller Bearing	D-N No. H-7577 grease Alternate - multi-purpose lithium base bearing grease	At periodic inspection (See Figure 4-6)		
23	Sheave Bearings	D-N No. H-7577 grease Alternate - multi-purpose lithium base bearing grease	At periodic inspection (See Figure 4-6)		
33	Bottom Hook Bearing	SAE 20-30 gear oil	Weekly	Monthly	Yearly
51	Top Hook Thrust Washer	SAE 20-30 gear oil	Monthly	Yearly	Yearly

\*This lubrication schedule is based on a hoist operating in normal environmental conditions. Hoists operating in adverse atmospheres containing excessive heat, corrosive fumes or vapors, abrasive dust, etc., should be lubricated more frequently.

FIGURE 4-6. RECOMMENDED LUBRICATION SCHEDULE.



**INSPECTION & MAINTENANCE CHECK LIST  
HAND OPERATED OVERHEAD CHAIN HOIST**

TYPE OF HOIST \_\_\_\_\_ CAPACITY \_\_\_\_\_  
 LOCATION \_\_\_\_\_ ORIGINAL INSTALLATION DATE \_\_\_\_\_  
 MANUFACTURER \_\_\_\_\_ MANUFACTURER'S SERIAL NO. \_\_\_\_\_

ITEM	FREQUENCY OF INSPECTION			POSSIBLE DEFICIENCIES	OK	ACTION REQUIRED
	FREQUENT		PERIODIC			
	DAILY	MONTHLY	1-12 MO.			
Load Chain	*	*	*	Inadequate lubrication, excessive wear or stretch, cracked, damaged or twisted links, corrosion or foreign substance		
Brake Mechanism	*	*	*	Slippage or Excessive Drift		
Hooks	*	*	*	Excessive throat opening, bent or twisted more than 10 degrees, damaged hook latch, wear, chemical damage, worn hook bearing. Cracks (use dye penetrant, magnetic particle or other suitable detection method)		
Hook Retainers			*	Worn or damaged nuts, pins, washers, collars used to secure hook in load block or housing		
Brake Parts: Friction Discs			*	Excessive wear, glazing, oil contamination		
Pawl, Ratchet Pawl Spring			*	Wear, binding, worn bearing Breaks, corrosion or stretch		
Pawl Stud Load Flange			*	Excessive wear, pawl retention Excessive wear, scoring		
Sheave, Pinion Shaft, Hand Chain Wheel, Chain Attachments			*	Distortion, cracks, excessive wear, damaged threads		
Gearing			*	Inadequate lubrication, cracks, distortion, worn or broken teeth		
Bearings, Shafts			*	Inadequate lubrication, distortion, cracks, excessive wear		
Housing, Hook Swivels			*	Cracks, distortion, loose bolts or nuts		
Nuts, Bolts, Rivets			*	Looseness, stripped or damaged threads		
Supporting Structure and Trolley (if used)			*	Damage or wear which restricts ability to support imposed loads		
Warning Label			*	Missing, damaged or illegible		

NOTE: Refer to Maintenance and Inspection Sections of the Hoist Manual for further details.

**FREQUENCY OF INSPECTION:**

Frequent – Indicates items requiring inspection daily to monthly. Daily inspections may be performed by the operator if properly designated.

Periodic – Indicates items requiring inspection monthly to yearly. Inspections to be performed by or under the direction of a properly designated person. The exact period of inspection will depend on frequency and type of usage. Determination of this period will be based on the user's experience. It is recommended that the user begin with a monthly inspection and extend the periods to quarterly, semi-annually or annually based on his monthly experience.

**FIGURE 4-7. RECOMMENDED INSPECTION & MAINTENANCE CHECK LIST.**

**NOTE:** This inspection and maintenance check list is in accordance with our interpretation of the requirements of the safety standard for overhead hoists ANSI B30.16-73. It is, however, the ultimate responsibility of the employer/user to interpret and adhere to the applicable requirements of this safety standard.

## SECTION V ILLUSTRATED PARTS LIST

5-1. GENERAL.

5-2. An exploded illustration of the Model CA Hoist follows. The number adjacent to each part is the index number. Keyed to this index number on the

following page is the part name and quantity required. When ordering parts for your hoist, please see page 1 of the current parts list.

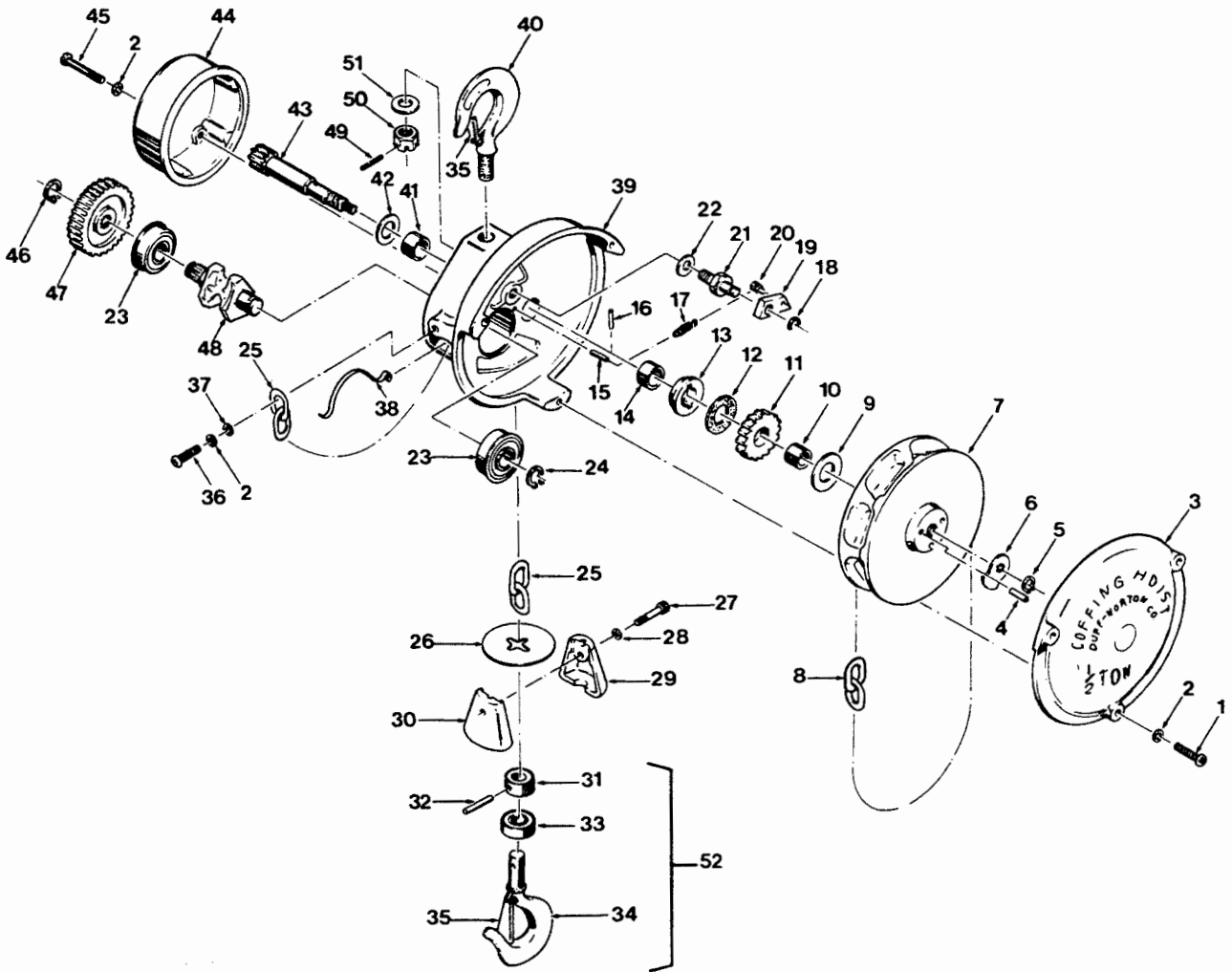


FIGURE 5-1. EXPLODED ILLUSTRATION OF MODEL CA HOIST

# COFFING®

## CA HOIST PARTS LIST - 1/2 TON ALUMINUM SPUR GEAR HOIST PUBLICATION PART NO. CAP-10-1

**NOTE:** See figure 5—1 in the Operating and Maintenance Instructions manual supplied with your hoist for assistance in determining the part you wish to order. The index number listed is the number adjacent to each part on the illustration. When ordering parts, please give the part number, part name, quantity desired, and the model and serial number of your hoist.

INDEX NUMBER	PART NAME	PART NUMBER	QUANTITY REQUIRED
1	Screw	H-1102-P	3
2	Lock Washer	H-4084-P	6
3	Chain Wheel Cover	CA-32	1
4	Roll Pin	H-5233	1
5	Retaining Ring	H-5531	1
6	Thread Stop	CA-252	1
7	Hand Chain Wheel	CA-33-1	1
8	Hand Chain	ML-19	14 ft.
9	Front Brake Disc	CA-580-1R	1
10	Bearing	CA-530-1	1
11	Ratchet Assembly (Includes Index No. 10)	CA-901-1	1
12	Rear Brake Disc	CA-581-1	1
13	Load Flange	CA-101	1
14	Bearing	CA-531	1
15	Roll Pin	H-5232	1
16	Pin Key	CA-103	1
17	Reverse Pawl Spring	B-67	1
18	Retaining Ring	H-5505	1
19	Pawl Assembly (Includes Index No. 20)	CA-902	1
20	Spring Anchor Pin	A-18-C	1
21	Pawl Stud	CA-26	1
22	Lock Washer	H-4132	1
23	Bearing	CA16K	2
24	Retaining Ring	H-5506	1
25	Load Chain	JL19B	8'9"
26	Warning Label	687K1	1
27	Screw	JF-700	1
28	Lock Washer	H-4131	1
29	Swivel Frame	JF-20-2	1
30	Swivel Frame	JF-20-3	1
31	Hook Collar	JF-108	1
32	Driv-Lok Pin	H-5122	1
33	Bearing	JF-510	1
34	Bottom Hook Ass'y	3JG20S	1
35	Latch Kit	H-7540	2
36	Dead End Screw	H-1101-P	1
37	Washer	H-4002-P	1
38	Chain Wear Strip	CA-251	1
39	Housing	CA-18	1
40	Top Hook	CA-3-9-S	1
41	Bearing	CA-520	1
42	Washer	CA-250	1
43	Pinion Shaft*	CA-400-2	1
44	Gear Cover	CA-31	1
45	Screw	H-1103-P	2
46	Retaining Ring	H-5502	1
47	Gear #	CA-420-1	1
48	Load Sheave #	CA-16-1	1
49	Roll Pin	H-5251	1
50	Slotted Nut	H-3936-P	1
51	Thrust Washer	JF-260	1
52	Bottom Hook Assembly (Includes Index Nos. 31-35) Capacity Decal	CA-903-1 675K94	1

\* Serial No. CA—2889 and after—Pinion Shaft changed to CA—400—2. Order parts from list as needed. Serial No. CA—2888 and below—when ordering Pinion Shaft CA—400—2 also order Index Nos. 5, 6 and 42.

# Serial No. CA—101—BG and after Load Sheave (48) and Gear (47) changed to serrated connection as illustrated. Inventory of old style keyed parts is being maintained as listed below.

Load Sheave CA—16

Gear CA—420

Key CA—700

Load Sheaves Retaining Ring H—5506 (2 req'd)

# COFFING<sup>®</sup>

## HOISTS

### WARRANTY

**E**very hoist is thoroughly inspected and tested prior to shipment from the factory. Should any problem develop, return the complete hoist prepaid to your nearest Coffing Hoists Authorized Warranty Repair Station. If inspection reveals that the problem is caused by defective workmanship or material, repairs will be made without charge and the hoist will be returned, transportation prepaid. This warranty does not apply where: **(1)** deterioration is caused by normal wear, abuse, improper or inadequate power supply, eccentric or side loading, overloading, chemical or abrasive actions, improper maintenance, or excessive heat; **(2)** problems resulted from repairs,

modifications, or alterations made by persons other than factory or Coffing Authorized Warranty Repair Stations personnel; **(3)** the hoist has been abused or damaged as a result of an accident; **(4)** repair parts or accessories other than those supplied by Coffing Hoists are used on the hoist. Equipment and accessories not of the seller's manufacture are warranted by the manufacturer.

**Except as stated herein, Coffing Hoists makes no other warranties, express or implied, including warranties or merchantability and fitness for a particular purpose.**

### ! WARNING

**Overloading and Improper Use Can Result In Injury**

**To Avoid Injury:**

- Do not exceed working load limit, load rating, or capacity.
- Do not use to lift people or loads over people.
- Use only alloy chain and attachments for overhead lifting.
- Read and follow all instructions.

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