



# **MOLNAR**

## CLEAR FLOOR HOIST

MF 1705-93-0H-3T



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INSTALLATION, OPERATION  
& MAINTENANCE MANUAL

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## **OPTIONAL 240 VOLT SINGLE PHASE**

### **MINIMUM REQUIREMENTS FOR ELECTRICAL CONNECTION OF MOLNAR HOISTS**

**Important: All installations should be carried out by suitably qualified persons. Failure to comply may void warranty.**

The following information is a guide only based on the latest standards as set out in AS/NZS 3000, for installations outside of Australia & New Zealand refer to local standards/regulations.

Circuit Breakers should be of "D" curve type (motor start, high inrush current) - Ratings given as a maximum for circuit & motor protection based on DOL selection guide.

Voltage operating range: -6% to +10% of motor nameplate Voltage.

Motor Voltage 240V Operation range 225V to 264V.

Cable sizes are given as a guide only for a maximum cable length to 30m. Longest cable runs and in area where supply voltage is below motor voltage, calculation should be made to ensure Voltage Drop will not fall below minimum operating voltage.

**When installed motors must be tested under Full Load checking Voltage at motor terminals.**

#### **Motor 2.2kW 240V Single phase model CWC3640F**

Full Load Current	12.4 Amps
Min Cable Size	2.5mm 2 core + earth
Circuit Breaker	1 phase 32 Amp 10kA Recommended Clipsal 4CB132/10 or equivalent

No person should be permitted to operate the MOLNAR CLEAR FLOOR HOIST without first studying the operating instructions on page 7 and safety precautions on page 10.

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

The installation requirements on page 27 must be completed and the certificate on the inside back cover must be signed by the installer. The guarantee card must be completed and returned to MOLNAR ENGINEERING PTY. LTD.

In tropical and steam cleaning conditions to prevent rust in the cylinder raise the hoist to full height and leave it there when not in use overnight and on weekends.

This vehicle hoist is not designed to be used for steam cleaning nor to be installed in the open exposed to the elements. Vehicle hoists installed under such conditions are not covered by our guarantee.



MODEL MF 1705-93-0H-3T

**complies fully with the  
Australian Standard  
1418.9 - 1987**

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## SPECIFICATIONS

Width between columns	2650mm
Overall width	3250mm
Overall height	3850mm
Overall length	1200mm
Maximum raised height	1900mm
Minimum lowered height	110mm
Length of lifting arms maximum	1020mm
Length of lifting arms minimum	610mm
Lifting time (working height)	approx. 20 secs
Electric motor	- 3 phase, 2.2kw, 2700 rpm, 415 volts, 50 hertz
(optional)	- Single phase, 2.2kw, 2850 rpm, 240 volts, 50 hertz
Hoist mass	- 722kg
Wire rope	- 13mm diameter 6 x 29FW(14/7+7F/1) IWRC RHOL B1770 minimum breaking strength 107kn
Hydraulic oil	- Castrol Hyspin AWH46, Shell Tellus T46, Mobil DTE 25, BP Bartran HV46 or equivalent
Capacity	- 3000kg (3.0 tonnes)

The Manufacturer reserves the right to alter these features and specifications without notice.

# INTRODUCTION

Here is the MOLNAR CLEAR FLOOR 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 smallest service station. Safe, strong, simply built to give years of trouble-free service. The MOLNAR CLEAR FLOOR HOIST embodies many features that makes 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 mounted on the hydraulic column.

## **INSTALLATION**

The MOLNAR CLEAR FLOOR HOIST is fast and simple to install only 12 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 CLEAR FLOOR HOIST can be quickly, easily and economically re-sited.

# INTRODUCTION

## **FOR SPEEDIER SERVICE**

With the MOLNAR CLEAR FLOOR 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.

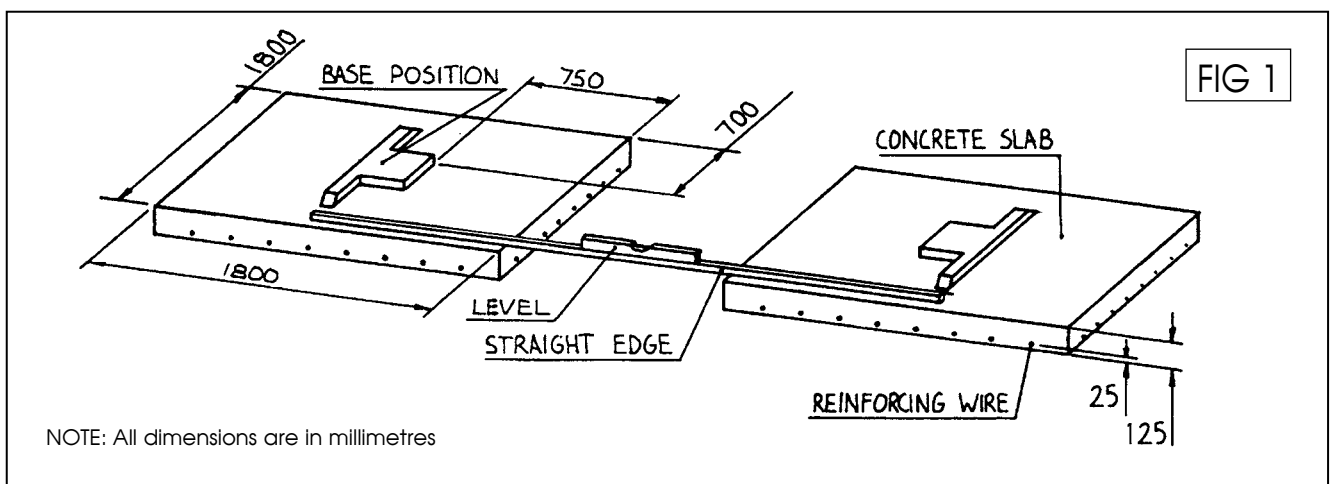
## **EASY TO OPERATE**

The MOLNAR CLEAR FLOOR 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.

## FLOOR REQUIREMENTS FOR MODEL MF 1705-93-0H-3T

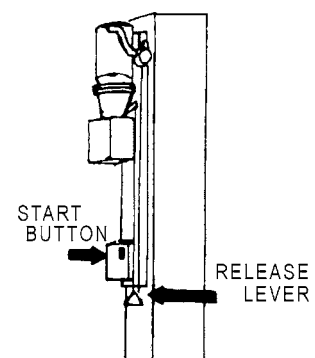
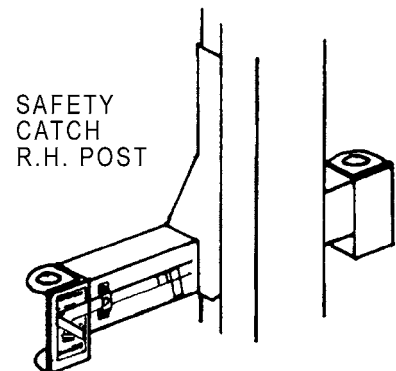
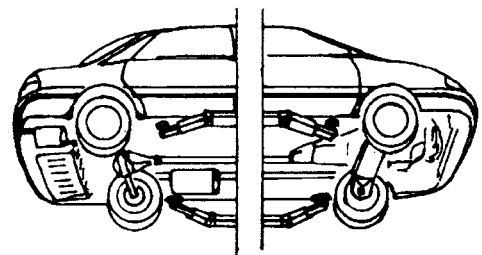
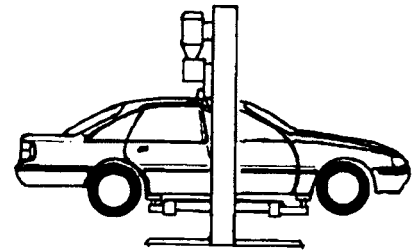
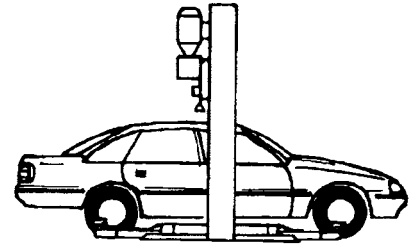
These notes are for your guidance prior to installation.

1. It is the users responsibility to provide a satisfactory site area.
2. The floor should be a reinforced concrete slab not less than specified in figure 1.  
Compressive strength of concrete no less than 25Mpa.  
(Cement 1, Sand 2, Metal 3).  
Reinforcement wire diameter 6mm x 200mm x 200mm square mesh F42 grade.  
NOTE: The reinforcement mesh must be 90mm to 100mm below the surface.
3. For correct installation of the Clear Floor Hoist the floor must be flat and level. A level tolerance between posts of 10mm is allowable. Check with straight edge and spirit level. (Ref. Fig. 1).
4. The recommended fastening requirement to use is a dynabolt 20mm x 82mm with an M16 thread size.  
NOTE: Some authorities do not approve expanding type anchorage devices.
5. The foundation for this hoist should be designed by a competent person. The sizes shown will in most circumstances provide adequate mass to prevent overturning and sufficient area for load bearing resulting from the loaded hoist.
6. The reinforcement should be selected and located to accommodate a bending moment of 10.72 E6 Nmm at the end of the steel footing attached to each post. The concrete footing must comply with AS3600-1994 Concrete structures.
7. No liability for any damages will be accepted should you install the hoist on an unsuitable floor.



# OPERATING INSTRUCTIONS

1. Drive on - car to be centred.
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. Do not go under car until load rests on safety.
4. When car reaches maximum height limit switch will come into operation and stop hoist. When hoist has stopped, pull release lever until load rests on safety.
5. During the lifting of the car a clicking sound should be noticeable which indicates the safety mechanism is operating. If this sound is not heard, immediately cease using the hoist and call an authorised service agent.
6. The following steps are to be taken when lowering the hoist. Raise hoist approximately 20mm. 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 20mm. Release safety catch and lower.
10. **WARNING.** Do not go under vehicle under any circumstances while vehicle is being lifted or lowered.



# MAINTENANCE

## **CHECK DAILY**

Check safety mechanism to see that it functions properly.

## **CHECK MONTHLY**

1. Safety mechanism operation.
2. Condition of sheaves, shafts and shaft locks.
3. Condition of wire ropes.
4. Overall cleanliness.
5. Clean tracks of dry lubricant and re-apply lubricant on wear pad tracks and roller tracks.

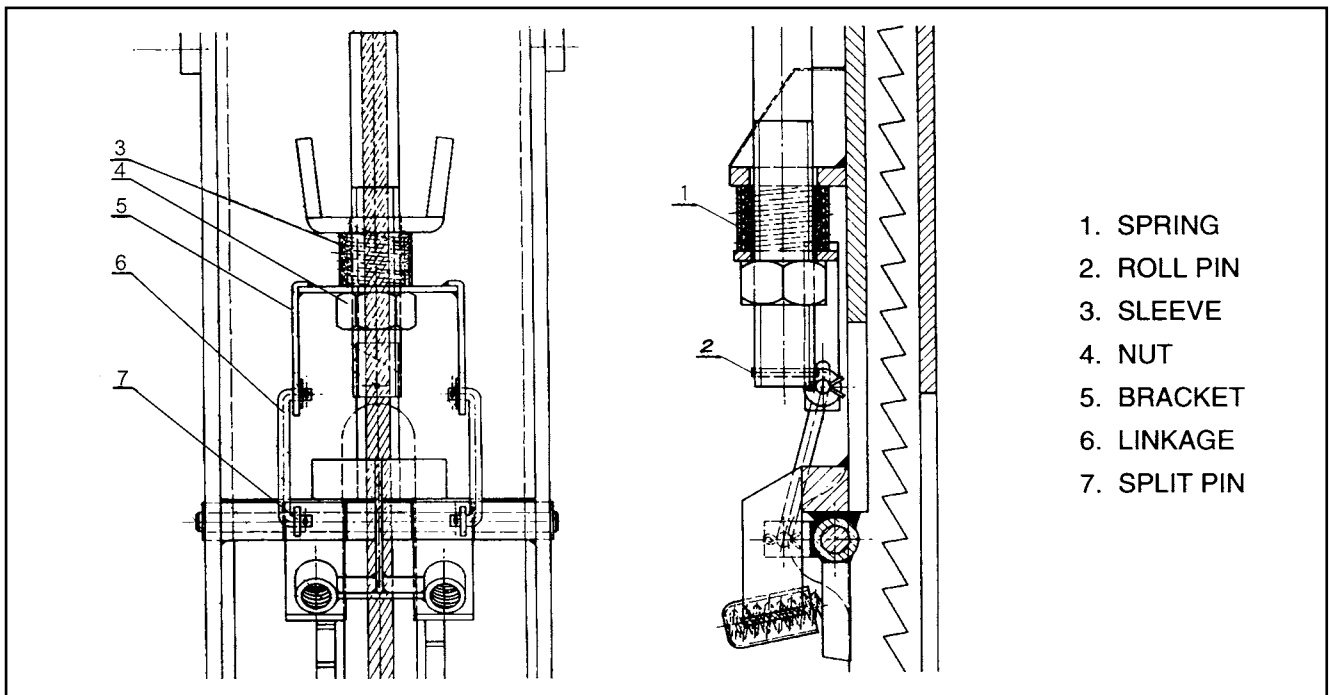
## **CHECK 6 MONTHLY**

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

NOTE: Refer to trouble shooting chart, page 11, for fault remedies.

## **CABLE ADJUSTMENT**

If the long cable has stretched provision is provided for cable adjustment by winding the cable nut up.



## MAINTENANCE

### YEARLY

Service and safety inspection on the hoist must be performed by a competent person. This inspection must be recorded. If the 12 monthly service and safety inspection is not performed, the warranty is null and void.

NOTE: Yearly service must include removal of rollers and pulleys to inspect, clean and lubricate bushes and pins.

### 2 YEARLY

Hydraulic oil and filter should be replaced. Fill Oil Tank to Oil Level Line with Shell Tellus T46 oil, Mobil DTE25 oil, Castrol Hyspin AWH46 oil, BP Bartran HV46 oil or equivalent.

### WIRE ROPE INSPECTION

Wire ropes must be inspected by a COMPETENT person. Inspect for wear, rust and broken wires. Ropes are to be discarded according to the criteria.

Wire rope must be replaced if:

- a. At any point the visible number of broken wires exceeds 10 in any length of rope equivalent to 20 times the rope diameter i.e. for 13mm diameter rope 10 broken wires in 260mm of cable.
- b. A strand of wire is broken.
- c. A rope has been physically damaged by crushing or deforming.

## LUBRICATION PROCEDURES FOR MOLNAR 2 POST HOISTS

It is the Hoist Owner's responsibility and Duty of Care to maintain the Hoist as per the Maintenance Schedule in the Hoist Owner's Manual.

All Tracks must be lubricated regularly. (Both Posts.)

This includes the roller tracks behind the covers. (Both Posts.)

Molnar Engineering suggest that the rear tracks be heavily lubricated. You may use grease on the rear tracks because the rear tracks are fully covered by the Hoist covers.

The 2 Front Tracks and the 2 Side Tracks also have to be regularly lubricated. (Both Posts.)

Molnar Engineering suggests Teflon or Silicon Sprays may be used (because the Hoist will be totally clean and there is no fear of lubricant accidentally being rubbed onto clothing).

"TAC 2" lubricant may also be used.

# SAFETY PRECAUTIONS

## DON'T

1. Do not try to lift anything beyond the maximum capacity 3000 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. Ropes 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 into the off position while weight is resting on safety.
12. Do not attempt to operate the hoist from under vehicle.

## FAULT CHART

FAULT	PROBABLE CAUSE	REMEDY
Noise from rollers.	Lack of lubrication on roller tracks and roller pins.	Lubricate roller tracks with CRC Dry Glide. Lubricate roller pins with 80/90 grade gear oil.
Noise from pulleys.	Lack of lubrication on pulley pins.	Lubricate pulley pins with 80/90 grade gear oil.
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.
Hoist does not respond to operation switch.	Power supply to motor is interrupted. Motor turning in opposite direction. Cables either cut or damaged.	Check main fuse, power source, magnet switch and terminal relay. Interchange 2 terminals in 3 phase circuit.
Damaged cable.	Worn sheaves and sheave pins or bushes.	Replace sheaves, sheave pins and cables and bushes.
Carriage shuddering in lifting and lowering mode.	Lack of lubricant on wear pad tracks causing wear pads to grip instead of sliding.	Clean and re-apply lubricant on wear pad tracks.
Excessive side movement of carriage.	Worn wear pads.	Replace wear pads.

# REPLACEMENT PARTS LIST

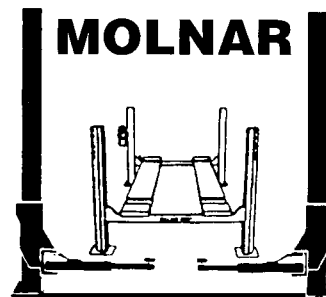
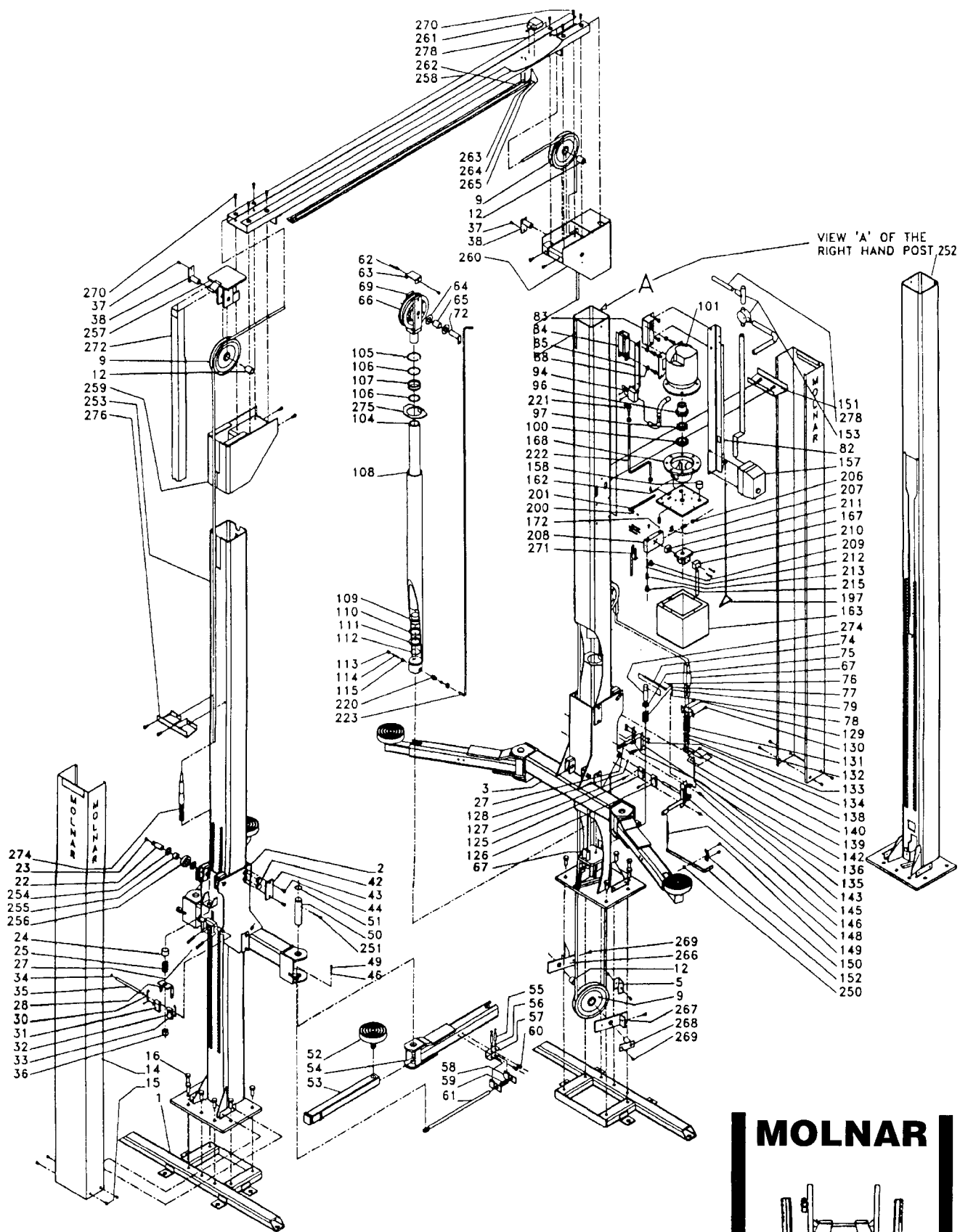
<b>OH93-AA</b>	<b>BASE</b>	<b>QTY/HOIST</b>
OH93-A-1	Base . . . . .	2
<b>OH93-BB</b>	<b>RIGHT HAND POST ASSEMBLY</b>	<b>QTY/POST</b>
OH93-B-14	Cover . . . . .	1
OH93-B-16	Base plate anchoring bolt . . . . .	7
OH93-B-83	Power unit carrier bracket (Large) . . . . .	1
OH93-B-84	Power unit carrier bracket (Small) . . . . .	1
OH93-B-151	Cover mounting bracket . . . . .	1
OH93-B-252	Right hand post . . . . .	1
<b>OH93-CC</b>	<b>LEFT HAND POST ASSEMBLY</b>	<b>QTY/POST</b>
OH93-C-14	Cover . . . . .	1
OH93-C-16	Base plate anchoring Bolt . . . . .	7
OH93-C-253	Left hand post . . . . .	1
OH93-C-276	Cover mounting bracket . . . . .	1
<b>OH93-DD</b>	<b>CABLES AND PULLEYS</b>	<b>QTY/HOIST</b>
OH93-D-9A	Single pulley assembly . . . . .	3
OH93-D-24	Cable spring sleeve. . . . .	1
OH93-D-25	Cable spring. . . . .	1
OH93-D-36	Cable nut . . . . .	1
OH93-D-37	Pulley pin retaining bolt . . . . .	1
OH93-D-38	Upper LH Pulley pin . . . . .	1
OH93-D-63	Cable retaining cap . . . . .	1
OH93-D-66A	Pulley assembly . . . . .	1
OH93-D-67A	Short cable. . . . .	2
OH93-D-72	Pulley pin. . . . .	1
OH93-D-74	Cable axle . . . . .	1
OH93-D-75	Spring support . . . . .	1
OH93-D-77	Cable spring. . . . .	1
OH93-D-131	Short cable spring . . . . .	2
OH93-D-257	Upper LH Pulley bracket . . . . .	1
OH93-D-268	Pulley pin. . . . .	1
OH93-D-274	Long cable. . . . .	1
<b>OH93-EE</b>	<b>HYDRAULIC CYLINDER ASSEMBLY</b>	<b>QTY/HOIST</b>
OH93-E-1S	Cylinder seal kit . . . . .	1
OH93-E-108	Outside cylinder. . . . .	1
OH93-E-108A	Hydraulic cylinder assembly. . . . .	1
OH93-E-111	Seal . . . . .	1
OH93-E-220	Straight adaptor . . . . .	2
OH93-E-221	Elbow adaptor. . . . .	1
<b>OH93-FF</b>	<b>POWER PACK ASSEMBLY</b>	<b>QTY/HOIST</b>
OH93-F-96A	Coupling assembly . . . . .	1
OH93-F-101 SP	Electric motor kit (240v) . . . . .	1
OH93-F-101 TP	Electric motor (415v) . . . . .	1
OH93-F-163A	Hydraulic tank assembly. . . . .	1
OH93-F-167	Hydraulic pump. . . . .	1
OH93-F-197	Lowering handle . . . . .	1
OH93-F-208A	Control valve assembly . . . . .	1
<b>OH93-GG</b>	<b>TOP BRACE</b>	<b>QTY/HOIST</b>
OH93-G-258	Brace. . . . .	1
OH93-G-259	L/H beam support bracket. . . . .	1
OH93-G-260	R/H Beam support bracket . . . . .	1
OH93-G-261	Limit switch . . . . .	1
OH93-G-262	Limit switch activating bar . . . . .	1

# REPLACEMENT PARTS LIST

<b>OH93-HH</b>	<b>STARTER ASSEMBLY</b>	<b>QTY/HOIST</b>
OH93-H-82	Starter bracket . . . . .	1
OH93-H-85	Limit switch bracket. . . . .	1
OH93-H-94	Limit switch . . . . .	1
OH93-H-153	Junction box. . . . .	1
OH93-H-157	Starter box . . . . .	1
<b>OH93-JJ</b>	<b>LIFTING ARM ASSEMBLY</b>	<b>QTY/ARM</b>
OH93-J-46	Circlip . . . . .	1
OH93-J-49	Locking rod pivot pin . . . . .	1
OH93-JJ-52	Pick up pad . . . . .	1
OH93-J-53	Extension arm. . . . .	1
OH93-J-54	Telescopic arm. . . . .	1
OH93-J-55	Locking plate pivot pin. . . . .	2
OH93-J-57	Locking arm bracket. . . . .	1
OH93-J-58	Locking plate . . . . .	2
OH93-J-59	Spring . . . . .	1
OH93-J-60	Locking arm bracket bolt. . . . .	2
OH93-J-61	Locking rod. . . . .	1
OH93-J-354	Foot pedal . . . . .	1
OH93-J-355	E-Clip . . . . .	1
OH93-J-356	Foot pedal shaft . . . . .	1
OH93-J-357	Foot operated locking arm bracket. . . . .	1
OH93-J-8550*	Locking arm kit (for four arms). . . . .	1
OH93-J-85357	Foot operated locking arm kit (for four arms). . . . .	1
OH93-J3AB	Stabiliser pad . . . . .	1
OH93-J3AA	Elevated pad . . . . .	1
<b>OH93-KL</b>	<b>LEFT HAND CARRIAGE ASSEMBLY</b>	<b>QTY/CARRIAGE</b>
OH93-KL-2	Left hand carriage . . . . .	1
OH93-KL-27	Safety toggle spring . . . . .	2
OH93-KL-30	Safety linkage . . . . .	2
OH93-KL-31	Safety toggle . . . . .	1
OH93-KL-32	Safety toggle . . . . .	1
OH93-KL-35	Toggle shaft . . . . .	1
OH93-KL-254	Washer (Acetal). . . . .	8
OH93-KL-255	Bush . . . . .	4
OH93-KL-256	Roller . . . . .	4
OH93-KL-42R	Wear pad . . . . .	8
<b>OH93-KR</b>	<b>RIGHT HAND CARRIAGE ASSEMBLY</b>	<b>QTY/CARRIAGE</b>
OH93-KR-3	Right hand carriage . . . . .	1
OH93-KR-125	Safety toggle . . . . .	1
OH93-KR-126	Safety toggle . . . . .	1
OH93-KR-140	Safety pivot arm . . . . .	1
OH93-KR-150	ON/OFF bracket . . . . .	1
OH93-KR-152	Safety on/off arm . . . . .	1
OH93-KR-250	ON/OFF Shaft . . . . .	1
<b>OH93-LL</b>	<b>SAFETY CONTROL ASSEMBLY</b>	<b>QTY/CARRIAGE</b>
OH93-L-79	Linkage . . . . .	1
OH93-L-142	Linkage . . . . .	1
OH93-L-146	Safety actuating assembly. . . . .	1
OH93-L-148	Activating spring . . . . .	1

\*Superseded

# MODEL MF 1705-93-0H-3T



# ACCESSORIES AVAILABLE FROM MOLNAR ENGINEERING

**Optional**  
J3AB Stabilizing Pads prevents pickup pads from slipping. Stabilizes the vehicle from rocking movement.

**Optional**  
EP02 Elevated Extension Pads enables easy pickup for vans and 4-wheel drives.

**Featuring**  
JJ3 Large Pickup Pads.  
Rubber size - large 140mm.

**MOLNAR ENGINEERING**  
*recommends to all new owners the purchase of our accessories to cover all working situations*

CHASSIS

TELESCOPIC LIFTING ARMS

STABILITY PADS

SEAL PANEL

HOIST

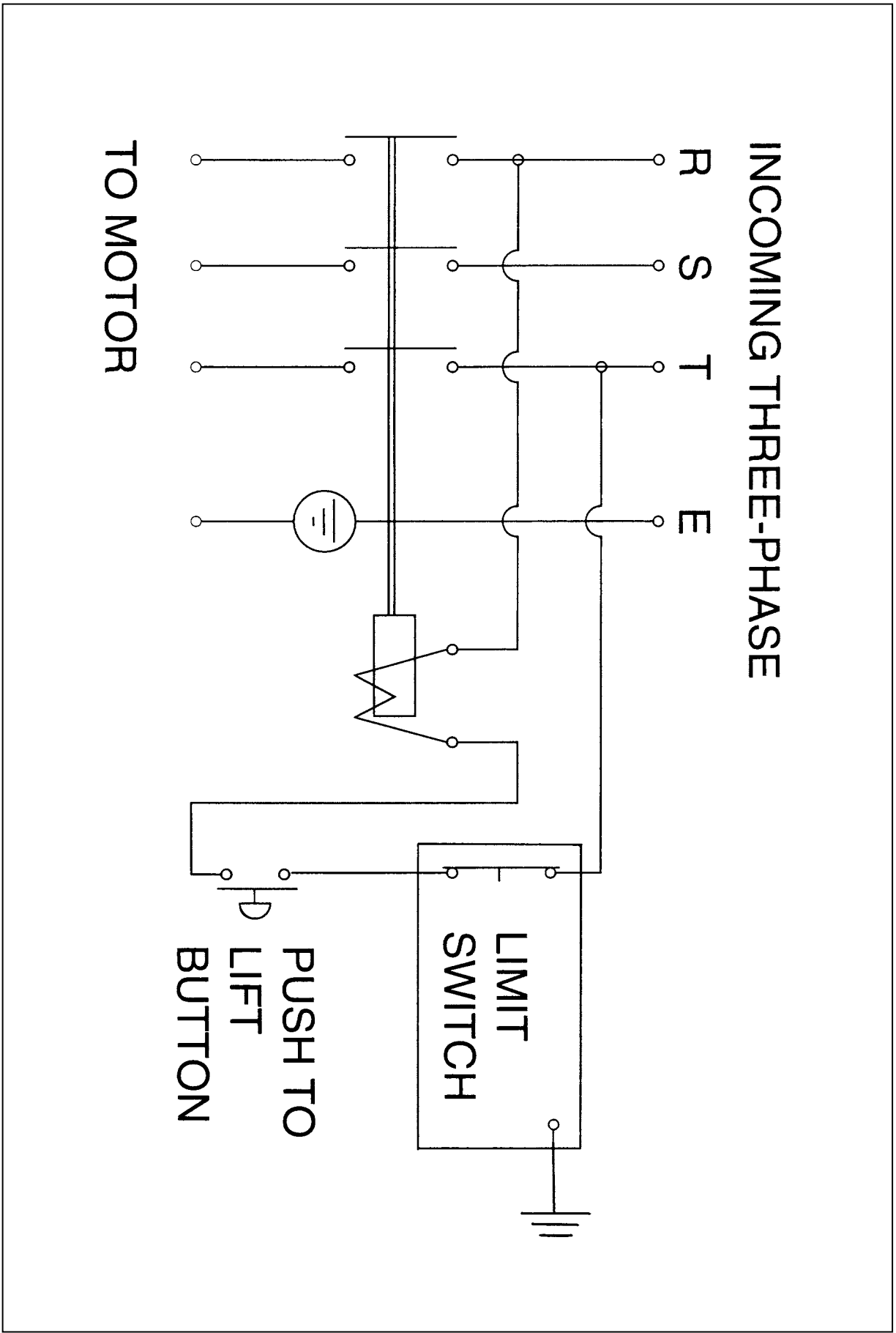
LIFTING PADS

# HYDRAULIC CYLINDER REPLACEMENT

## Procedure

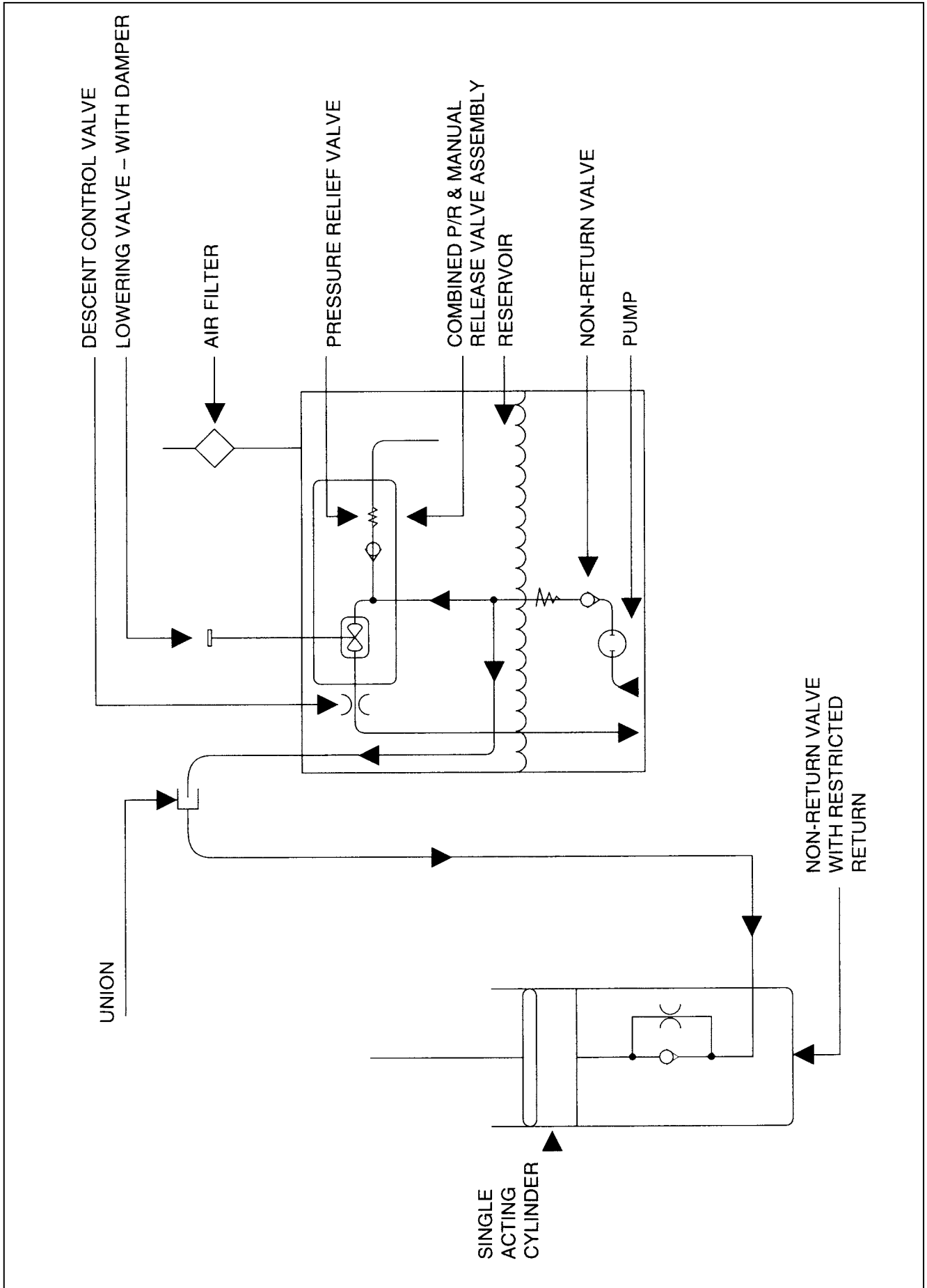
1. Turn off power and isolate the hoist.  
Disconnect power cables from the hoist.
2. Remove post covers and cable cover.
3. Make sure both carriages are fully lowered. Lift left hand carriage to waist height. Disconnect long cable at left hand carriage.
4. Disconnect top limit switch. Slide conduit into right hand post to expose cable connectors. Disconnect the cable connectors for the top limit switch in the top cross beam. Remove the top limit switch activating bar.
5. Remove left hand post top pulley.
6. Remove the top cross beam.
7. Disconnect conduit from the T-piece junction, and withdraw the two white top limit switch wires from conduit.
8. Disconnect hydraulic pipe from the cylinder at the power pack.
9. Remove the power pack from the right hand post.
10. Unbolt right hand post and lay down with the exposed sheaves facing upwards.
11. Remove the pulley assembly from the top of the right hand post.
12. Remove the post cap from the top right hand post.
13. Disconnect cylinder locator at the top of the cylinder and disconnect pipe locator. Ensure hydraulic pipe disconnected is inside the post and then slide cylinder/pipe out of post.
14. To remove piston take out circlip and apply compressed air to inlet (with caution). Inspect cylinder wall for rust or scoring. If scored the cylinder wall must be re-honed or the malfunction will continue. If rusted it must be re-honed or replaced.
15. Reassemble in reverse order.

# WIRING DIAGRAM



WIRING TO THIS UNIT TO COMPLY WITH AS 3000

# HYDRAULIC CIRCUIT DIAGRAM



# INSTALLATION INSTRUCTION

FIG 2

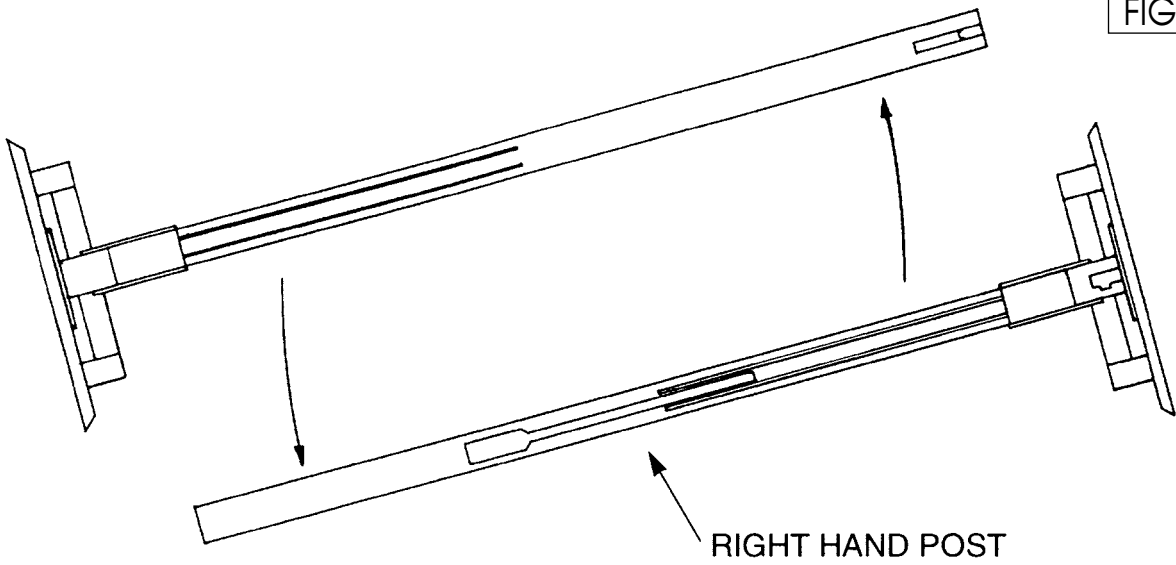
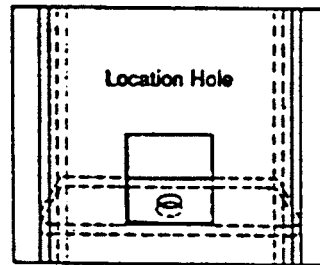
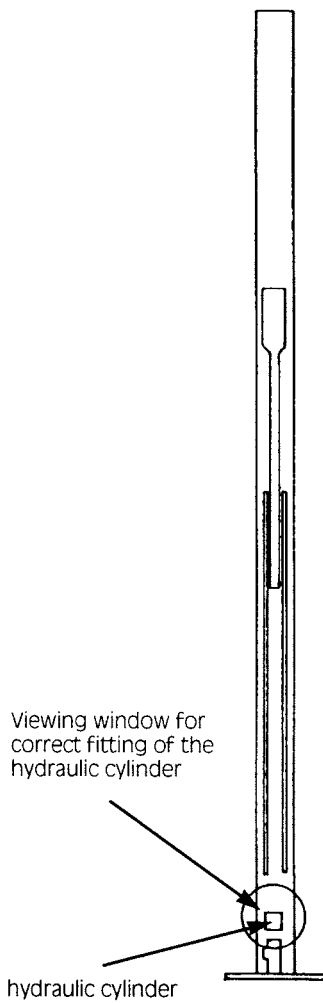
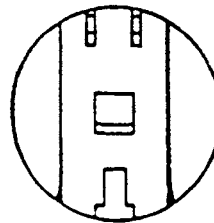


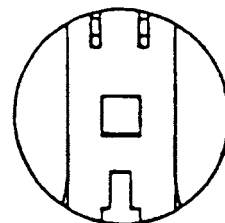
FIG 3



INCORRECT



CORRECT



NOTE: The cylinder must be seated with a 2mm gap above the cylinder support plate. This is done by correctly positioning the location pin on the bottom of the cylinder with the hole in the cylinder support plate.

## INSTALLATION INSTRUCTION

1. Position hoist to installation position on two bearers with packing legs approximately 20-50mm above the ground.
2. Remove packing legs.  

NOTE: The packing legs securing bolts (2 per side) are to be fitted into the base plates of the posts. The nuts are to be discarded.
3. Remove wooden crates. Open crates and lay out contents.
4. Remove lifting arms.
5. Cut straps holding posts together and remove wooden protectors from posts.
6. Swing out top of both posts, horizontally anti-clockwise right hand post first and place on wooden blocks. Refer figure 2.
7. Remove single long cable end and cable from inside motor post. "Top end".
8. Pull conduit through the top of the post.
9. NOTE: The beam support bracket with the pulley is the R/H beam support bracket. Remove pulley from R/H beam support bracket. Fit the R/H beam support bracket to the motor post, correctly feeding the cable and the conduit through respective locations. Refit pulley into the R/H beam support bracket ensuring the correct location of cable.
10. Fit the L/H beam support bracket to left hand post.
11. Ensure cable is tightly seated in sheave groove at the bottom end of the motor post whilst raising the motor post into upright position.
12. Check cable positions when motor post is in upright position.
- 12a. Position right hand post and bolt down one outside fastening lug. The recommended fastening requirement is to use a dynabolt 20mm x 82mm with an M16 thread size.
13. Position left hand post 2650mm from right hand post.  
Lift left hand post into position.
14. Place top cross beam on top of beam support brackets. Refer figure 4. Secure each side with the bolts provided (6 per side).
15. Check distance between bottom of posts 2650mm.
16. Check posts are square to each other, adjust accordingly.
17. Check that posts are vertical.

# INSTALLATION INSTRUCTION

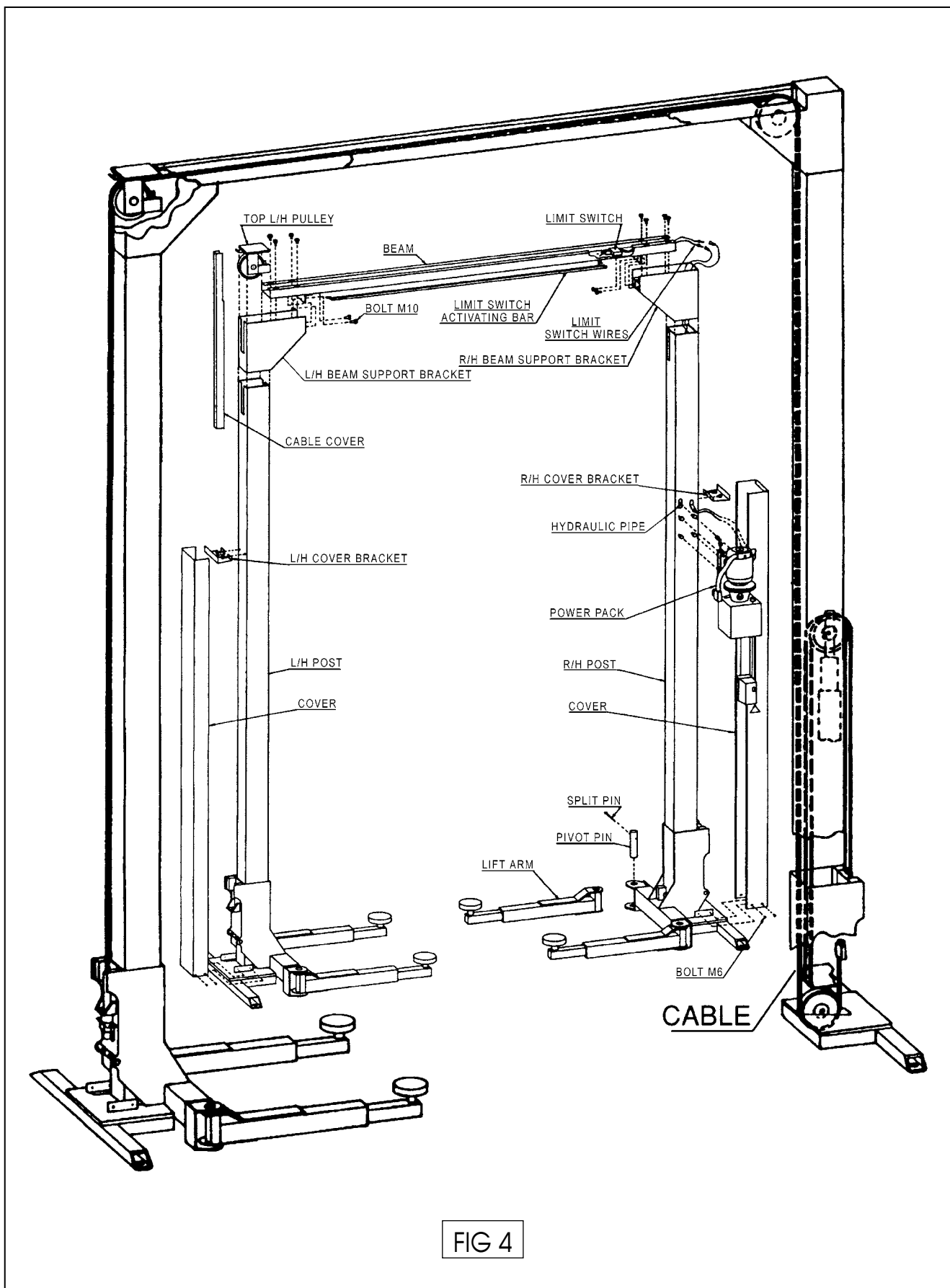
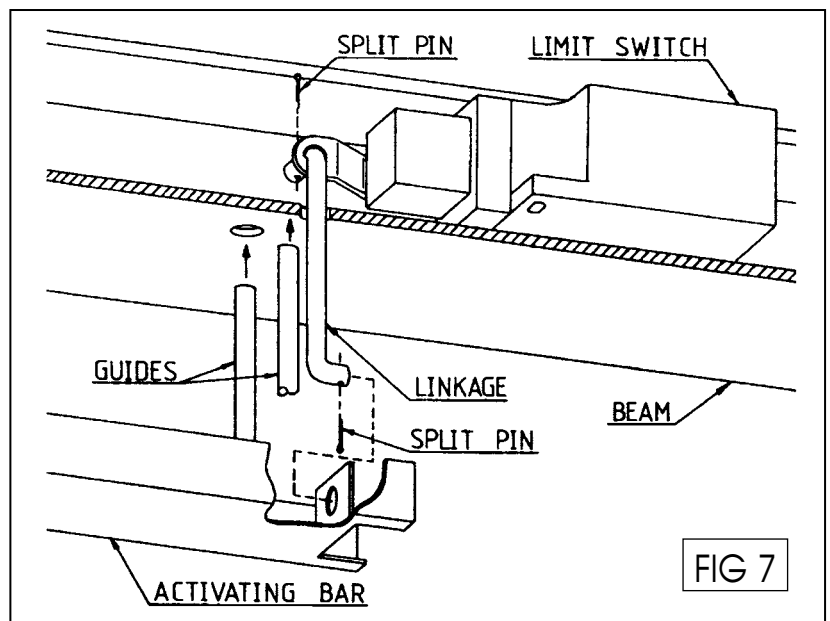
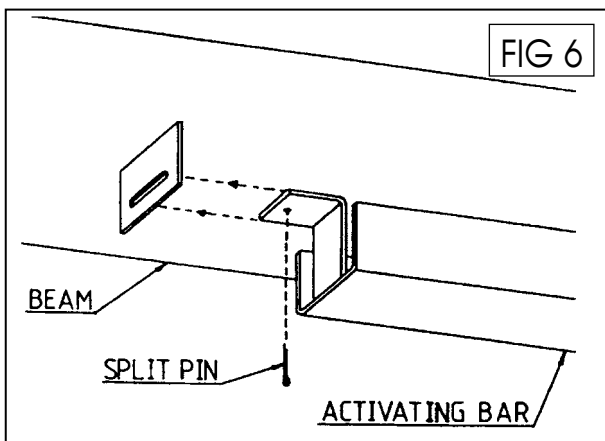
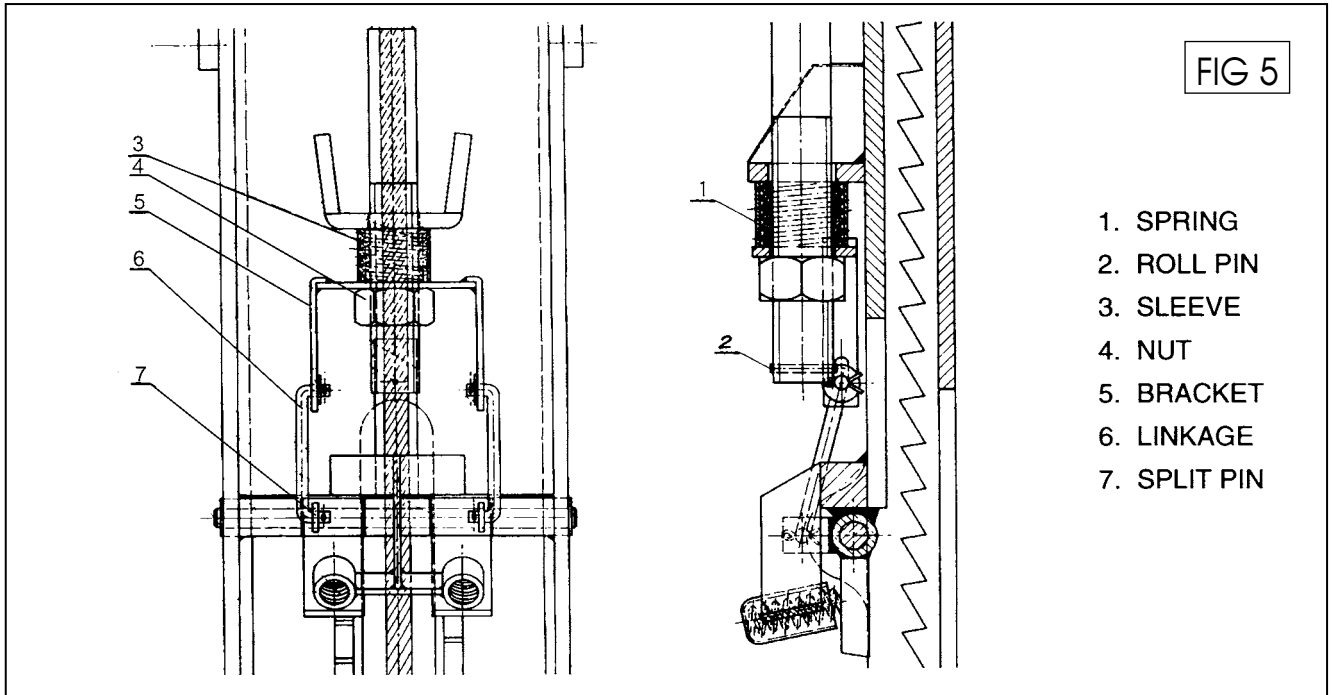


FIG 4

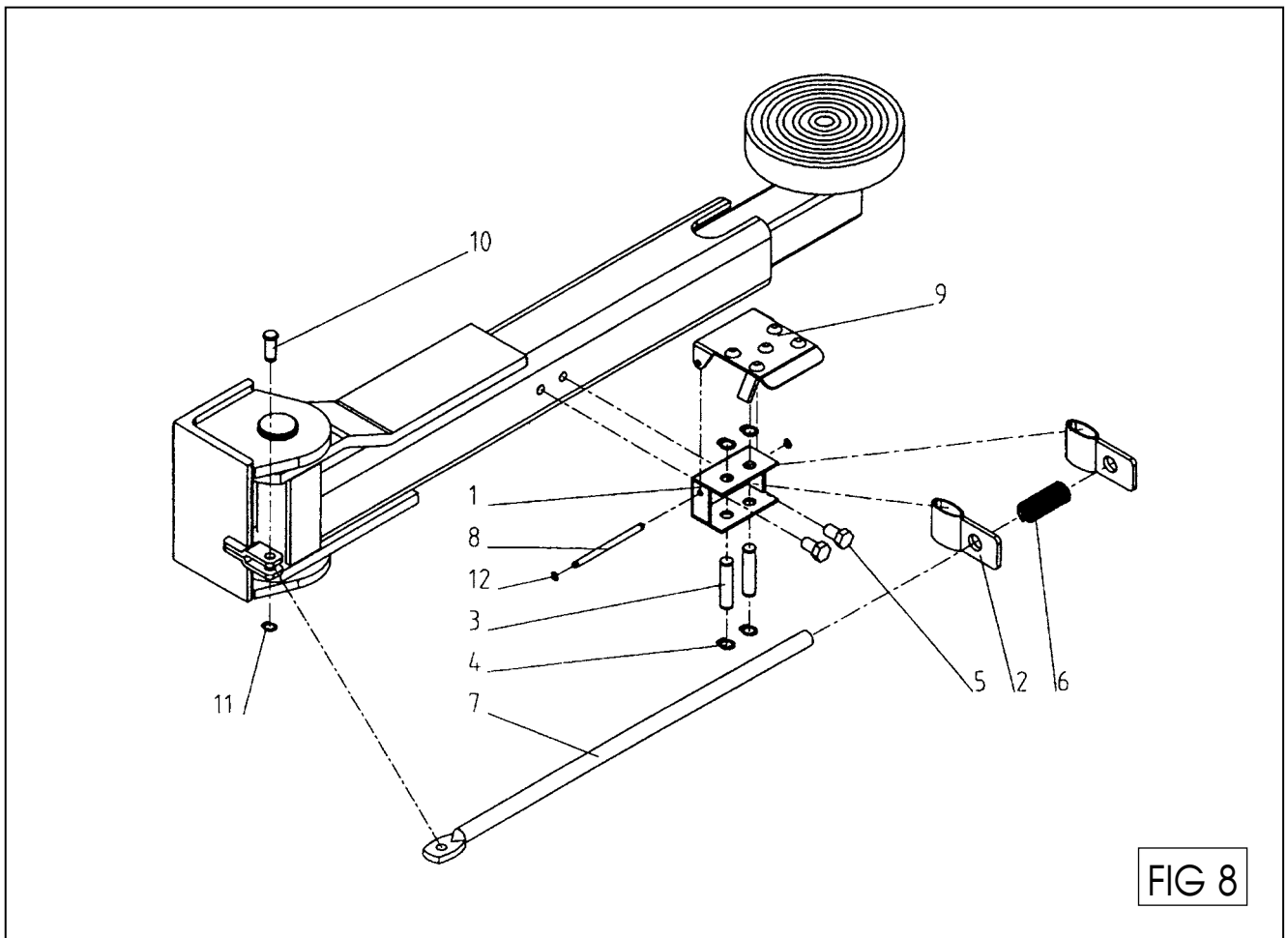
## INSTALLATION INSTRUCTION

18. Bolt left hand and right hand posts down.
19. Fit the cable to the left hand pulley assembly and locate pulley assembly onto the top of the left hand post.
20. Attach the long cable to the left hand carriage. Refer figure 5.  
Cut the straps marked "DO NOT CUT THIS STRAP UNTIL THE POST IS IN AN UPRIGHT BOLTED-DOWN POSITION".
22. Place power pack on motor post. Feed limit switch wires through conduit in post, connect at top. Refer figure 4.
23. Connect hydraulic pipe leading from the cylinder. Ensure all hydraulic fittings are tight. (Refer figure 10, Betabite Hydraulics Assembly Instructions.)
24. Attach limit switch activating bar to the top cross beam. Refer figure 6 & 7.
25. Pour oil into the tank. Oil to be filled through breather vent. Connect Power.
26. IMPORTANT. Check that all cables are seated correctly in pulley grooves.
27. Raise hoist to approximately waist level.
28. Check that the cylinder is seated correctly (with a 2mm gap when viewed through inspection hole above bottom right sheave). If cylinder is not seated correctly adjust its position with bent wire until it drops into position and seats under its own weight. Refer figure 3.
29. Install lifting arms.
30. Install locking arms. Refer figure 8.
31. Left hand side carriage approximately 25mm higher than right hand carriage, to allow the cable to bed in.
32. Bolt cover bracket to posts.
33. Attach door protectors. Refer figure 9.
34. Apply lubricant on wear pad tracks and roller tracks.
35. Check all nuts and bolts for correct tightness.
36. Check that the hoist is operating correctly by raising and lowering throughout range. Check that the safety is working. Check that both limit switches are working.
37. Install covers on both posts. Install cable cover.
38. Clean the hoist of anti-corrosion spray

# INSTALLATION INSTRUCTION



## INSTALLATION INSTRUCTIONS

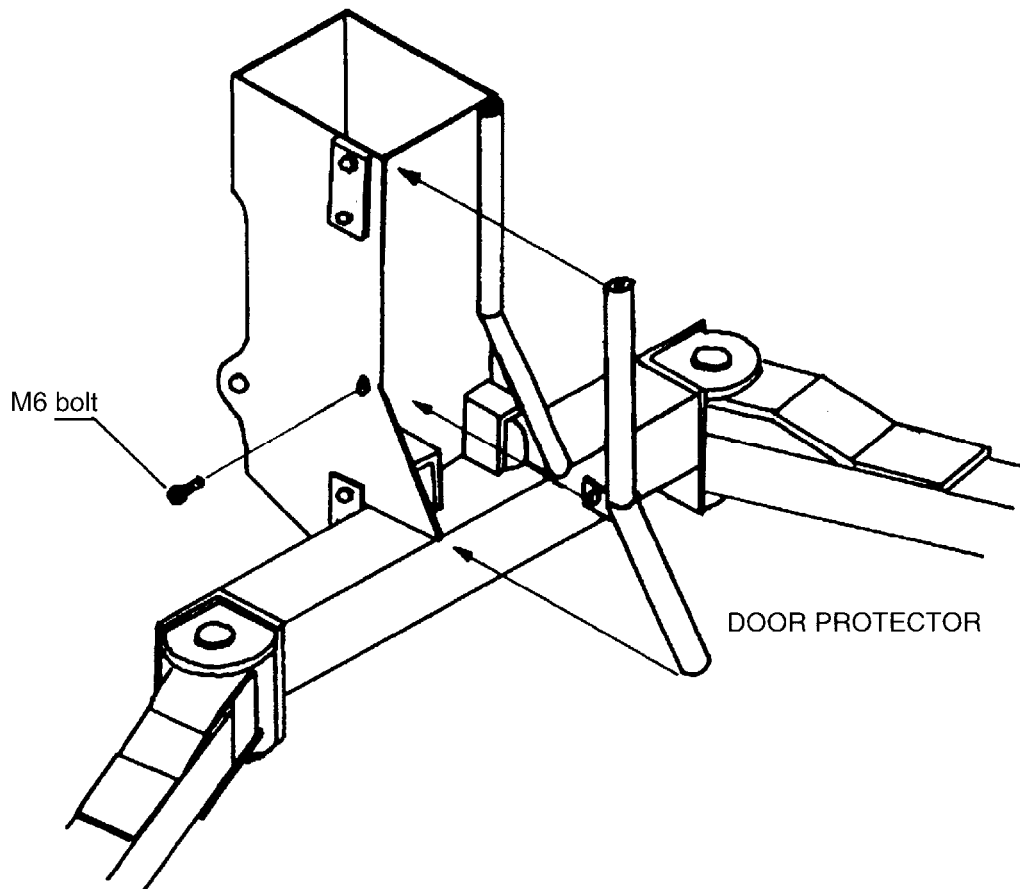


## INSTALLATION PROCEDURE

1. Bolt locking bracket (1) to pick-up arm using 7/16 U.N.F. bolts.
2. Locate arm (7) in pivoting bracket.
3. Slide locking lug (2), followed by spring (6), followed by another locking lug (2), along arm (7).
4. Locate locking lugs (2) in locking bracket (1).
5. Push pins (3) into position and secure using circlips.
6. Push pin (10) into position and secure using circlip (11).
7. Place foot pedal (9) over locking bracket (1).
8. Push shaft (8) through foot pedal and locking bracket and secure with E clip (12).

## DOOR PROTECTOR INSTALLATION PROCEDURE

FIG 9



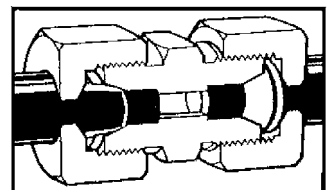
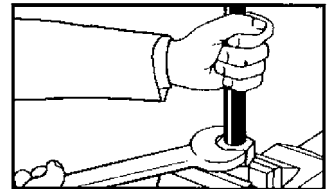
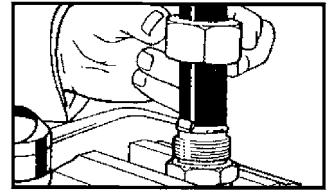
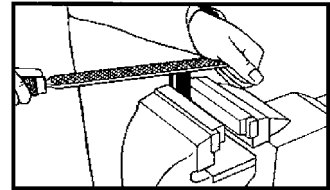
## INSTALLATION PROCEDURE

1. Place door protector into position as shown in above drawing. Make sure the door protector ends are flush with the edge.
2. Push the protector in at the bend, until the holes in the bracket and the carriage line up.
3. Screw the M6 bolt into position as shown in diagram.

# BETABITE HYDRAULICS ASSEMBLY INSTRUCTIONS

FIGURE 10

1. Cut the tube to length and file ends square.
2. Remove internal and external burrs from tube end.
3. We always highly recommend that joints are pre-made whilst the coupling body is held firmly in a bench vice.
4. Ascertain that all the detail parts of the coupling are suitably lubricated, especially the internal body cone, the rear of the ferrule and the internal thread of the nut. The lubrication process is recommended on all fittings, however, on stainless steel couplings the use of a quality lubricant is imperative. Betalube, a copper based paste is highly recommended and available from Betabite Hydraulics or your local distributor. Please note after assembly, fittings to be used on Oxygen lines should be fully degreased.
5. Slide the nut onto the tube, followed by the ferrule, the open end of the nut should be towards the end of the tube, and similarly, the cutting or smaller end of the ferrule should point towards the tube end.
6. Present the tube, nut and ferrule to the coupling body, making sure that tube passes cleanly through the nut and ferrule & butts firmly against the step (abutment face) provided in the coupling body. Screw the nut onto the coupling body until finger tight.
7. Hold the tube in one hand and with the correct sized spanner in the other hand, tighten the nut until the ferrule is felt to just grip the tube. This point is determined by rotation or slightly rocking the tube. From this point, the nut should be tightened  $1 \frac{1}{4}$  to  $1 \frac{1}{2}$  turns from the initial ring grip to obtain a fully effective cutting action. On larger sizes of fitting, an extension to the spanner is highly recommended to maximise leverage and minimise effort.
8. If the nut is now removed, the ferrule will have cut its own seating on the tube and whilst it will be found to rotate, it cannot be moved towards the tube end. The 'joint' may now be re-assembled, by re-tightening of the nut until significant resistance is felt and then increase for a further  $\frac{1}{8}$  to  $\frac{1}{4}$  of a turn. The above procedure must be followed closely to ensure a safe and successful joint.
9. Betabite fittings correctly made can be broken repeatedly, when not under pressure and re-made without affecting their pressure tightness and leak-proof quality.



# INSTALLATION REQUIREMENTS

## **INSTALLER MUST CHECK THE FOLLOWING LIST WHEN INSTALLING A MOLNAR CLEAR FLOOR HOIST**

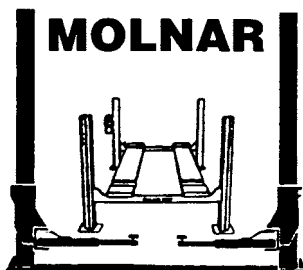
1. A suitable floor where the hoist is to be bolted down must have a level surface to ensure the hoist base frames lie flat. When the hoist is bolted down check all nuts and bolts to ensure they are correctly tightened.
2. Check wire ropes and sheaves for possible transport damage or dislocation.
3. When power is connected to the hoist terminal box the motor must rotate clockwise. If hoist will not lift exchange wires on two phases.
4. Check safety mechanism for loose nuts or bolts.
5. Check operation of safety mechanism on both sides, then test hoist with load.
6. Recheck hoist operation. Demonstrate the hoist to the operator.
- 7. Very important**
  - 7.1 Instruct operator how to use the hoist, how the safety mechanism works and where to place lifting pads when lifting vehicles.
  - 7.2 Point out maintenance requirements on wire ropes and that they should be checked monthly.
  - 7.3 Point out that by law, the operator and/or owner are responsible for the maintenance and safe operation of the hoist.
8. When all the above points are checked the certificate must be signed by the installer.

# CERTIFICATION

I hereby certify that the hoist has been checked and is in a safe operating condition and that the purchaser/operator has been duly instructed in the operation thereof.

Purchaser . . . . .  
Model No . . . . . MF 1705-93-QH-3T . . . . .  
Serial No . . . . .  
Date . . . . .

Installation by . . . . .  
Address . . . . .  
. . . . .  
Name . . . . .  
Signature . . . . .  
Date . . . . .



MANUFACTURED BY:

**MOLNAR ENGINEERING PTY. LTD.**

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