

Clarke[®] **STRONG-ARM**

OPERATING & MAINTENANCE INSTRUCTIONS



2 POST VEHICLE LIFT

**Model Nos:
CPL30S & CPL30T**



Clarke[®]
INTERNATIONAL



CERTIFICATE OF CONFORMITY

We declare that this product complies to the following standards/directives:

- EN 89/336/EEC
- EN 89/392/EEC
- 91/368/EEC
- 93/44/EEC
- EN 60 204-1
- IEC 34/1

**EC TYPE APPROVAL. NR. 04 205 4388/94 RWTUV. GmbH.
LANGEMARCKSTR 20. 45141 ESSEN GERMANY**

Product Description: **2 POST VEHICLE LIFT**

Model Numbers: **CPL30S, CPL30T**

Serial (Batch) No:

Signed 

Clarke[®] INTERNATIONAL
Hemnall Street, Epping, Essex CM16 4LG



Thank you for purchasing this CLARKE 2-Post Vehicle Lift which has been designed with safety in mind and complies with all relevant European safety standards.

Before installation, it is important that you read this manual thoroughly and ensure the instructions are carefully followed.

All operators of this equipment MUST read this manual before being allowed to use it. They must ensure that all safety, operating and maintenance instructions are fully complied with, thus ensuring the safety of themselves and others in the vicinity.

You can look forward to the Vehicle Lift giving you long and satisfactory service, provided the instructions and maintenance schedules are carefully followed, .

Please note, that this manual is an integral part of the equipment, and should be kept with it at all times. even in the event of re-sale.

GUARANTEE

This CLARKE product is guaranteed against faulty manufacture for a period of 12 months from the date of purchase. Please keep your receipt as proof of purchase. This guarantee is invalid if the product is found to have been abused, modified or tampered with in any way, or not used for the purpose for which it was intended.

Faulty goods should be reported to your Clarke dealer immediately.

This guarantee does not effect your statutory rights.

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SAFETY PRECAUTIONS

WARNING!

As with all machinery, there are certain hazards involved with their operation and use. Exercising respect and caution will considerably lessen the risk of personal injury. However, if normal safety precautions are overlooked or ignored, personal injury to the operator or damage to property may result.

- Ensure the site selected is large enough to accommodate the lift, including a safety area, and with adequate height clearance, taking into account the size of vehicles expected to be worked on. (see Assembly & Installation, p6).
- Ensure the area on which the base is mounted is flat and level, and of sufficient strength to adequately support the weight of the lift and vehicle, and is capable of relieving and securing the foundation fittings. (see Assembly & Installation, p6).
- Ensure adequate lighting is provided throughout the entire area.
- ALWAYS wear shoes with non-skid soles and metal or reinforced toe-caps.
- ALWAYS wear protective head cover, and protective eye shield.
- DO NOT wear jewellery which may get caught in moving parts. Long hair should be contained.
- NEVER exceed the load for which the machine was designed. If the load capacity and other warning labels become defaced or illegible, have them replaced. (Contact your Clarke dealer for replacements).
- Before operating, ensure that all bolts, pins and securing devices are correctly in place and in good condition. Check for signs of cracked welds, bent or loose pins or other signs of structural damage. Do not use if any of these conditions exist. Ensure repairs are carried out by qualified persons only, or contact your nearest Clarke dealer.
- Use ONLY those fittings and fixtures supplied. NEVER substitute bolts or pins or other components, unless they are direct replacements from Clarke International.
- DO NOT allow any person to operate the machine unless they are completely familiar with all aspects of operation and have read this manual thoroughly.
- DO NOT use the machine for lifting people or for any other use other than that for which it was designed.
- Ensure the machine is properly maintained at all times (see Maintenance).
- If the machine has been subjected to an abnormal load or shock, remove it from service immediately and have it fully inspected by a qualified person. If necessary, refer to your Clarke dealer.
- Before loading the machine, adjusting the arms etc., ensure the ON/OFF switch is set to the 'O' (OFF) position.
- Do not reverse a vehicle into position on the lift, unless it is rear engine drive, as the Short, Hinged Arms, at the rear of the lift, must always support the engine.
- Before locating the lifting arm pads on the lifting points, check to ensure the rubber pads are free from oil or grease which could cause the pad to slip during operation. Never raise a vehicle without the rubber pads in place. Replace them if they become damaged
- Ensure the vehicle being lifted is completely stable and the lifting arms are located on the recommended lifting points ONLY. If in doubt, ALWAYS consult the vehicle handbook to determine where the lifting points are located.
- NEVER operate the machine with any guard or cover removed.
- Ensure that no equipment is connected to the vehicle when raising or lowering.

- During the lifting process, ensure the load remains parallel to the ground. Should it tilt, stop lifting immediately, lower the load and investigate the cause.
- ALWAYS keep a constant check whilst lifting to ensure that there is sufficient height clearance, particularly in the event of an unusually large vehicle.
- NEVER allow any electric cables to pass through or rest on the structure of the lift. If they should become frayed or damaged in any way, the lift could become live, with serious consequences.
- Before lowering the lift, ensure that all personnel, tools and other equipment used, is moved well clear, into the safety zone.
- When operating the machine, the operator and any persons in the vicinity should stand well clear - in the safety zone, (see Installation), and constantly checking to ensure that no obstacle prevents progress of the lift.
- DO NOT allow anyone to stand beneath the lift until it has stopped, is perfectly stable, and the ON/OFF switch is set to the 'O' (OFF) position.
- DO NOT remove a vehicle until all arms are swung clear.
- NEVER board the vehicle for any purpose when it is in a raised position.
- Never modify the lift in any way.
- ALWAYS ensure the power to the machine is switched OFF before maintenance or servicing.
- When the machine is not in use, the lift should be lowered to the ground and the supply to the machine should be switched OFF. The ON/OFF switch on the control panel should be in the 'O' (OFF) position, and the switch padlocked in place.

FEATURES

This machine has been designed with safety in mind and complies with all relevant European safety standards.

The lifting arms are operated by screws, one in each column, driven by an electric motor. The motor drives the Drive Screw via drive belts, and the drive is transferred to the Driven Screw via a chain.

A single control panel, mounted on the rear of the left hand (driving) column, comprises the main ON/OFF switch, and UP and DOWN controls.

Long Telescopic Arms are provided at the front of each column, with Hinged Arms at the rear. The Hinged Arms must ALWAYS be supporting the engine of the vehicle. Do not, therefore, reverse a vehicle into position on the lift, unless it is rear engine drive.

Each Arm is provided with adjustable rubber pads for locating on the vehicles' lifting points. The maximum height to which the arms may be raised is 1850mm (6 ft), giving adequate room to operate beneath the vehicle.

The MINIMUM ground clearance is 125mm.

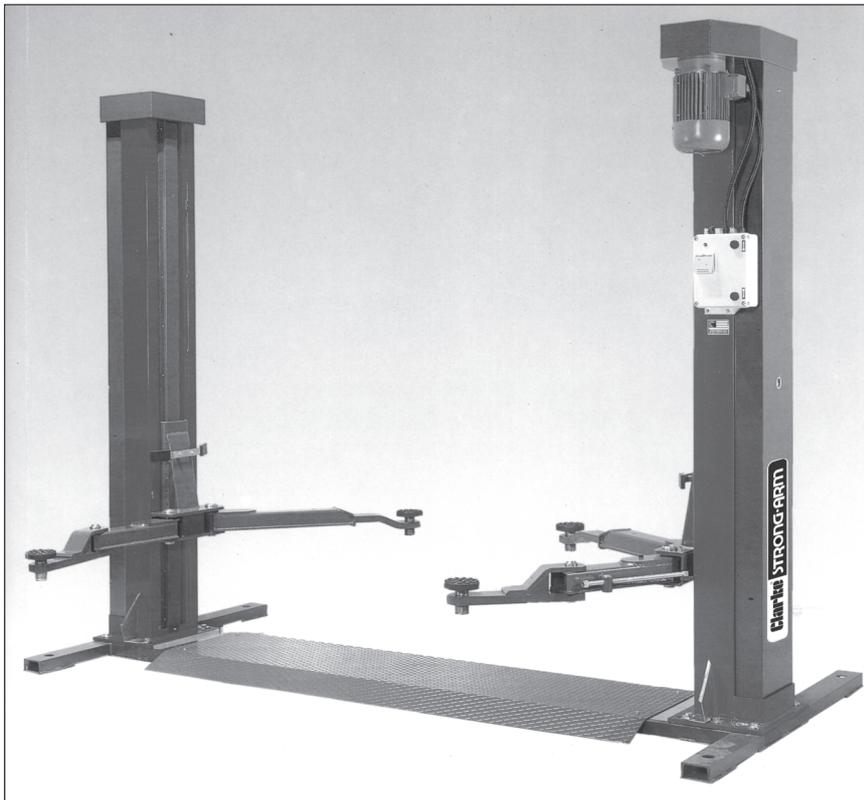
PACKAGING and CONTENTS

The 2-Post Lift is delivered in two packages. One consists of a wooden crate containing 1 Drive Column, 1 Driven Column and 4 Arms. The other package comprises the Base Frame, unpacked.

The wooden crate also includes:

- various screws for the assembly of the machine
- 1 chain for the transmission
- 4 Arm Pin sets
- 4 Arm Safety sets
- 4 Foot Guards
- 2 Carriage Guide Bars
- This Operating & Maintenance manual

Fig. 1



This illustration shows the rear of the machine with the Short, Hinged Arms nearest the camera,

Unpack the crate and carefully lay out the various components checking to ensure they are undamaged. Any damaged item should be reported to your Clarke dealer immediately in order to arrange for a replacement to be made.

SELECTING THE SITE

The machine should be placed on a concrete floor which is at least 160mm thick and capable of withstanding the load of the machine and vehicle (2450 lbf/in² min).

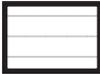
The surface should be perfectly flat and level. If this is not the case, metal shims must be used beneath the base plate to ensure it is level. (see Final Adjustments - p10). The floor must be capable of receiving and securing four M12 foundation bolts (not supplied). Please refer to 'Assembly - Base Frame' for further details.

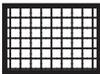
If the machine is mounted on a 'load bearing floor', expert advice should be sought to ensure it is of sufficient strength to withstand the load.

There should be sufficient space for a vehicle to manouvre to ensure a straight line path on to the lift, and the height clearance, directly above the lift, should be sufficient to ensure that no damage could occur to a vehicle being lifted.

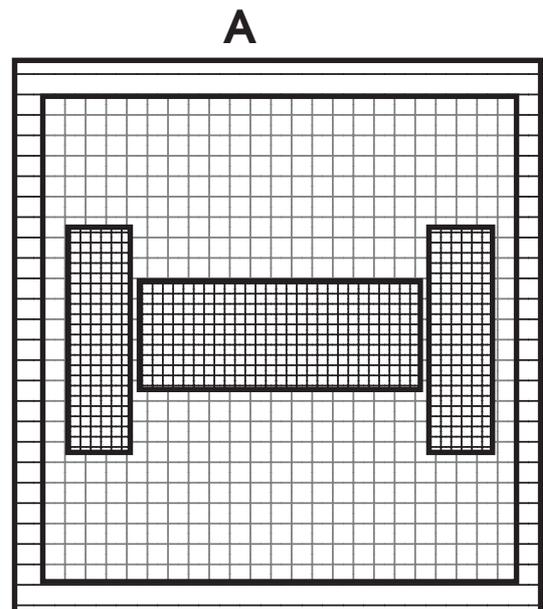
NOTE: Ideally, a height gauge, set to the maximum vehicle height permitted, should be erected at the entrance to the lift.

The area must be large enough to provide a Safety Zone. The diagram below illustrates the minimum suitable space for the machine.

 Minimum Working Area(AxB)
5310 x 7200mm
(17 x 23½ft)

 Space occupied by the machine (AxB)
3110 x 1500mm
(10 x 5ft)

 Free Safety Area (AxB)
4310 x 6200mm
(14 x 20ft)



The Free Safety Area is that area where equipment, personel etc., must NOT be positioned at any time other than when working beneath the vehicle.

The size of this area will depend upon the size of the vehicle - the larger the vehicle, the larger the area. However, the MINIMUM FREE SAFETY AREA is 4310 x 6200mm

ASSEMBLY & INSTALLATION

IMPORTANT:

This machine should be assembled by trained personnel only.

NOTE: Unless otherwise stated, the numbers in brackets refer to the parts list item number and number in corresponding diagram.

1. Base Frame

Position the Base Frame at the desired location, bearing in mind that the 'Driving Column', i.e. that column carrying the motor and control panel, must be mounted so that the control panel faces the shorter foot of the base frame. (see fig. 2), and is at the LEFT HAND REAR of the machine.

Mark out the securing bolt holes, and proceed to install the foundation bolts.

The base frame should be secured using proper foundation bolts, size - M12 (not supplied), and the depth of the fixing should not be less than 150mm.

Installation should be carried out by a qualified person, who can determine the composition of the surface material and advise on the correct type of fixing required.

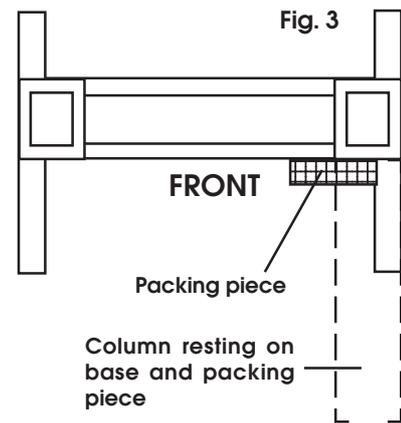
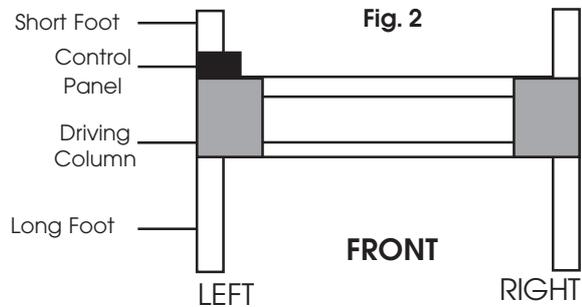
Bolt the base frame down, but do not fully tighten. It may be necessary to use metal shims, between the floor and frame, in order to ensure the frame is level. It is not necessary at this stage to level with absolute accuracy, as this is carried out once the lift is fully assembled.

2. The Columns

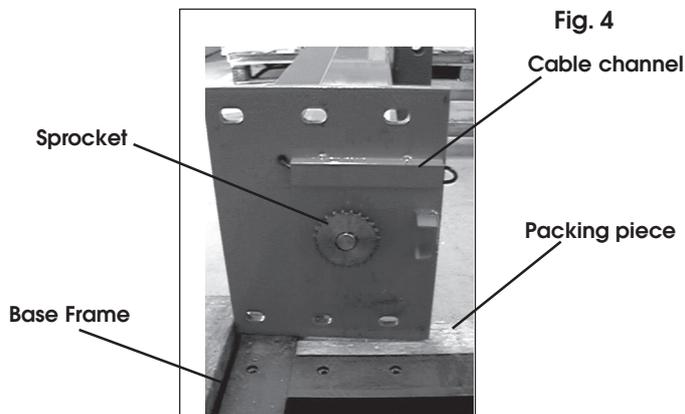
Firstly, fit the Column Dust Covers (Items 35 and 36, Parts List on page 17) - one to the top of each column, securing them each with four self tapping screws provided.

Position the Driven Column as shown in Fig. 3, with the bottom flange of the column resting on the edge of the base and a packing piece, and the carriage facing inwards.

Raise the column carefully, in the manner shown below. Ensure



Raising the Column with Bottom Plate resting on Foot of Base Frame and a packing piece



the sprocket at the base of the column enters the opening in the base cleanly, without touching the sides, (as this could damage the sprocket).

Ensure also that the cable, which protrudes from the channel, welded to the columns' bottom plate (shown in fig. 4), is not trapped between the plate and base.

Secure to the Base Frame using the four screws, and large flat washers provided, in the corner bolt holes ONLY, leaving them finger tight at this stage. **DO NOT use the centre holes.**

Carry out the same procedure for the other column.

3. THE CHAIN

3.1 Before attaching the chain, you must first ensure the Arm Carriages are at the same height, measured from the columns' Base Plate. If an adjustment is required, remove the dust cover from the top of the Driven column and turn the hex. nut (on top of the column, shown in fig. 5), until the carriage is perfectly in line with that of the Drive Column. Replace the Dust Cover

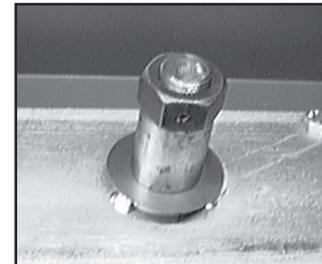


Fig. 5

3.2 Remove all but the two 'outside' column mounting screws and slacken these off sufficiently so that the column may be tilted outwards (see fig.6), in order to allow the chain to be slipped around the sprocket.

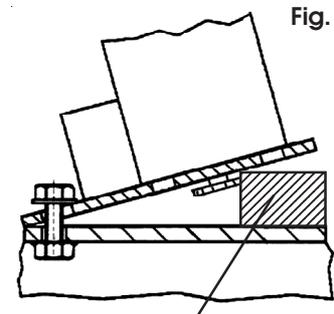


Fig. 6

Before tilting the column outwards however, slacken off the chain adjuster screw, shown in fig. 7, fully, and make sure the column is pushed in, towards the opposite column, as far as possible.

3.3 Very carefully tilt the column outwards and, as a safety precaution, place chocks between the columns' Base Plate and the Base Frame as shown in fig. 6. (Should the column slip, the chocks will prevent the column from injuring the hands of the person manipulating the chain.

Place Chocks here

Fig. 7

3.4 Slip the chain around the sprocket so that the end of the chain reaches approximately half way across the Base Frame.

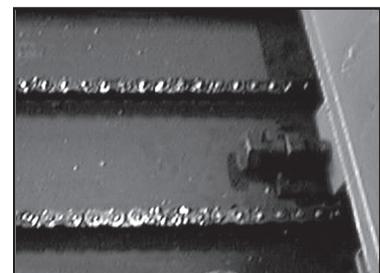


Fig. 8

3.5 Once the chain is connected, remove the chocks, lower the column and screw down the column mounting screws again, leaving them finger tight.

3.6 Proceed to connect the chain to the sprocket in the other column in a similar manner, ensuring that the run of chain, from one sprocket to the other, is as tight as you can get it, **without** turning the sprocket, (as this will cause the carriages to become missaligned).

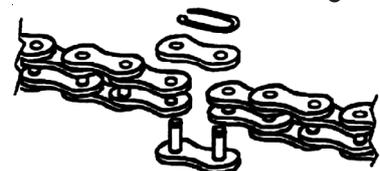


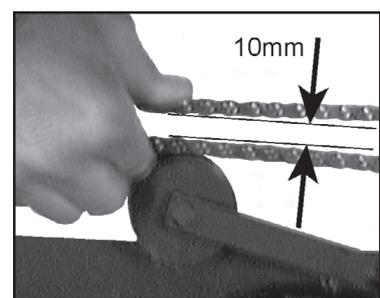
Fig. 9

3.7 The two ends of the chain can now be brought together and joined using the quick coupling provided (fig.8).

3.8 Once the chain is in place, it must be adjusted by screwing the adjuster screws, (fig. 7), clockwise.

Screw in each adjuster, in turn, by a similar amount - say 1/2 turn each side, until the gap at the centre, between the two runs of the chain, is 10mm when using reasonable force of the thumb and forefinger of one hand only. (see fig.9).

This microswitch is a safety feature, and operates when the chain becomes too slack (less than 10mm gap at the centre of the run), or breaks, shutting off the power to the motor.



3.9 Finally, connect the two electric cables, one from the base of each Column, to the leads from the microswitch, using the two waterproof in-line connectors packed in the parts bag. Trim the cables back so that there is as little slack in the cable as possible, to prevent any possibility of the connector, or the cable, coming into contact with the chain.

Connect brown to brown, and blue to blue. When adjustments are completed, apply chain lubricant to the chain (not supplied).

5. The Arms

The long telescopic arms must be mounted on the **FRONT** of each Arm Carriage, i.e. at the side of the column facing the longer foot.

Note that the arms are 'handed'. Shown in fig. 10 are the four arms supplied, two Long - Telescopic, and two Short - Hinged.

The right hand long telescopic arm is located on the front carriage mounting of the right hand (driven) column.

The right hand Short Hinged Arm is connected to the rear carriage mounting of the right hand (driven) column, etc.

Insert the end of the arm into its housing in the carriage, line up the holes and insert the 40mm dia. pin (item 3, fig. 11) with the ring nut (2), at the top. Secure from below with the circlip (4), provided.

NOTE:

1. *If the arms are low down, making it difficult to fit the circlips (4), wait until the arms are raised, during testing, when they can be fitted with ease.*
2. *It is recommended that you apply a thin layer of grease to the pins before insertion and also on to the carriage sliding guides when assembly of the arms is completed.*

6. The Arm Safety Bars (Ref Fig 11)

The Arm Safety Bars (item 17), lock the arms in a set position preventing them from swinging freely, and also limits movement, so that they do not collide with each other.

This allows them to be safely locked out of the way when required, and provides for easy and quick lining up of the arms and pads with the lifting points without the possibility of the arms moving whilst unattended. i.e. when operating the lift to take the weight of a vehicle. The threaded Safety Bar has a boss welded to one end. This fits on to a pivot pin on the carriage. It can fit either way round. Ensure the pivot pin and the hole in the boss, are free of paint or preservative, and apply a drop of oil to the pin before fitting the safety bar, ensuring it is fully seated on the pin.

Do not fit the circlip to the top of the pin at this stage.

Insert the Spring (19), into the Housing (A), in the arm followed by the Safety nut (18). Ensure the threaded portion of the hole in the safety nut is at the bottom as shown in fig. 13.

Push down on the safety nut, against spring pressure, and ensuring the hole in the nut lines up with that in the housing, swing the arm so that the safety bar (17) threads its way through the housing and nut.

Fig. 10

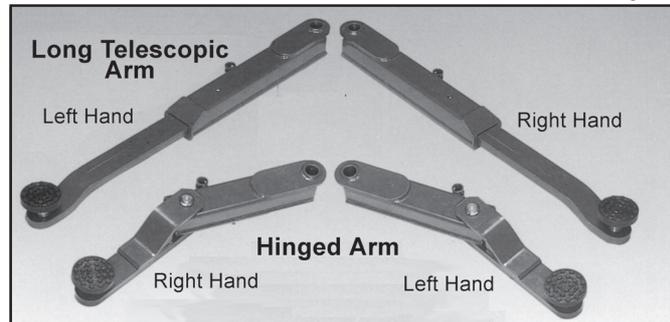


Fig. 11

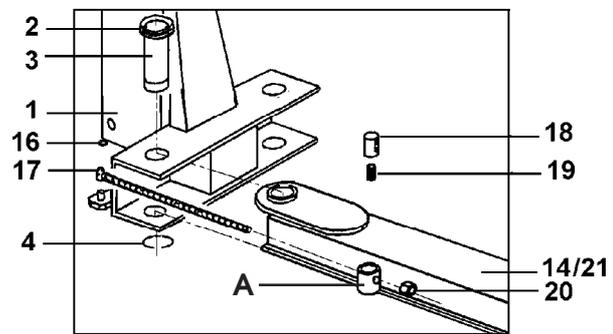


Fig. 12

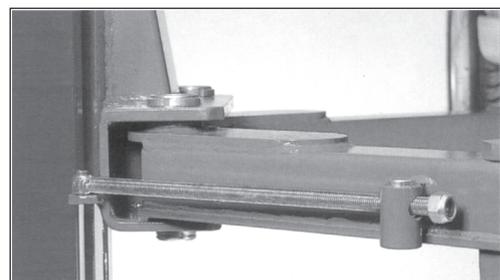
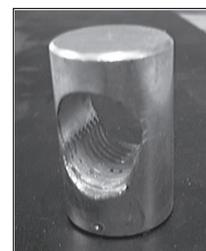


Fig. 13



Release pressure on the safety nut and the spring will push the nut upwards, locking its threads with those on the bar, thereby locking the bar in place.

To test its operation, press down on the safety nut and the threads should disengage, allowing the arm to move freely. If it proves to be difficult to disengage the threads by pushing down on the nut, it will be necessary to reposition the boss of the safety arm, on the pivot pin on the carriage.

If the safety bar is locked, i.e. the threads will not disengage when the safety nut is pressed down, apply an upward pressure to the safety bar whilst pushing down on the safety nut, thereby disengaging the threads, then get an assistant to swing the arm in order to withdraw the safety bar from the safety nut and housing.

Pull the safety bar from the pivot pin, place a flat washer (provided) on to the pin and replace the bar. Connect the bar to the safety nut as previously described and retest to ensure the bar releases correctly when the safety nut is pressed down.

If necessary, repeat the operation, by placing another washer on the pin, until the safety bar locks and releases satisfactorily.

When completely satisfied, fit the circlip (16), to the pivot pin, and screw the self locking nut on to the end of the safety bar, to its full extent. i.e. ensure the threaded safety bar is completely through the nut and is gripped by the nuts' nylon insert.

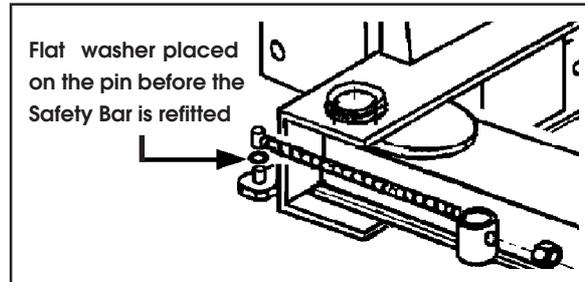
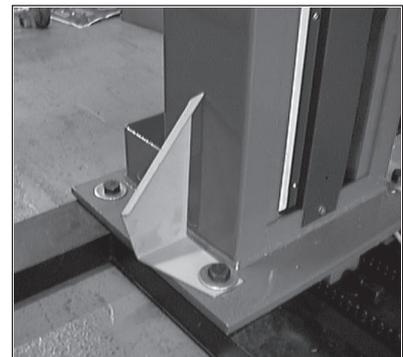


Fig. 14

7. The Foot Guards

The four Foot Guards are safety devices and must be in place. They are designed to prevent people from casually standing on the base of the column, with a foot extended into the Free Safety Area, thereby inviting the arm carriage or arm, to crush the foot on its downward travel.

They are located with a single Column mounting bolt as shown in fig. 14.



8. The Safety Guides

Safety Guides are provided which are bolted, one to each carriage, and can be clearly seen in fig., 1, mounted immediately above the arms.

Each guide has rubber pads at each end of the guide bar to prevent serious damage to a vehicle if it is not driven or positioned correctly between the columns. The safety guides also affords some protection for the columns themselves.

These guides should now be bolted the carriage, in the manner shown in fig. 1.

9. Final Adjustments

The machine is now ready for final adjustment. This involves securing the columns firmly to the base frame, and bolting the complete assembly to the floor ensuring the columns are perpendicular, and perfectly in line with each other.

Firstly, screw down the column mounting screws, progressively, to a torque setting of 32lbft (43Nm).

Using a large spirit level, ensure the columns are perpendicular, in both directions, and in line with each other. Any misalignment may be corrected with shims placed beneath the base frame at strategic points. Remember, the floor should be properly prepared beforehand, and should be perfectly level and flat at the area supporting the lift. This will simplify the job of aligning the columns.

All mounting points must be in solid contact with the floor, and any gaps between the base frame and the floor, must be taken up with suitable shims ('U' shaped at the mounting bolts), of at least 80x80mm dimension.

When completely satisfied, tighten the bolts progressively to the torque setting recommended by the foundation bolt manufacturers.

ELECTRICAL CONNECTIONS

WARNING

1. *This machine must be earthed*
2. *Electrical installation of this machine must be carried out in accordance with all IEE regulations and must be carried out by a qualified electrician.*

1. Model CPL30S

This model is powered by a **230 VAC, 50Hz, Single phase motor**,

Connect the mains lead to a 230V 50Hz electrical supply, having a fuse rating of 20amps.

IMPORTANT: A 13Amp plug MUST NOT be used with this machine.

The conductors in the mains lead are coloured in accordance with the following code:

Green & Yellow	-	Earth
Blue	-	Neutral
Brown	-	Live

As the colours of the flexible lead may not correspond with the coloured markings identifying terminals in your electrical supply, you should proceed as follows:

Connect the Green & Yellow conductor to terminal marked with the letter 'E' or Earth symbol "⏏", or coloured GREEN or YELLOW & GREEN.

Connect the Brown conductor to the terminal marked with the letter 'L' or coloured RED

Connect the Blue conductor to the terminal marked with the letter 'N' or coloured BLACK

9.2 Model CPL30T

This model is powered by a **400 VAC, 50Hz, three phase motor**. and connection should be made through a fused isolator having a delayed fuse rating of 20Amps.

The conductors should be connected as follows:

Connect the Green & Yellow conductor to terminal marked with the letter 'E' or Earth symbol "⏏".

The other conductors should be connected, one to each of the three available phases.

It is **IMPORTANT** to ensure that the phase connections are correctly made, so that the motor turns in the correct direction of rotation. i.e. when the UP button is pressed the arms are raised, conversly when the DOWN button is pressed they are lowered.

If the arms lower when the UP button is pressed, it will be necessary to reverse two of the three phase connections in order to reverse the direction of rotation of the motor.

When testing the machine, ensure all precautions are taken as previously described.

IMPORTANT:

Connection must be made via a fused isolator, located close to the machine so that it is easily reached by the operator. We further recommend that a Residual Current Device (RCD) be used.

NOTE: It may be necessary to replace the mains cable, supplied with the machine, with one of a more suitable length for your installation. Ensure the conductor sizes are at least the same as those in the cable supplied.

WARNING

The trailing cable from the machine to the mains supply MUST be protected in accordance with IEE regulations.

THE LUBRICATING PUMP

Each Drive Screw is lubricated by a pump located in the arm carriage. When the arms are at their lowest level, the pump is charged with oil from the reservoir in the base of the column. As the arms are raised, oil is delivered to the point of contact between the Drive Screw and Nut. Before the lift is used therefore, the oil reservoir must be filled with oil as follows:

Remove the side panel (3) from each column and pour 1 litre of oil (Shell Spirex Heavy Duty 85W/140 or equivalent is recommended) into the base of the column.

Observing all precautions previously mentioned, and keeping hands etc. well clear of the moving parts, switch on the power to the machine, and turn the main ON/OFF switch to 'I' (ON).

Press the '↑' (UP) button and allow the machine to rise by 20 - 30cm, before releasing and pressing the '↓' (DOWN) button and lowering again. Repeat this operation a few times, until the pump delivers oil to the nut during the UP phase.

When satisfied, switch OFF the machine at the main ON/OFF switch, and the mains supply, with the arms in their lowest position, then replace the side panels.

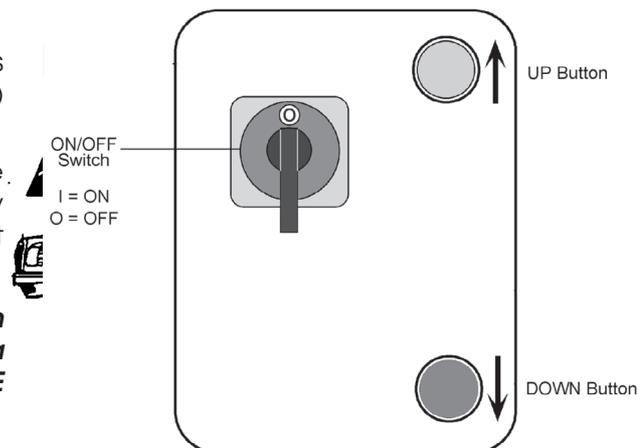
CONTROLS

Due to the care in which the machine is designed and manufactured, there are no special commissioning tests to carry out, however, once the machine has been installed, fully check its operation without a load. Should it not raise or lower to its fullest extent, check to ensure the limit switches in the drive column, and one in the driven column, are correctly set to allow maximum movement of the arm carriages.

The diagram shows the Control Panel, which is located at the rear of the left hand (driving) column.

If desired the main ON/OFF switch can be padlocked in place, and this is strongly recommended whenever the lift is left unattended.

NOTE: The provision of the ON/OFF safety switch does not preclude the user from providing a mains supply isolator, in accordance with IEE regulations.



OPERATION

Ensure the main ON/OFF switch is in the 'O' (OFF) position, then swing the arms well clear so that the vehicle may be driven in line with the axis of the lift, and centralised between the two columns.

It is extremely important to ensure the vehicle is positioned so as to achieve correct load distribution on the arms.

Fig. 15 illustrates the manner in which a typical vehicle should be positioned.

Always check as to whether the vehicle is carrying an abnormal load. i.e in the boot, or in the back of a van etc., and have it removed before positioning. DO NOT exceed the max. capacity for the lift.

Fig. 15

**MAX
2500kg**

Position the arms so that the rubber pads are directly beneath the lifting points recommended by the vehicles' manufacturer, then screw out the pads so that they are in solid contact.

Screw out the coarser, large diameter screws first, from below the Arm, until the pad is almost touching the lifting point. Then bring the pad lightly into contact by screwing out the pad itself. It may be necessary at this stage to adjust the position of the Arm slightly in order to ensure the pad is correctly aligned before finally bringing it firmly into contact by screwing out the large diameter screw again.

Fig.16



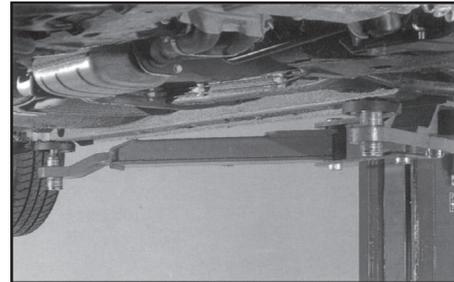
Ensure all precautions are taken as previously described before turning the main ON/OFF switch to 'I' (ON), and pressing the ↑ (UP) button briefly in order to take the weight of the vehicle ONLY. DO NOT attempt to lift the vehicle in one operation.

Only when the full weight of the vehicle is taken and the vehicle is deemed to be level and stable should you continue to raise to the desired operating height.

Once the lift is at the desired operating height, DO NOT FORGET to turn the main ON/OFF switch to the 'O' (OFF) position.

When lowering the lift, first ensure that all personnel, tools and equipment are removed from the safety area and vehicle before turning the main ON/OFF switch to 'I' (ON) and pressing the ↓ (down) button.

Fig. 17



MAINTENANCE

IMPORTANT: Unless the maintenance task requires that the machine be operated, ensure it is switched OFF at the main ON/OFF switch, and the mains supply, before commencing.

Weekly

Clean the machine at least once per week, removing all foreign bodies and dirty materials. Use a suitable non-corrosive, oil free detergent where necessary. DO NOT use water or inflammable liquids. The Support Pads must be free from oil or grease at all times.

Monthly

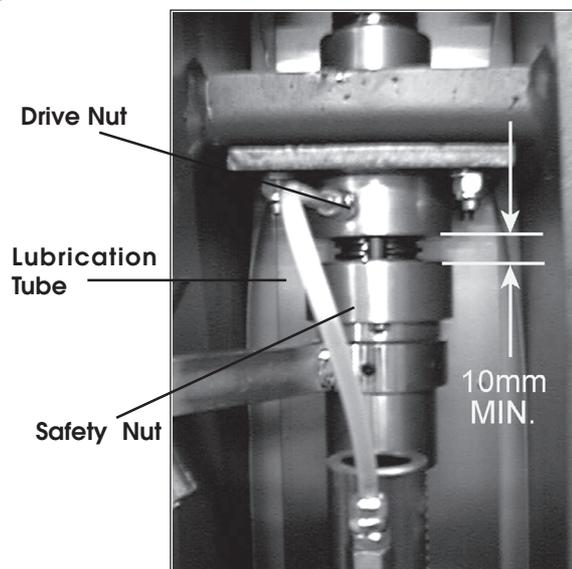
1. Check the drive nut wear by raising the arms until the drive nut is in line with the spy hole in the columns' side panel (remove the plastic bung).

The drive nut is shown in fig 18. Check the distance between the drive nut, and the safety nut as shown.

If this distance appears to be less than 10mm, remove side panel and measure. You should seek technical assistance from your Clarke dealer, if the measurement is less than 10mm, as it may be necessary to replace the drive nut.

2. Check the operation of the Screw Lubricating Pump, by raising the arms and observing the pump through the spy hole in the columns' side panel (remove the plastic bung).

Fig. 18



Oil should be seen moving through the plastic lubricating tube to the drive nut. If there is no oil present, or if only air bubbles can be seen, remove the side cover and add oil (Shell Spirex Heavy Duty 85W140 or equivalent is recommended), before re-checking the pumps' operation.

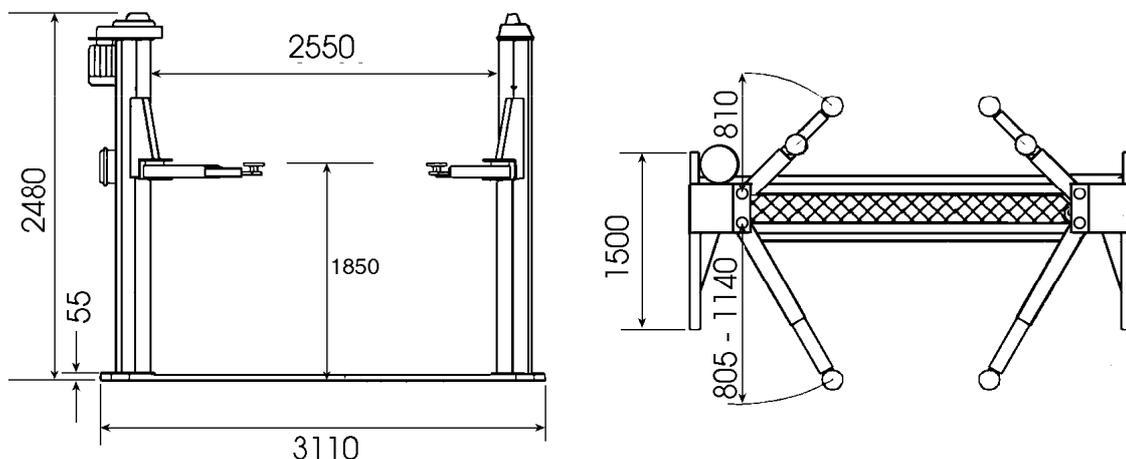
3. Remove the base frame Cover Plate to allow access to the chain, and lubricate it with chain lubricant.
4. Lubricate the upper screw bearings which are accessed from the top of each column. Apply a few drops of oil to each bearing.
5. Grease the Sliding Carriage Guides. Clean off any excess.

Annually

1. Remove columns' side panel, pump out the oil from the base of the column. Clean thoroughly and refill with clean oil (Shell Spirex Heavy Duty 85W140 or equivalent is recommended).
2. Check for lateral movement of the carriage on its guides. Any movement can be taken up by adjusting the guide rollers, which are accessed by removing the side panels, and can be found at each side of the carriage.
Undo the locknuts and screw out the nylon guide rollers until any wear is taken up. If the guide rollers are badly worn, contact your Clarke dealer for advice.
3. Check motor Drive Belt tension. The drive belts are located at the top of the drive column. Belt tension is correct when the belt can be depressed by 12mm (1/2") at the middle of its longest run, using reasonable thumb pressure.
Adjustment is effected by slackening the motor mounting bolts, jacking out the motor to give the required belt tension, and re-tightening the mounting bolts.

SPECIFICATIONS

	CPL30S	CPL30T
Motor	230V 50Hz 1Ph	400V 50Hz 3Ph
Power Rating	4HP (3kW)	4HP (3kW)
Fuse Rating	20Amps	20Amps
MAX Capacity	2500kg	2500kg



Please note that the details and specifications contained herein, are correct at the time of going to print. However, CLARKE International reserve the right to change specifications at any time without prior notice. Always consult the machine's data plate

TROUBLESHOOTING

Problem	Probable Cause	Remedy
Machine does not operate	<ol style="list-style-type: none"> 1. No power 2. Chain microswitch has operated 3. Safety Nut Microswitch has operated 	<ol style="list-style-type: none"> 1. Check power supply Check ON/OFF switch Check Fuse/circuit breaker 2. Switch OFF at main ON/OFF switch, remove Base Frame Cover Plate and check chain. Renew or adjust as necessary. 3. Check Safety nut through spy hole. If Drive Nut has failed, consult your Clarke dealer
Intermittant Operation	<ol style="list-style-type: none"> 1. Thermal cut-out has operated 2. Chain too loose 	<ol style="list-style-type: none"> 1. Wait for a few minutes to allow time for the relay to reset. If the condition occurs repeatedly, check cause - low voltage, exceeding machines' capacity, damaged motor etc. If necessary, consult your Clarke dealer. 2. Re-adjust chain
Lifting operation is irregular	<ol style="list-style-type: none"> 1. Motor Drive Belts are loose 2. Damaged or badly lubricated Carriage Sliding Guides 3. Too much movement between carriage and sliding guides. 	<ol style="list-style-type: none"> 1. Check and adjust as necessary. 2. Check, adjust and/or lubricate as necessary. 3. Check and adjust as necessary.

SPARE PART & SERVICING



For Spare Parts and Service, please contact your nearest dealer, or CLARKE International, on one of the following numbers.

PARTS & SERVICE TEL: 020 8988 7400

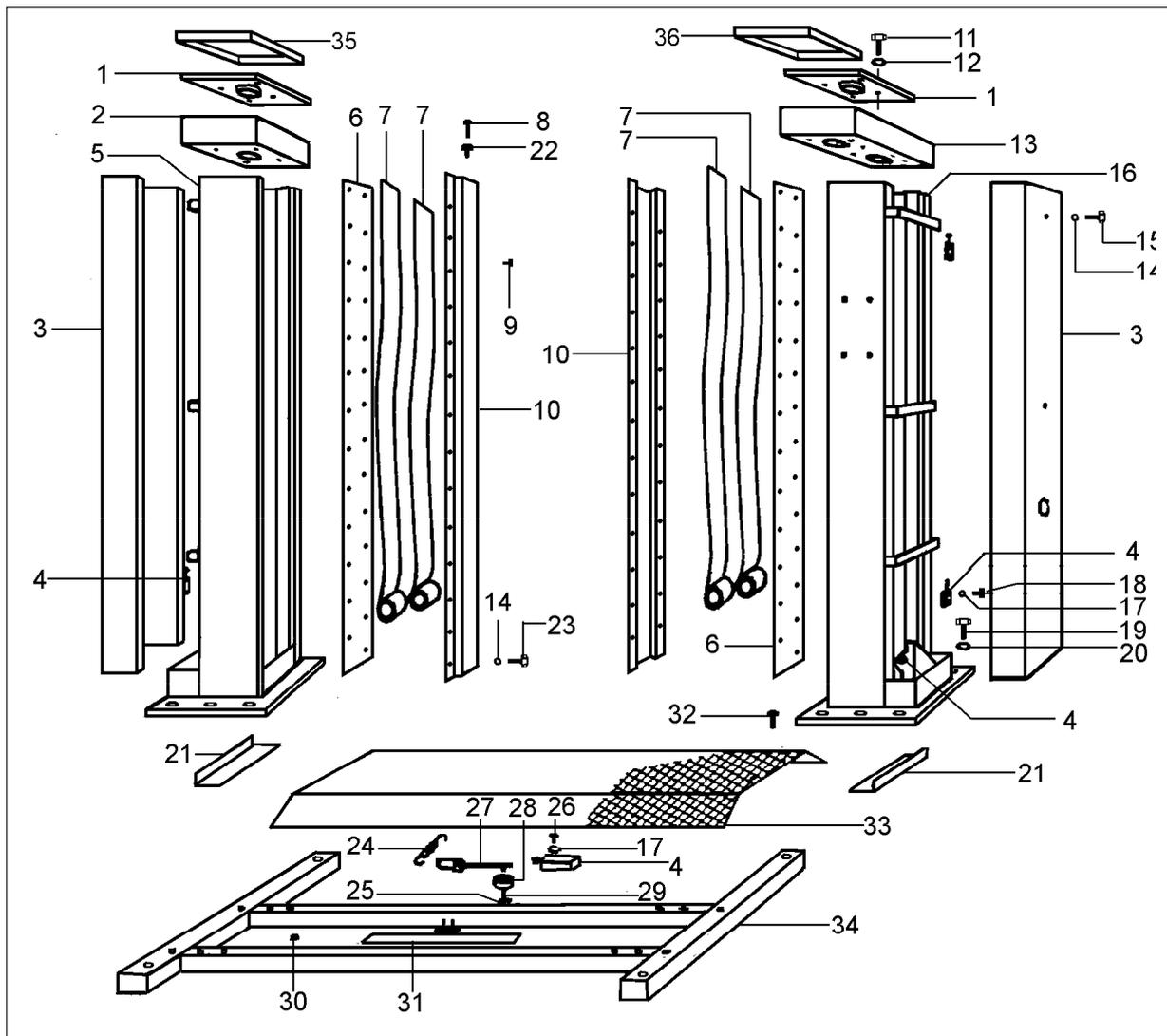
PARTS & SERVICE FAX: 020 8558 3622

or e-mail as follows:

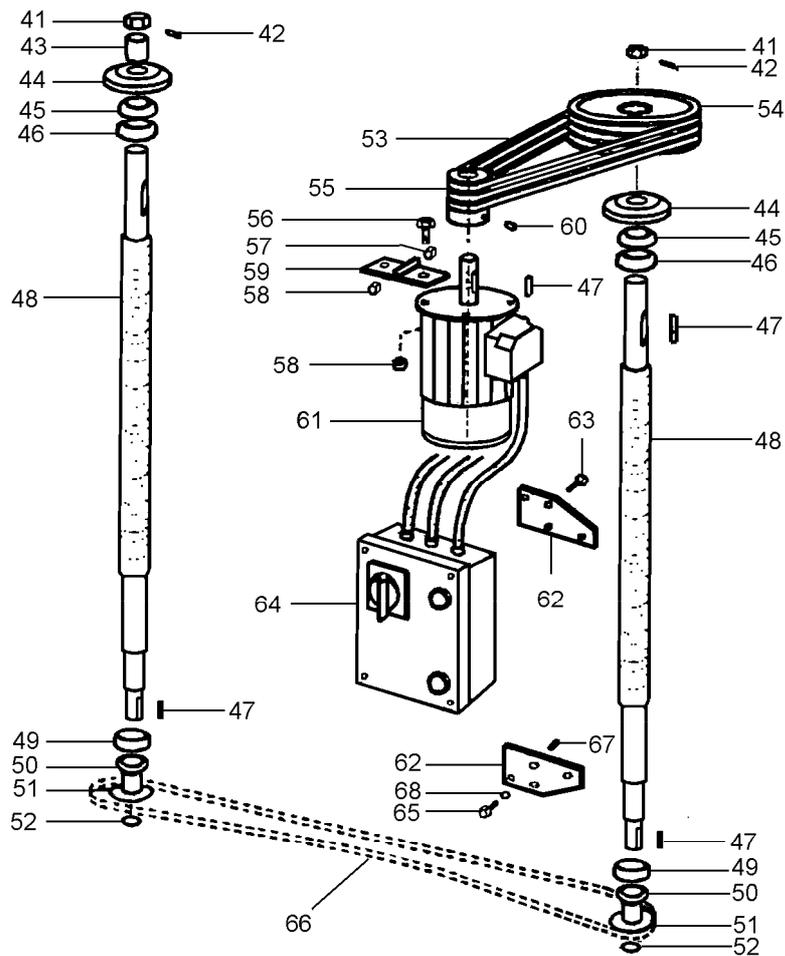
PARTS: Parts@clarkeinternational.com

SERVICE: Service@clarkeinternational.com

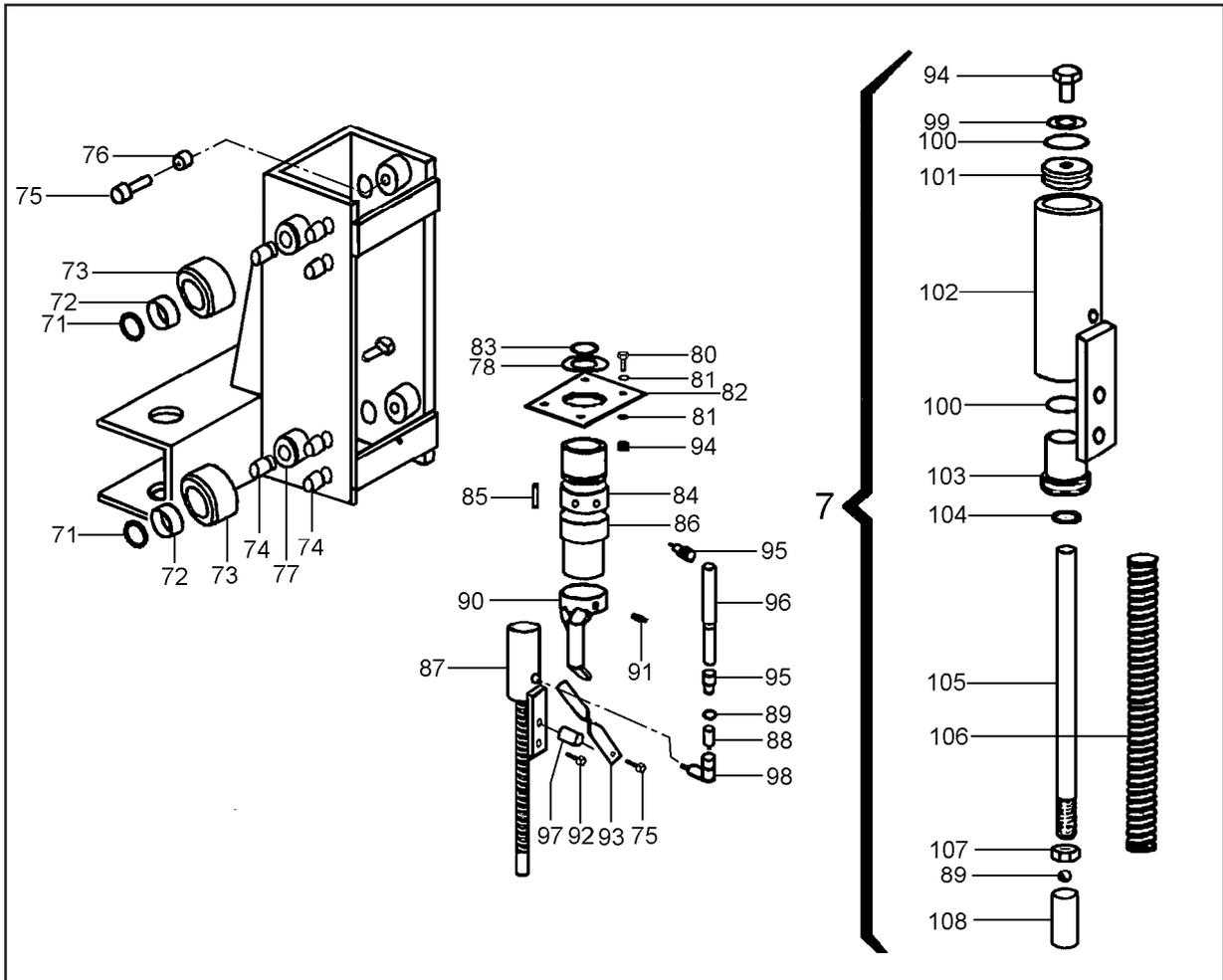
PARTS LISTS & DIAGRAMS



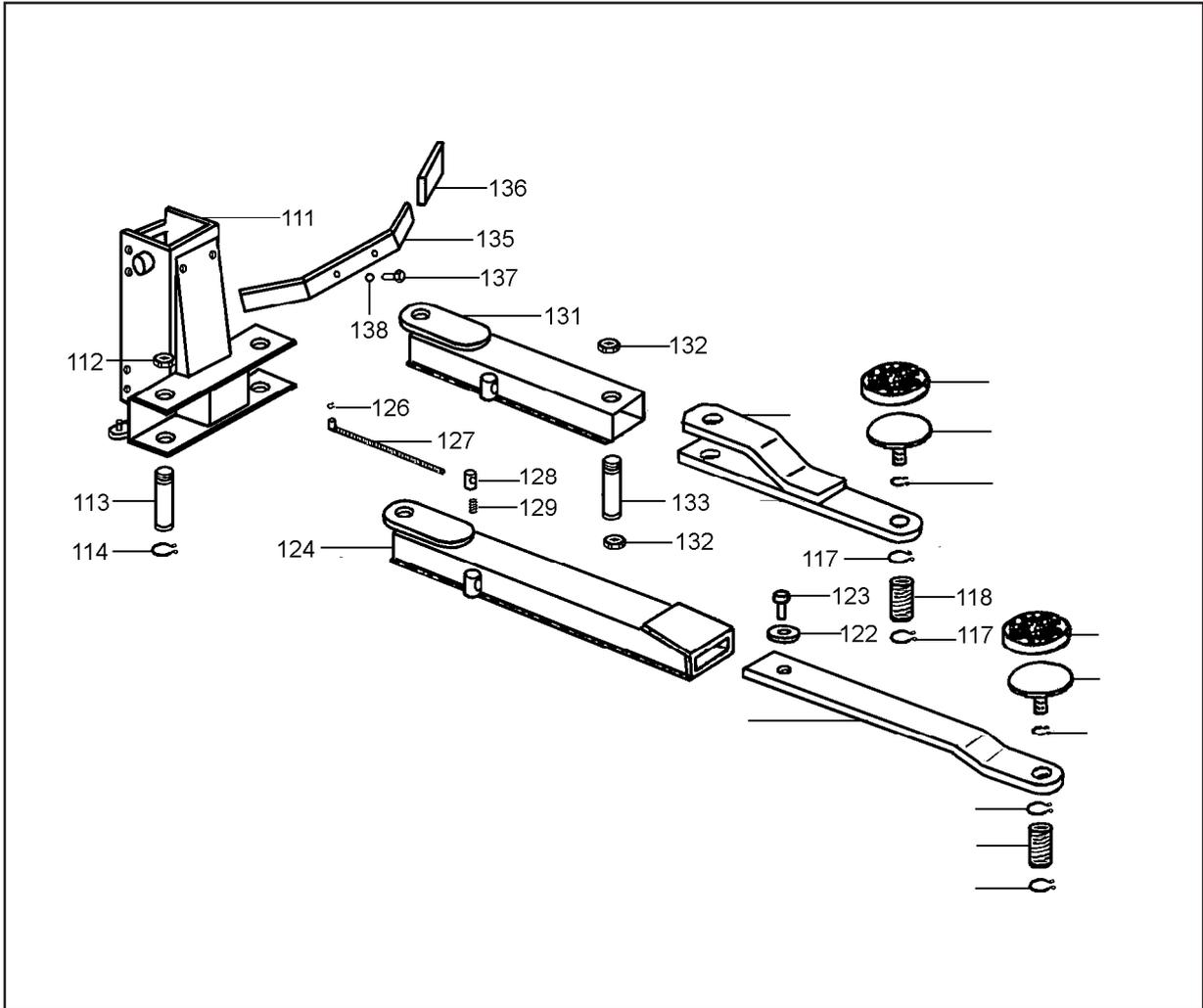
No.	Description	Part No.	No.	Description	Part No.
1	Head	GZ609-2-C39	19	Screw	GZ011614
2	Upper Panel	GZ609-2-C42	20	Washer	GZ161601
3	Side Panel	GZ609-0-C51	21	Cover Plate	GZ609-0-P21
4	Microswitch	GZ381004	22	Threaded Rivet	GZ12601
5	Driven Column	GZ609-1-C1	23	Screw	GZ01607
6	Inner Panel	GZ609-0-C49	24	Spring	GZ609-0-17
7	Flexible Covers	GZ609-0-C50	25	Circlip	GZ171201
8	Screw	GZ01605	26	Screw	GZ02402
9	Rivet	GZ18301	27	Roller Lever	GZ609-2-13
10	Front Guard	GZ602-0-C48	28	Roller	GZ609-0-P18
11	Screw	GZ011204	29	Self Lubricating Ferrule	GZ271201
12	Washer	GZ161201	30	Screw	GZ011603
13	Upper Panel (Drive)	GZ609-2-H9	31	Guide	GZ609-0-P19
14	Washer	GZ16801	32	Screw	GZ01802
15	Screw	GZ01607	33	Base Cover Plate	GZ609-0-P20
16	Driving Column	GZ609-1-H1	34	Base Frame	GZ609-1-P1
17	Washer	GZ16401	35	Dust Cover Driven Column	n/a
18	Screw	GZ02402	36	Dust Cover Driving Column	n/a



No.	Description	Part No.	No.	Description	Part No.
41	Nut	GZ143002	56	Screw	GZ01812
42	Pin	GZ79503	57	Washer	GZ16801
43	Spacer	GZ609-0-C44	58	Nut	GZ14801
44	Guard Ring	GZ609-0-C43	59	Belt Tightener	GZ609-0-H13
45	Bearing	GZ555202	60	Spring	GZ15801
46	Bearing	GZ555202	61	Motor Assy. 230V	GZ609-M1-6-E40
47	Key	GZ850801	61	Motor Assy. 400V	GZ609-6-E40
48	Lifting Screw	GZ609-0-C34	62	Support Plate	GZ609-0-H13
49	Bearing	GZ555201	63	Screw	GZ064203
50	Sealing Ring	GZ865201	64	Control Box 230V	GZ6091-6-E60
51	Pinion	GZ609-0-C38	64	Control Box 400V	GZ609-6-E60
52	Circlip	GZ172801	65	Screw	GZ064202
53	Drive Belt	GZ881173	66	Chain	GZ331201
54	Driven Pulley	GZ609-0-H11	67	Internal Thread	GZ11701
55	Drive Pulley	GZ609-0-H12	68	Washer	GZ16402



No.	Description	Part No.	No.	Description	Part No.
71	Circlip	GZ174001	90	Microswitch Activator	GZ609-2-H6
72	Self Lubricating Ferule	GZ274001	91	Spring	GZ15604
73	Roller	GZ609-0-C33	92	Screw	GZ01802
74	Sliding Block	GZ609-0-C31	93	Microswitch Activator	GZ609-0-H8
75	Screw	GZ01811	94	Self Locking Nut	GZ13801
76	Nut	GZ14801	95	Adapter	GZ711801
77	Contrast Ring	GZ609-0-C32	96	Tube	GZ254601
78	Contrast Plate	GZ609-0-C37	97	Spacer	GZ609-0-C46
79	Carriage	GZ609-1-C15	98	Elbow	GZ301801
80	Screw	GZ01804	99	Washer	GZ50801
81	Washer	GZ16801	100	Gasket	N/A
82	Plate - Drive Nut	GZ609-2-C29	101	Piston	GZ609-0-L1
83	Circlip	GZ175501	102	Small Cylinder	GZ609-0-L2
84	Drive Nut	GZ609-0-C35	103	Cylinder Guide	GZ609-0-L3
85	Spring	GZ79801	104	Gasket	N/A
86	Safety Nut	GZ609-0-C36	105	Cylinder	GZ609-0-L4
87	Lubricating Pump Assy	GZ609-6-C45	106	Spring	GZ609-0-L5
88	Adapter	GZ609-0-C52	107	Nut	GZ141001
89	Ball	GZ29601	108	Pawl	GZ609-0-L6



No.	Description	Part No.	No.	Description	Part No.
111	Carriage	GZ609-1-C15	126	Circlip	GZ171202
112	Ring Nut	GZ874001	127	Safety Bar	GZ609-1-B29
113	Pin	GZ609-0-B14	128	Nut	GZ609-0-B31
114	Circlip	GZ174001	129	Spring	GZ609-0-B32
117	Circlip	GZ174301	131	Hinged Arm (Left)	GZ609-1-B27
118	Threaded Pin	GZ609-0-B11	131	Hinged Arm (Right)	GZ609-1-B20
119	Circlip	GZ172501	132	Ring Nut (Hinged Arm)	GZ873001
120	Support Set	GZ609-1-B12	133	Pin	GZ609-0-B26
121	Buffer	GZ609-0-B28	134	Hinged Arm Extension	GZ609-1-B23
123	Screw	GZV01803	135	Safety Bar	GZ609-0-B33
124	Long Telescopic Arm (Left)	GZ609-1-B9	136	Safety Bar Buffer	GZ609-0-B34
124	Long Telescopic Arm (Right)	GZ609-1-B1	137	Screw	GZ01802
125	Long Arm Extension	GZ609-0-B8	138	Washer	GZ16807



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Clarke INTERNATIONAL

For spare parts and servicing, please contact your nearest dealer, or Clarke International on

020 - 8988 - 7400

e-mail: Parts@clarkeinternational.com e-mail: Service@clarkeinternational.com