

MOLNAR

TWO-POST HOIST

INSTALLATION, OPERATION & MAINTENANCE MANUAL

MANUFACTURED BY:

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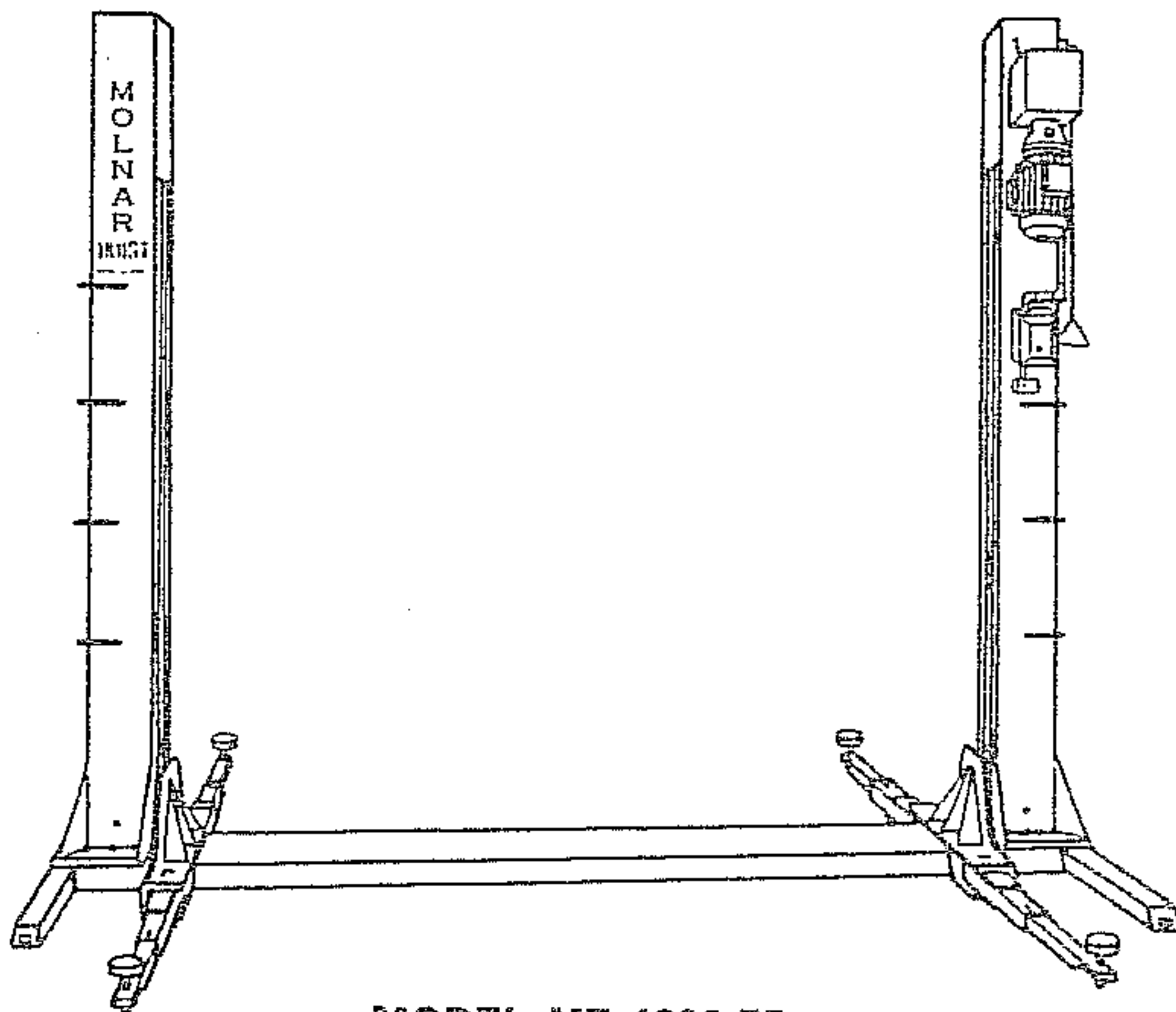
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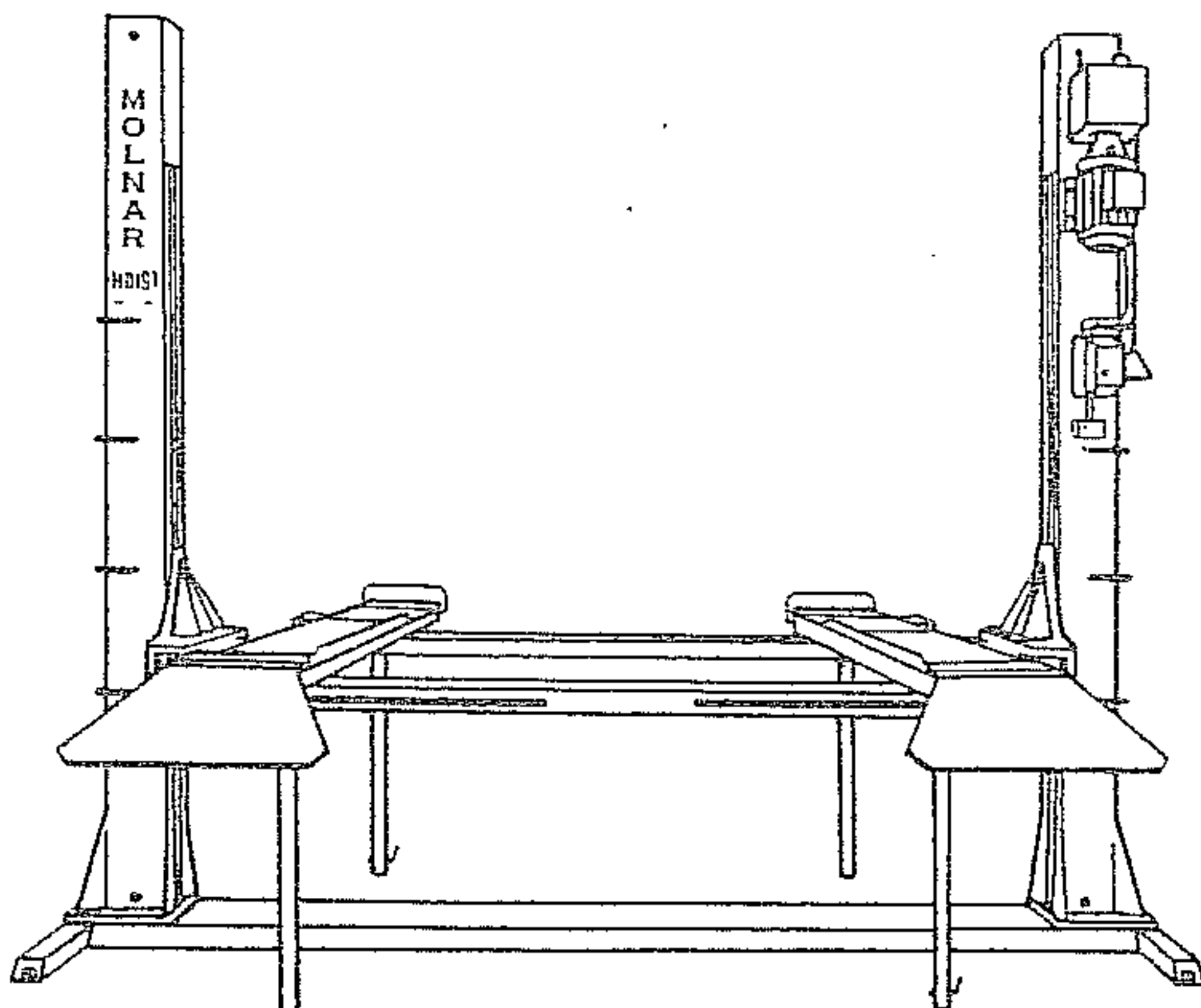
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No person should be permitted to operate the **MOLNAR TWO-POST HOIST** without first studying the operating instructions and page 14.

This manual should be kept in a safe place and referred to as necessary.



MODEL MF 4923-75



MODEL MF 4923-RT

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SPECIFICATIONS

Width Between Columns	2650 mm
Overall Width	3250 mm
Overall Height	2820 mm
Overall Length	1600 mm
Width of Base Plate	600 mm
Height of Base Plate	55 mm
Maximum Raised Height	1900 mm
Minimum Lowered Height	90 mm
Length of Lifting Arms	Max. 1020 mm Min. 610 mm
Lifting Time	20 seconds
Capacity	2500 kilograms (2.5 tonnes)
Electric Motor	3 PH, 3 HP, 2870 RPM, 415 volts, 50 c/s
Total Weight	1095 kilograms (1.095 tonnes)

The manufacturer reserves the right to alter these features and specifications.

INTRODUCTION

Here is the **MOLNAR TWO-POST HOIST**, a space saving, wheel-free hoist and its many advantages.

It has been purposely designed for space-saving and to give versatility and profitability to the largest garage and the smallest service station.

Safe, strong, simply built to give years of trouble-free service. The **MOLNAR TWO-POST HOIST** embodies many features that make it the most up-to-date equipment for quicker and more profitable service.

SAFE AND EFFICIENT OPERATION

Due to an electro hydraulic system which gives years of trouble-free service. Raising and lowering of vehicle is controlled by hydraulics, plus built-in mechanical safety against any failure, plus deadman control. The hoist is operated by means of one-arm control mounted on the hydraulic column.

INSTALLATION

The **MOLNAR TWO-POST HOIST** is fast and simple to install, only 4 bolts needed for a suitable floor. No costly excavation. It is also ideal for upper floor-level where excavation is not possible. The hoist is surface mounted, a feature which means lower overall cost. Compared with similar-priced hoists the **MOLNAR TWO-POST HOIST** can be quickly, easily and economically re-sited.

FOR SPEEDIER SERVICE

With the **MOLNAR TWO-POST HOIST** maximum accessibility is assured. No cumbersome beams or cross-sections impede the operator in any way, giving the hoist unlimited advantages, when used for unit replacement. With this lifting method the suspension springs are relaxed, facilitating lubrication and repair work. Wheel service, brake adjustment, washing, underbody spraying or sealing or any underbody repairs can be speedily carried out.

EASY TO OPERATE

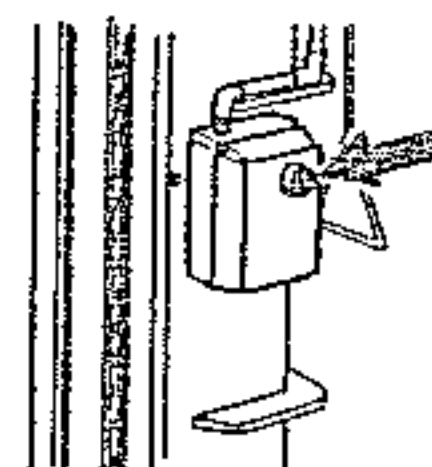
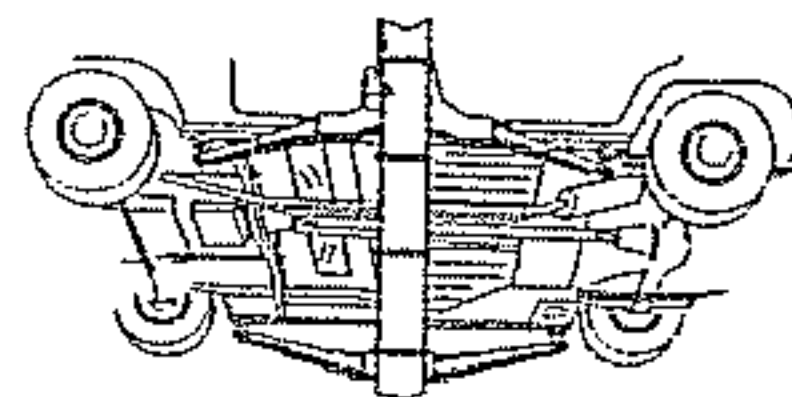
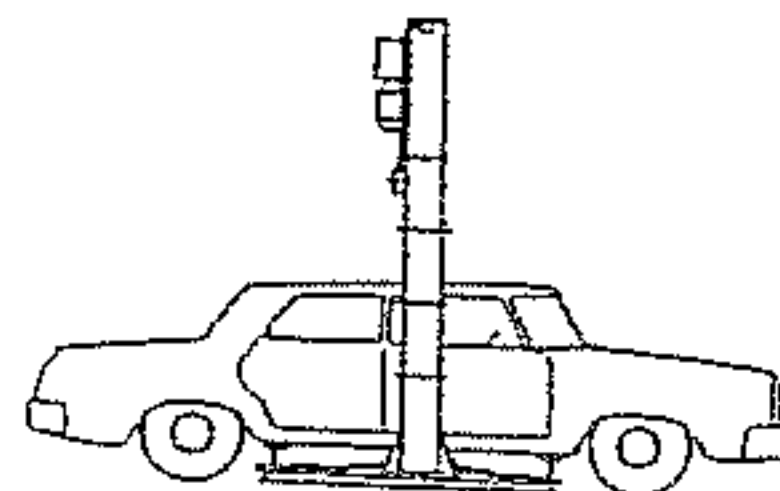
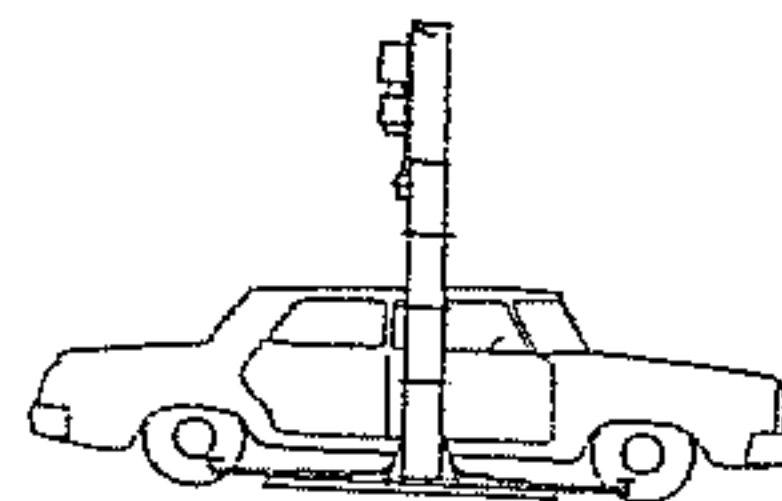
The **MOLNAR TWO-POST HOIST** is operated with the greatest of ease. The telescopic adjustable arms and contact pads are easily placed in position by one man. The operator has full confidence due to the mounting of the arms and the area of the chassis which can be contacted. The vehicle is immediately wheel-free and stable at any height.

APPROVED BY THE DEPT. OF LABOUR & INDUSTRY No. CR00164

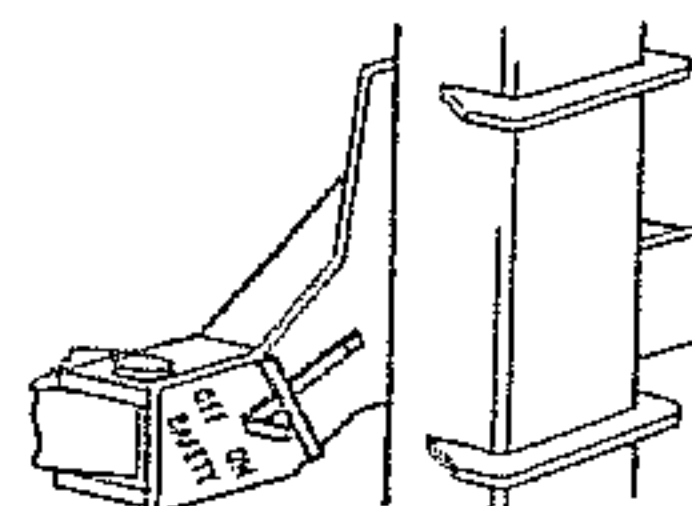
OPERATING INSTRUCTIONS

1. Drive on - with car centred over base.
2. Place the four pads under edge of car fore and aft at jack points.
3. Press starter button and raise car to required height.
4. When car reaches maximum height, limit switch will come into operation and stop hoist.
5. During the lifting of the car a clicking sound should be noticeable which indicates the safety mechanism is operating.
6. The following steps to be taken when lowering the hoist. Raise hoist approximately 50 mm. Push safety catch to the OFF position.
7. Pull release lever down and lower hoist.
8. If car is to be worked on at an intermediate position re-apply safety catch.
9. To lower to ground level. Raise car approximately 50 mm. Release safety catch and lower.

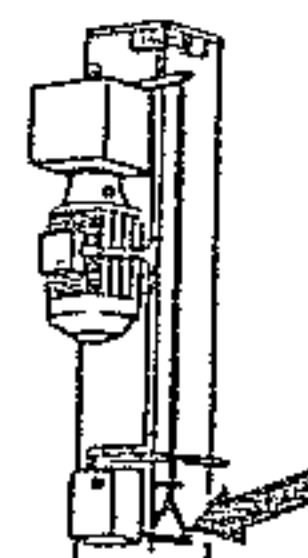
N.B. LEFT HAND SIDE SAFETY CATCH IS NOT TO BE OPERATED MANUALLY UNLESS AN EMERGENCY OCCURS.



STARTER BUTTON R.H. POST



SAFETY CATCH R.H. POST

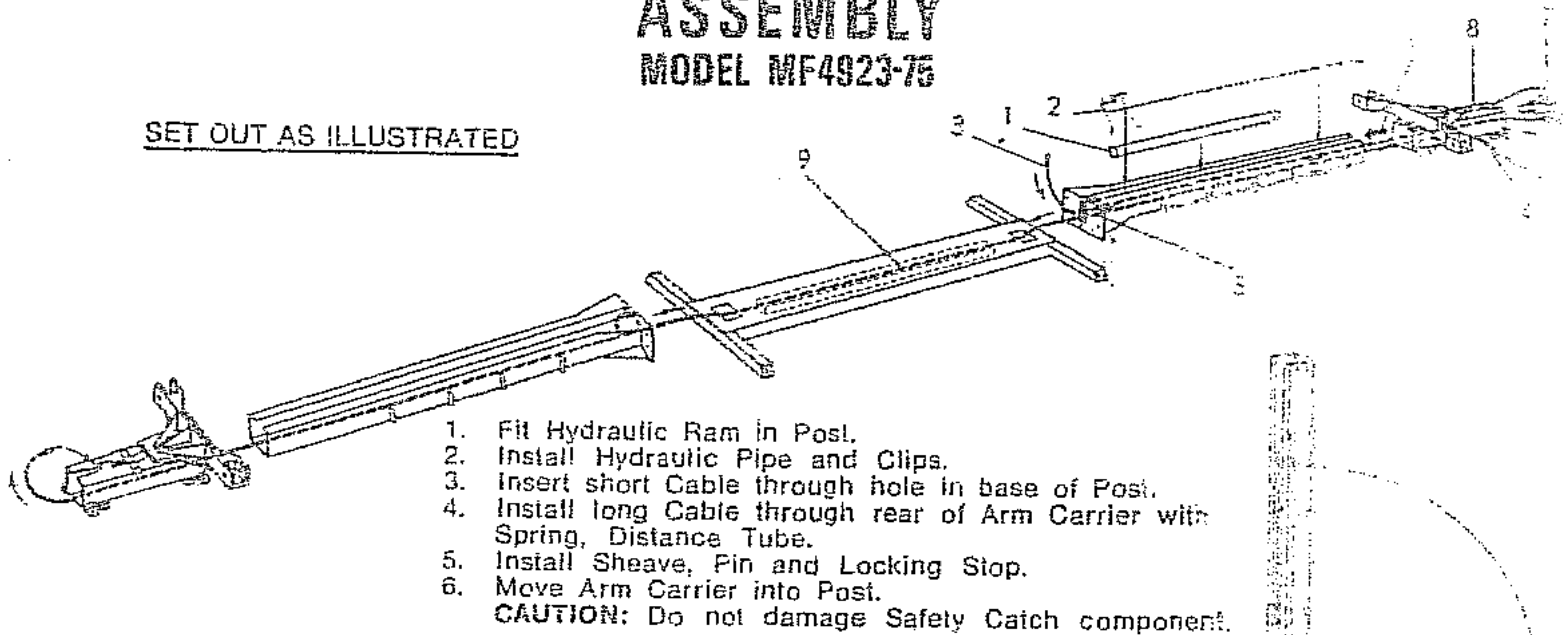


RELEASE LEVER R.H. POST

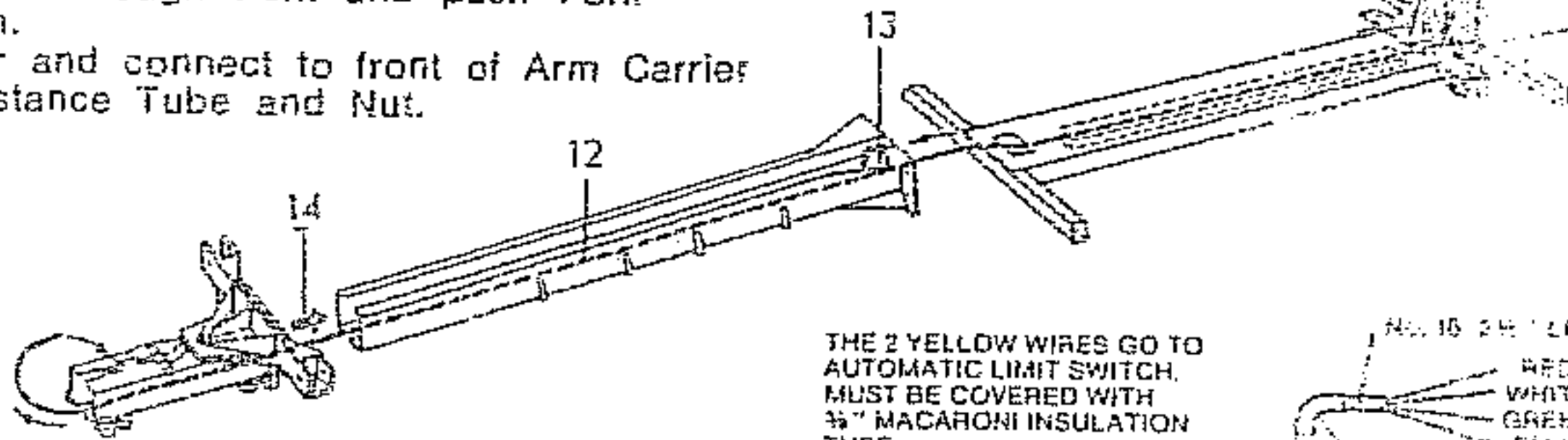
ASSEMBLY

MODEL MF4923-75

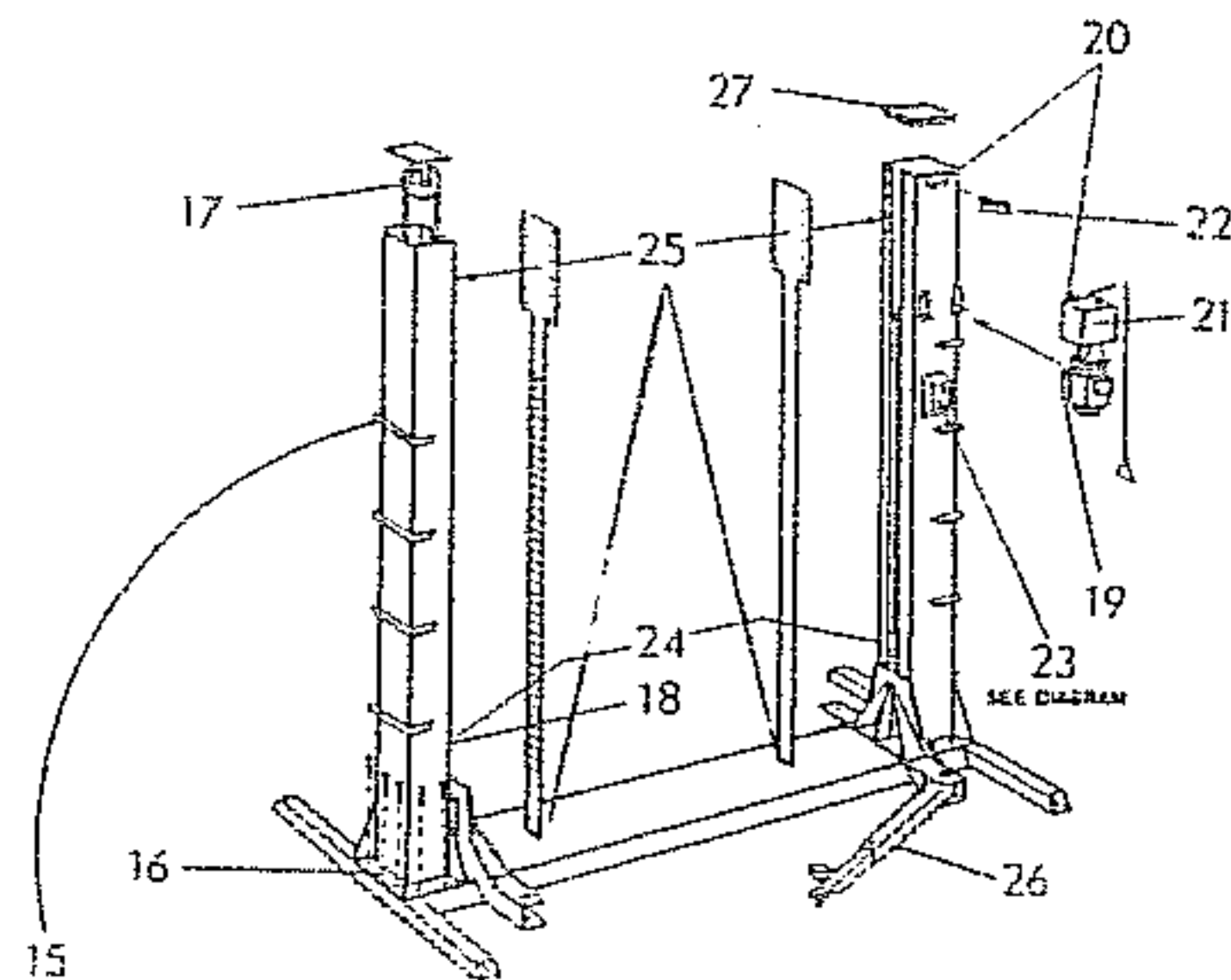
SET OUT AS ILLUSTRATED



7. Pass short Cable through Fork and push Fork into top of Ram.
8. Fold Cable over and connect to front of Arm Carrier with Spring, Distance Tube and Nut.

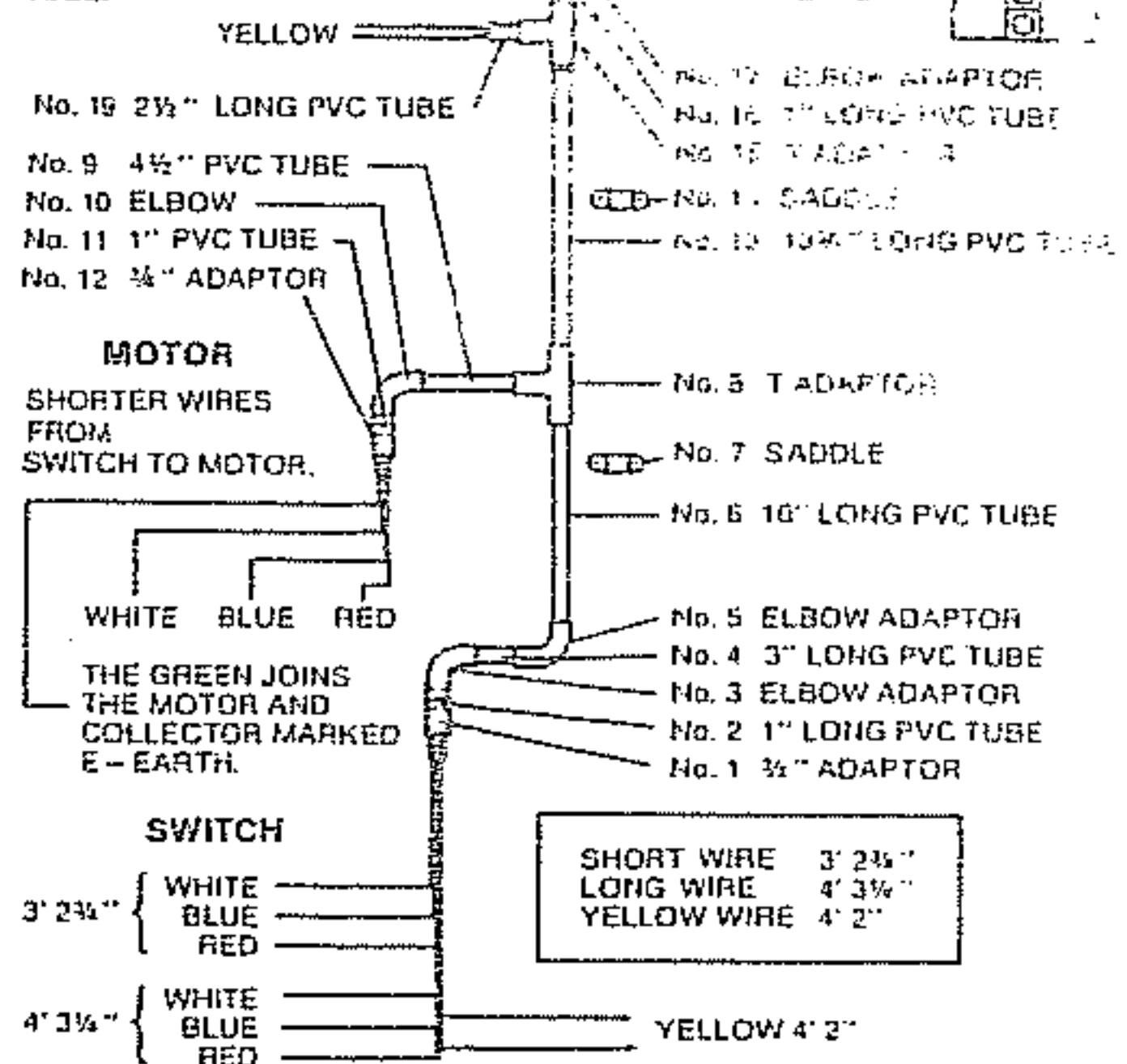


9. Insert Cable through tube located under Base Plate.
10. Stand Post Upright.
11. Secure with Bolts.
12. Feed Cable through other Post.
13. Install Sheave, Pin and Locking Stop.
14. Move Arm Carrier into Post.
15. Stand Post Upright.
16. Secure with Bolts.
17. Install top Plate and Sheave.
18. Lift Arm Carrier approx. 450mm to connect Cable to front of Carrier using Spring, Distance Tube and Nut.
19. Mount Power Unit to brackets.



★ N.B.: GREASE 4 SHEAVES BEFORE USE.

THE 2 YELLOW WIRES GO TO AUTOMATIC LIMIT SWITCH. MUST BE COVERED WITH 3/8" MACARONI INSULATION TUBE.



20. Connect Hydraulic Pipe to Power Unit
21. Fill tank with Mobil D.T.E. Light Oil
22. Attach Limit Switch
23. Attach Motor Starter Unit. See diagram for correct wiring.
24. Adjust Left Cable so Carrier is approx. 100mm from ground. Adjust Right Cable for thread to protrude approx. 25mm. (If longer cut off excess thread).
25. Bolt on Safety Straps to Posts.
26. Install Arms.
27. Mount Dust Cover on top of Post.
28. Bolt down base with 4 — 5/8" Dynabolts.
29. Connect to Mains Power.

FLOOR REQUIREMENTS FOR HOIST BASE

For correct installation of the Hoist the floor must be flat and level. A level tolerance between posts of 10 mm is allowable. Check with straight edge and spirit level. See Fig. 1.

In situations where the floor is too soft a reinforced concrete slab, 3850 x 2200 x 120 mm should be laid. (Cement 1 Sand 3 Metal 6). If the floor is solid but not quite level, it may be compensated for with steel shims. See Fig. 2.

If shims are used they must also be placed at the points A. B. C. D. & E. as required to maintain the level and stability of the Hoist. See Fig. 3.

A concave or convex section to be used as a floor for the Hoist base may be levelled with the use of a sand and cement mix. See Fig. 4. (Cement 1 Sand 5). 5/8 inch Dynabolts are recommended for fastening down. See Fig. 3.

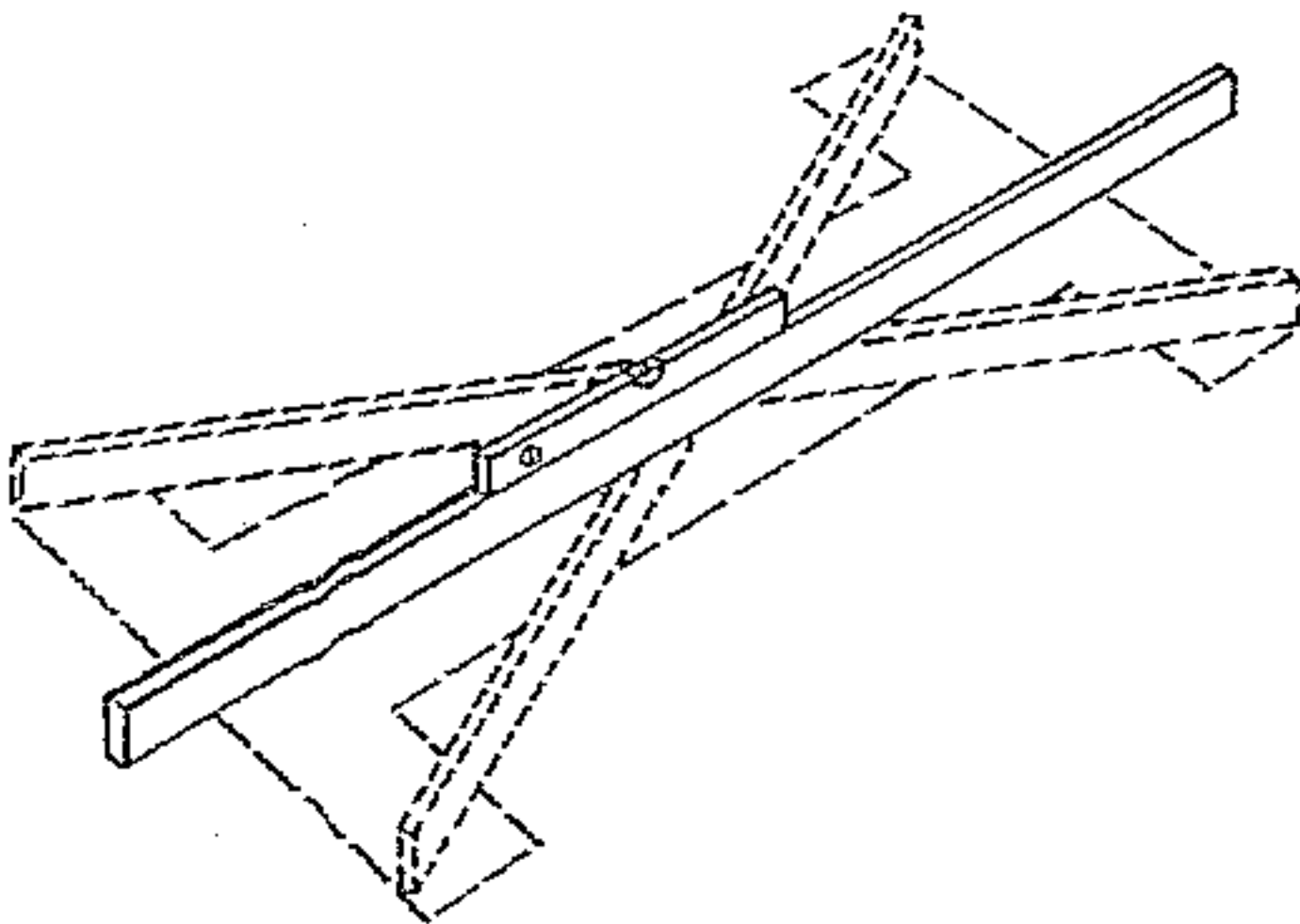
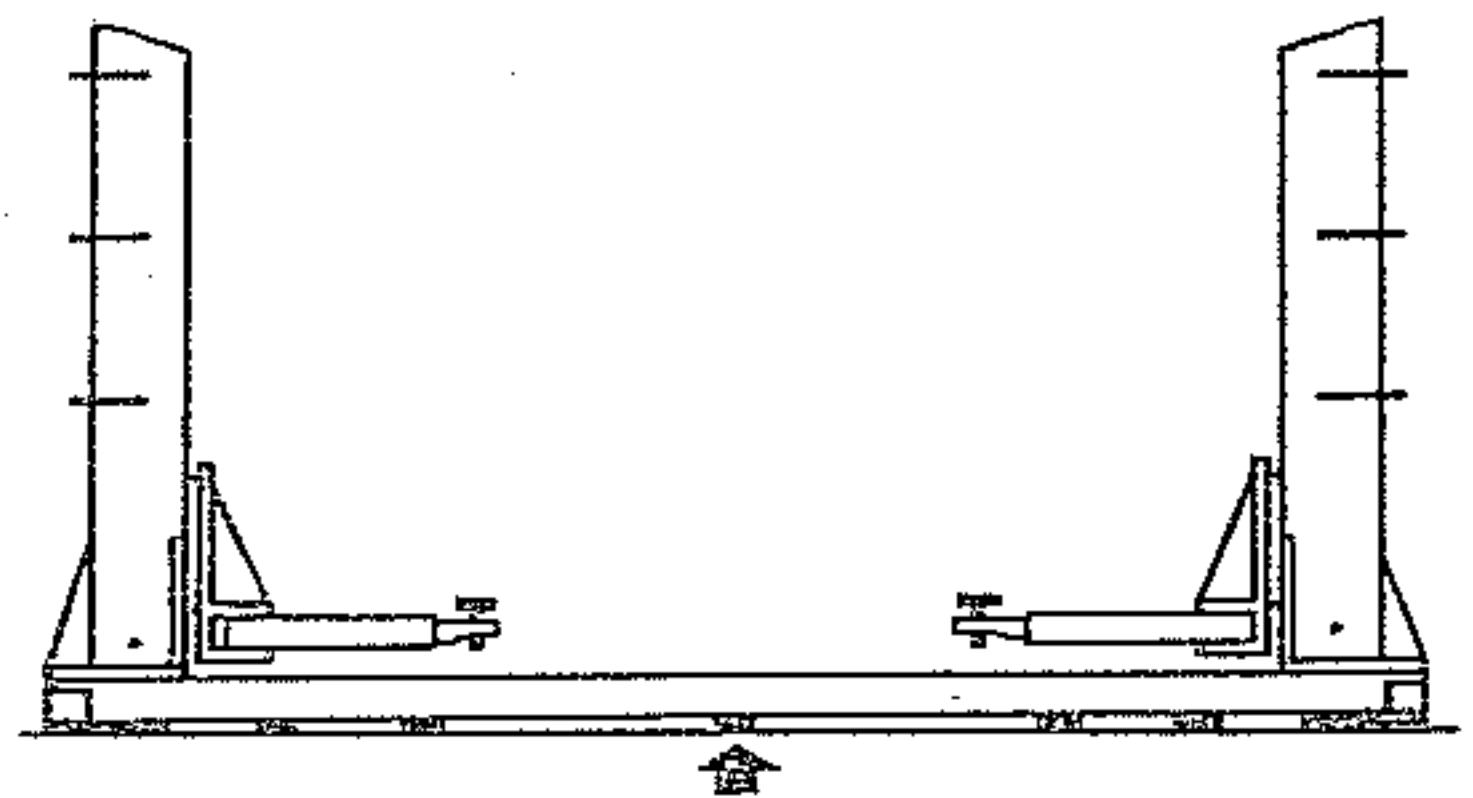
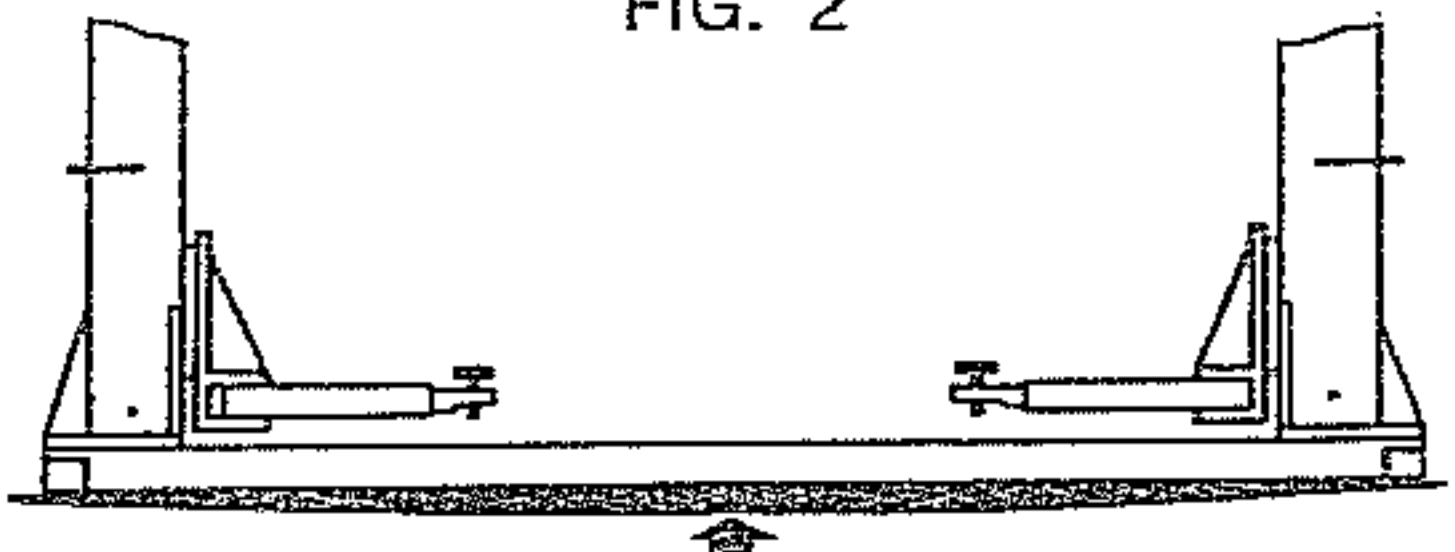


FIG. 1

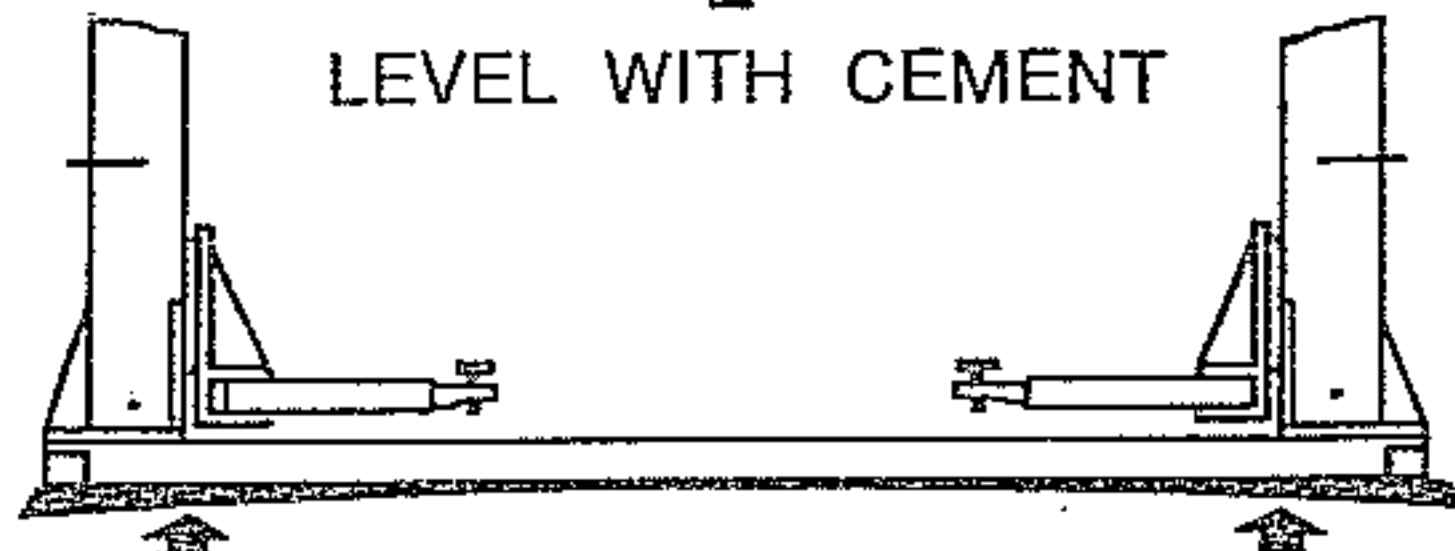


PACKING SHIMS
FIG. 2

10 mm
Tol.



LEVEL WITH CEMENT



LEVEL WITH CEMENT

FIG. 4

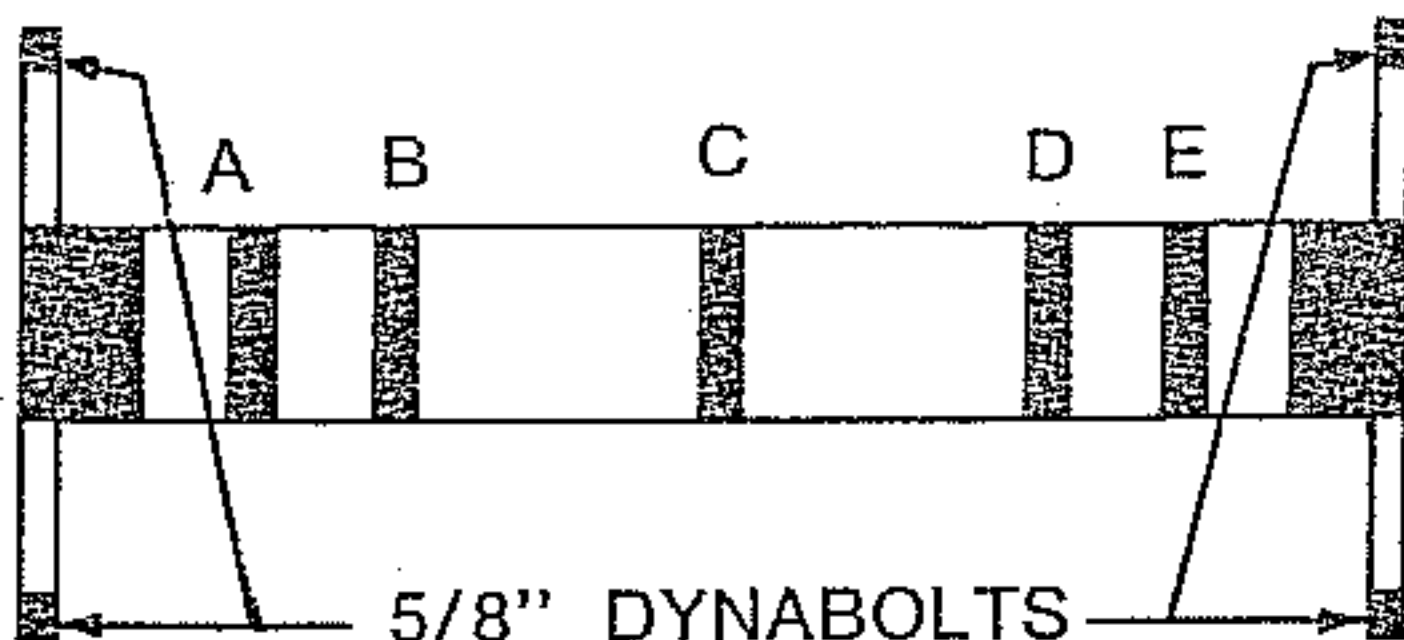
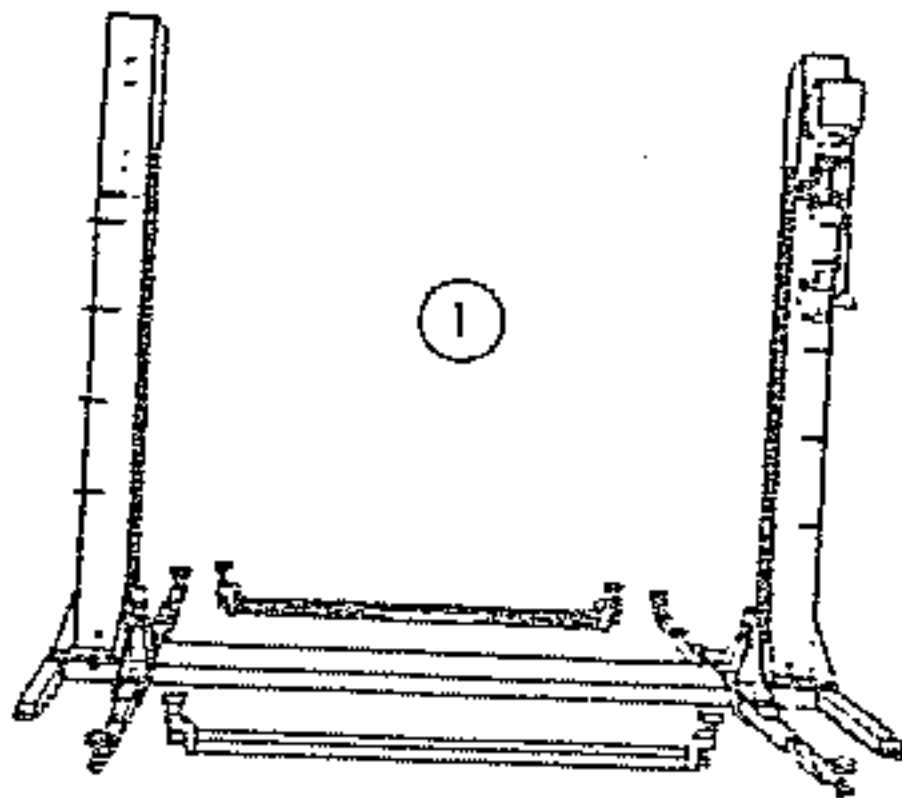


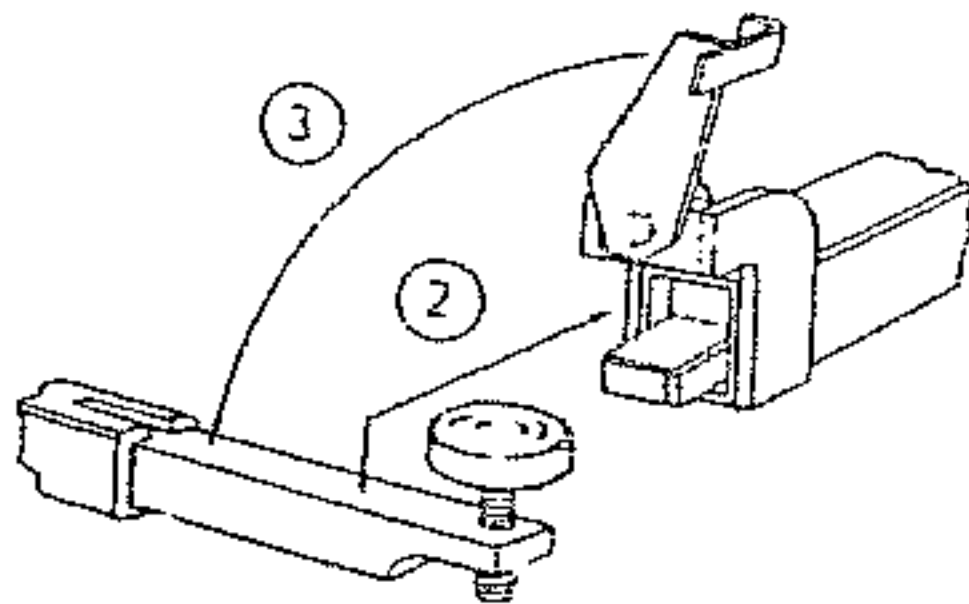
FIG. 3

ASSEMBLY OF RAMP BASE

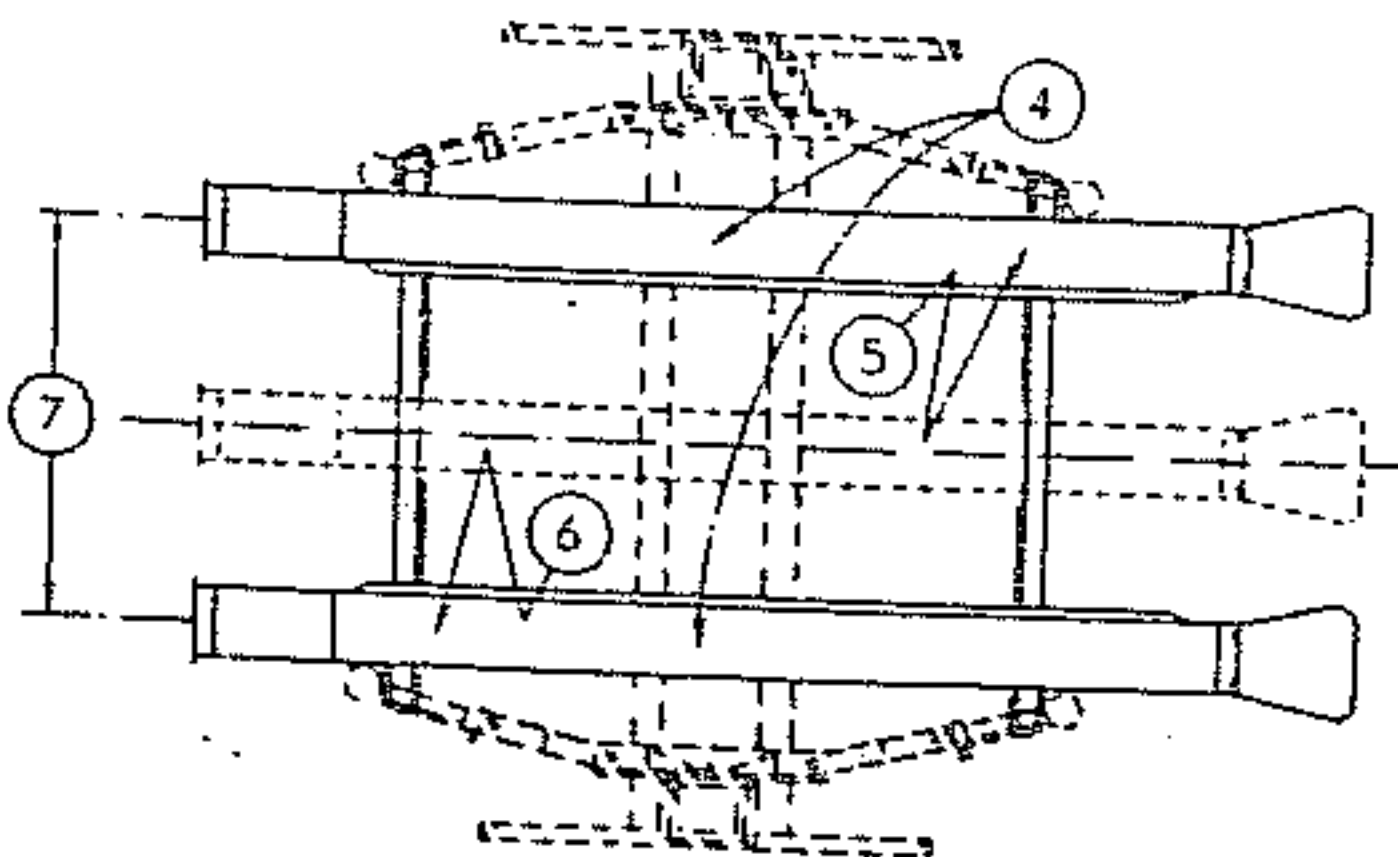
The **MOLNAR TWO-POST HOIST** also comes with a Ramp Base. This base, for wheel aligning and general work, can be purchased as a separate item and installed at any time.



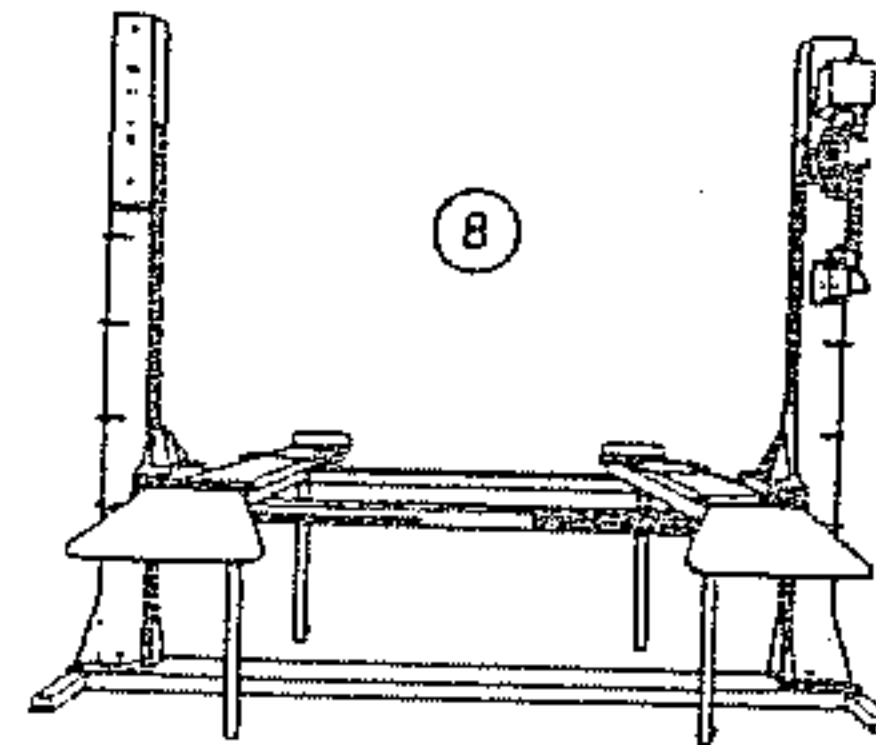
1. With arms of hoist extended parallel in lowest position, place front and rear cross-members between small extensions.



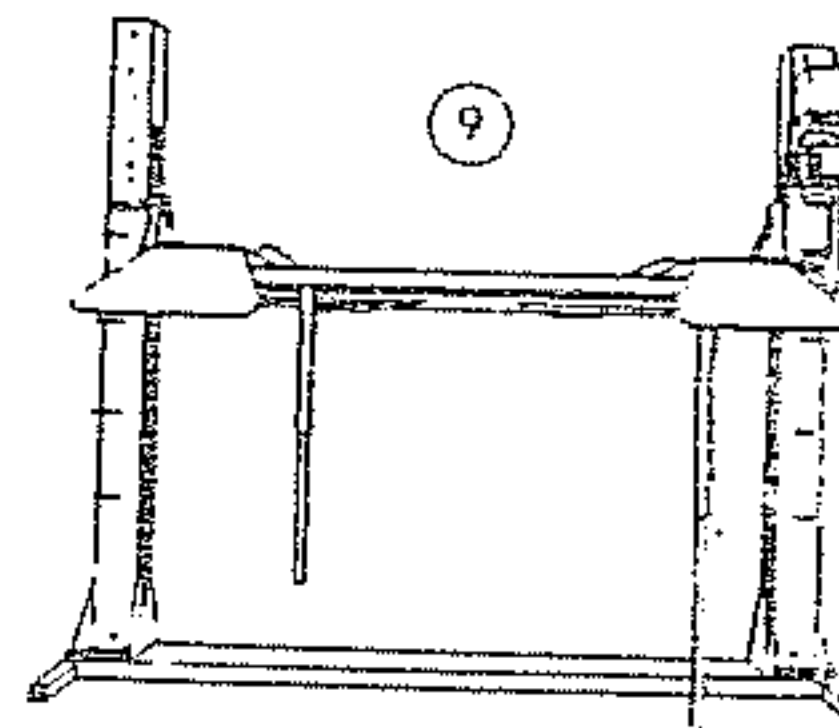
2. Swing arms inward to fit between fork and support on cross-member ends.
3. Push down locking lever.



4. Place R.H. and L.H. ramps on cross-members.
5. Move R.H. to centre of cross beams (between guides) and drop in. Roll to the right.
6. Move L.H. to centre of cross beams and drop in. Roll left.
7. Adjust ramps to width of track.



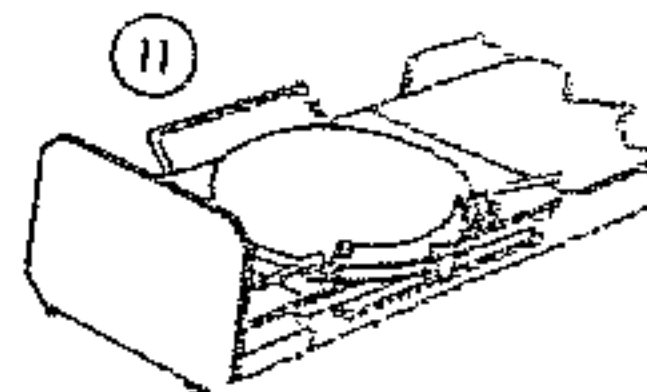
8. Ramps with supports down for Wheel Alignment.



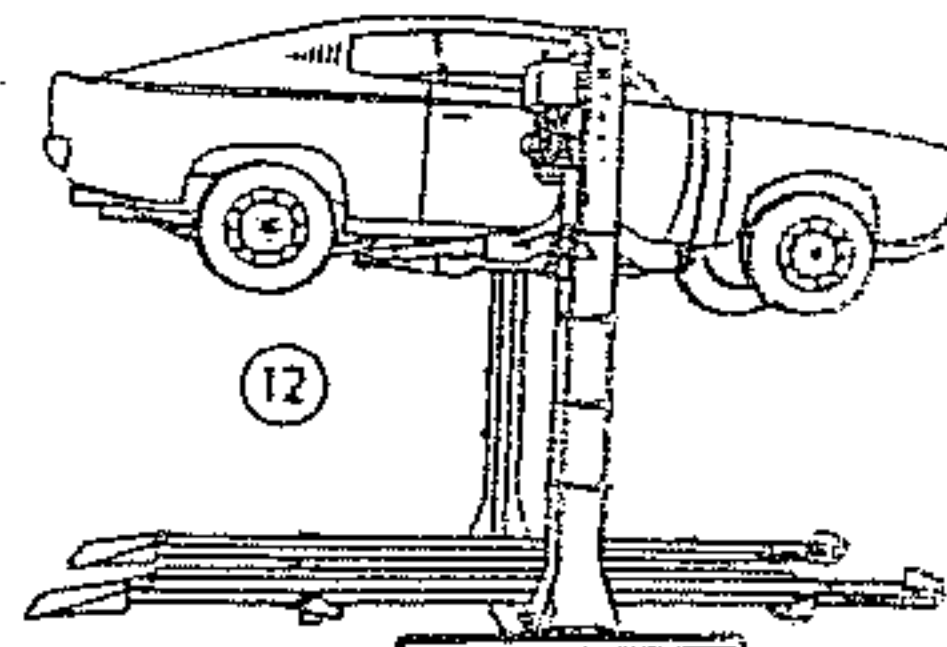
9. Adjustment for rigidity on diagonal corners.



10. Plate will automatically rise to restrain car when hoist is raised.



11. Roll car forward to turntable for wheel aligning.



12. To obtain a wheel free situation, reverse procedures 3 and 2 and place arm pads under jack points of car.

MAINTENANCE

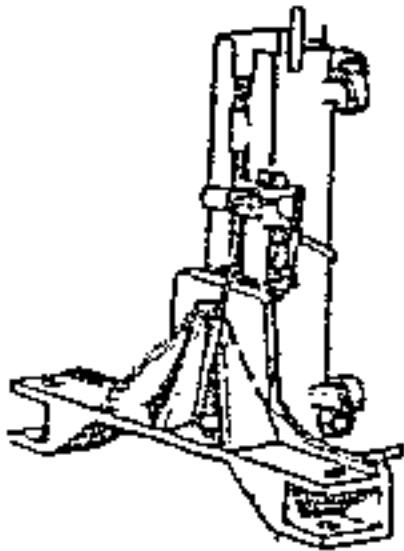
CHECK MONTHLY

1. Safety mechanism operation
2. Condition of Sheaves, Shafts and Shaft Locks.
3. Cable condition.
4. Overall cleanliness

CHECK 6 MONTHLY

1. State of swivel arms.
2. Oil leaks from cylinder.
3. Oil leaks at pipe joints.
4. Anchor bolts.

SAFETY DEVICES



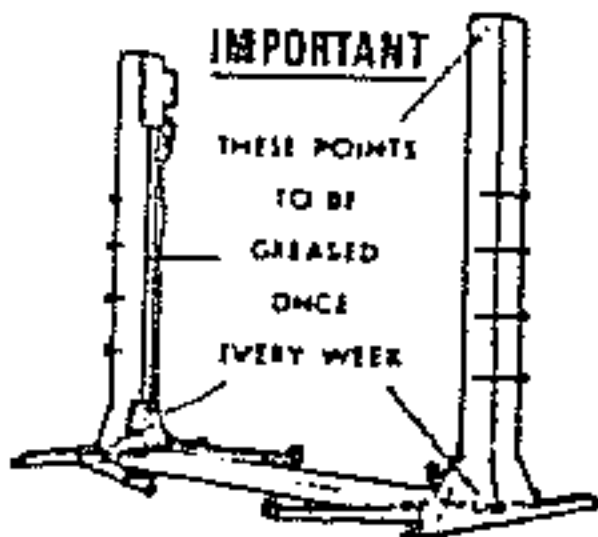
Check safety mechanism to see that it functions properly. If worn excessively replace whole unit.

See REPLACEMENT OF SAFETY MECHANISM OR GUIDE BEARINGS.

HYDRAULIC SYSTEM

Hydraulic oil should be replaced every 2 years. Move arm carriers to lowest point and siphon oil out through breather hole in tank. Fill to 2.5 mm (1") from top of tank with SHELL TELUS 27 OIL, MOBIL D.T.E. LIGHT OIL, CASTROL A.W.H. 32 HYSPIN or equivalent. Top up as necessary.

SHEAVES AND SHEAVE SHAFTS



It is **important** to grease sheave shafts weekly. This saves wear on sheaves and cables. To replace sheaves or shafts raise arm carriers and chock up. Take off shaft lock and remove shaft and sheave. Replace and lower arm carriers.

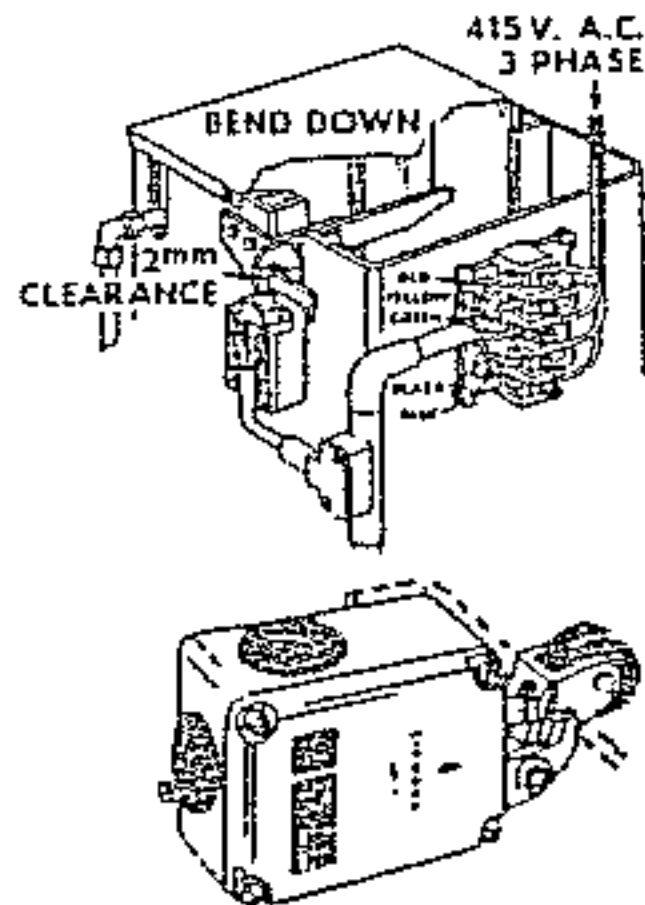
CABLES

Inspect for wear and rust. Smear with water resistant grease 6 monthly. To replace cables, reverse assembly procedure from item 20 or see page 12. To tension either cable, if necessary, screw up cable nut (D5) as required.

LUBRICATION

4 grease nipples to be greased weekly as shown on diagram. Smear cables with water resistant grease every 6 months. When not in use the arm carriers should be left on the floor.

LIMIT SWITCH

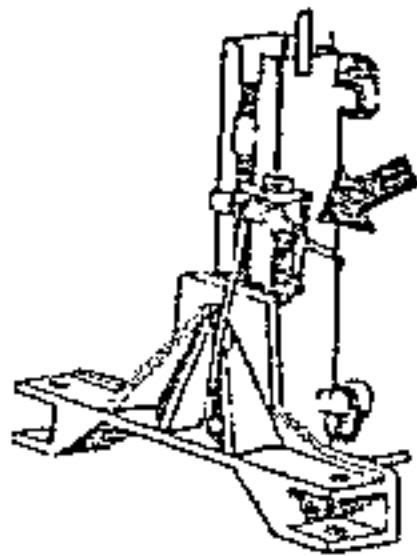


Straighten arm leaving 2 mm gap and lubricate.
(early models only).

If motor rotates in wrong direction interchange these two cables.

New Limit Switch. No maintenance required.

SAFETY MECHANISM

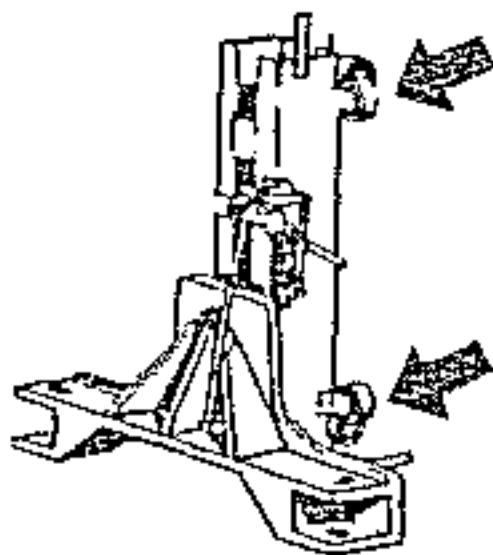


Replacement of safety mechanism.

Remove carrier from post. See page 12.

Replace whole unit.

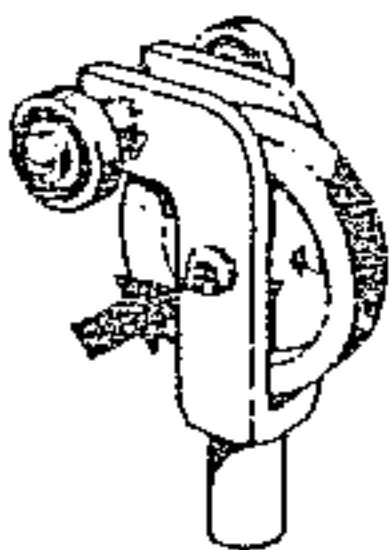
CARRIER GUIDE BEARINGS



Replacing of carrier guide bearings. Remove carrier from post. See page 12. Using a puller take off guide bearings. Replace with pressure. Do not hammer.

Do not damage guide bearing shafts.

FORK AND SHEAVE

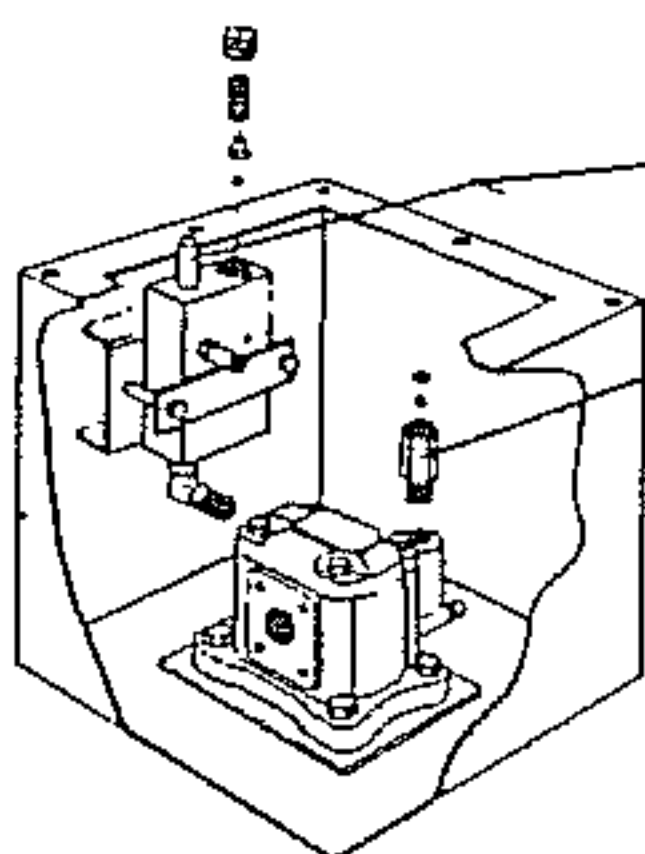


Grease fork sheave shaft. To replace fork guide bearings. See illustrations 1 to 7 page 10.

Guide bearings should be removed with a puller and replaced with pressure. Do not hammer.

Do not damage guide bearing shafts

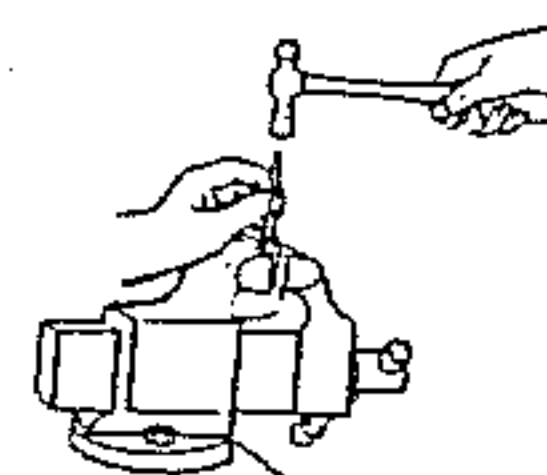
RELEASE VALVE



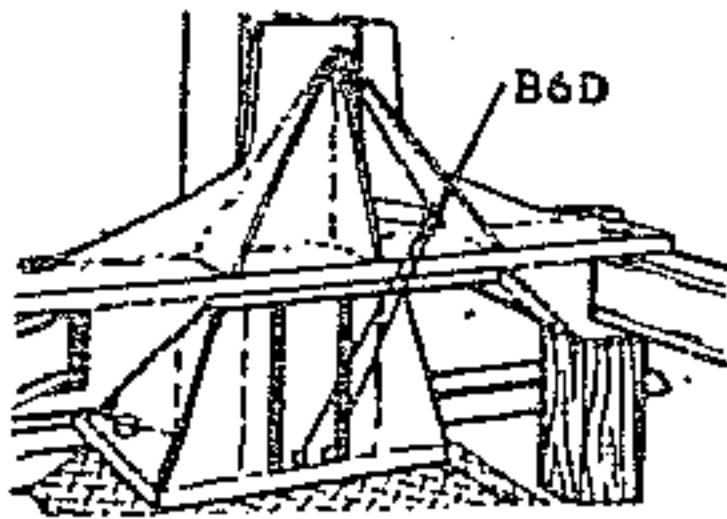
If not seating properly rotate one full turn.

NON-RETURN VALVE

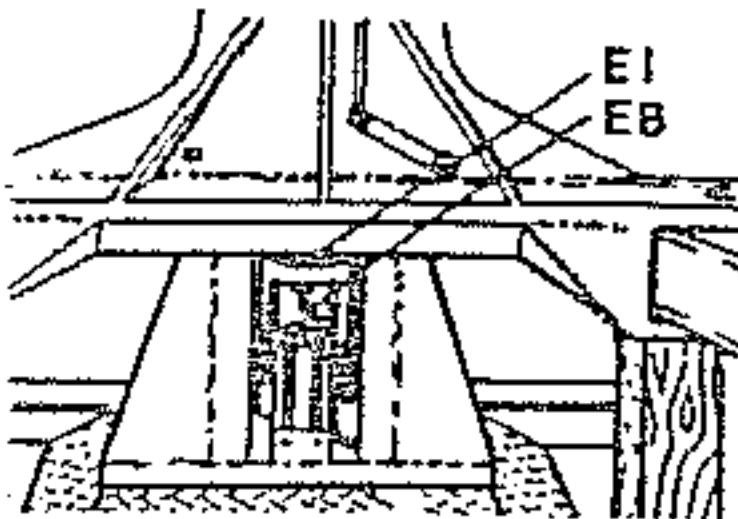
Take out washer and ball.
Clean and reseal ball.
To reseal place ball in valve
and give a sharp tap with
punch and hammer.



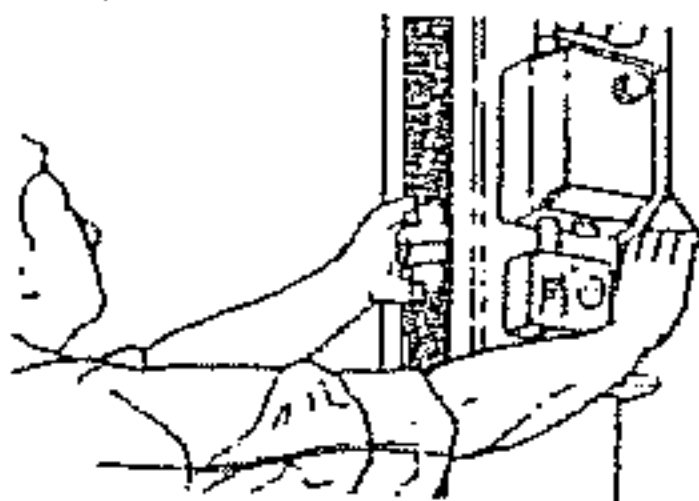
TO SERVICE OR REPLACE HYDRAULIC CYLINDER



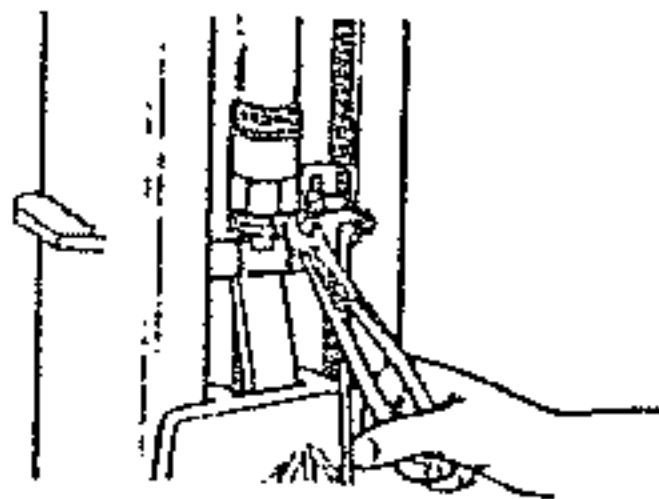
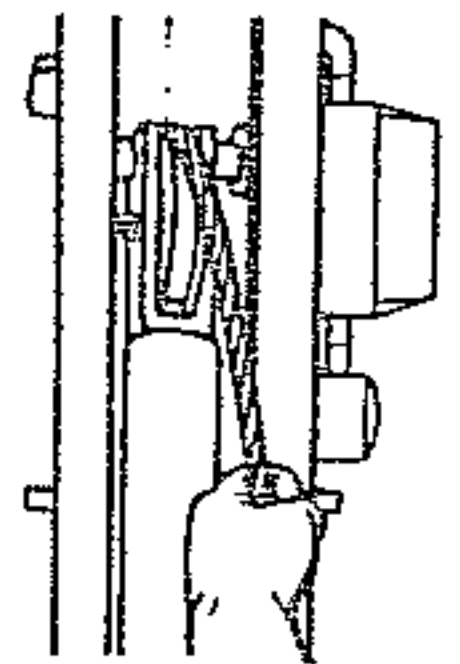
1. Raise carriers approx. 460 mm (18"). Place block under carrier and lower carrier. Loosen bolts (B6D) at bottom of safety strap. Undo 12 bolts at top and remove dust cover and safety strap.



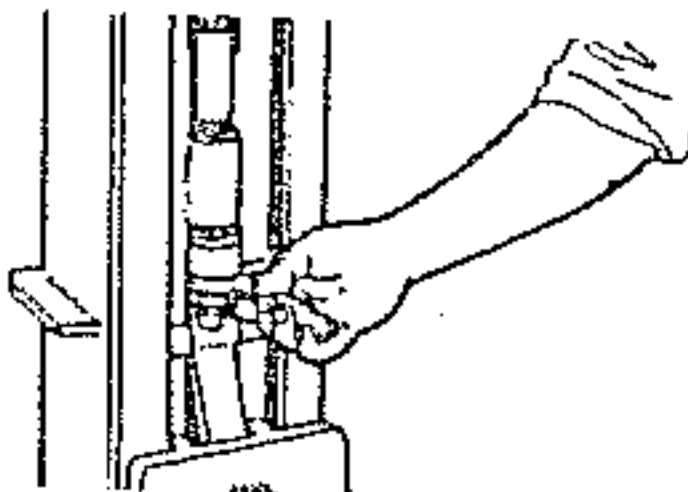
2. This will expose oil pipe (E8) and base of hydraulic cylinder (E1).



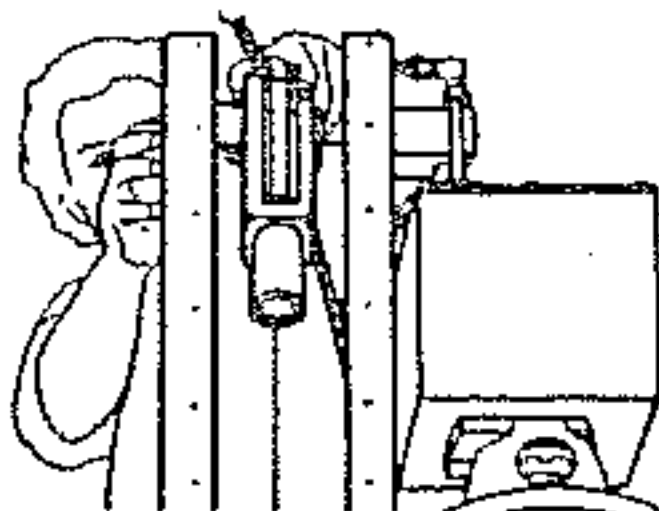
3. Pull release lever down and at the same time pull on the cable to completely compress hydraulic cylinder.



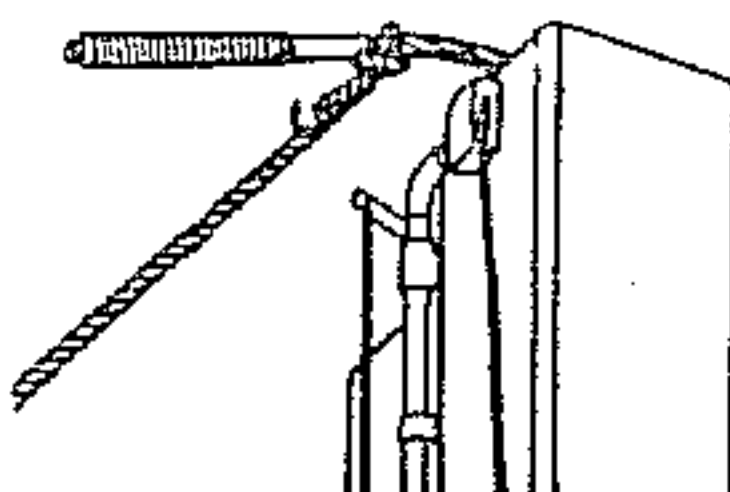
4. Withdraw split pin at end of cable screw attachment.



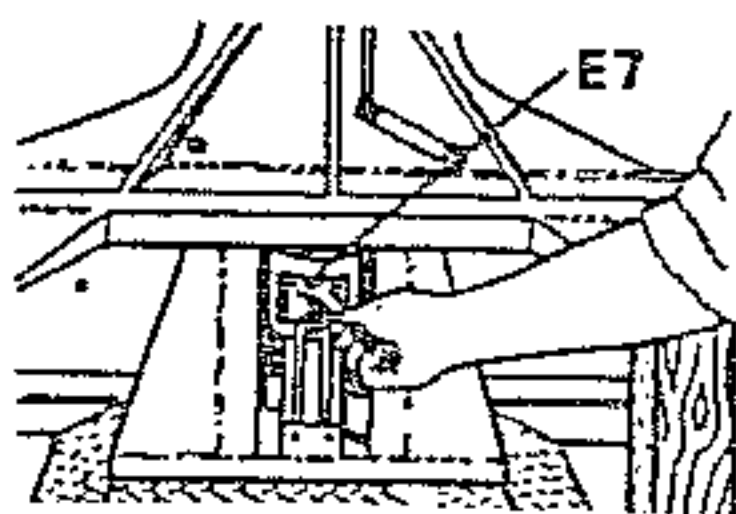
5. Unscrew nut (D5) and withdraw cable from carrier.



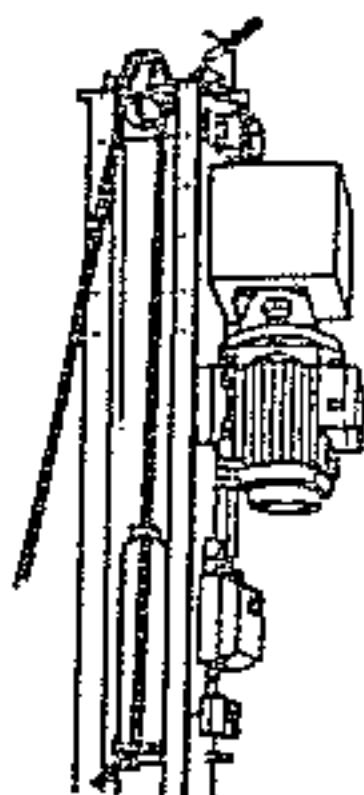
6. Raise cable vertically and lift out fork and sheave.



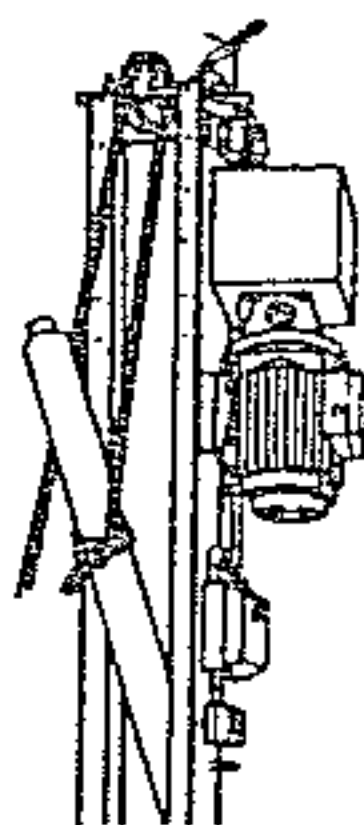
7. Tie back cable.



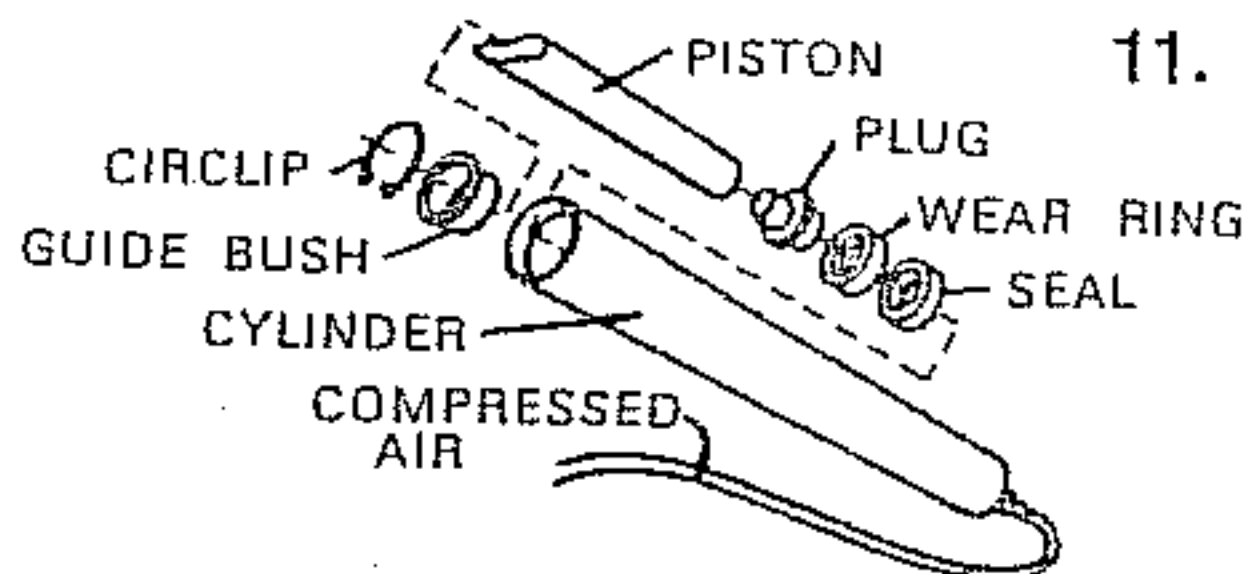
8. With cylinder completely compressed (to prevent excessive oil spillage) unscrew nut (E7) and disconnect oil pipe.



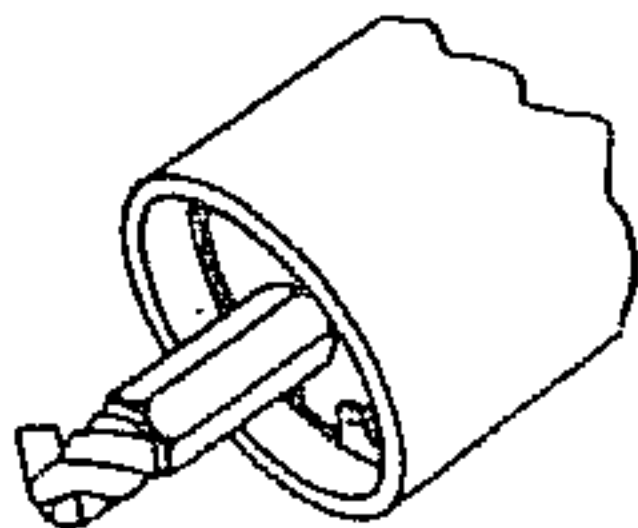
9. Using sheave from fork, as a pulley, lift cylinder off base.



10. Take cylinder out of post.



11. To remove piston take out circlip and apply compressed air to nipple. Inspect cylinder wall for rust or scouring. If scoured the cylinder wall must be re-honed or the malfunction will continue. If rusted it must be re-honed or replaced.



12. N.B. When returning cylinder to post be sure to cover nipple with insulation tape to prevent damage to thread. Install in reverse order.

REPLACEMENT OF SAFETY MECHANISM OR GUIDE BEARINGS

To remove carrier from R.H. post.

Raise carriers approximately 460 mm (18"). DISCONNECT MAINS POWER. Loosen 2 bolts (B6D) at bottom of safety strap, undo 12 bolts at top and remove dust cap and safety strap.

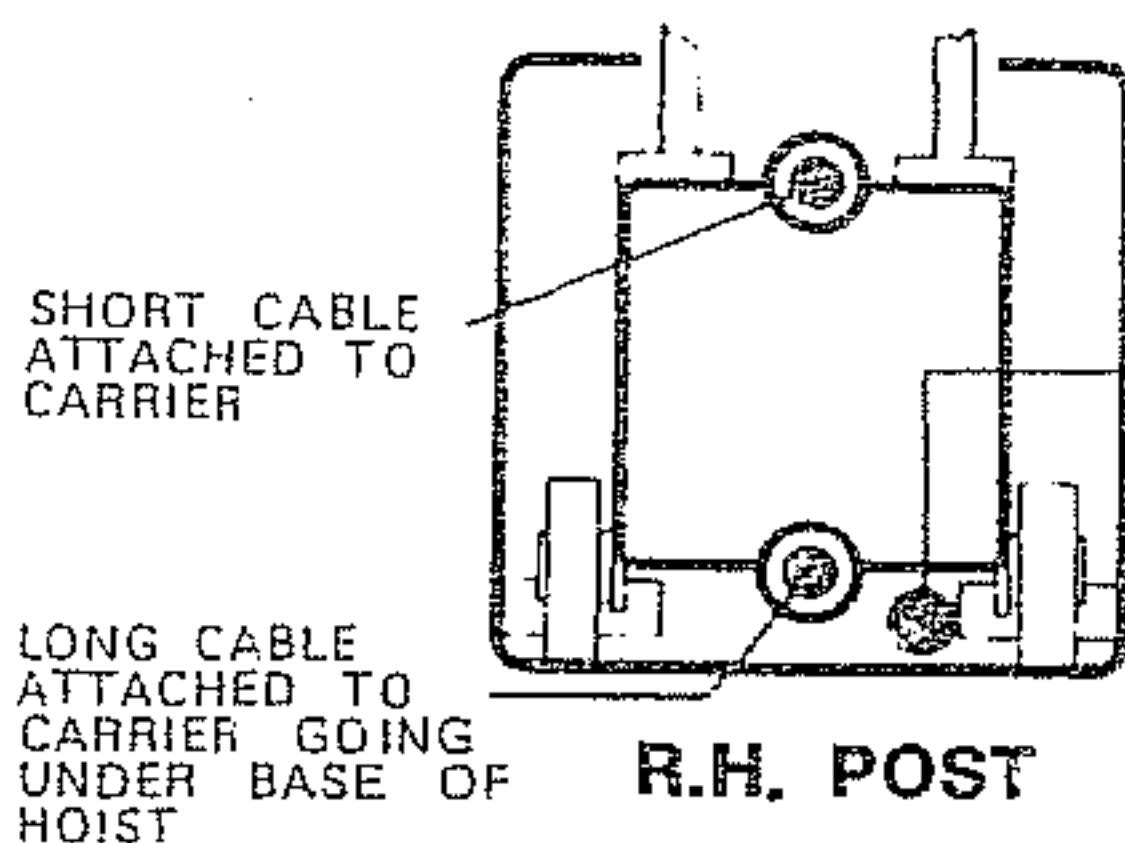
Remove safety strap from L.H. post. Remove arms R.H. post. Place block 300 mm (12") high under L.H. side carrier and lower carrier on to it. Lower R.H. carrier to ground level so that cable is slack. Undo L.H. side cable nut (D5) and remove L.H. top plate and sheave, place on ground in front of L.H. post. Disconnect wires from motor. Unscrew limit switch arm from post, (early models only) or remove limit switch, see limit switch maintenance page 9. Undo elbow at top of tank. Undo 4 nuts supporting motor and tank unit and remove motor and tank. Undo bolts at base of post. Place block of wood approx. 1,250 mm (7') from base of hoist. Slide post forward on base approx. 2.5 mm (1") then lower backwards onto block. Undo cable nut at R.H. post and lay cable back. Remove fork and sheave then slide out carrier.

N.B. BE CAREFUL NOT TO DAMAGE SAFETY MECHANISM. MAKE SURE CABLES ARE NOT CROSSED WHEN RE-ASSEMBLING.

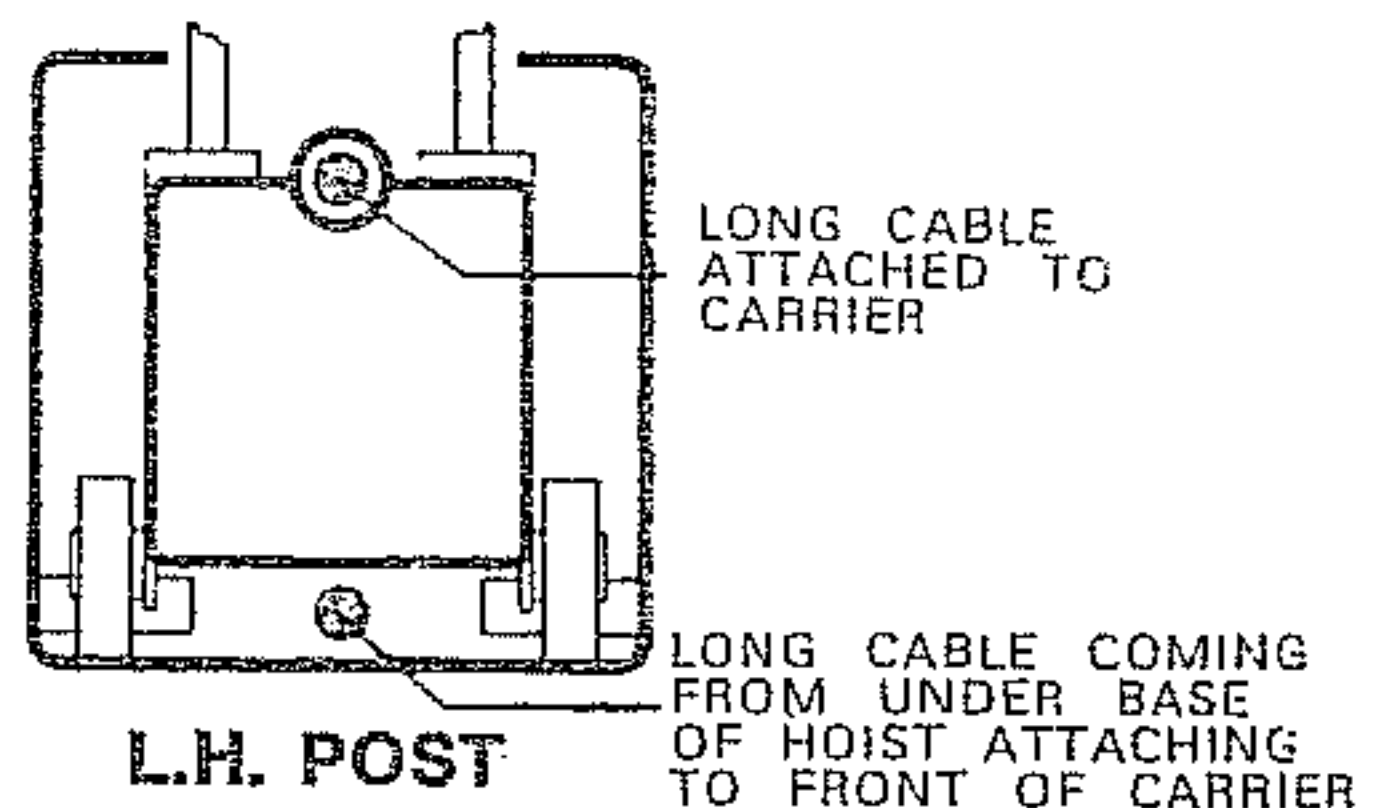
To remove carrier from L.H. post.

Raise carriers 460 mm (18"). Remove safety strap. Remove arms. Place block under L.H. carrier and lower. Lower R.H. carrier to ground to slacken cable. Disconnect L.H. cable and remove top plate and sheave. Lower carrier to ground by lifting carrier manually and removing block. Undo 7 bolts on base of post. Place block of wood approx. 2,150 mm (7') behind post. Slide post forward on base plate approx. 2.5 mm (1") and lower post backwards onto block. Lay cable back in post extending fully. Slide carrier out. MAKE SURE NOT TO DAMAGE SAFETY MECHANISM.

Re-assemble in reverse order. ENSURE THAT THE CABLE IS BETWEEN CARRIER AND POST.



SHORT CABLE SECURED TO BASE OF POST



DON'TS

1. Do not try to lift anything beyond the maximum capacity - 2,500 kg.
2. Do not operate without first ascertaining the safety of people and equipment in the area.
3. Do not go under car or make adjustments while hoist is in operation.
4. Do not try to adjust bearer pads engaged to jack points, while the hoist is in operation.
5. Do not fail to inspect safety devices periodically to see they are in proper working condition.
6. Do not make unauthorised changes to safety equipment.
In emergency consult this manual or your local dealer.
7. Do not oil or grease swivel arms as they should not move in or out while hoist is operating.
8. Do not fail to protect operating switch from water if the hoist is used for car washing. Cables should be smeared with water resistant grease.
9. Do not try to adjust relief valve as it has been set at maximum operating efficiency.
10. Do not turn off mains power while hoist is operating.
11. Do not force safety lever arm into the off position while weight is resting on safety strap.

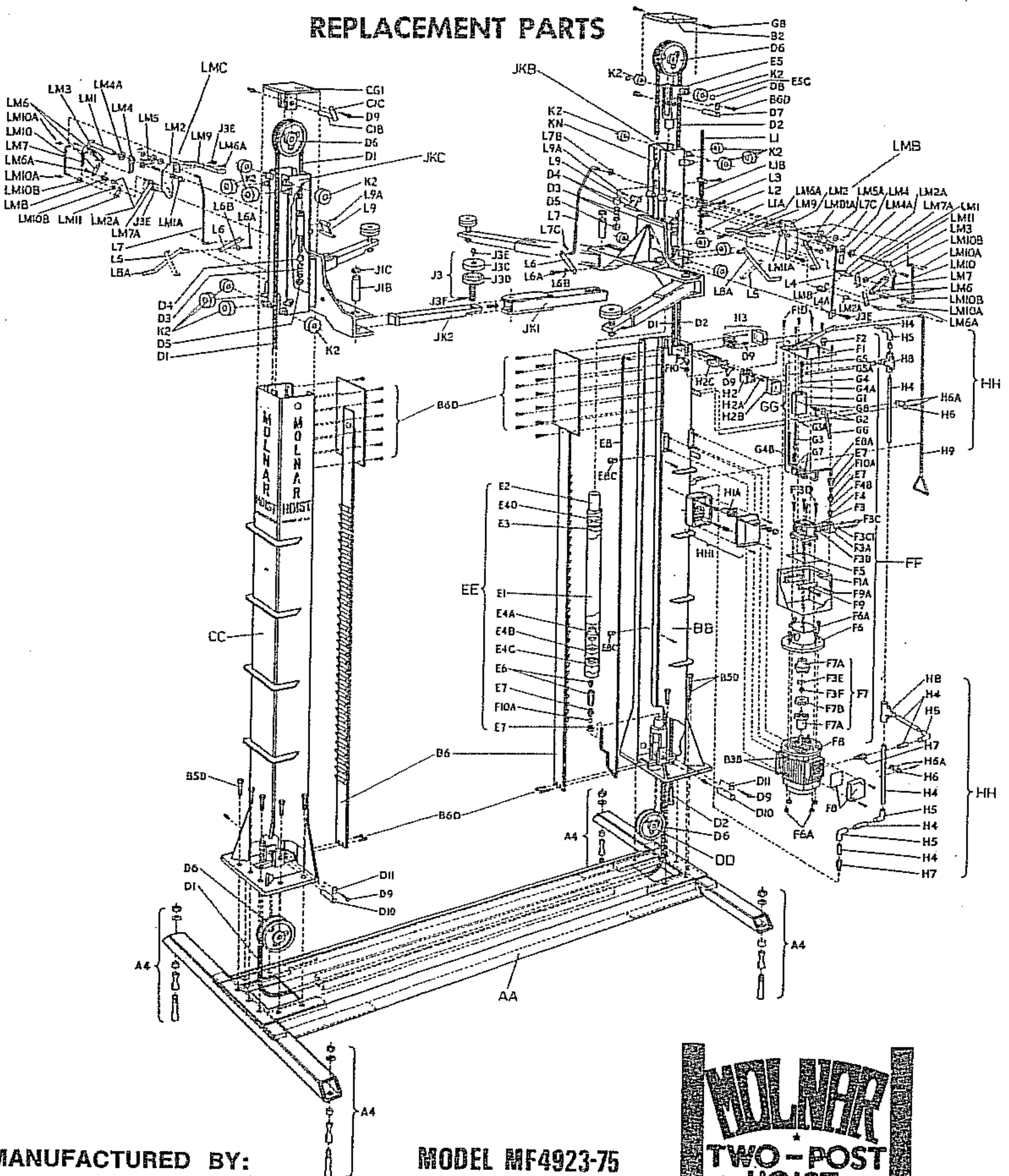
FAULT

PROBABLE CAUSE

REMEDY

Leakage of oil at joints	Loose joints in the high pressure pipes	Inspect the piping and tighten joints
Leakage of oil at top of hydraulic cylinder	Worn packing seal in hydraulic cylinder	Replace packing seal or cylinder
Lack of lifting power	Release valve not seating properly or a loose connection inside of tank Obstruction in suction side of pump	Rotate valve stem one full turn Tighten connections Remove and clean out tank, refill with fresh oil
Hoist fails to stay up	Release valve not seating properly Loose joints in oil line in the tank or outside if non-return valve is not seated correctly return oil pressure will rotate electric motor	Rotate release valve stem on full turn or replace Tighten joints Check for dirt or possible damage to valve seat. Clean or replace. See page 10.
Hoist does not respond to operation switch	Power supply to motor is interrupted Motor turning in opposite direction Cables either cut or damaged Open circuit at Limit Switch. Sticky or bent Limit Switch arm	Check main fuse, power source, magnet switch and terminal relay. Interchange 2 terminals in 3 phase circuit See page 10 Replace cables Straighten arm, leaving 2 mm gap and lubricate (early models only)
Damaged cable	Worn sheaves and sheave pins, due to lack of lubrication	Replace sheaves, sheave pin and cables

REPLACEMENT PARTS



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MOLNAR ENGINEERING PTY. LTD.

MODEL MF4923-75

18-20 COGLIN STREET, BROMPTON, S.A. 5007
 TELEPHONE: 46 6893
 TELEX: 89938

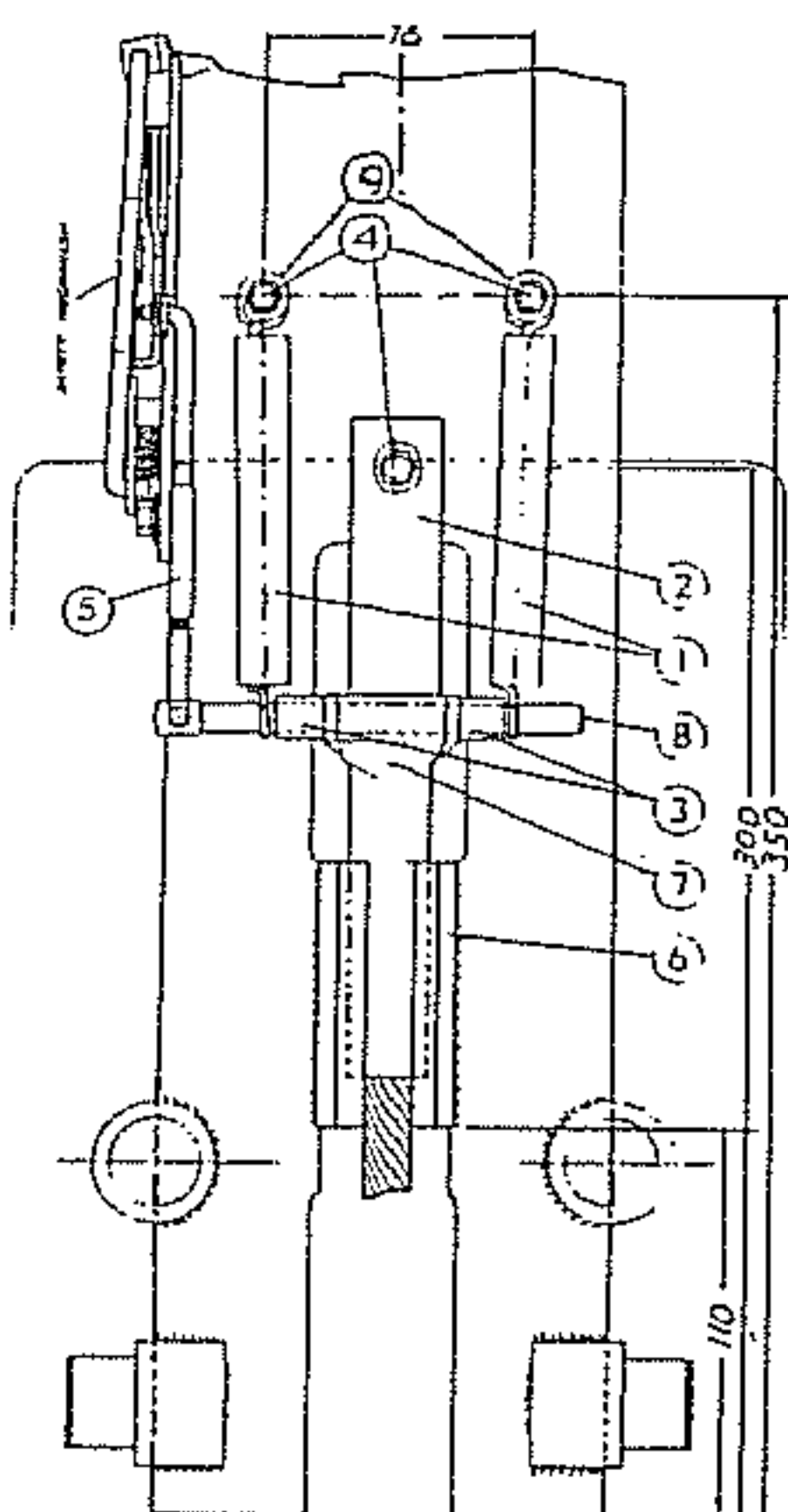
16
 46 6894
 46 8006



MOLNAR ENGINEERING PTY. LTD.
ALL HOISTS WITH SERIAL NO. STARTING WITH 'M'

MODIFICATION TO SAFETY MECHANISM
SPARE PARTS

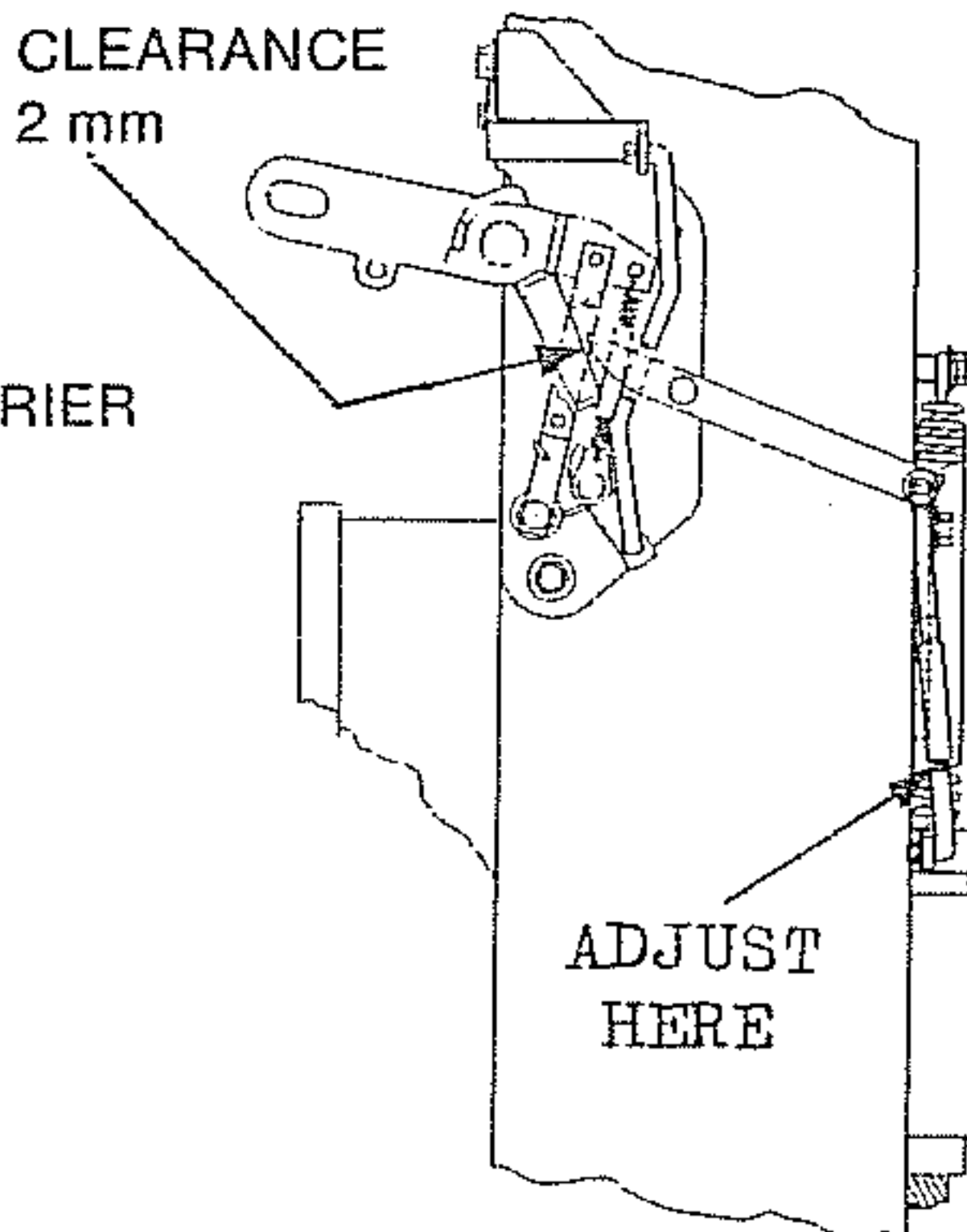
RIGHT HAND CARRIER
REAR VIEW



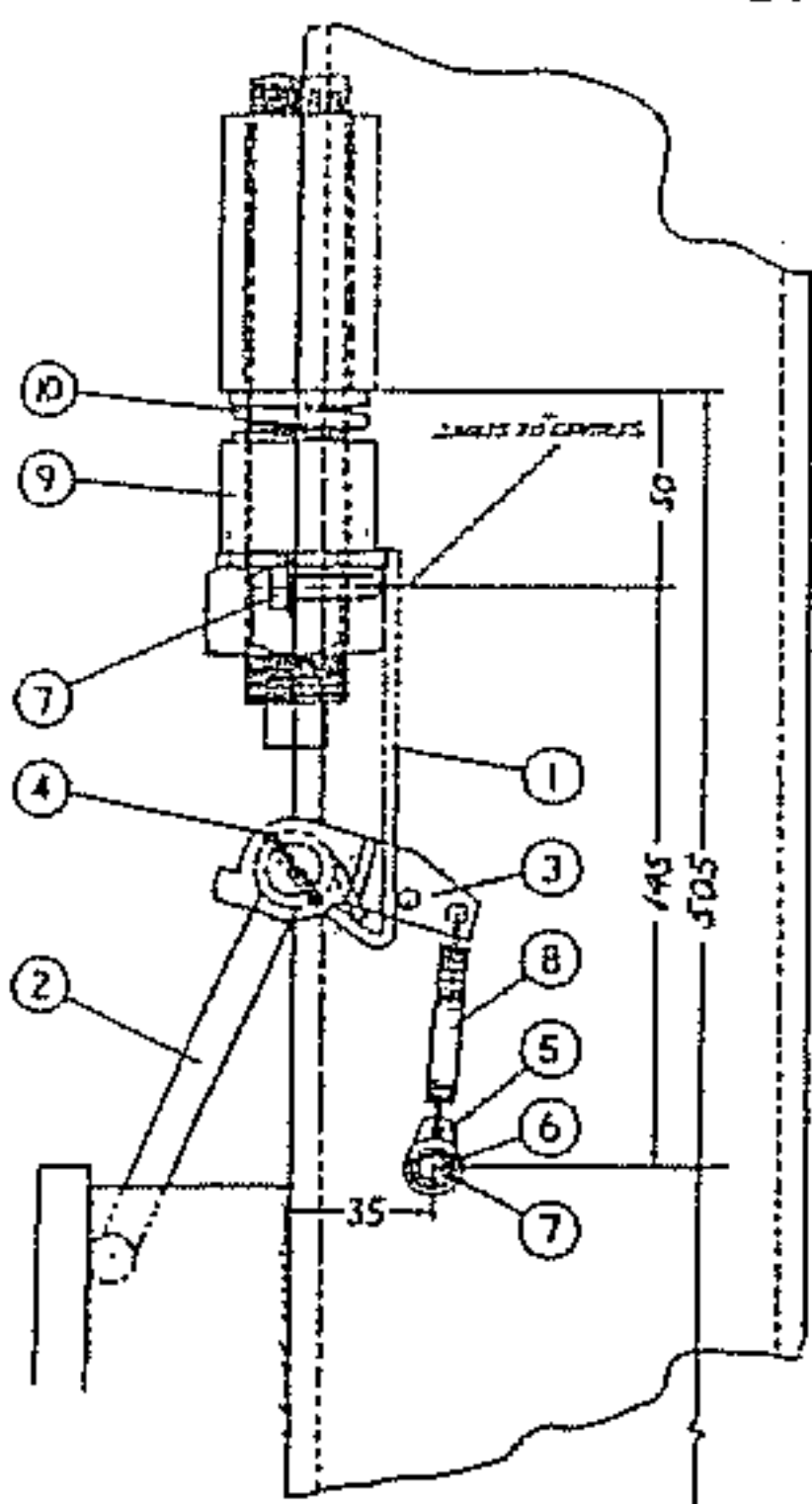
RIGHT HAND CARRIER

- 1 NS1B
- 2 NS2B
- 3 NS3B
- 4 J3E
- 5 NS5B
- 6 NS6B
- 7 NS7D1
- 8 NS8B
- 9 NS9B

RIGHT HAND CARRIER
SIDE ELEVATION



LEFT HAND CARRIER
SIDE ELEVATION



LEFT HAND CARRIER

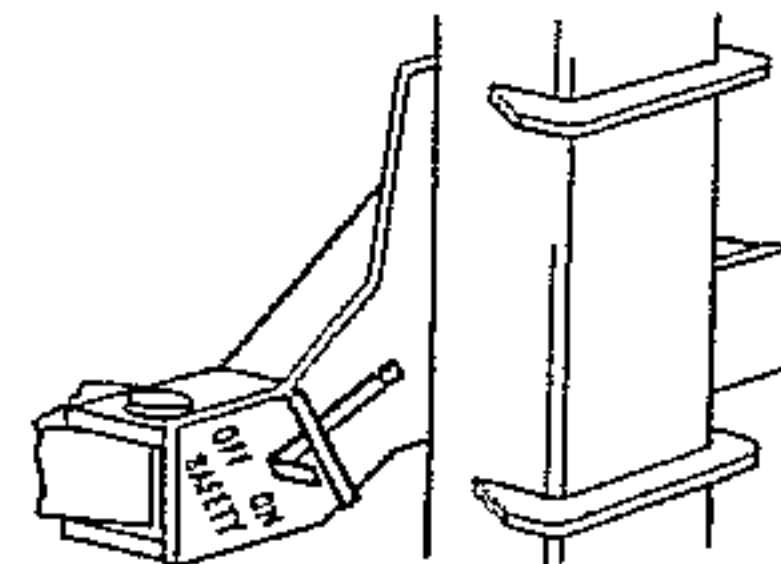
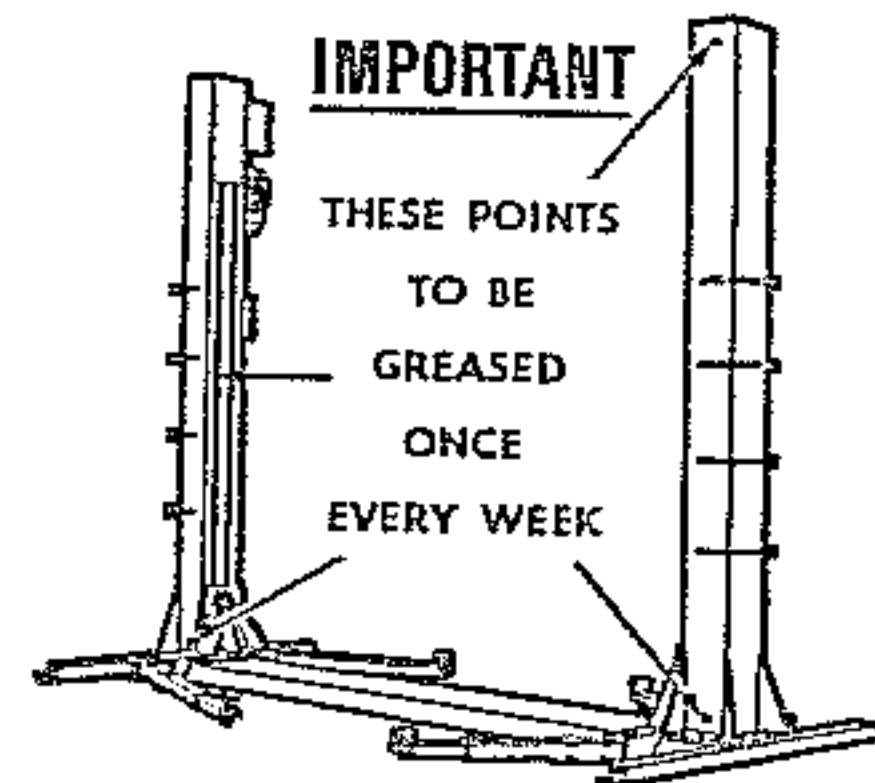
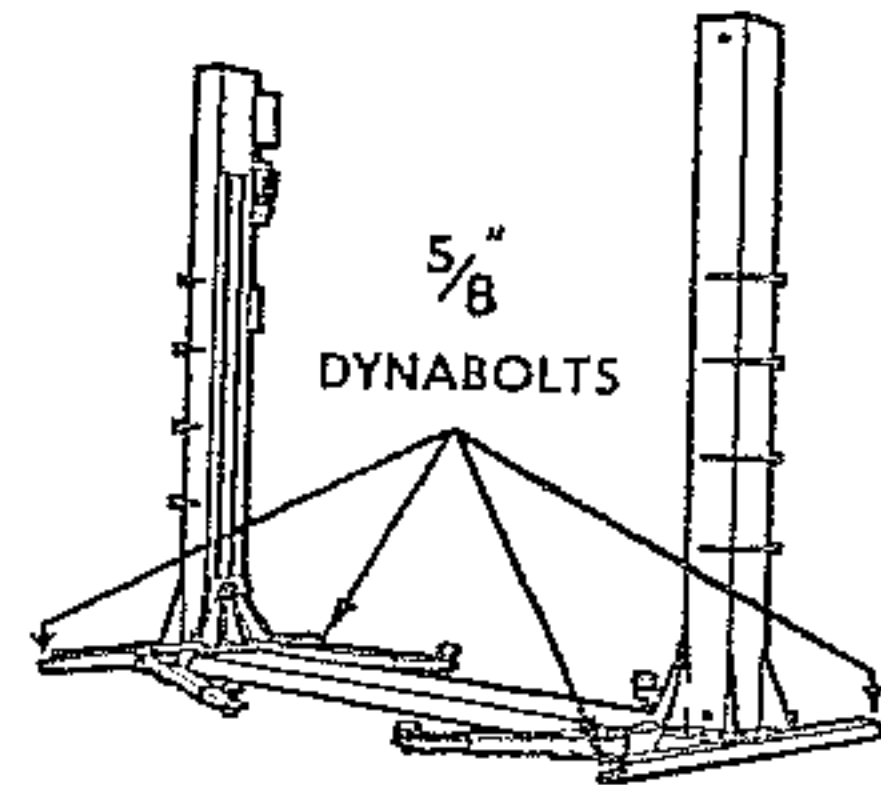
- 1 NS1C
- 2 NS2L9C
- 3 NS3C
- 4 NS4C
- 5 LM11A
- 6 LM2A
- 7 J3E
- 8 LM7
- 9 D4
- 10 D3



INSTALLATION INSTRUCTIONS

INSTALLER TO CHECK FOLLOWING LIST WHEN INSTALLING MOLNAR TWO-POST HOIST

1. A suitable floor where the hoist is to be bolted down is to have a level surface to ensure the hoist cross members lay flat.
5/8" Dynabolts are recommended for fastening.
2. When power is connected to the hoist collection box the motor must rotate clockwise. If hoist will not lift exchange white and red wires.
3. Check cables and sheaves for possible transport damage. Grease sheave pins.
4. Check safety mechanism for loose nuts or bolts.
5. Check operation of safety mechanism on both sides, then test hoist with load.
6. Re-check hoist operation. Demonstrate the hoist to the operator.
7. **VERY IMPORTANT.**
Instruct operator how to use hoist, how the safety mechanism works and where to place lifting pads when lifting vehicles. Point out greasing nipples and that they are greased once weekly.
8. When all above points are checked this sheet must be signed by the installer and the purchaser and returned to the manufacturer.



I hereby certify that the Hoist has been checked and is in operating condition and the purchaser duly instructed in the operation thereof.

Installer:..... Purchaser:.....MODEL No.:.....

RETURN TO: SERIAL No.:.....
MOLNAR ENGINEERING PTY. LTD, 18-20 COGLIN ST., BROMPTON, S.A.

All cables shall be examined every 6 months and replaced if:

- (a) At any point the visible number of broken wires exceeds 10 in any length of cable equivalent to 20 times the cable diameter.
- (b) If a strand of wire is broken.
- (c) If a cable has been physically damaged by crushing or deforming.



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