



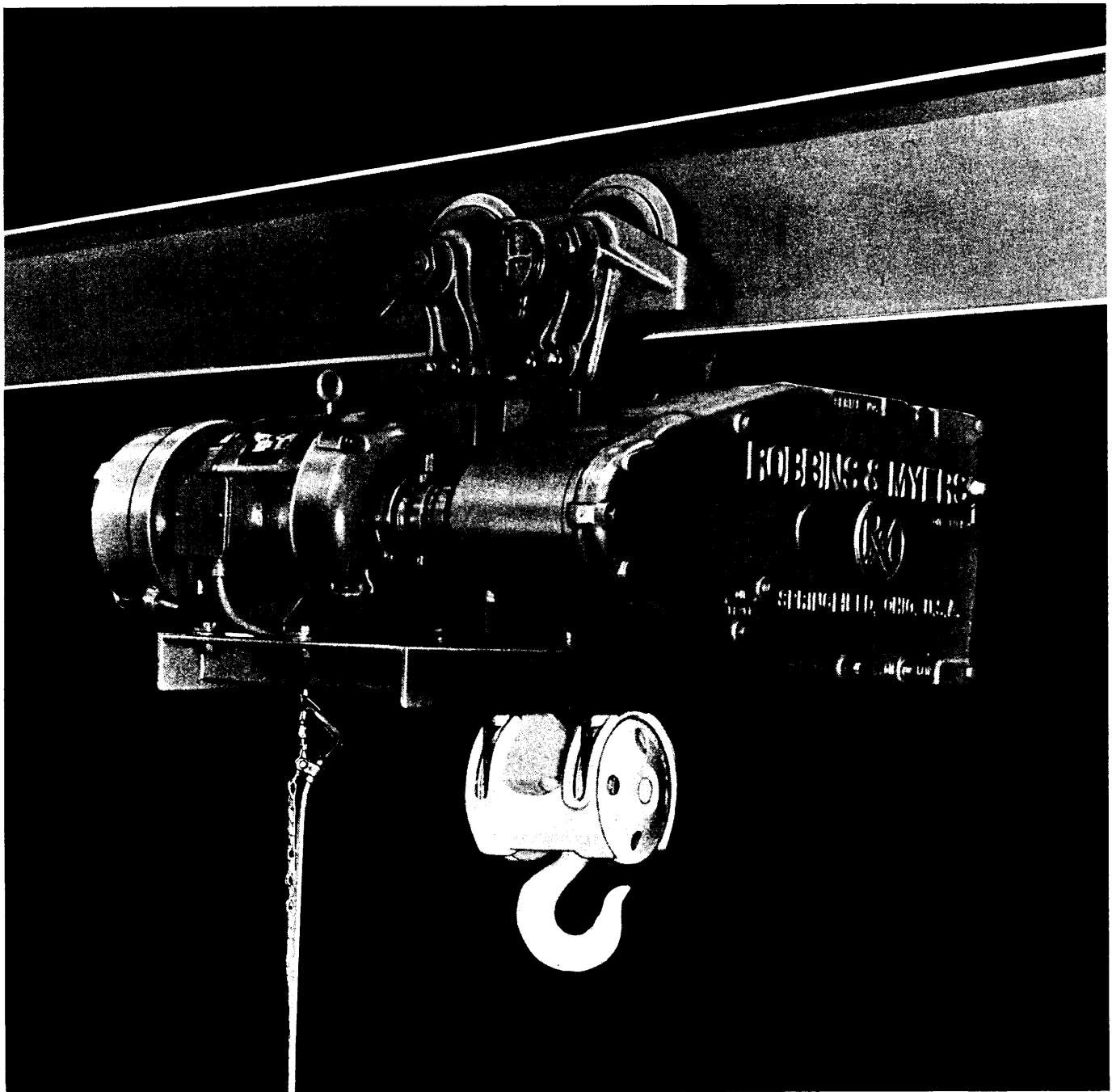
Robbins & Myers

Material Handling Products

Bulletin 950-B

Series F Electric Hoists

Service Manual and Parts Catalog



FOREWORD

To the purchasers of **Robbins & Myers SERIES F Electric Hoists**

This manual has been prepared primarily to acquaint you with the general aspects of installation, operation and maintenance of the hoist you have purchased. It is our earnest desire to express our appreciation for the privilege of serving you.

We feel that the advantage of advanced engineering, based on our experience in designing hoists for all types of industrial service — plus superior workmanship and the highest quality materials available — will provide for you the utmost satisfaction through the years of use. We have carefully outlined the procedures necessary to secure a safe, serviceable hoisting installation. Proper installation is important to the ultimate performance of the hoist. Study the instructions carefully and observe all precautions to prolong the life of the hoist and its accessories. Keep this manual where it will be readily accessible in case of an emergency.

CAUTION

WHEN INSTALLING THE NEW HOIST BE SURE TO:

1. Check all nameplates. See page 4.
2. Get correct limit switch action by properly connecting the power lines. See pages 5 and 6.
3. Observe all instructions on tags attached to the hoist.

GUARANTEE

Robbins & Myers, Inc., stands behind every product which bears its name. The equipment you have purchased has been designed and built to rigid specifications of quality and performance. Materials and workmanship are guaranteed for a period of one year from date of shipment. Any part proved defective within that interval will be replaced without charge f.o.b. factory. We ask only that the purchaser give written notice of such defect. We cannot, of course, assume responsibility for unauthorized repairs or alterations.

NOTE: This manual covers Models F2, F3 and F5 Robbins & Myers hoists. There are slight differences in details among these three models. Therefore, the illustrations shown in this manual may not be accurate to the last detail for the particular hoist you have purchased. We therefore ask that you use this information accordingly.

TABLE OF CONTENTS

<p>Foreword 2</p> <p>Guarantee 2</p> <p>Cross Section View 3</p> <p>Nameplates 4</p> <p>Installation 4</p> <p>Trolley Mounting 5</p> <p>Rigid Mounting 5</p> <p>Base Mounting 5</p> <p>Connecting Main Leads 5</p> <p>Limit Switches and Controls 5,6</p> <p>Motors 6</p> <p>Automatic Load Brake 7</p> <p>Load Brake Adjustment 7</p> <p>Motor Brake 8</p>	<p>Motor Brake Adjustment 8</p> <p>Wire Rope Conservation 8</p> <p>To Install a New Wire Rope 8</p> <p>Lubrication 9</p> <p>Reeving Diagrams 9</p> <p>Trouble Chart 10,11</p> <p>Repair Instructions 12</p> <p>Replacement of Oil Seals 12</p> <p>General Repair Parts Information 13</p> <p>Returned Parts 13</p> <p>Claims 13</p> <p>Parts Catalog 14 thru 25</p> <p>Lubrication Schedule 26</p>
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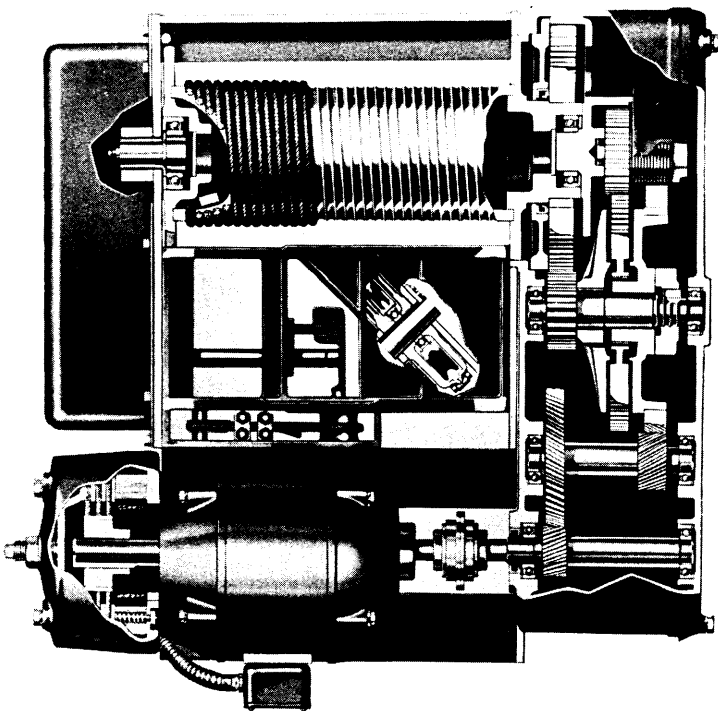


FIGURE 1-
Typical Cross Section
of R & M SERIES F Hoist

This cross section view of the Robbins & Myers Series F Hoist reveals engineering of the highest order and precision manufacture. This is typical throughout the entire line of R & M products.

NAMEPLATES

Prior to installing and using the hoist it is important to refer to all the nameplates for detail specifications regarding voltage, current, phase, load capacity, etc. Particular attention should be paid to the method of connecting the main line leads. See Limit Switches and Controls, pages 5 and 6. Some models may be connected for different line voltages. See wiring diagrams in hoist control box.

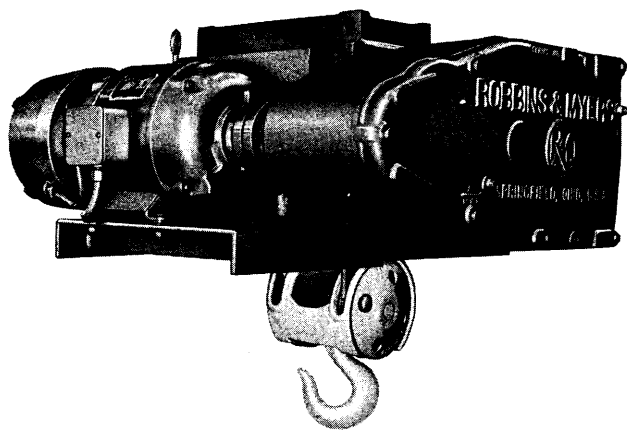


FIGURE 2- Type A

INSTALLATION

The various types of mountings are illustrated in Figs. 2 thru 5. Also available but not shown is the hand powered trolley which is similar to Fig. 3 except for the hand wheel and driving parts. Each of these hoists may use the collector assembly, Fig. 6, or flexible cable to bring power to the hoist motor. See instructions on page 5 for mounting trolley and rigid mounted models. Installation may vary depending on each application.

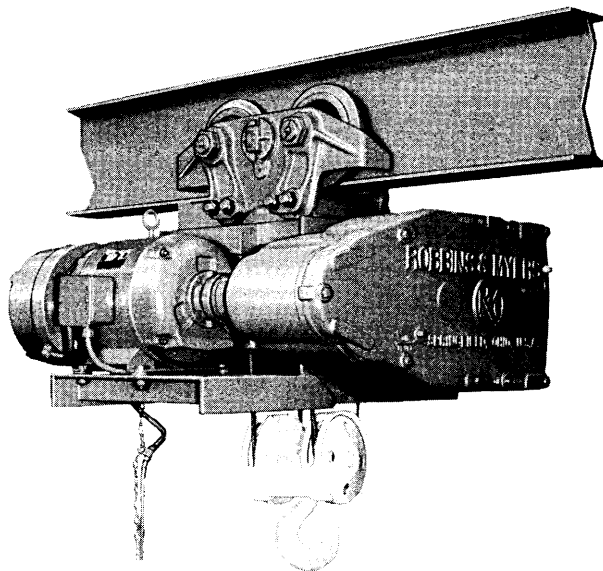


FIGURE 3- Type B

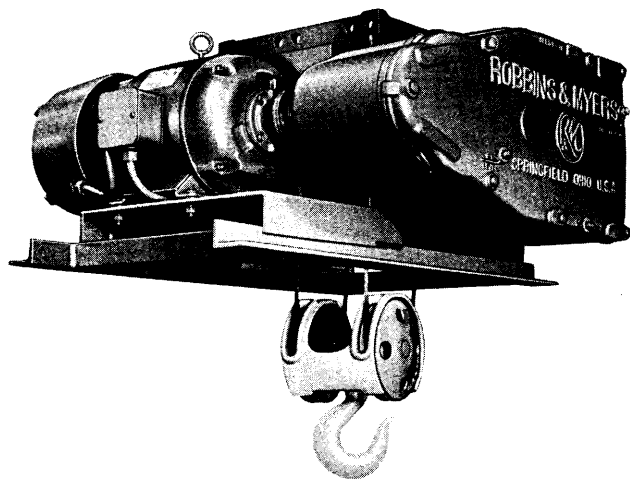


FIGURE 4- Type Z

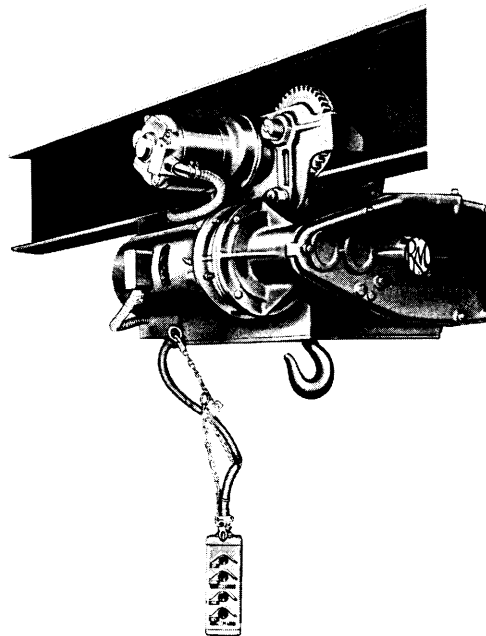
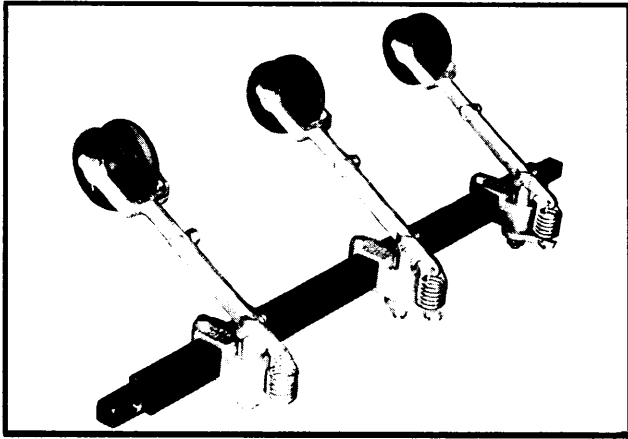


FIGURE 5- Type MDW

FIGURE 6-



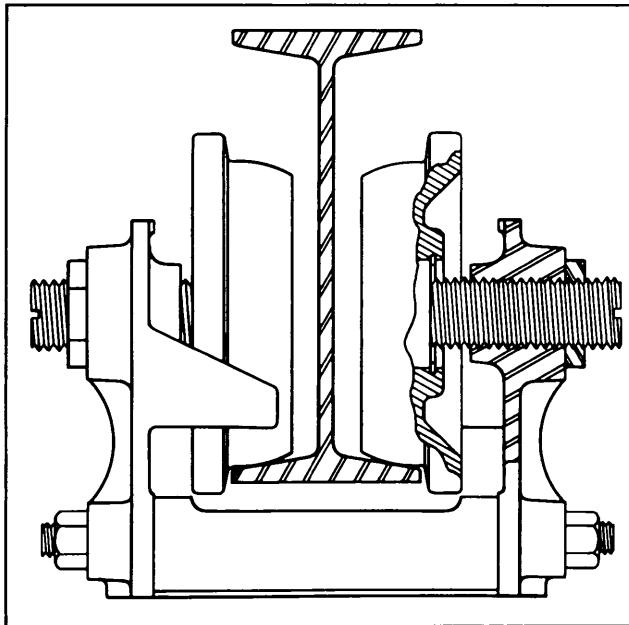
TROLLEY MOUNTING

See Fig. 7. The trolleys on Series F Hoists have threaded wheel studs which may be adjusted in or out for various size beams. They are suitable for either American Standard bevel flange I-beams or flat flange beams of equivalent flange widths. Below is a list of the hoists and the I-beams on which they will operate:

F2	2 ton	7"-18" I-beams
F2	3 ton	10"-20" I-beams
F3	5 ton	10"-20" I-beams
F3	6, 7-1/2 ton	12"-20" I-beams
F5	5, 6, 7-1/2 ton	12"-20" I-beams
F5	10 ton	12"-24" I-beams

In order to prevent binding, a clearance of 1/8" must be maintained between the trolley wheel flange and the beam flange. Slightly more clearance is required if the runway has short radius curves. All hoists must be mounted with the drum parallel to the beam.

FIGURE 7-



RIGID MOUNTING

Rigid mounting (Type A) hoists, see Fig. 2, are especially adaptable for stationary applications or monorail trolley installations.

BASE MOUNTING

Base mounted (Type Z) hoists, see Fig. 4, are for stationary applications such as floor mounting, or on double girder crane trolleys. Base mounted hoists should always have the supports running perpendicular to the axis of the hoist drum.

CONNECTING MAIN LEADS

Make certain that your current supply is the same as stamped on the motor nameplate. Test the line voltage of each phase with a voltmeter at the motor terminals when the motor is operating at full load. Connect the hoist main line leads to the power supply in the manner shown in Fig. 10. Check the hook movement by "inching" the "UP" push button of the pendant. Should the hook lower instead of rise, release the push button and recheck the power connections. The interchanging of any two of the three main line leads will reverse the direction of hook travel on 3-phase hoists. For other power supplies see the wiring diagrams for instructions.

LIMIT SWITCHES & CONTROLS (FIG. 19)

The limit switch mechanism functions as a stop for the hook at the maximum upper travel. It consists of a weight suspended from a lever by a small cable or chain. When the block reaches the highest safe limit of its travel it lifts the weight, allowing the lever to rotate. This rotation actuates the limit switches. The limit switches on Series F hoists operate as follows:

When the bottom block is run upward to its safe limit of travel it trips a switch that interrupts the current to the controls, stopping the hoist in that position. Should the motor brake fail, or should the hook for some reason drift before stopping, a second switch immediately reverses the motor and runs the block downward a few inches. The hoist can again be operated merely by pressing the "Down" button on the push button station.

There is a third emergency stop switch which kills the entire control circuit. This switch is used only for protection in case the main lines are out of phase when the hoist is first installed or if the limit weight

should break and fall to the bottom block. In either case, hook block travel is stopped before the hoist can be damaged. Under normal operation the bottom block will never go into this position; in the event that it does, the push button will not operate the hoist. Consult the wiring diagram inside the control box of the hoist for instructions to put the hoist back into operation. The limit switch is an emergency stop and should NEVER be used as a normal operating procedure.

After the hoist has been connected to main line leads (see instructions above) check the operation of the limit switches by starting the hook block in the hoisting direction. Slowly lift the limit switch weight by hand. This should open the hoisting circuit and bring the block to a complete stop. If the hoist does not stop, follow the instructions under "Connecting Main Line Leads." Further lifting of the weight should cause the switch to close the lowering circuit thereby reversing the motor and lowering the hook block. Release the weight and let it drop to its normal position. This should open the lowering circuit and stop the hoist (push buttons not depressed).

The limit switches are mounted in the control box and are protected against atmospheric conditions. Normally they will last the lifetime of the hoist.

Since no other part of the hoist is subjected to more abuse than the limit switches, a thorough understanding of them will be helpful in preventing trouble and in making repairs.

CAUTION

Do not under any circumstances change the wiring in the panel or the push button pendant. **DO NOT DISREGARD THESE INSTRUCTIONS.** Continued operation of the hoist with hook travel reversed will result in extensive damage. The manufacturer cannot assume responsibility for repairs if the proper precautions have not been taken.

MOTORS

Designed to provide the utmost in dependable hoisting service, the motor that powers your hoist was developed by Robbins & Myers motor engineers to attain the maximum performance of the hoisting mechanism. Each motor is enclosed against normal hazards of dust and moisture and is equipped with single row width, permanently sealed bearings, see Fig. 9, which are packed with sufficient grease for years of rugged hoisting service. The standard trolley motor is designed to permit the leads to be connected for three different power ratings for driving the trolley wheels without any change in speed. Each hoist is shipped with its trolley motor leads connected for average conditions. If more or less power is required, check the lead connections with the instruction plate on the motor for the method of changing the power of the motor.

NOTE:

Changing these connections on the trolley motor will not change the voltage required nor the speed of the trolley wheel.

FIGURE 8-

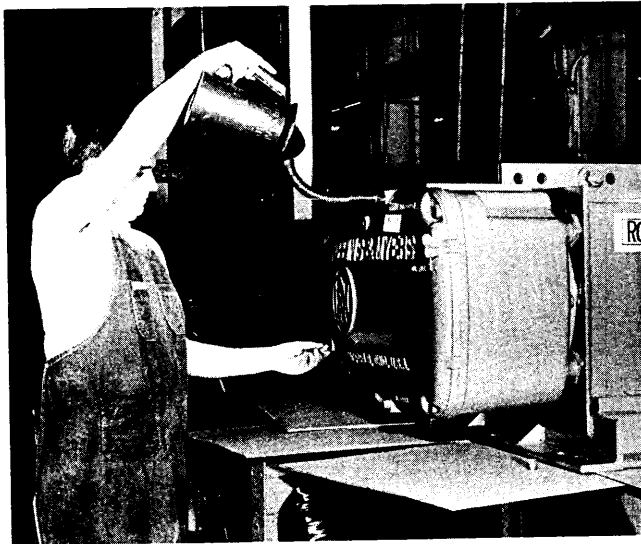


FIGURE 9-

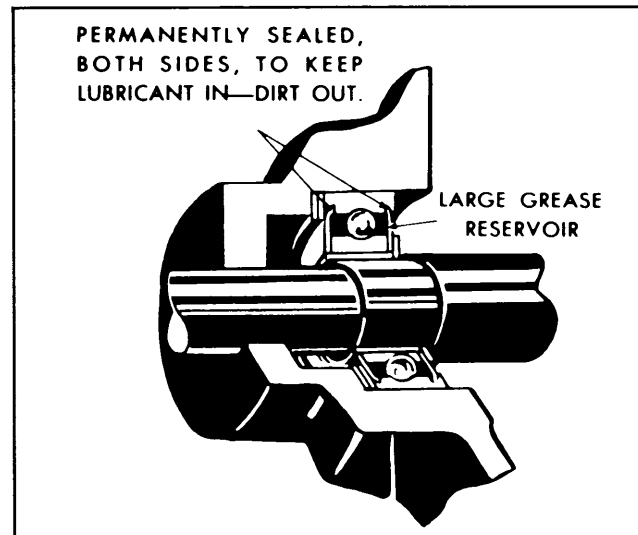


FIGURE 10-

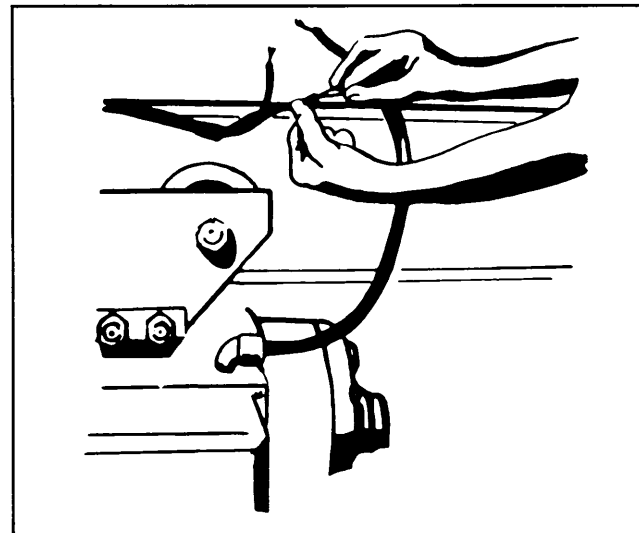


FIGURE 11A- F2 Load Brake

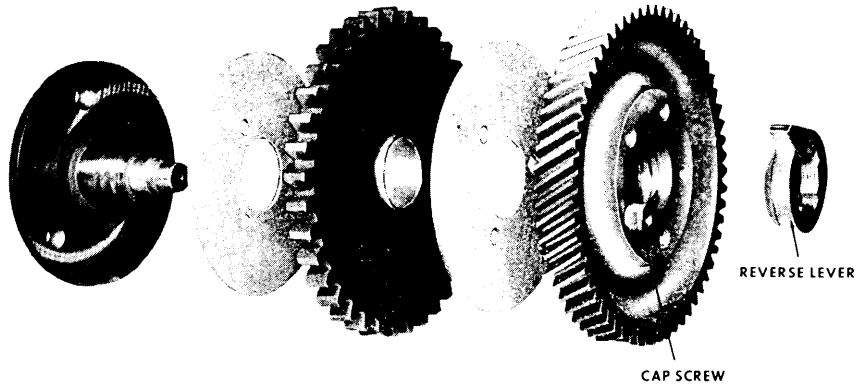
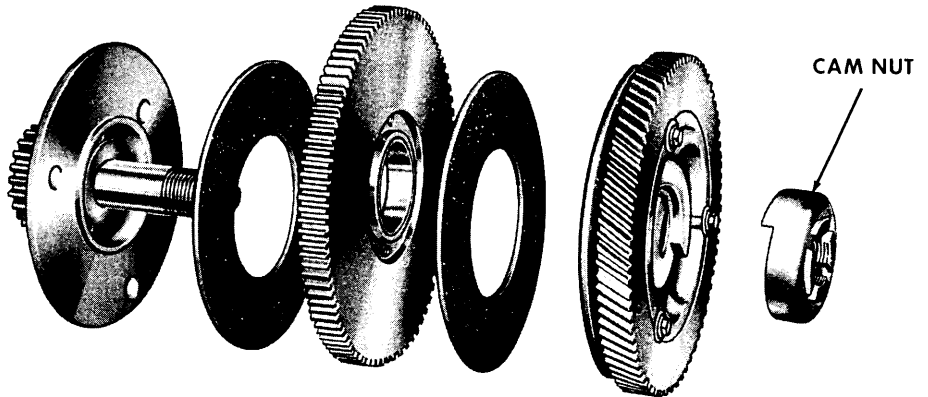


FIGURE 11B- F3 and F5 Load Brake



AUTOMATIC LOAD BRAKE

Fundamentally, the well designed electric hoist must perform two definite operations. In addition to the lifting and lowering of loads, it must be capable of suspending them in mid-air for indefinite periods of time without danger of slipping or dropping. An over-size Weston type load brake (Figs. 11-A, 11-B, 11-C) incorporated in the gearing of the R & M Series F Hoist automatically controls speed when the load is lowered and prevents dropping in the event of power failure. The spring clutch assembly for the load brake is self-contained and is mounted on the drum spider casting. It revolves only when hoisting and is stationary when lowering.

LOAD BRAKE ADJUSTMENT

The Weston type load brake always controls the load independently of the operator. It operates in an oil bath and requires no attention except to take up wear in the friction discs. When replacing discs be sure to coat the discs with a light film of oil before installing.

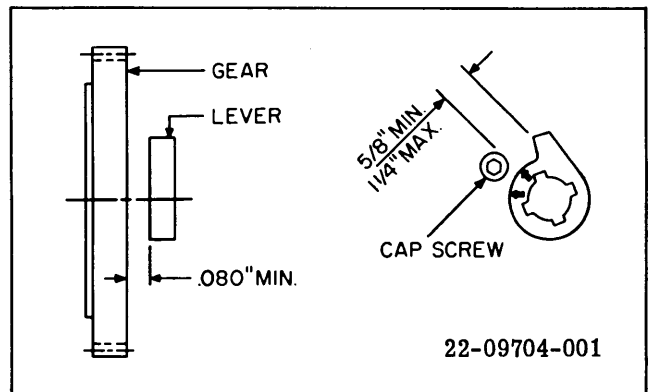
F2 HOIST (Fig. 11-A)

To adjust the load brake, remove the key from the reverse lever and the cap screw from the load brake gear. Turn gear, left hand, down firmly against linings. Screw lever down until there is .080 inch gap between the lever and gear. (Fig. 11-C).

Some models have a stop that prevents getting less than this .080 gap; in this case screw the lever down until it stops. Next, back off lever, stopping at the first point where the keyways line up and the cap screw can be inserted between arrows on lever or within the dimensions shown in Fig. 11-C. The maximum back-off should not exceed 3/4 of a turn.

Reinsert key and cap screw. Check adjustment by opening brake (turn gear right hand). There should still be clearance between the gear and lever when the cap screw engages with the lug on the reverse lever.

FIGURE 11C-



F3 and F5 HOISTS (Fig. 11-B)

To adjust brake, pull the key from the cam nut, screw the cam nut in, leaving about 1/8-turn play, and replace the key.

MOTOR BRAKE

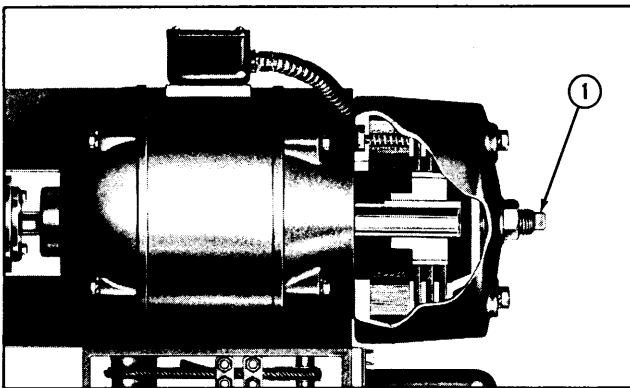
The Robbins & Myers magnetic motor brake (Fig. 12) is enclosed against fumes, dirt and moisture. The motor brake is the magnetic disc type and is used to prevent drift of the hook block. This brake dissipates energy in friction heat and operates every time the motor is energized. It has ample brake area and liberal wear allowance for satisfactory performance. Multiple, large area, asbestos friction discs mount on a splined hub and ride over polished steel discs. Equalized spring pressure that cannot be adjusted to overload the magnet provides smooth, long-wearing brake action.

MOTOR BRAKE ADJUSTMENT

As the brake discs wear, the brake will gradually lose its torque. For maximum life the brake should be adjusted within a few weeks after the unit has been installed or as soon as the friction discs have been well seated. After this, only periodic adjustment is required. It is not recommended to wait until the brake has lost all its torque before adjusting.

To adjust brake, back off the jam nut and draw up the center screw (1 in Fig. 12) until firm (6 to 8 lbs. force on a 10" wrench). Then back off 3/4 turn. Re-lock in place with the jam nut. No other adjustment needed.

FIGURE 12-



WIRE ROPE CONSERVATION

While the wear life of the wire rope depends mainly upon the frequency of use and severity of service, proper maintenance and reasonable hoisting precautions will aid considerably in prolonging its length of service. Periodic lubrication of the cable with 600-W oil will reduce deterioration caused by rust and acids and preserve the necessary flexibility for smoother, safer lifting. Examine the cable for broken wires. If more than three or four are found, the cable must be replaced. Cable of the exact size and quality with which your hoist was originally equipped is available on direct order from the factory. A cable so ordered will be complete with rope socket attached, ready for immediate installation. It is a good policy to have a spare cable on hand to prevent delays in production when replacement is needed.

TO INSTALL A NEW WIRE ROPE

It is suggested that the coil be rolled along the floor to permit unreeling without twisting or kinking of the cable. See Fig. 13. Remove the cable plug from the drum. Insert the new cable socket into the drum, threading the cable through the notched opening (see Fig. 14). Replace the plug and tighten securely. It is not necessary to remove the drum when installing a new cable. Be sure that the cable is directed over the drum so that the rotation of the drum will wind the cable properly in the grooves.

See the reeving diagrams on page 9 for proper reeving of cable through the sheaves. To connect the stationary end on two and four part hoists, pass the cable through the proper slot in the hoist load bar and over the cast radius. Run the cable back and attach to the stud as shown in Fig. 15.

IMPORTANT: On F3 hoists there are two slots in the load bar and two cast radii. The one farthest back toward the gear case is for two-part blocks only and the one toward the control end is for four-part blocks only. If the cable is put in the wrong dead end slot rapid cable wear may result.

CAUTION: The saddle of the cable clamp should ride on the loaded side of the cable.

FIGURE 13-

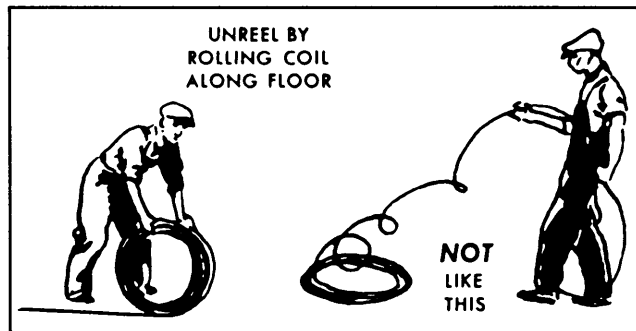


FIGURE 14-

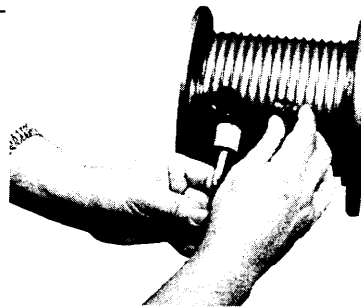
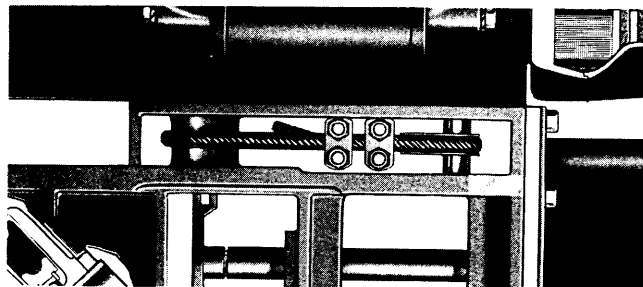


FIGURE 15-

Stationary End Cable Connection



HOIST LUBRICATION

Hoists are shipped from the factory with the proper amount of oil in the gear case. When changing oil, the following procedure is recommended: Drain oil by removing drain plug at the bottom of the gear case. Replace drain plug. When refilling, remove the two pipe plugs. One of these is at the top of the gear case cover, the other is below the center line of the case and is marked "Oil Level" (see Figure 8). Through the top hole fill with Heavy-Medium hydraulic oil, Socony

DTE or equivalent. Fill the case until the oil is visible through the "Oil Level" hole. See the Lubrication Schedule, page 26 for the amount of oil required for each hoist. Replace the plugs and wipe all excess oil from the housing. By maintaining the proper oil level all gear case parts are properly lubricated. The bottom blocks have pre-lubricated, double-sealed ball bearings and need no further lubrication. Most trolley wheels are lubricated through grease fittings on the ends of the wheel studs; use any #1 grease such as Mobilplex EP#1 or Socony Vacuum Gargoyle Grease BRB #1. The trolley drive motor is lubricated in the same manner as the hoist gear case.

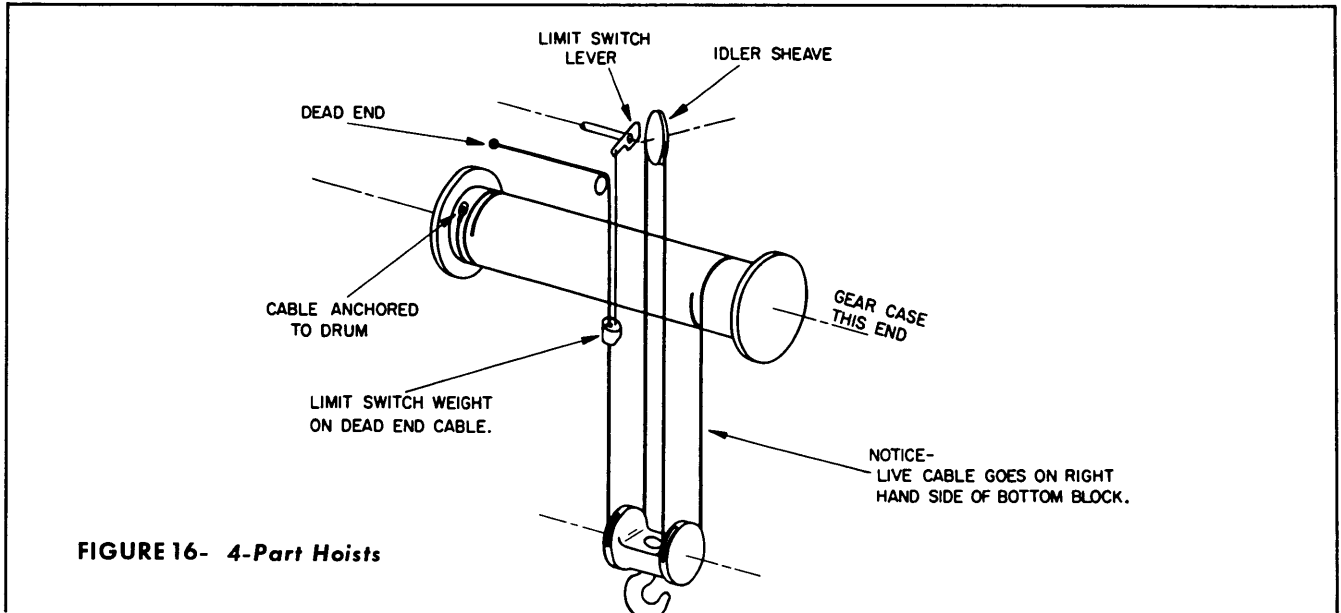


FIGURE 16- 4-Part Hoists

REEVING DIAGRAMS

When replacing the wire rope in any Series F hoist follow these diagrams. Both the hoist and the cable can be damaged by improper reeving.

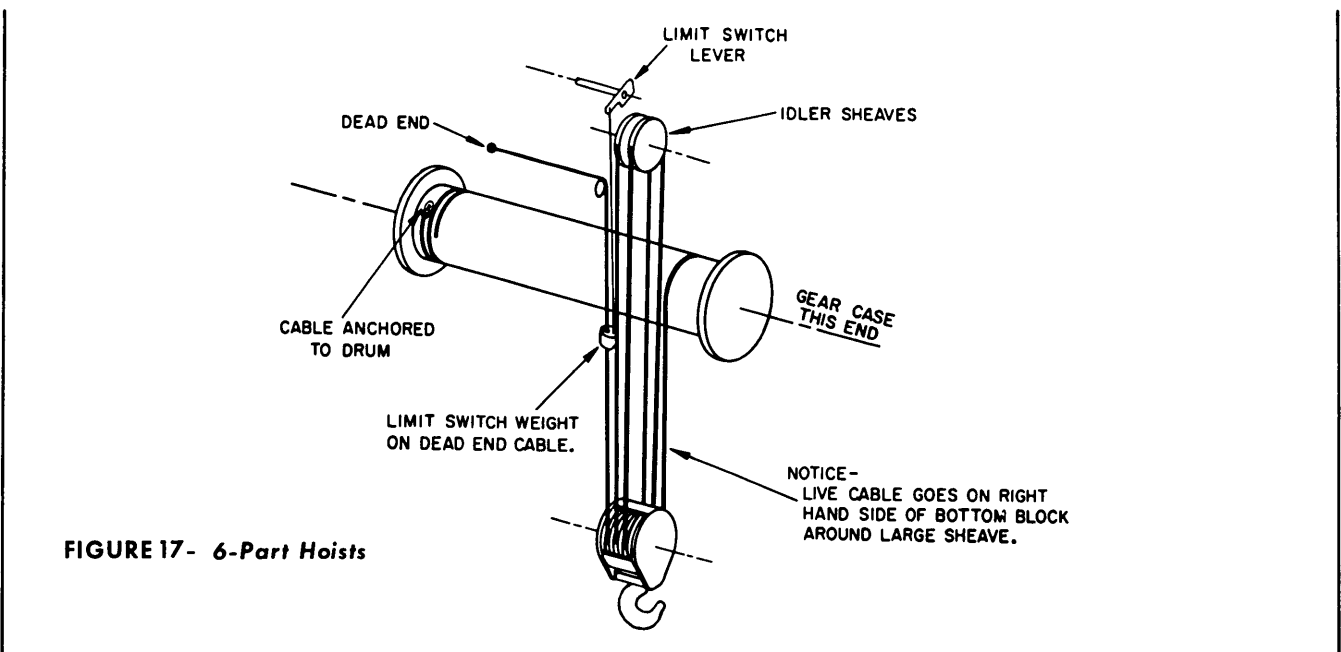
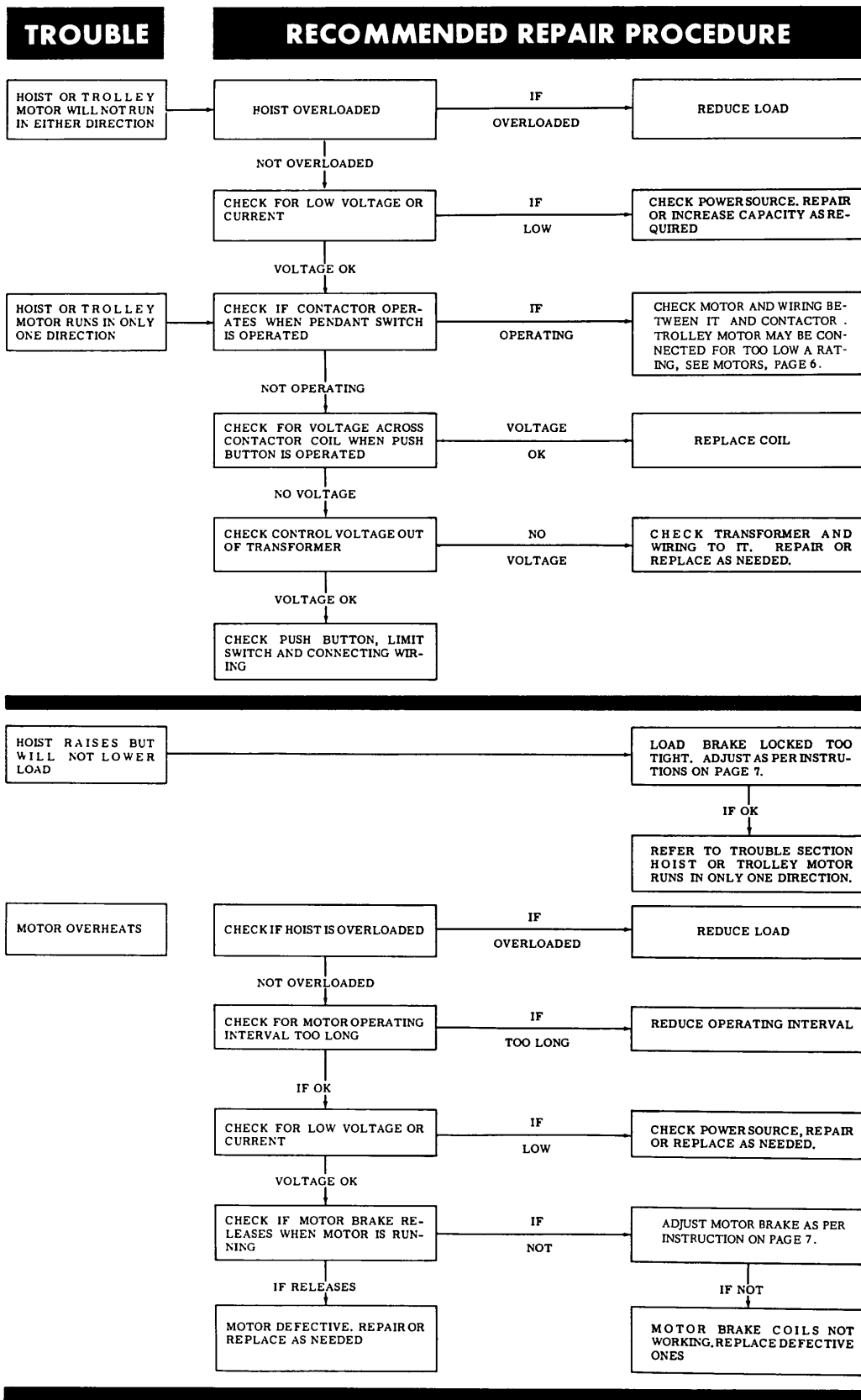


FIGURE 17- 6-Part Hoists

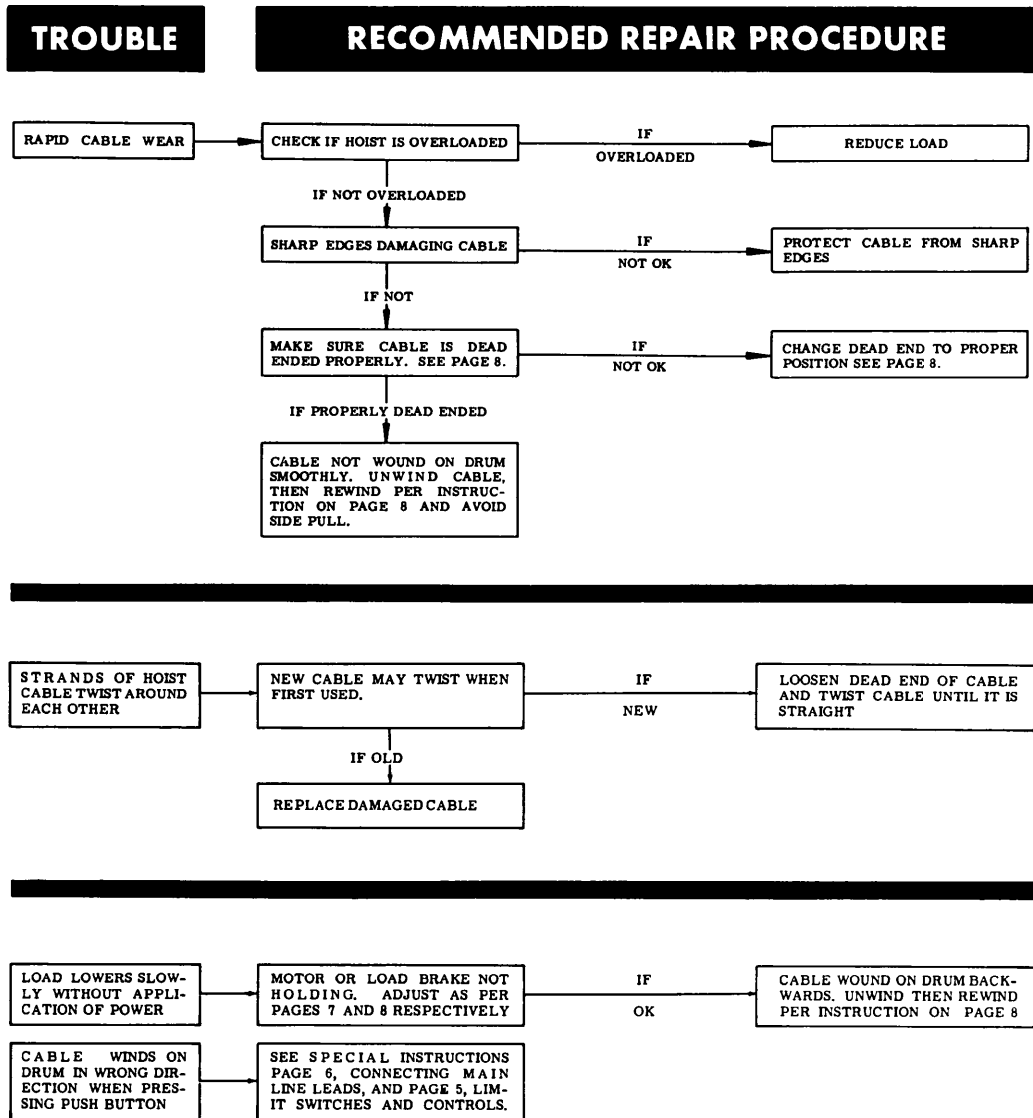
TROUBLE CHART

THE FOLLOWING CHART IS A LISTING OF POSSIBLE
HOIST TROUBLES AND THE RECOMMENDED PROCEDURE
FOR EFFICIENT REPAIR.



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THE FOLLOWING CHART IS A LISTING OF POSSIBLE
HOIST TROUBLES AND THE RECOMMENDED PROCEDURE
FOR EFFICIENT REPAIR.



REPAIR INSTRUCTIONS

Disassemble each of the main assemblies as shown in the exploded views, Figures 20 through 31. Retaining rings may be removed with standard Waldes-Kohinoor retaining ring pliers or screw drivers depending on the type of ring used.

NOTE: Disassembly should be limited to the removal of defective parts only. Unless required for replacement, the removal of dowel pins, nameplates, etc., is not recommended.

Clean all metal parts. To prevent damage, clean all close tolerance parts individually. Dry parts thoroughly immediately after cleaning. Inspect the following parts for the defects listed. Reject if worn or damaged.

NOTE: All gaskets, oil seals and lock washers are to be discarded if removed.

1. Inspect the parts for the following:
 - a. Threaded parts and openings for damaged or broken threads.
 - b. Gears and splined shafts for wear on sides of teeth and evidence of hammering or pounding.
 - c. Ball bearings for smoothness of operation and freedom of nicks, burrs and dirt.
 - d. Shaft, bushing and bearing surfaces for nicks, scratches, burrs or other damage affecting proper performance.
 - e. Keys and key slots for bent or burred corners and edges.
 - f. Castings for cracks, distortion or other structural damage.

- g. Electrical wiring for cracked, cut or frayed insulation.
- h. Contactors for burred or pitted contacts.

Replace all gaskets, oil seals and lock washers removed during disassembly as well as all parts damaged beyond simple and obvious minor repair.

2. To inspect the gearing remove the gear case cover, pull out the load brake assembly and intermediate gearing by hand. To remove the drum and drum shaft on an F2 hoist, take out the three cap screws in the front spider casting and pull out casting. The drum gear will come out with the drum shaft. Remove the gear case from the hoist frame by removing the three screws holding it. The drum may then be taken out through the opening in the side of the hoist frame.

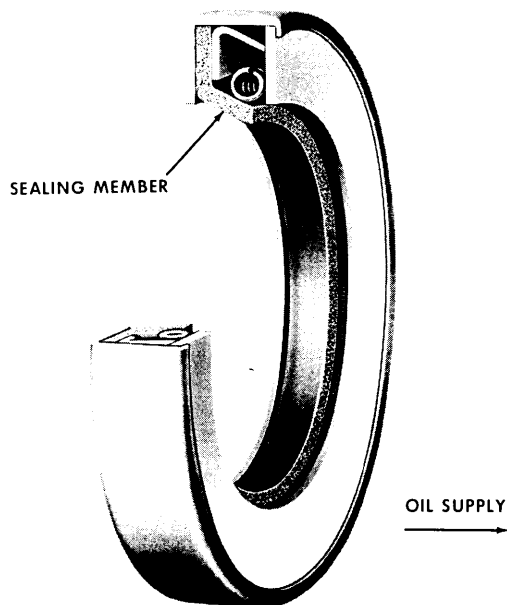
To remove the drum on an F3 or F5 hoist, take out the two cap screws in the front spider casting and pull out casting. The complete drum assembly can now be removed through the gear case.

3. Reassembly should be performed in the reverse order of disassembly. Use care in reassembly so as not to scratch, nick or burr highly finished parts. Never force parts together. If properly aligned, they will go together with very light tapping or pushing by hand.

Replace oil in the hoist gear case or trolley motor gear housing after final assembly. Refer to page 8.

FIGURE 18-

REPLACEMENT OF OIL SEALS



Before new seals are positioned, make certain that there are no burrs or rough spots on the shaft. Push the shafts through carefully, with the sealing member toward the oil supply as shown in Fig. 18. Assemble the oil seals into the housings by an arbor press, not by hammer or mallet.

When replacing oil seals, make certain that the leather edge of the seals faces toward the oil reservoir (Fig. 18).

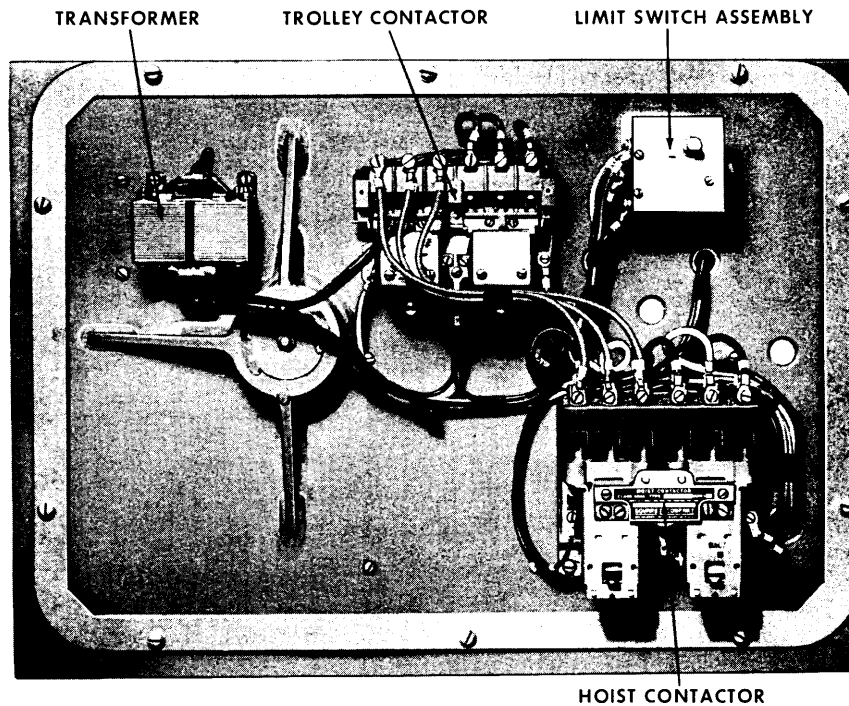


FIGURE 19-

GENERAL REPAIR PARTS INFORMATION HOW TO ORDER REPAIR PARTS CORRECTLY

The Parts Catalog section of this manual covers all replacement parts required for the Robbins & Myers Series F Hoist. To assure prompt service, each repair parts order must contain the following information:

1. Hoist Serial Number (see below).
2. Capacity.
3. Reference Number from Bulletin 950.
4. Quantity.
5. Description.
6. Voltage, Phase and Cycles.
7. Correct Shipping Destination.

On the brass nameplate will be found the Serial Number of your hoist -- i.e., Serial No. H----, or as in the case of the most recently built units it may show a five digit number followed by two letters and another number. An example of this type of serial number would be "37885PP1." Without this serial number we cannot be sure of sending you correct parts, so always mention serial number for prompt service. For a motor part give serial number of the motor as given on the motor nameplate, as well as hoist serial number.

When orders for parts are sent directly to Robbins & Myers, Inc., they should be addressed as follows:
 Hoist & Crane Division
 Robbins & Myers, Inc.
 1345 Lagonda Avenue
 Springfield, Ohio 45501

Orders telephoned or telegraphed to us must be immediately confirmed by letter since we cannot assume responsibility for the correctness of the telephone or telegraphic message.

NOTE:

Remember that factories may generally be closed on Saturdays. Orders received for stock parts late on Friday cannot be shipped until the Monday following. In an emergency, contact the factory, Hoist & Crane Division, phone (513) 323-6461, and every effort will be made to serve you.

Minimum repair parts charge 10.00

RETURN OF PARTS

Robbins & Myers, Inc., will not accept return of any parts unless accompanied by a claim tag; these claim tags to be issued at the time authorization of such return is made. Tags must be attached to the outside of the package.

CLAIMS

All shipments are carefully inspected and are delivered to the carrier in good order. Upon receipt of shipment, caution should be exercised that there is no loss or damage. If damage has occurred, refuse to accept the shipment until the carrier makes the proper notation to that affect. In the event of concealed loss or damage, notify the carrier immediately. By following these suggestions you will encounter less difficulty collecting your claim.

PARTS CATALOG

This section illustrates and lists all procurable parts for the Robbins & Myers Series F Hoist. Each part is listed by a reference number and description. Use the reference number and complete part description when ordering replacement parts. When a complete assembly is desired use the reference number and description of that assembly. Do

not list its component parts. Assemblies not having a reference number cannot be purchased as a complete item. It is necessary in this case to order each component part separately. Refer to page 13 of this manual for complete instructions pertaining to the ordering of replacement parts.

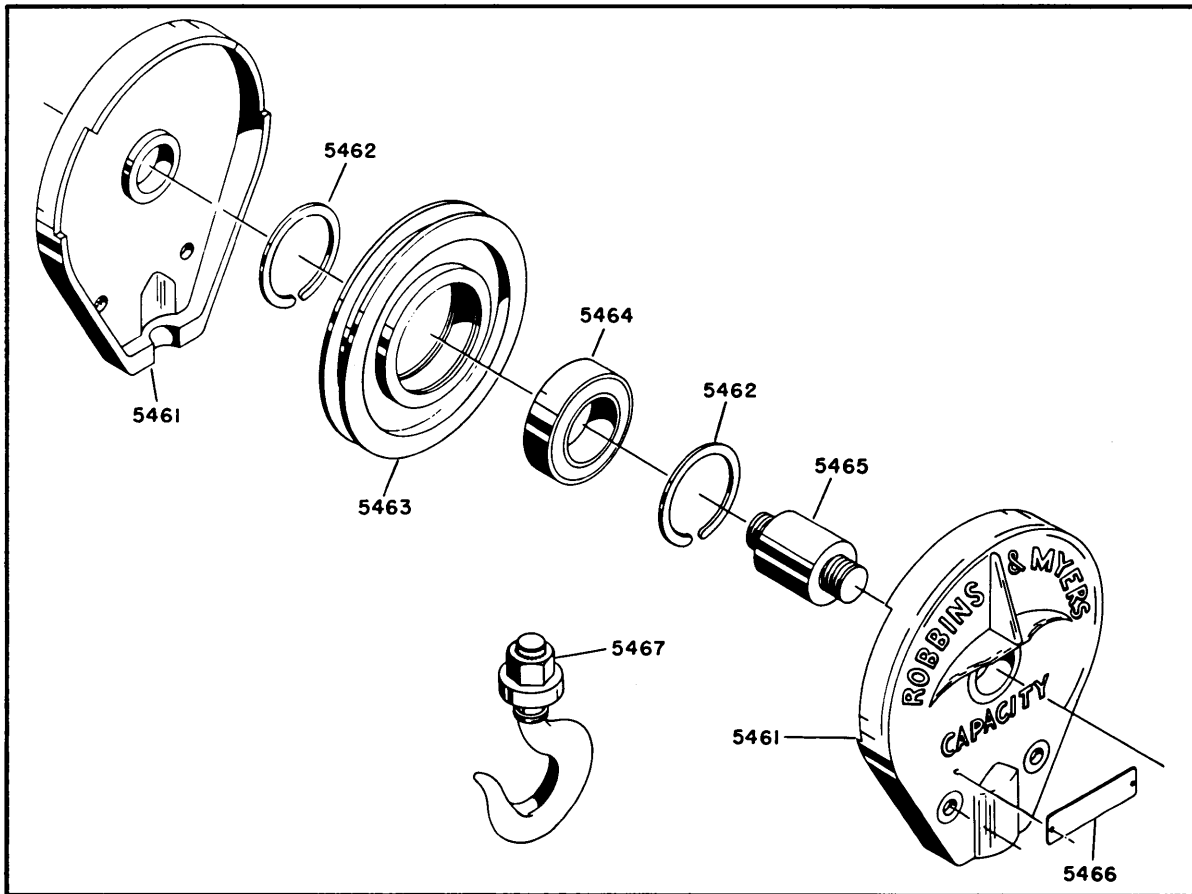


FIGURE 20- 2-Part Ball Bearing Block

REFERENCE NUMBER	PART DESCRIPTION
* 5460	Bottom Block Assembly
5461	Sheave Frame
5462	Snap Ring
5463	Sheave
5464	Ball Bearing
5465	Stud
5466	Capacity Plate
5467	Hook Assembly

* Use this reference number when ordering complete assembly.

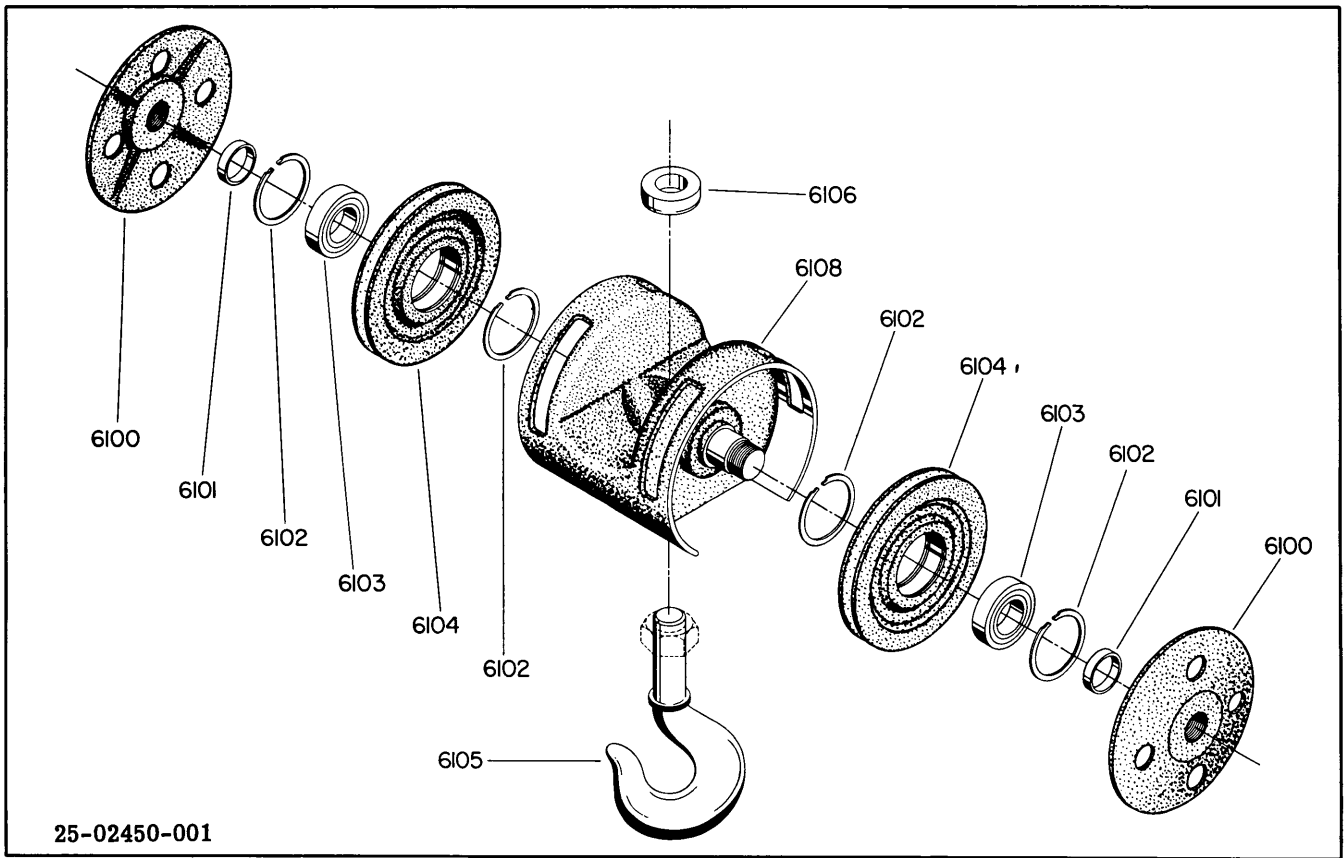


FIGURE 21- 4-Part Ball Bearing Block

REFERENCE NUMBER	PART DESCRIPTION	REFERENCE NUMBER	PART DESCRIPTION
6100	Sheave Cover	6105	Load Hook & Hook Nut
6101	Spacer	6106	Thrust Bearing
6102	Snap Ring	* 6107	Hook, Nut & Bearing Assembly
6103	Ball Bearing	6108	Sheave Frame
6104	Rope Sheave	* 6109	Complete Block Assembly

* Use this reference number when ordering the complete assembly.

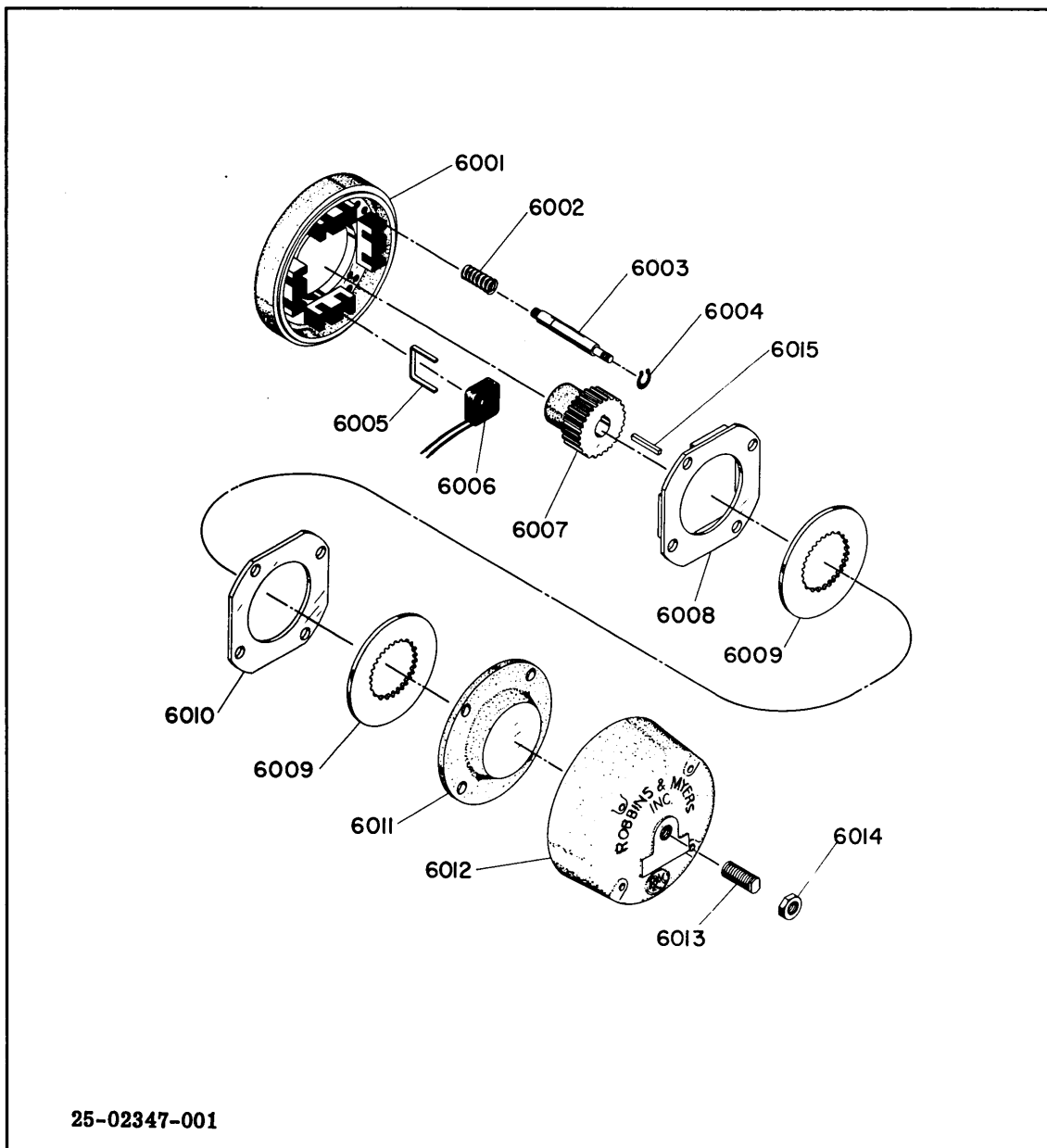
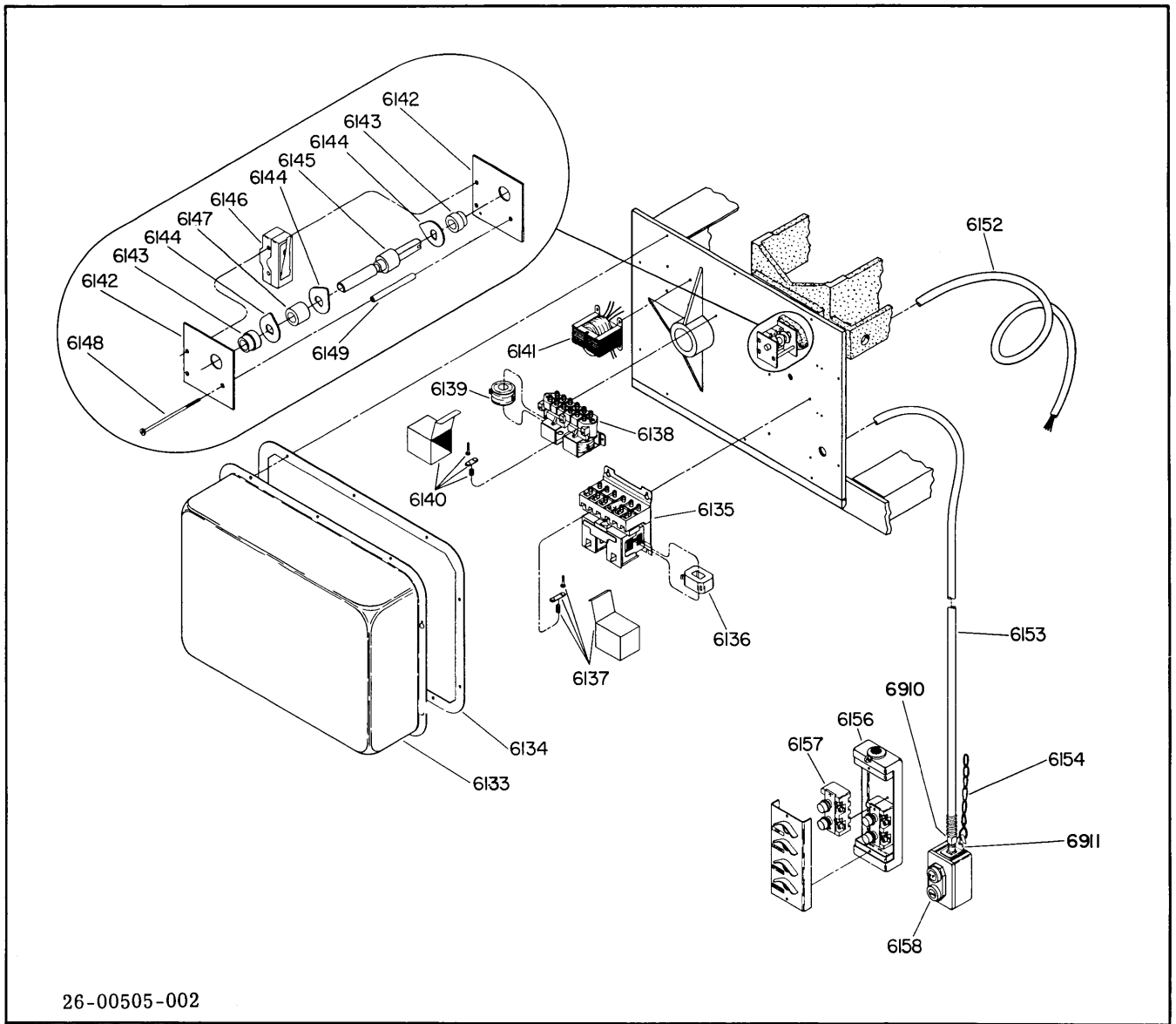


FIGURE 22- Motor Mounted Brake, M7

REFERENCE NUMBER	PART DESCRIPTION	REFERENCE NUMBER	PART DESCRIPTION
* 6000	Brake Assembly Complete	6008	Armature Plate Assembly
6001	Brake Head	6009	Friction Disc
6002	Spring	6010	Intermediate Thrust Plate
6003	Brake Stud	6011	End Thrust Disc
6004	Snap Ring	6012	Brake Cover
6005	Coil Support	6013	Adjustment Screw
6006	Magnet Coil	6014	Jam Nut
6007	Brake Hub	6015	Key

* Use this reference number when ordering the complete assembly.



26-00505-002

FIGURE 23- Hoist Controls

REFERENCE NUMBER	PART DESCRIPTION
6133	Control Cover
6134	Gasket
6135	Hoist Controller Complete
6136	Magnet Coil (Hoist)
6137	Contact Kit (Hoist)
6138	Trolley Controller Complete
6139	Magnet Coil (Trolley)
6140	Contact Kit (Trolley)
6141	Transformer
6142	Side Plate
6143	Bushing
6144	Operating Cam
6145	Limit Shaft

REFERENCE NUMBER	PART DESCRIPTION
6146	Micro Switch
6147	Cam Spacer
6148	Screw
6149	Side Plate Spacer
6152	Main Line Cable
6153	Pendant Cable
6154	Pendant Chain
6156	Push Button Complete
6157	Push Button Element
6158	Push Button Complete
6910	Strain Reliever
6911	Strain Bracket

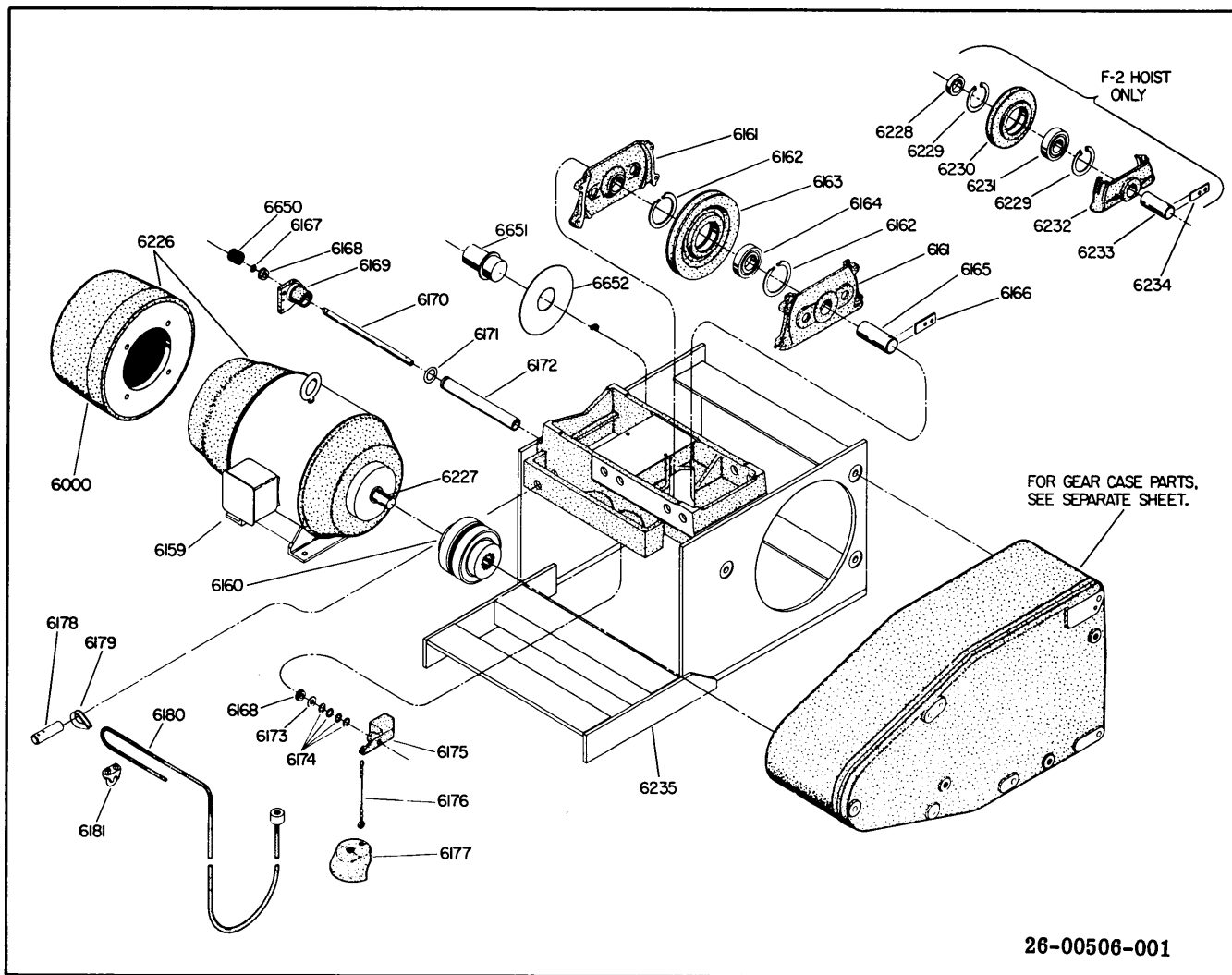
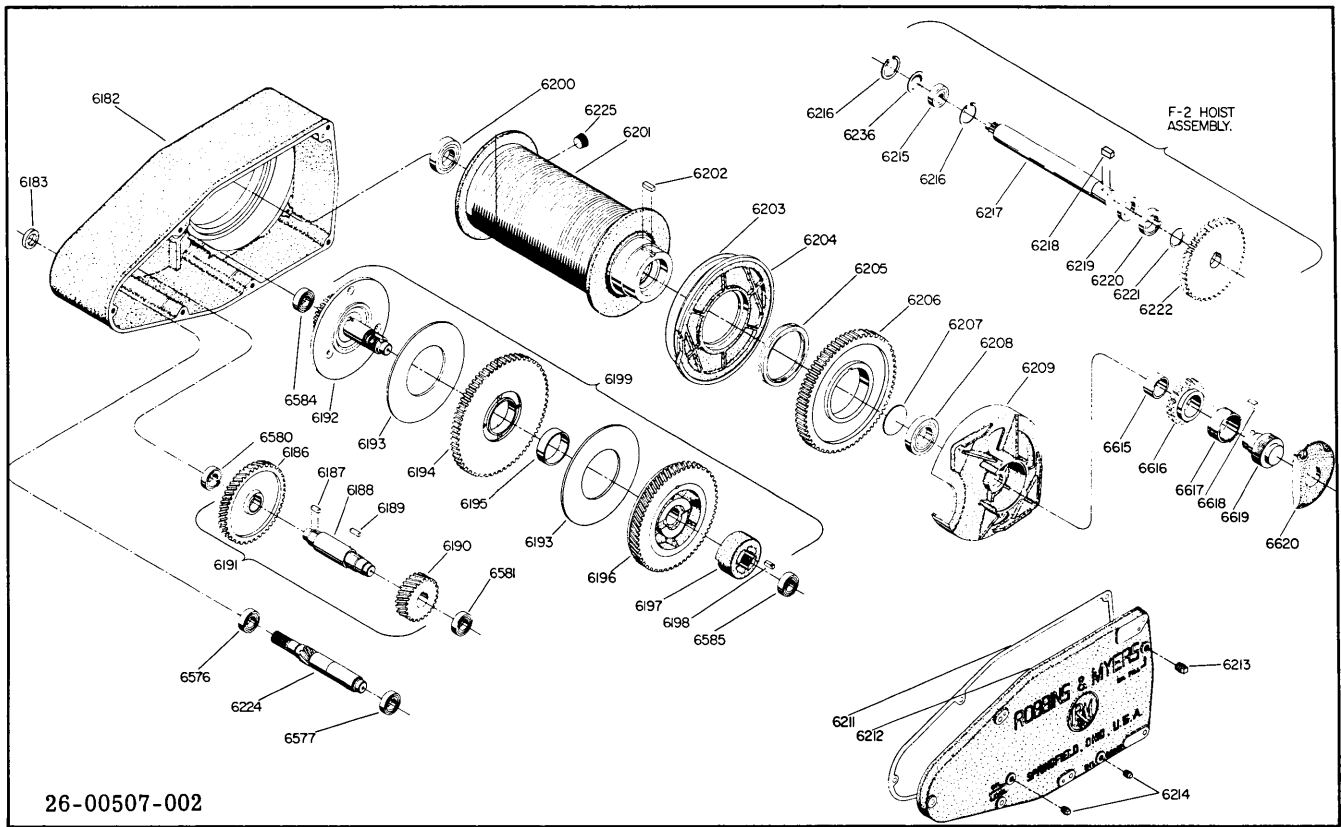


FIGURE 24- Hoist Frame and Component Parts

REFERENCE NUMBER	PART DESCRIPTION
* 6000	Motor Brake Complete
6159	Hoist Motor
6160	Motor Coupling
6161	Equalizer Sheave Guard
6162	Snap Ring
6163	Equalizer Sheave
6164	Ball Bearing
6165	Sheave Pin
6166	Keeper Plate
6167	Snap Ring
6168	Ball Bearing
6169	Limit Switch Bracket
6170	Limit Extension Shaft
6171	"O" Ring
6172	Shaft Mounting Tube
6173	Felt Washers
6174	Shim Washers
6175	Limit Counterweight
6176	Limit Cable Assembly

REFERENCE NUMBER	PART DESCRIPTION
6177	Limit Weight
6178	Dead End Pin
6179	Rope Thimble
6180	Wire Rope Assembly
6181	Rope Clip
6226	Hoist Motor & Brake Assembly
6227	Key
6235	Main Frame
6650	Limit Spring
6651	Drum Stud
6652	Spacer Washer
F2 HOIST PARTS ONLY	
6228	Bearing Spacer
6229	Snap Ring
6230	Equalizer Sheave
6231	Ball Bearing
6232	Equalizer Sheave Guard
6233	Sheave Pin
6234	Keeper Plate

* Use this reference number when ordering the complete assembly.



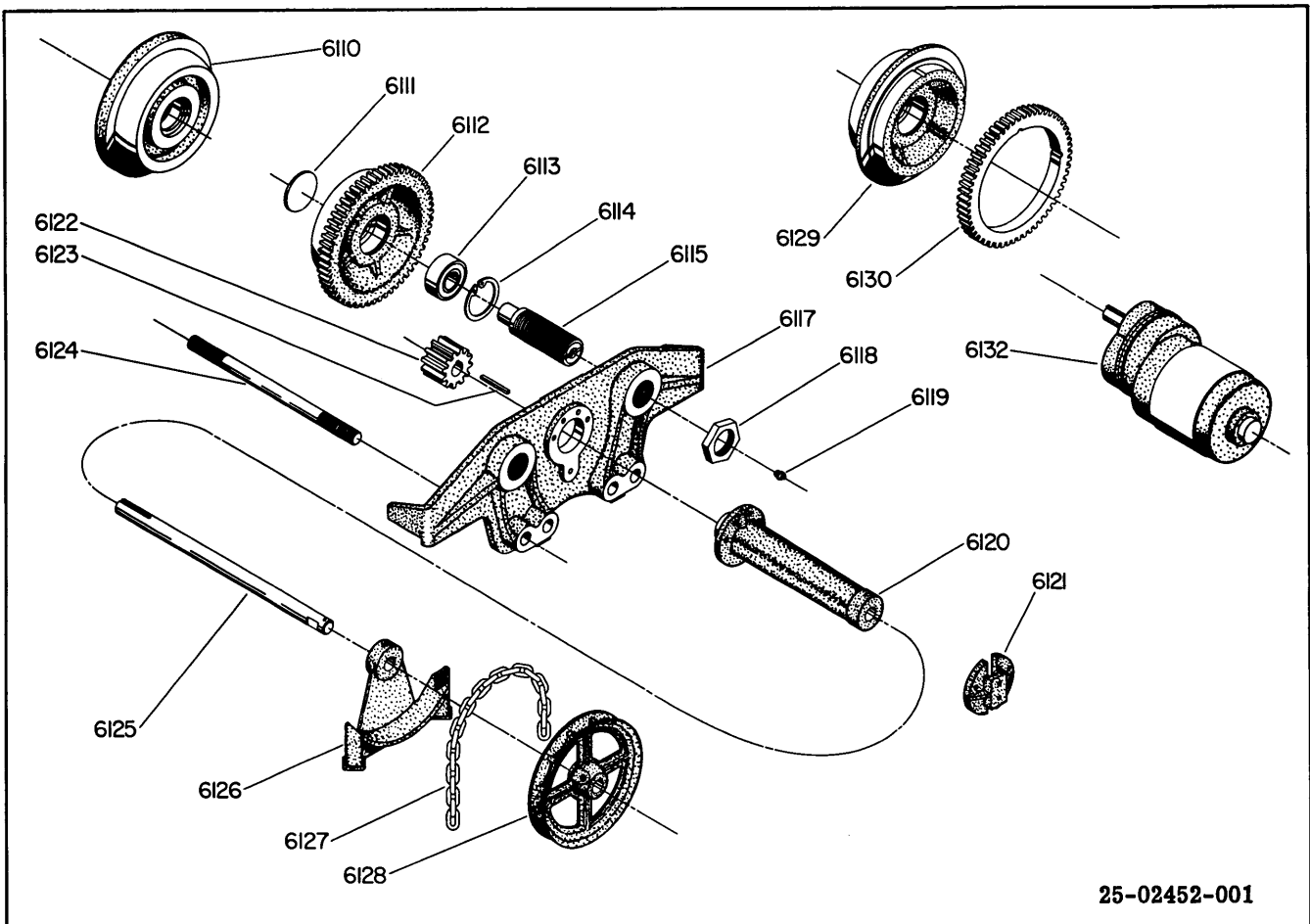
26-00507-002

FIGURE 25- Hoist Gear Case

REFERENCE NUMBER	PART DESCRIPTION
6182	Gear Case
6183	Oil Seal
6186	Motor Gear
6187	Key
6188	Intermediate Shaft
6189	Key
6190	Intermediate Pinion
* 6191	Intermediate Shaft Assembly
6192	Thrust Disc & Shaft
6193	Friction Disc
6194	Ratchet Gear
6195	Bushing
6196	Intermediate Gear & Spider
6197	Cam Nut (F3, F5) or Reverse Lever (F2)
6198	Cam Nut Key
* 6199	Load Brake Assembly
6200	Ball Bearing
6201	Rope Drum
6202	Key
6203	Gasket (End Shield)
6204	End Shield
6205	Oil Seal
6206	Drum Gear
6207	Welch Plug
6208	Ball Bearing
6209	Drum Spider
6211	Gasket

REFERENCE NUMBER	PART DESCRIPTION
6212	Gear Case Cover
6213	Vented Pipe Plug
6214	Pipe Plugs
6224	Motor Extension Shaft
6225	Pipe Plug
6576	Ball Bearing
6577	Ball Bearing
6580	Ball Bearing
6581	Ball Bearing
6584	Ball Bearing
6585	Ball Bearing
6615	Bushing
6616	Pinion
6617	Spring
6618	Key
6619	Shaft
6620	Cover
F2 HOIST PARTS ONLY	
6215	Ball Bearing
6216	Snap Ring
6217	Drum Shaft
6218	Key
6219	Oil Seal
6220	Ball Bearing
6221	Spacer Washer
6222	Drum Gear
6236	Grease Retainer

* Use this reference number when ordering complete assembly.



25-02452-001

FIGURE 26- Types B, BG, and MDW Trolleys

REFERENCE NUMBER	PART DESCRIPTION	REFERENCE NUMBER	PART DESCRIPTION
6110	Plain Wheel	6122	Drive Pinion
6111	Welch Plug	6123	Key
6112	Geared Wheel	6124	Trolley Stud
6113	Ball Bearing	6125	Handwheel Shaft
6114	Snap Ring	6126	Handwheel Guard
6115	Wheel Stud	6127	Hand Chain
* 6116	Wheel Stud & Bearing	6128	Handwheel
6117	Side Plate	6129	Wheel
6118	Lock Collar	6130	Wheel Gear
6119	Grease Fitting	* 6131	Wheel & Gear Assembly
6120	Handwheel Shaft Tube	* 6132	Trolley Motor Complete (Breakdown on Page 21)
6121	Collector Bar Bracket		

* Use this reference number when ordering the complete assembly.

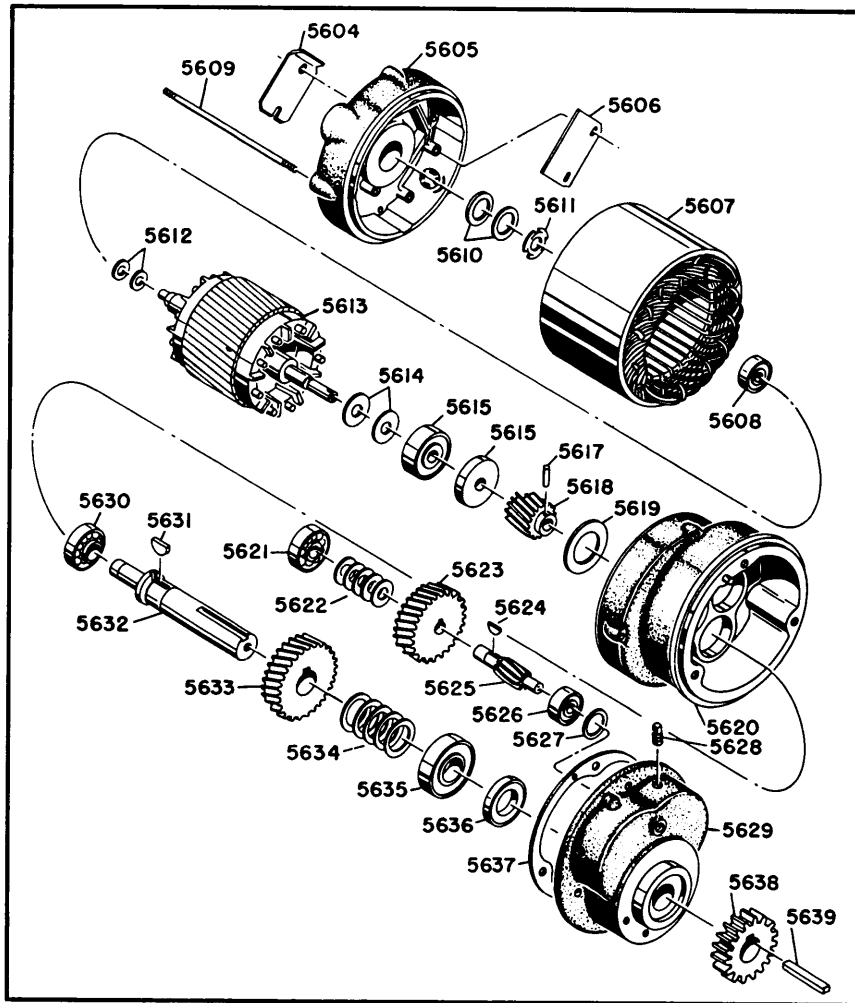


FIGURE 27- Trolley Motor

REFERENCE NUMBER	PART DESCRIPTION	REFERENCE NUMBER	PART DESCRIPTION
* 6132	Trolley Drive Motor Assembly	5622	Spacer
5604	Plate	5623	Intermediate Gear
5605	End Bell	5624	Key
5606	Plate	5625	Intermediate Pinion
5607	Stator	5626	Ball Bearing
5608	Ball Bearing	5627	Spacer
5609	Stud	5628	Pipe Plug
5610	Spacer	5629	Outer Gear Housing
5611	Spring Spacer	5630	Ball Bearing
5612	Spacer	5631	Key
5613	Rotor	5632	Drive Shaft
5614	Spacer	5633	Gear
5615	Ball Bearing	5634	Spacer
5616	Spacer	5635	Ball Bearing
5617	Groove Pin	5636	Oil Seal
5618	Pinion Gear	5637	Gasket
5619	Spacer	5638	Drive Gear
5620	Inner Gear Housing	5639	Key
5621	Ball Bearing		

* Use this reference number when ordering the complete assembly.

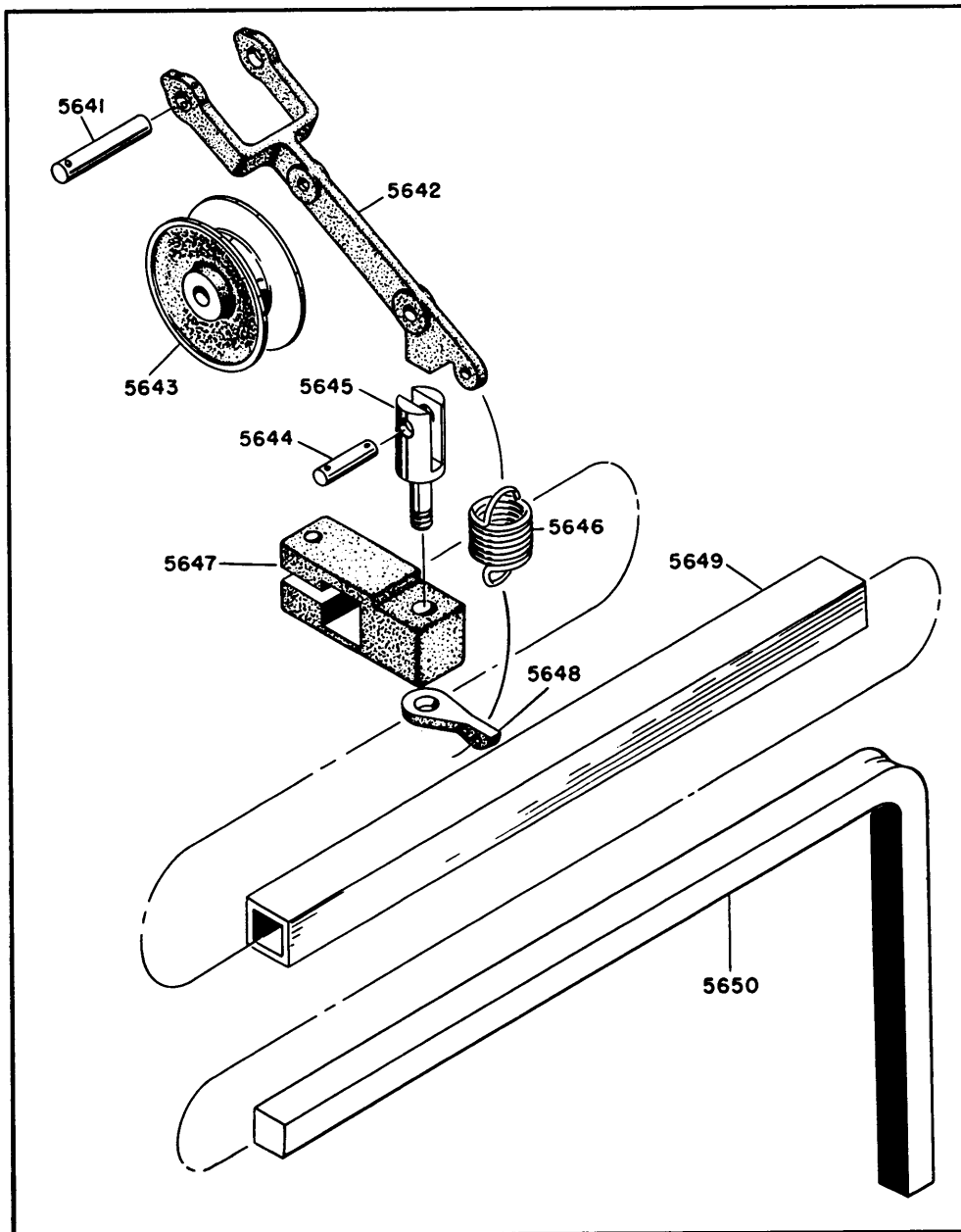
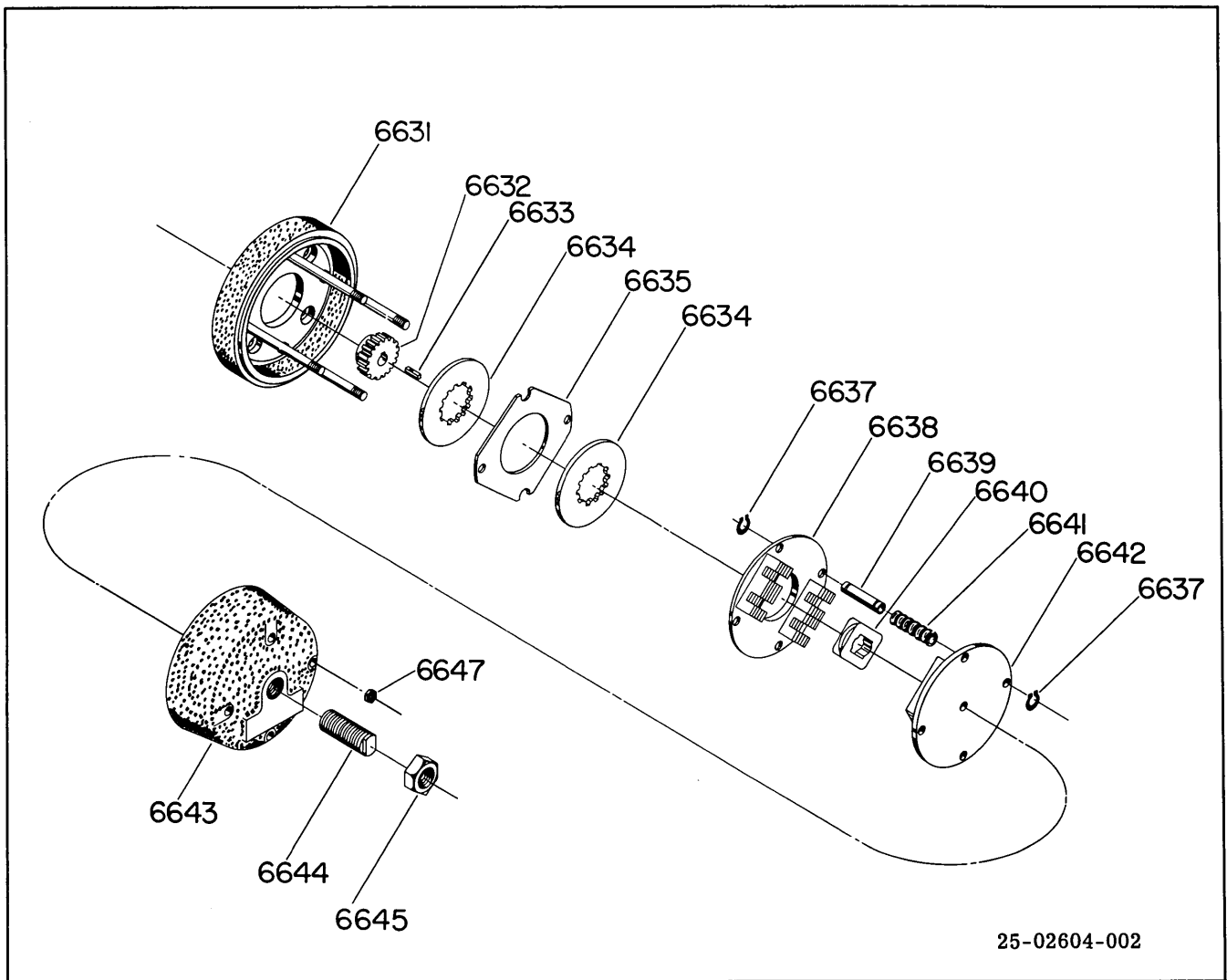


FIGURE 28- Current Collector

REFERENCE NUMBER	PART DESCRIPTION
* 5640	Collector Assembly
5641	Pin
5642	Harp
5643	Collector Wheel
5644	Harp Pin
5645	Harp Yoke
5646	Tension Spring
5647	Swivel Bracket
5648	Spring Anchor Lug
5649	Bar Insulator
5650	Collector Bar

* Use this reference number when ordering the complete assembly. Parts 5649 and 5650 are not included in this assembly and must be ordered separately.



25-02604-002

FIGURE 29- Motor Mounted Brake, M5

REFERENCE NUMBER	PART DESCRIPTION
* 6648	Brake Assembly Complete
6631	Brake Head & Stud Assembly (4) Studs
6632	Hub
6633	Key
6634	Friction Disc
6635	Intermediate Disc
6637	Retaining Ring
6638	Pole Plate Assembly

REFERENCE NUMBER	PART DESCRIPTION
6639	Sleeve
6640	Coil
6641	Spring
6642	Armature Plate Assembly
6643	Brake Cover
6644	Adjustment Screw
6645	Jam Nut
6647	Hex Nut

* Use this reference number when ordering complete assembly.

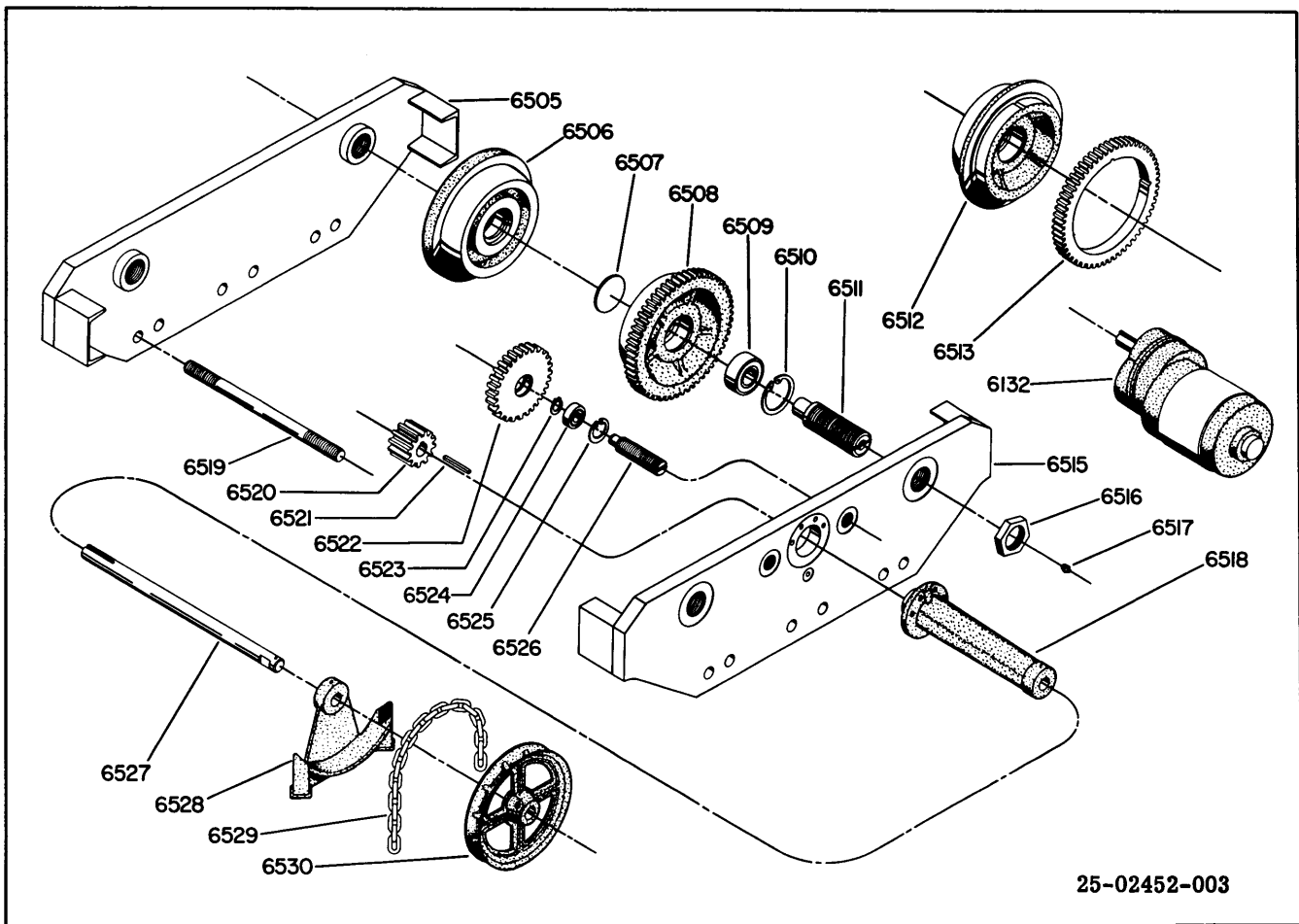


FIGURE 30- Long Lift Trolley

REFERENCE NUMBER	PART DESCRIPTION
6505	Plain Side Plate
6506	Plain Wheel
6507	Grease Retainer
6508	Geared Wheel
6509	Ball Bearing
6510	Snap Ring
6511	Wheel Stud
6512	Wheel
6513	Wheel Gear
* 6132	Trolley Motor Complete (See page 21 for breakdown)
6515	Geared Side Plate
6516	Lock Collar
6517	Zerk Grease Fitting
6518	Handwheel Shaft Tube
6519	Trolley Stud

REFERENCE NUMBER	PART DESCRIPTION
6520	Drive Pinion
6521	Key
6522	Idler Pinion
6523	Snap Ring
6524	Ball Bearing
6525	Snap Ring
6526	Idler Pinion Stud
6527	Handwheel Shaft
6528	Handwheel Guard
6529	Hand Chain
6530	Hand Wheel
* 6531	Wheel Stud & Bearing Assembly (6509 and 6513)
* 6532	Wheel & Gear Assembly (6512 and 6513)

* Use this reference number when ordering complete assembly.

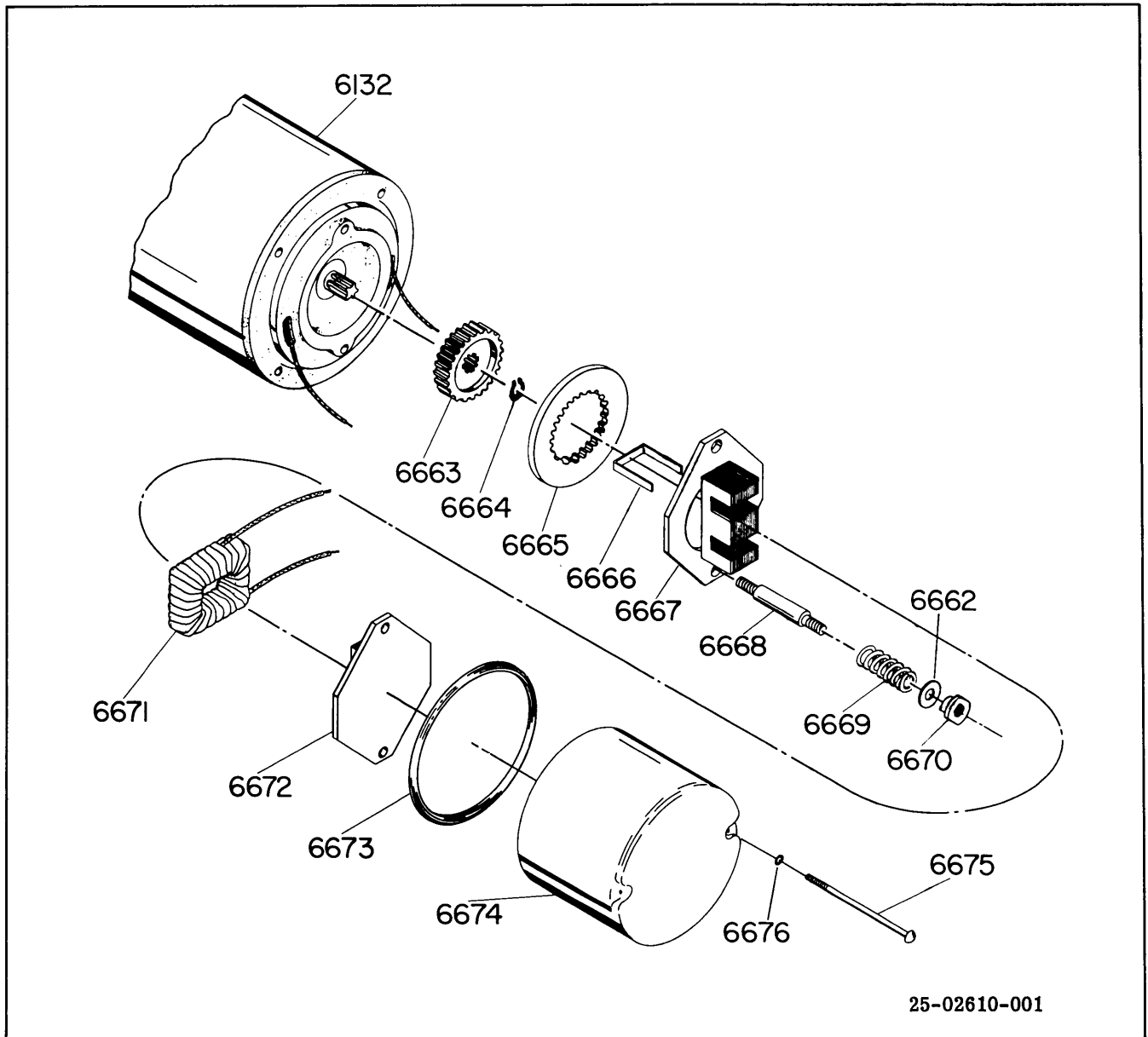


FIGURE 31- Trolley Motor Brake Parts

REFERENCE NUMBER	PART DESCRIPTION
* 6660	Trolley Motor & Brake Complete
6132	Trolley Motor (see page 21 for breakdown)
6662	Adjustment Washer
6663	Hub
6664	Retaining Ring
6665	Friction Disc
6666	Wedge
6667	Pole Plate

REFERENCE NUMBER	PART DESCRIPTION
6668	Stud
6669	Spring
6670	Adjusting Sleeve
6671	Coil
6672	Armature Plate
6673	"O" Ring
6674	Cover
6675	Cover Stud
6676	Aluminum Washer

* Use this reference number when ordering complete assembly.

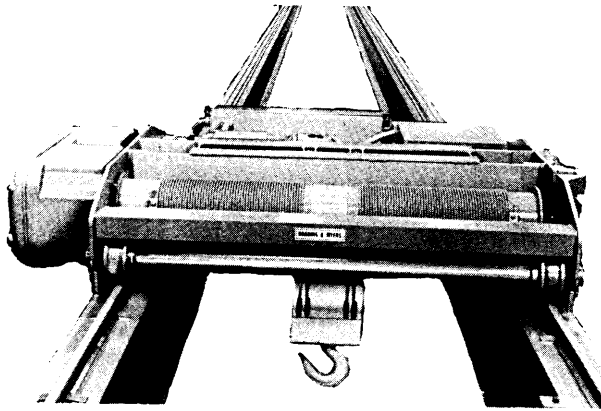
LUBRICATION SCHEDULE

Part	Hoist Frame	Lubricant	Amount	Period
Hoist Gear Case	F2 F3 F5	Socony DTE heavy-medium hydraulic oil	4 quarts 13 quarts 18 quarts	Semi-annually unless hoist shows evidence of leaking oil.
Trolley Motor Gear Housing	All hoists with head mounted trolley motors	Sunoco Sunep 070	1/2 pint	Semi-annually unless housing shows evidence of leaking oil
Hoisting Cable	All frames	600 W grease		Monthly
Bearings with external grease fittings	All frames	Mobilplex EP#1 or Socony Vacuum Gargoyle BRB#1		Semi-annually
Open trolley gears	All frames	Socony Vacuum Dorcia #150		Semi-annually

Some bearings outside the hoist gear case are pre-lubricated, permanently sealed and need no further lubrication.

Any other lubricants equivalent to the ones listed above will be satisfactory.

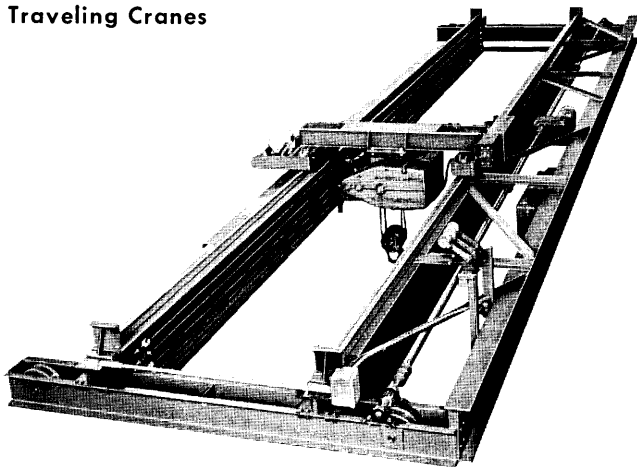
OTHER MEMBERS OF THE FAMOUS ROBBINS & MYERS MATERIALS HANDLING FAMILY . . .



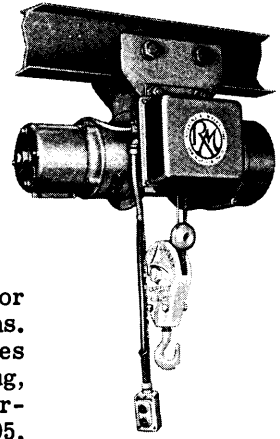
**Type C-75
Crane Trolley Hoists**

Heavy duty, Class D rated units for double girder cranes or monorail systems. Features both low profile and low headroom, direct drive trolley with rotating axles and extra duty rated motors and brakes. Capacities through 15 tons. Bulletin 900-8.

**Overhead
Traveling Cranes**

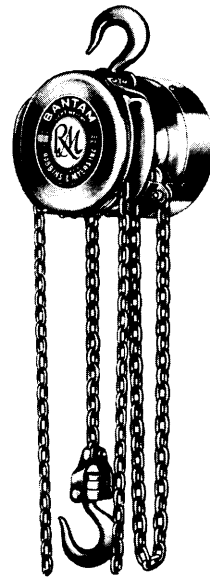


A complete line of standard units for general service. Single and double girder models in top running and underhung designs. Motor-driven or hand-gearred. Floor or cab control. Capacities to 30 tons; spans to 100 feet. Bulletin 900.



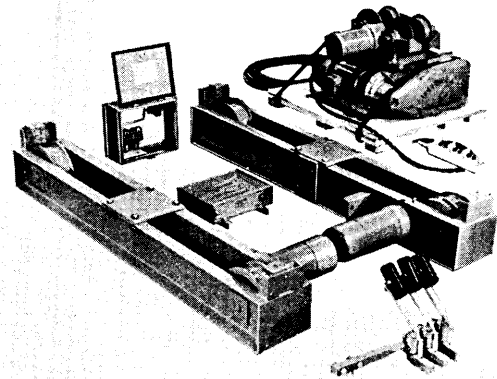
**TYPE J
Electric Wire Rope Hoists**

Modern electric hoists for handling loads to two tons. Push button control gives fast-action lifting. Lug, hook, push type or motorized trolleys. Bulletin 905.



**Spur Geared
Hand Chain Hoists**

Portable, low cost materials handling. Coil link chain permits hoisting from any angle. Capacities to 25 tons. Bulletin 5151.



Crane Components

A full line of hoists, endtrucks and accessories which enable you to build your own crane at a considerable saving in cost. Everything included except the structural members. Motor-driven or hand-gearred. Top or under-running. Capacities to 25 tons. Bulletin 900-5.

