CUMFLOW RP1250XD
ROTATING PAN MIXER

PARTS
&
OPERATION MANUAL

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INDEX

The contents of this handbook although correct at the time of publication, may be subject to alteration by the manufacturers without notice and Winget Limited can accept no responsibility for any errors or omissions contained within the following pages. Nor can we accept any liability whatsoever arising from the use of this manual howsoever caused.

Winget Limited operate a policy of continuous product development. Therefore, some illustrations or text within this publication may differ from your machine

Winget Limited can accept no responsibility for incorrectly supplied spare parts unless the part number and a full description of the items required is given when the order is placed.

NOTE

Imperial fixings (bolts, setscrews, nuts, washers etc) have been progressively changed to Metric. If in doubt as to whether you have a Metric or Imperial fixing please order the metric items listed, i.e. bolt or setscrew and associated or flat and spring washers to replace the existing items

NOTE
Electrical cables particularly those with copper conductors suffer from a condition known as ‘relaxation’ which may cause wiring to work loose over a period of time, it is recommended that the tightness of wiring connections and terminals are checked following the first month in service.

OPERATING

AND

MAINTENANCE MANUAL

SECTION 1

GENERAL INFORMATION

COMPANY DETAILS AND GENERAL INFORMATION

For any spares or service work, please contact:-

Winget Limited
P.O. Box 41
Edgefold Industrial Estate
Plodder Lane
Bolton
Lancs U.K.
BL4 OLS

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Facsimile No: ++ 44 (0)1204 854663
'E Mail' crokersales@winget.co.uk
parts@winget.co.uk
service@winget.co.uk

ORDERING SPARES

To help us to complete your order promptly and correctly we need:-

- Machine type and serial number
- Description and quantity of parts required
- The full address to which the parts are to be sent

Winget Limited can accept no responsibility for incorrectly supplied spare parts unless the part number and a full description of the items required is given when the order is placed.

IMPORTANT NOTICE

The CUMFLOW RP1250XD is a high performance mixer

The following precautions are necessary to obtain the best results and to avoid damage to the MIXING STAR and DRIVE

ENSURE TRANSIT BAR AND RING ARE REMOVED FROM DOOR BEFORE STARTING MACHINE.

AGGREGATES

Strict control of graded aggregates must be maintained
Maximum size 38mm

Oversize lumps of aggregate or rogue materials must be prevented from entering the Pan

MIXING STAR BLADES

They are to a special shape and material to prolong wear life. They should not be modified in any way and only replaced with GENUINE '**CROKER**' spares Obtained from **WINGET LIMITED.**

A daily check is advisable to ensure that the Blades/Wearing parts are secure and undamaged.

PAN RIM & BASE WEARING PLATES

They must be replaced before excessive wear causes distortion.

MAXIMUM BATCH LOADS

UNDER NO CIRCUMSTANCES should the Maximum Batch Loads quoted be exceeded nor should the mixer be or re-started when there is a mix in the Pan

MIXING PAN

Ensure that the Mixing Pan is rotating concentrically and that the pan base is Rotating in horizontal place, otherwise damage may occur to the door mechanics.

WARNING

THE MANUFACTURER ACCEPTS NO RESPOSIBILITY FOR ANY DAMAGE OR FAILURE RESULTING FROM OPERATIONAL MISUSE OR MALPRACTICE. ANY MODIFICATIONS TO THE MACHINE WILL AFFECT ITS WORKING PARAMETERS AND SAFETY FACTORS. REFER TO THE MANUFACTURERS BEFORE FITTING ANY NON STANDARD EQUIPMENT OR PARTS.

THE MANUFACTURERS ACCEPT NO RESPONSIBILITY FOR ANY MODIFICATIONS MADE AFTER THE MACHINE HAS LEFT THE FACTORY, UNLESS PREVIOUSLY AGREED IN WRITING. THE MANUFACTURERS WILL ACCEPT NO LIABILITY FOR DAMAGE TO PROPERTY, PERSONNEL OR THE MACHINE IF FAILURE IS BROUGHT ABOUT DUE TO SUCH MODIFICATIONS, OR THE FITMENT OF SPURIOUS PARTS.

RP1250XD
OPERATIONAL AND SAFETY REQUIREMENTS

PRE-DELIVERY INSPECTION (Also see separate Document)

1.1 Drive coupling alignments, pan and star meshing of pan rack and drive gear.

1.2 Operating clearances star blade to pan. Fixed blade to pan wall.

1.3 Discharge blade to pan base.

1.4 Rollers to register ring.

1.5 Correct oil level in gearboxes. All grease points charged. Gear teeth greased.

1.6 Air system tested.

1.7 Door operation and seating.

1.8 No load test. Correct rotations.

PRE INSTALLATION

2.1 Check consignment.

2.2 Offload equipment using certified lifting gear of suitable capacity, by a competent person (see separate chart for nett weight).

INSTALLATION

3.1 Refer to contract arrangement and site instructions.

3.2 Mixer to be mounted on supports of adequate strength and rigidity to prevent undue vibration when mixing and securely bolted.

3.3 Mixer frame to be level on structure, add packers as required.

3.4 Check that pan is correctly seated on Rollers and that pan rack and drive gear are in correct mesh.

3.5 Check locating rollers to register ring.

3.6 Check operating clearances star blade to pan. Fixed blade to pan wall. Discharge blade to pan base. See maintenance section Ops Manual.

ELECTRICAL SERVICES

Refer to wiring diagram in Ops Manual. All wiring to be undertaken by competent electrician. **NOTE:** electrical cables particularly those with copper conductors suffer from a condition known as 'relaxation' which may cause wiring to work loose over a period of time, it is recommended that the tightness of wiring connections and terminals are checked following the first month in service.

4.1 Refer to pneumatic circuit diagram in Ops Manual. Connect compressor. Supply compressed air 5.5 bars as required (80psi).

4.2 Refer to wiring diagram in Ops Manual when connecting air control valves.

4.3 Remove transit bar and ring from door BEFORE starting mixer.

4.4 Ensure starters are mounted away from mixer on supports free of vibration.

4.5 Ensure starters are fitted with correct overloads – see technical specification power units.

OPERATION

5.1 Correct oil level, Gearboxes and Air line lubricator.

5.2 Mixing pan clear of loose nuts and bolts to prevent damage to fingers and blades.

5.3 Check correct rotation – mixing star – anti clockwise; mixing pan – anti clockwise. All when viewed from the top.

5.4 Discharge door and blade correct operation.

5.5 Blade operating clearances adjust in line with maintenance instructions.

5.6 Never exceed manufacturer's maximum capacity as detailed in specification.

SHUTDOWN

6.1 Prior to any work being carried out mixer to be isolated and physically locked off. Recommended equipment double key exchange system.

6.2 Follow procedure detailed in company and users' Health and Safety Policy at all times.

6.3 Ensure all storage bins containing materials to be mixed are isolated.

6.4 Shut off water supply and drain off water tank or flowmeter

MAINTENANCE

7.1 Ensure that all maintenance is carried out in accordance with the Parts and Operating manuals and proprietary manufacturer's specific instruction.

7.2 Isolate electrical and other services to the mixer as section 6 above.

7.3 Service at recommended intervals.

7.4 Use Croker manufactured replacement parts supplied by **WINGET LIMITED**.

GENERAL

8.1 Under no circumstances should the Maximum Batch Loads be exceeded by either weight and volume as stated in Technical Specification.

8.2 Mixer star blades to be checked daily for damage.

8.3 Pan rim and base wearing plates must be replaced before excessive wear causes distortion.

8.4 Ensure mixing pan is rotating concentrically and pan base is rotating in horizontal plane.

8.5 Mixer must not be stopped and started when there is mix in the pan.

8.6 Refer to Contract Drawing for scope of supply. Site instruction notes outlining weights etc.

8.7 Refer to Method Statement when installation and commissioning is responsibility of Winget Limited.

Nett Weights Max (kgs)

9.1

RP50XD	788	RP1250XD	4840
RP100XD	814	RP1500XD	4980
RP200XD	1400	RP3000XD	7112
RP400XD	2000	FP1000	4040
RP550XD	2150	FP1500	4065
RP850XD	2600	FP2000	4100

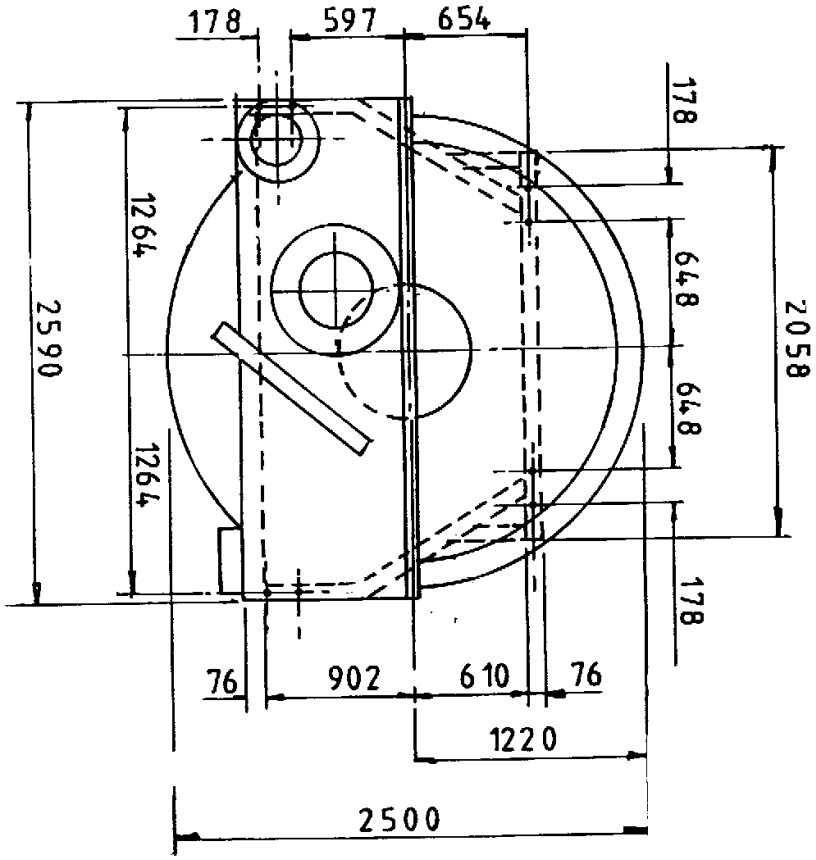
9.2 Refer to technical specification for nett weights of ancillary equipment.

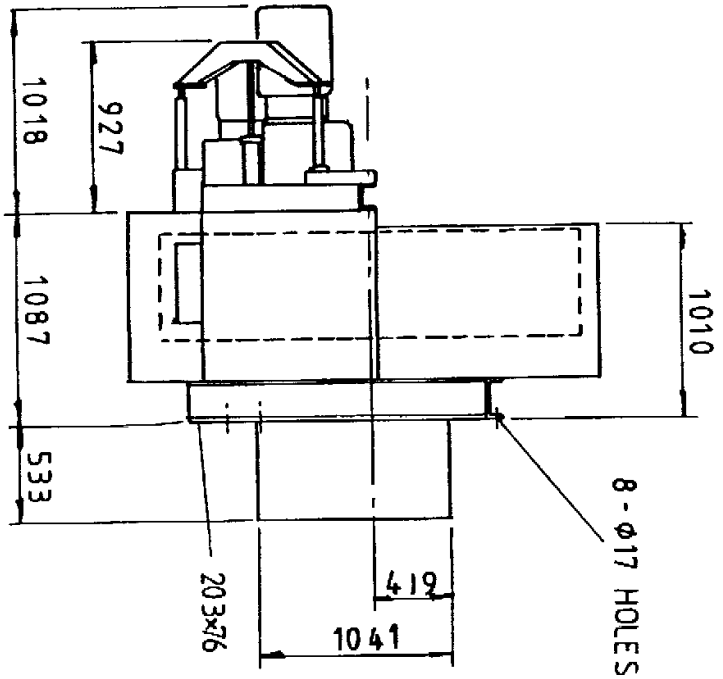
9.3 Refer to contract drawing for nett weights of ancillary equipment.

Miscellaneous

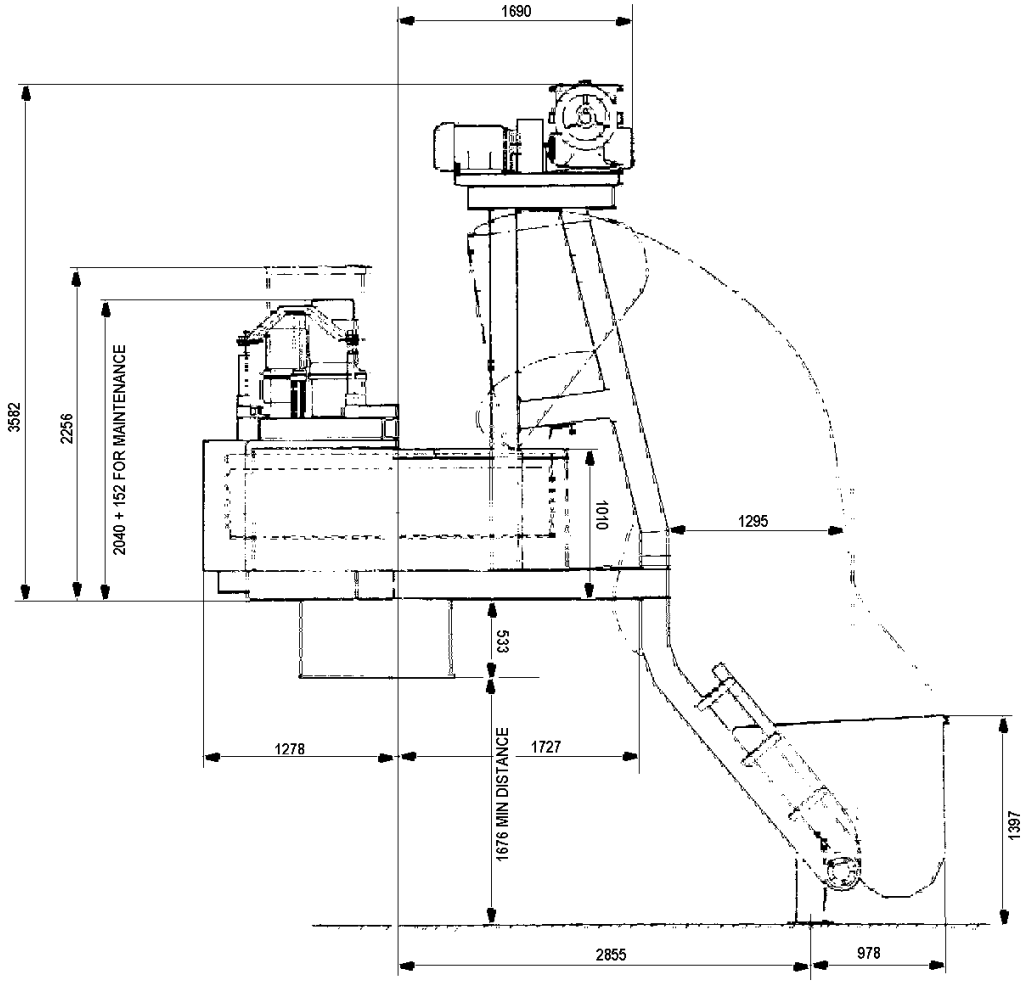
10.1 Noise measured in accordance with Directive 79/113 EEC 85LPA.

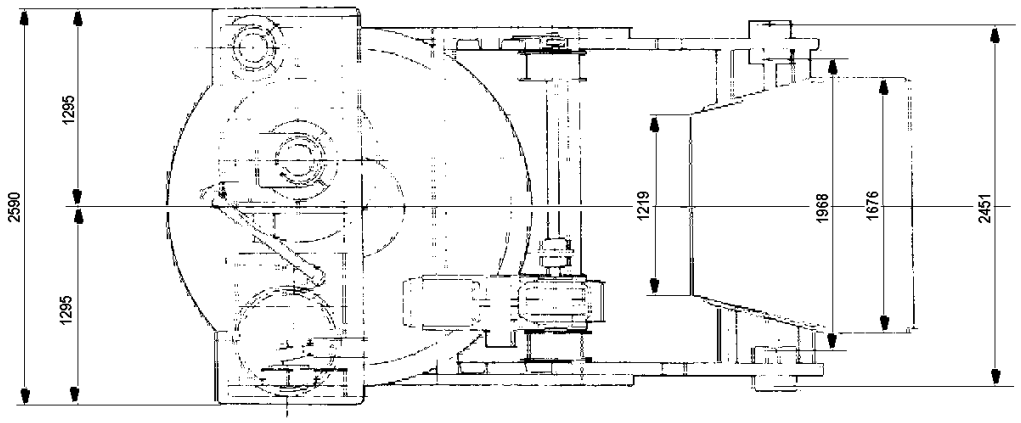
RP1250XD GENERAL ARRANGEMENT





RP1250XD GENERAL ARRANGEMENT WITH LOADER





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OPERATING

AND

MAINTENANCE MANUAL

SECTION 2

INSTALLATION AND OPERATING INSTRUCTIONS

PRE-INSTALLATION

On arrival of the equipment it is advisable to check that all packages listed on the consignment note have been received.

The equipment must be offloaded using certified lifting gear of suitable capacity, by a competent person.

When unloading the mixer, care must be taken to ensure the discharge chute remains clear of obstructions as the chute and door hang below the chassis.

An outline drawing and bolt hold plan is normally sent prior to the despatch of the machine and will enable preparations to be made for the installation. With the `picture` of what the machine will look like when it is assembled, the ancillary equipment dismantled for transport can easily be identified.

INSTALLATION

Please refer to contract arrangement and site instructions as applicable.

It is recommended that a concrete foundation (to take foundation bolts – not supplied) of at least 0.6m^2 by 0.3m thick to take M20 bolts should be provided for each leg of the support structure and runway when fitted. When the machine is supplied without a support structure it should be mounted on supports of sufficient strength and rigidity to prevent undue vibration when the machine is working. When making provision for a loading hopper pit it is strongly recommended that the pit is concreted out so that it can easily be kept clean and free from any build up which could prevent the bottom limit switch from operating correctly.

Before completing the installation, check that the main mixer frame is level with a spirit level. Packings should be inserted as required under the structure legs or main frame. The packings under the mixing pan roller brackets are set during manufacturing and must not be disturbed under any circumstances.

Check that the pan is seated and that the pan rack and drive gear are in mesh.. Also check that all the blade clearances are in line with the maintenance instructions.

On connecting to the power supply, the wiring diagram must be referred to. A check that the wiring is correct is the rotation of the following:-

- The mixing pan and mixing star rotate anti-clockwise when looking from the top.

- The loader winch rotates anti-clockwise looking from the rope drum end when the raise button is pressed.

- The whirler unit rotates clockwise when looking from the top.

It is advisable to mount the starters away from the machine on supports free from vibration. Ensure that the starters are fitted with suitable overloads – see technical specification – power units. **Note:- it is recommended that the mains electrical supply is taken via an earth leakage circuit breaker.**

A simple Water Flow Meter is available as an option to the water tank, this has a range of 0-100 litres and features an adjustable flow indicator with a reset facility allowing very accurate measurement of water flow irrespective of the pressure. The Flow Meter is normally fitted with a manual ‘on/off’ valve and is protected by a washable in line strainer.

A supply of compressed air at 5.5 bars is required. The inlet for the connection from the air line is tapped ½" B.S.P. A drop in pressure will cause incorrect operation of the pneumatic system.

OPERATING THE MACHINE

Before starting production the following points should checked:-

(1) That there is oil in
- (a) the Star Drive Gearbox
- (b) the Pan Drive Gearbox
- (c) the Loader Winch Gearbox (when fitted)
- (d) the Air Line lubricator

(2) The Mixing pan should be clear of loose nuts, bolts, spanners etc., as these will damage the fingers and blades.

(3) Check that the Discharge Door and Discharge Blade are operating correctly.

(4) Check that the blade clearances are correct and if necessary adjust, in line with the maintenance instructions.

(5) Check that the limit switches on the loader stop the Loading Hopper in the required positions at the top and bottom of the runway.

(6) Check that the Water tank is set to the required amount and is filling up to this level. (See later page for further information on Water Tank operation).

(7) When Weigh Gear is fitted check that the setting arrangements and lubrication requirements have been carried out.

(8) If a Flow Meter is fitted check that the pointer is reset to zero and the strainer is clean and free from debris.

IMPORTANT:

The CUMFLOW is a high performance Mixer.

The following precautions are necessary to obtain the best results and to avoid damage to the Mixing Star and Drive.

AGGREGATES:

Strict control of graded aggregates must be maintained. Maximum Size 38mm. Oversize lumps of aggregate or rogue material must be prevented from entering the Pan.

MIXING STAR BLADES:

They are of a special shape and material to prolong wear life. They should not be modified in any way and only replaced by genuine **'WINGET CROKER'** spares.

Daily check is advised to ensure that the Blades/Wearing Pieces are securely bolted and undamaged.

PAN RIM & BASE WEARING PLATES:

They must be replaced before excessive wear causes distortion.

MAXIMUM BATCH LOADS:

Under no circumstances should the Maximum Batch Loads quoted be exceeded nor should the Mixer be stopped and re-started when there is a mix in the Pan.

After each mix the contents of the pan must be completely discharged before attempting to close the discharge door. At the end of each period of operation the mixing pan, mixing blades, discharge blade and fingers, discharge chute, discharge door and seating must be washed down to prevent concrete setting on them and so impairing the efficiency of the machine.

WARNING:

THE MAUFACTURER ACCEPTS NO RESPONSIBILITY FOR ANY DAMAGE OR FAILURE RESULTING FROM OPERATIONAL MIS-USE OR MALPRACTICE.

OPERATING INSTRUCTIONS FOR WEIGH GEAR MECHANISM

HYDROSTATIC LOADCELL & GAUGE

The Hydrostatic Load Cell is connected by a flexible capillary tube (approx 9.7 metres long) to a 300mm (12") diameter weigh gauge.

The whole system is assembled and filled with fluid under vacuum and under no circumstances should any of the components be disconnected, in the event of component damage the complete assembly should be returned to Winget Limited for repair.

The system is factory calibrated and any variation between the calculated tare and the actual tare recorded can be corrected by means of the tare adjustment knob on the side of the gauge.

With no load acting on the loadcell the pointer will be below zero, this is to accommodate the weight of the hopper. When the hopper is placed on to the loadcell the pointer will register zero. Final zero adjustment can be made via the zero adjustment knob on the side of the gauge housing.

ELECTRONIC LOADCELL & GAUGE

The electronic Loadcell & Gauge consists of an electrically operated loadcell mounted on the weigher frame and connected to a remote mounted digital readout control box. The connecting lead should be protected from damage and the readout box mounted such that it is not affected by vibrations etc. The mounting instructions detailed within Section 9 of this manual should be followed to avoid excess vibrations damaging the control box. Section 9 also contains detailed advice on setting up, obtaining zero and operation of the loadcell and readout box and should be referred to before the equipment is operated.

NOTE THE FOLLOWING WIRING CONNECTIONS

+ Excite RED
- Excite BLUE

+ Signal GREEN
- Signal YELLOW

OPERATING INSTRUCTIONS FOR 0-100 LITRE WATER FLOWMETER

The simple manually operated 0-100 litre Water Flow Meter is available as an option to the water tank and is normally mounted on the side of the mixer feeding directly into the pan. The meter is normally fitted with 1” hose tail connectors but different sizes of water inlet connections to suit various hose diameters are also available. The meter is normally provided with a simple ‘on/off’ valve and inline filter/strainer mounted next to but down stream of the flowmeter.

OPERATION

On a daily basis before use the strainer should be removed and checked for debris and obstructions, cleaned and refitted. Ensure the on/off valve is in the ‘off ‘ position and turn on the main water supply. Set the adjustable pointer on the dial face via the central knob to the required amount of water. Check the

indicator reads zero, if not operate the reset lever on the side of the meter which will reset the indicator. Turn the on/off valve slowly to the ‘on’ position watching the movement of the indicator around the dial, when the indicator reaches the pointer sharply turn valve to the ‘off ‘ position. The indicator will register the amount of water delivered. Operate the reset lever to bring the indicator back to zero and repeat the operation for each batch of material mixed.

When shutting down the mixer either at night or at the end of each shift it is recommended that the main water supply to the flow meter and ‘on/off’ valve is shut off.

If it is expected that the overnight temperatures will drop to or close to freezing it is recommended that the Flow Meter, Valve, Filter and Pipework are drained to prevent damage.

OPERATING THE MIXER

SAFETY NOTES

Never operate the mixer unless you have read and fully understand the contents of the Operators Manual

Never operate the mixer whilst wearing loose fitting clothing

Never reach inside the Pan whilst it is rotating

Never operate any equipment unless you have received adequate training

Cement, certain other minerals and organic compounds can cause skin irritation leading to Dermatitis. Always use Personal Protective Equipment i.e. gloves etc to protect the skin from direct contact. If in any doubt about the materials being used consult your employers COSHH manual

Wear Eye protection to protect your eyes from dust and liquid splashes

Do not attempt to remove the pan single handedly, obtain assistance, use the Pan Trolley (if provided) or use suitable lifting equipment

Do not operate the mixer with any of the guards removed, safety devices or interlocks disconnected. They are there to offer you some protection, ensure they are correctly maintained

Carry out the daily maintenance before operating the mixer and report defects to your supervisors

Oils, Greases and Lubricants are skin irritants and prolonged direct skin contact can cause skin cancer. PPE or barrier creams should be used when carrying out maintenance work, wash your hands on completion

Always dispose of waste oils and lubricants in a proper manner, it is illegal to pour it down drains or bury it. Contact your local authority for a list of authorised disposal sites

Always disconnect the power supply at the mains before carrying out any maintenance work or cleaning the equipment down. Do not turn on the power until everything has dried out

Do not allow waste from the wash down process to enter the public drainage system unless it has been properly filtered.

Decals and Instruction Plates are attached to the equipment to warn against hazards and assist in the safe operation of the equipment, if damaged or defaced they should always be replaced.

It is likely that clutch and/or brake linings may contain asbestos and suitable precautions should be taken to avoid breathing in the dust, protective clothing should be worn. Hands should be washed immediately after handling components and old discarded parts or linings should be disposed of in a responsible manner in line with local or national regulations covering the disposal of asbestos waste.

OPERATING

AND

MAINTENANCE MANUAL

SECTION 3

TECHNICAL SPECIFICATION AND MAINTENANCE

TECHNICAL SPECIFICATION OF CUMFLOW RP1250XD

CAPACITIES:	Maximum Batch Capacity	by Weight	1910 kgs
		by Volume	1250 litres
	Nominal Output (Based on 2200 kg/m^3)		850 litres
AGGREGATES:	Maximum Aggregate Size		38 mm

MIXER FRAME: Strongly constructed from welded Steel Channel

MIXING PAN: Steel Base Pan mounted on three wide track rollers with central discharge door. Pan Rim, Base and Discharge Door fitted with renewable Wearing Plates available in different materials.

MIXING STAR: Tripple Arm Mounting, Six Spring loaded Star Blades, three at Pan floor level and three for high level mixing.

FIXED BLADE: Spring loaded pan side scraper assembly.

DISCHARGE BLADE: Pneumatically operated in conjunction with the Discharge Door.

WHIRLER: Intermittent blades mounted on vertical shaft.

POWER UNITS:	Mixing Star)	15 kw
	Mixing Pan)	7.5 kw
	Loader Motor (where fitted)	7.5 kw
	Whirler Motor (where fitted)	15 kw

DRIVES	Mixing Pan	Gear unit with steel pinion and cast rack
	Mixing Star	Gear unit directly mounted
	Whirler	Vee Rope Drive

SPEEDS	Speed of Pan	8 rpm
	Speed of Mixing Star	44 rpm
	Speed of Loading Hopper	21 metres/min
	Speed of Whirler	720 rpm

FREE AIR CONSUMPTION (PER BATCH 80 PSI)		126.5 litres
WEIGHTS (UNLADEN)	Without Loader	4580 kg
	With Loader	5180 kg
ELECTRICS	Motor Voltage	415V 3ph 50hz Option 60Hz
	Control Voltage	110V

MACHINE SAFETY DIRECTIVE

All Gears are suitably guarded.

MAINTENANCE

IMPORTANT

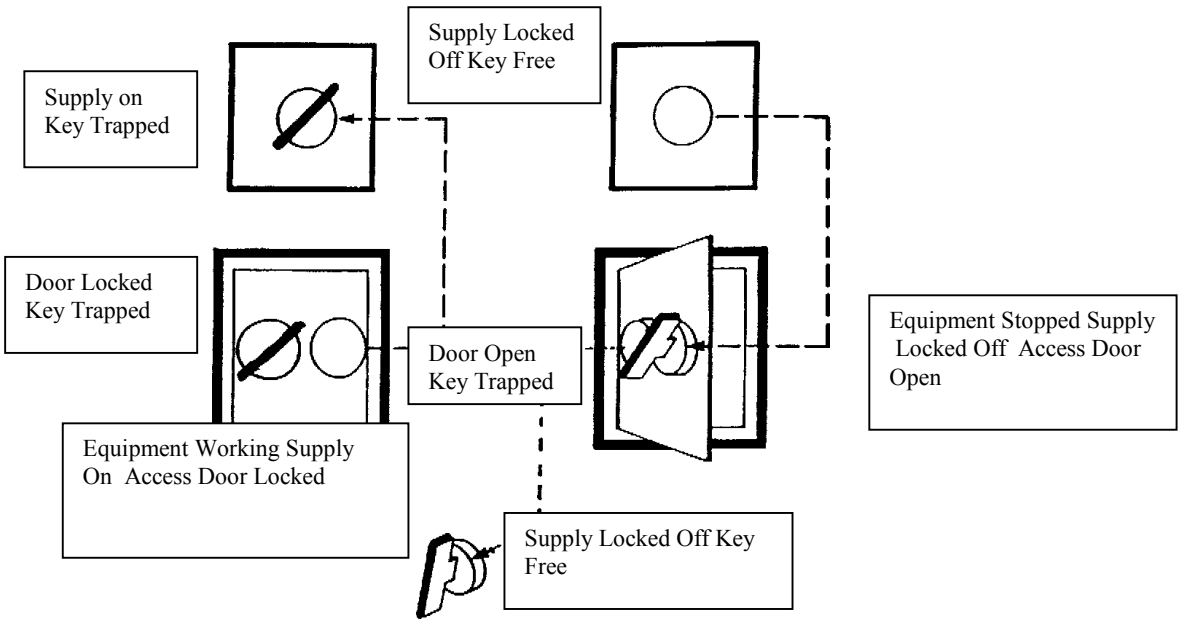
ALWAYS ENSURE APPARATUS IS ISOLATED FROM MAINS SUPPLY BEFORE COMMENCING MAINTENANCE.

SHUTDOWN PROCEDURE

Prior to any work being carried out the apparatus is to be isolated and physically locked off.

We recommend a double key exchange system.

Safe access to equipment with one access door and one control point.



Follow the procedures detailed in your Health and Safety Policy at all times.

Ensure all storage bins containing materials to be mixed are isolated.

Shut down the water supply and drain off any water tanks or flowmeter fitted

MAINTENANCE OF MIXER

IMPORTANT NOTE:

Ensure that all maintenance is carried out in accordance with the Parts and Operating Manual and Proprietary Manufacturer's specific instruction.

PROCEDURE

1 ISOLATE ELECTRICAL, PNEUMATIC AND OTHER SERVICES TO THE MIXER (see separate section).

2 Service at recommended intervals.

3 Use Croker manufactured replacement parts available from **WINGET LIMITED**.

4 Ensure all safety guards and interlocks are reinstated prior to operating the mixer.

5 Main items of wear (see Section 4).

A) Star Blades
B) Fixed Blade
C) Discharge Blade
D) Whirler Blades

Access to mixing pan internals is via the safety interlocks. Each of the above are bolted components and are replaced by simple method and usually achieved in situ without dismantling other components.

E) Pan base and rim wearing plates are also bolted construction and can be replaced in situ. However, pan covers will need to be dismantled to provide the necessary access.

F) Other items prone to less wear are star blade fingers, lower whirler shaft assembly and mixing star. Each can be replaced again in situ but pan covers would require tensing to provide necessary access.

G) Pan rollers can be adjusted to accommodate wear during operation. These can be replaced when required in situ using jacking method to support pan and provide the necessary access.

MAINTENANCE AND LUBRICATION

DAILY: Using Total Multis EP2 grease (or equivalent) and grease the following points:-

Pan Roller Spindles	3 Points
Pan Locating Rollers	4 Points
Discharge Blade Lifting Gear Brackets	2 Points
Air Cylinder Lever Pivot Holder	1 Point
Mixing Blade Finger Bearings	3 Points
Fixed Blade Finger Bearing	1 Point
Loading Hopper Rollers	2 Points

Inspect and top-up if necessary:-

Air Line Lubricator	Use Total Azolla 27 (or equivalent) Or suitable Pneumatic Tool Oil

WEEKLY: Inspect and top up if necessary:-

(1)	Star Drive Gearbox	Use Total Carter EP320 (or equivalent)
(2)	Pan Drive Gear Box	Use Total Carter EP320 (or equivalent)
(3)	Loader Winch Gearbox (Flender)	Use Total Carter EP220 (or equivalent)

Inspect and Adjust

(1) Pan Gear and Pinion – Apply Open Gear Lubricant (or equivalent) as required.

(2) Adjust Star Blades, Fixed Blades and Discharge Blade to the following settings, also make sure that Blade fingers are free in their bearings and that the springs are clear of obstructions.

Mixing Blade:	(3 mm) clear of pan base. Adjust by moving the blade down its finger.
Discharge Blade:	Just touching pan base when finger bridge is resting on stop sleeves. Adjust by moving bridge up or down fingers.
Fixed Blade:	(3 mm) clear of pan base and just touching pan rim. Adjust by moving hinge brackets along its slots and blade up or down its fingers. Re-set spring to 100 mm overall length after setting blade.

(3) After the first week's running the Whirler Vee Belt Drive will need adjustment to take up initial wear/stretch. At the correct tension it should be just possible to twist each belt through 90^{o} when gripped between finger and thumb midway between pulleys.

(4) Loading Hopper Wire Rope – clean off grit etc. and inspect for broken strands. Clean and apply a suitable wire rope dressing.

500 HOUR MAINTENANCE FOR PAN AND STAR DRIVE GEAR UNITS

After 500 running tours, the Gearboxes should be drained and thoroughly flushed with a light flushing oil and refilled with new oil of the correct grade ie. Total Carter EP320 or equivalent. It is advisable to drain, flush and refill with new oil after every 12 months, or more often if operating conditions are severe.

To fill the Gearboxes, remove the oil level plug and the filler breather plug and pour in oil until it flows from the level hole. Replace the plugs making sure that the vent holes in the filler breather plug are clear.

Approx capacity of Star Gearbox:	23.8 litres
Approx capacity of Pan Gearbox:	9.4 litres

MONTHLY: **Inspect:**

(1) All blades for ware – replace when worn.

(2) Pan rim, base and door wear plates – replace when worn

(3) Pan Roller Bearings – replace if necessary

(4) Pan Door Bearing – replace if necessary

(5) Pneumatic system for leaks – repair or replace damaged parts.

(6) Pneumatic Cylinders. Make sure that the door cylinder piston rod is at the end of its travel when the discharge door is just home in its seating.

(7) Check the S.H. Bushing securing the Mixing Star to the gearbox output shafts are tight. Torque setting 34Nm.

CAUTION: **BEFORE WORKING UNDER LOADING HOPPER, REST HOPPER ON SAFETY BOLTS. DO NOT FORGET TO REMOVE THESE BOLTS BEFORE RE-STARTING THE MACHINE**

(Item 45 on arrangement of Loader Section)

(8) Loader Magnetic Brake – adjust if necessary, to the following instructions:-

Mounting:

Set the brake so that the horizontal centre-line of the shoe corresponds with the centre-line of the brake wheel shaft and the shoe pivots are equally spaced from the vertical centre-line.

Installing:

Slacken back equalising screw (Item 14) Slack nut (Item 5) and adjust screw (Item 3) to give required braking torque.

WARNING:

The end of the adjusting screw (Item 3) must always be visible in the hole at the end of the adjusting nut (Item 6).

Set nuts (Item 5) so that contact is made with the load spring block in the shoe lever when solenoid plunger has moved through half its stoke. Once properly set, this setting should not be altered. With solenoid plunger right down, set equalising screw (Item 14) to give equal friction lining clearances.

Tighten locknuts (Item 5 & Item 14) and be sure that the load spring bracket is in place.

Check adjustments frequently and lubricate brake shoe pivots. To adjust for ware, screw in adjusting screw (Item 3) until the adjusting nuts are clear and only touch lever (Item 1) when plunger is depressed through half its stroke.

When new linings are fitted, repeat all adjustments.

Orders and enquiries should always state full description of parts required. The serial number on the brake should always be quoted.

ANNUALLY:

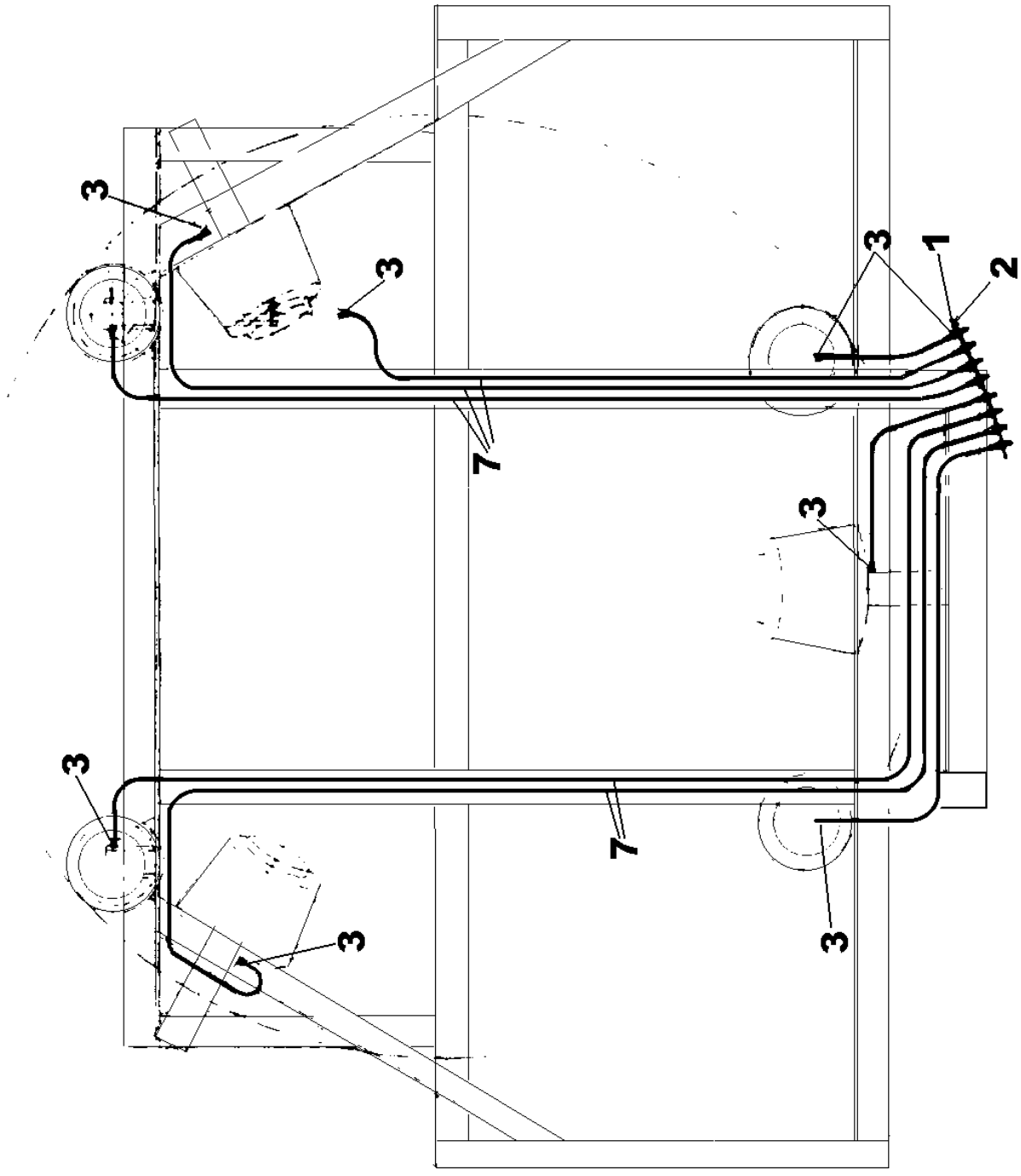
Worm Reduction Gear Unit (Flender):

Drain and clean out the gear case and refill with Total Carter EP220 or equivalent. When running conditions are severe this procedure should be adopted more frequently. (Approx capacities – 10 Imperial Pints: 5.7 Litres: 1.6 American Gallons).

NOTE

Electrical cables particularly those with copper conductors suffer from a condition known as ‘relaxation’ which may cause wiring to work loose over a period of time, it is recommended that the tightness of wiring connections and terminals are checked following the first month in service.

LUBRICATION LAYOUT



LUBRICATION LAYOUT

ITEM	PART NO.`	DESCRIPTION	
1	CR540221	LUBRICATION PANEL	1
2	131S01	GREASE NIPPLE	7
3	CR510012	STRAIGHT CONNECTOR	7
4	CR289006	STRAIGHT CONNECTOR	A/R
5	CR289004	TUBE NUT	A/R
6	CR269007	TUBE OLIVE	A/R
7	CR510415	BUNDY TUBE	A/R

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OPERATING

AND

MAINTENANCE MANUAL

SECTION 4

MIXER SPARE PARTS

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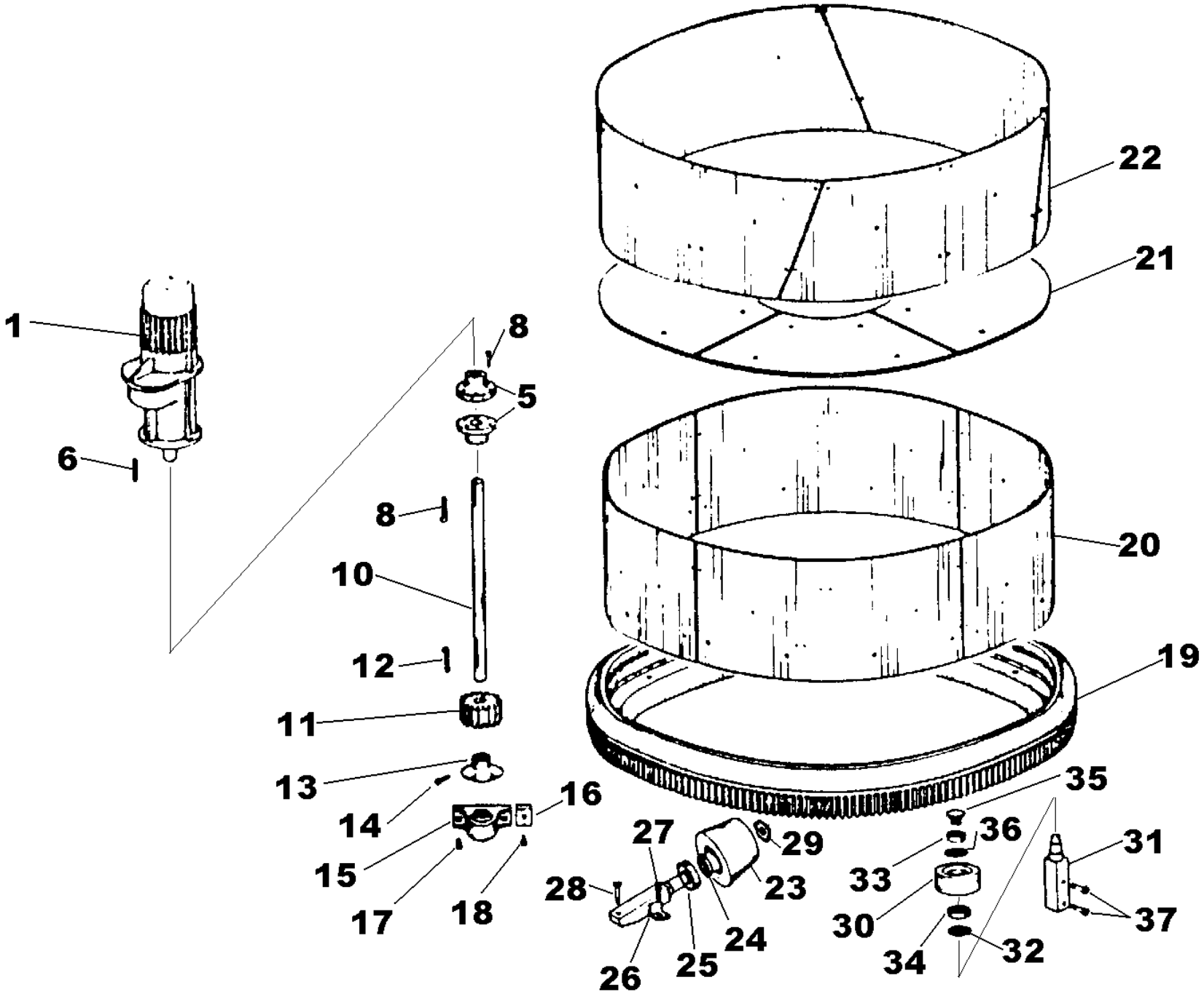
RP1250XD PAN & PAN DRIVE



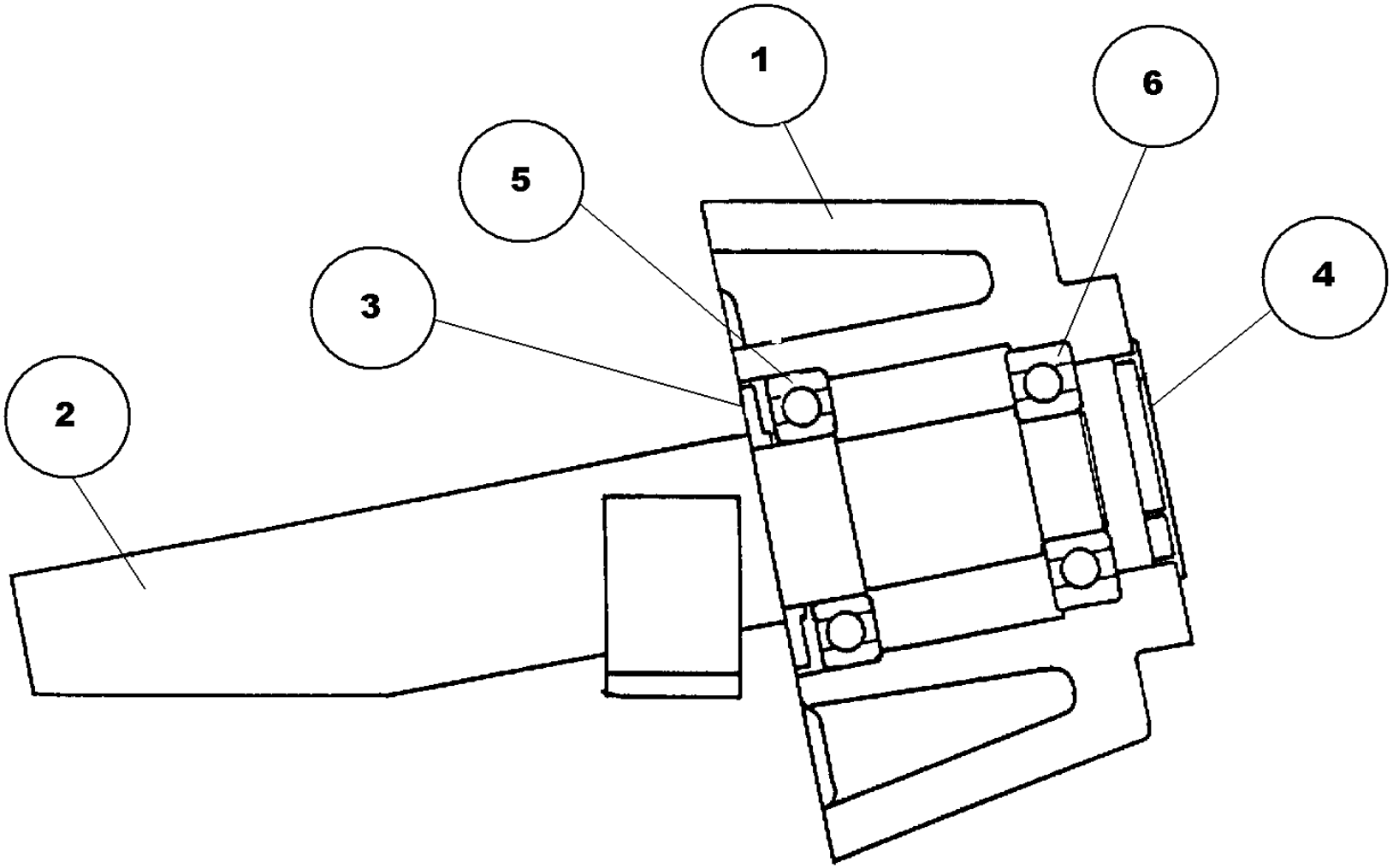
RP1250XD PAN DRIVE & PAN

1	CR299112	GEARED MOTOR - UK SPEC RENOLD R5D RITEPOWER 7.5KW 3PH 50HZ	1
1	CR22100673	GEARED MOTOR USA 60HZ SPEC SEVER WEG MOTOR 7.5KW (10 HP)	1
1	CR299156	GEARED MOTOR USA 60HZ SPEC SEVER BALDOR MOTOR 7.5KW (10HP)	1
	CR299168	MOTOR BALDOR 230/460V FOR ABOVE	1
1	CR	GEARED MOTOR UK SPEC SEVER 7.5KW (10HP) 415V 3PH 50HZ	1
1	CR220173	GEARED MOTOR UK SPEC FLENDER 7.5KW (10HP) 415V 3PH 50HZ	1
1A	CR530040	MOTOR SPACERS/PACKERS, REPLACED BY ITEMS IB ORDER SHIM TO SUIT SPECIFIC GEARED MOTOR INSTALLED	8
1B	CR	MOTOR SHIM PLATE, RENOLD	1
1B	CR539247	MOTOR SHIM PLATE,USA SPEC SEVER	1
1B	CR	MOTOR SHIM PLATE,UK SPEC SEVER	1
1B	CR	MOTOR SHIM PLATE, FLENDER	1
1C	11S06K	MOTOR FIXING BOLTS M16 X 60	8
1D	105S07	WASHER TAPERED M16	8
1E	267S09	WASHER FLAT M16	8
1F	61S06	NUT BINX SELF LOCKING M16	8
5	CR239009	PAN DRIVE COUPLING	1
6	CR329069	MOTOR COUPLING KEY	1
8	CR329030	DRIVE SHAFT COUPLING KEY	1
10	CR520007	DRIVE SHAFT	1
11	CR460004	DRIVE PINION	1
12	CR320030	DRIVE PINION KEY	1
13	CR260031	DRIVE SHAFT BEARING COVER	1
14	CR241179	COVER BOLT	1
15	CR150936	DRIVE SHAFT BEARING	1
16	CR530039	DRIVE SHAFT BEARING STOP	1
17	11S06G	BEARING FIXING BOLTS M16	2
17A	105S07	WASHER TAPERED M16	2
17B	267S09	WASHER FLAT M16	2
17C	17S08	WASHER SPRING M16	2
17D	7S06	NUT M16	2
18	11S06H	STOP FIXING BOLTS M16	1
18A	105S07	WASHER TAPERED M16	1
18B	267S09	WASHER FLAT M16	1
18C	17S08	WASHER SPRING M16	1
18D	7S06	NUT M16	1
19	CR210009	SPUR GEAR RIM	1

RP1250XD PAN DRIVE & PAN

20	CR530045	PAN RIM, MILD STEEL	4
20A	CR530045SS	PAN RIM, STAINLESS STEEL	4
20B	52S06M	PAN RIM FIXING BOLTS M16	16
20C	17S08	WASHER SPRING M16	16
20D	7S06	NUT M16	16
21	CR530047	PAN BASE WEAR PLATE, MILD STEEL	4
21A	CR530047H	PAN BASE WEAR PLATE, WEAR RES STEEL	4
21B	CR530047SS	PAN BASE WEAR PLATE STAINLESS STEEL	4
21C	52S04H	PAN BASE WEAR PLATE BOLTS M10	8
21D	17S05	WASHER SPRING M10	8
21E	7S04	NUT M10	8
21F	52S06H	PAN BASE WEAR PLATE BOLTS M16	16
21G	17S08	WASHER SPRING M16	16
21H	7S06	NUT M16	16
*	CR530044	PAN BASE, MILD STEEL	1
*	CR530044SS	PAN BASE, STAINLESS STEEL	1
*	52S06P	PAN BASE FIXING BOLTS	16
*	17S08	WASHER SPRING M16	16
*	7S06	NUT M16	16
22	CR530048	PAN RIM WEAR PLATE, MILD STEEL	4
22A	CR530048H	PAN RIM WEAR PLATE, WEAR RES STEEL	4
22B	CR530048SS	PAN RIM WEAR PLATE, STAINLESS STEEL	4
22C	52S05G	PAN RIM WEAR PLATE BOLTS M12	56
22D	17S06	WASHER SPRING M12	56
22E	7S05	NUT M12	56
23	CR210002	PAN SUPPORTING ROLLER	3
23A	CR54100074	CAP GREASE	
24	CR150062	RAN ROLLER BEARING (SMALL)	3
25	CR150131	PAN ROLER BEARING (LARGE)	3
26	CR260026	PAN ROLLER SPINDLE	1
27	11S06G	BOLT M16	6
27A	105S07	WASHER TAPERED M16	6
27B	267S09	WASHER FLAT M16	6
27C	17S08	WASHER SPRING M16	6
27D	7S06	NUT M16	6
28	8S06P	BOLT M16	3
28A	105S07	WASHER TAPERED M16	3
28B	267S09	WASHER FLAT M16	3
28C	17S08	WASHER SPRING M16	3
28D	7S06	NUT M16	3
29	CR541279	COVER	7
30	CR210003	PAN LOCATING ROLLER	4
31	CR520383	PAN LOCATING ROLLER SPINDLE	4
32	CR490073	WASHER	4
33	CR150125	BEARING (SMALL)	4
34	CR150126	BEARING (LARGE)	4
35	CR240007	RETAINER, CIRCLIP EXTERNAL	4
36	CR240006	RETAINER, CIRCLIP INTERNAL	4
37	8S06M	BOLT, SPINDLE RETAINING M16	12
37A	267S09	WASHER FLAT M16	12
37B	17S08	WASHER SPRING M16	12
37C	7S06	NUT M16	12

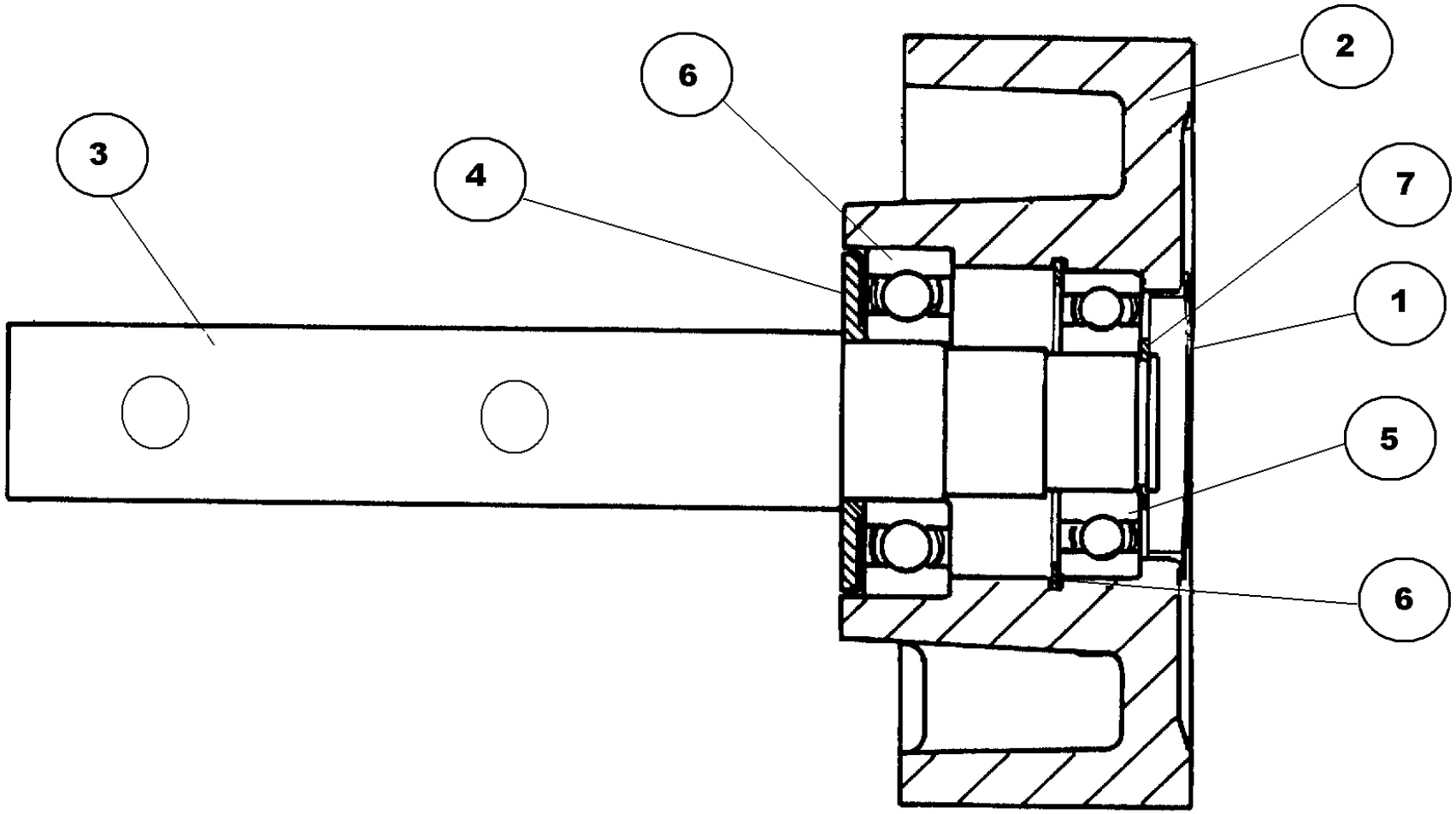
RP1250XD PAN ROLLER ASSEMBLY



RP1250XD PAN SUPPORT ROLLER ASSEMBLY

1	CR210002	PAN SUPPORT ROLLER	3
2	CR260026	PAN ROLLER SPINDLE	3
3	CR490063	DUST WASHER	3
4	CR54100074	CAP	3
5	CR150062	BALL BEARING	3
6	CR150131	BALL BEARING	3

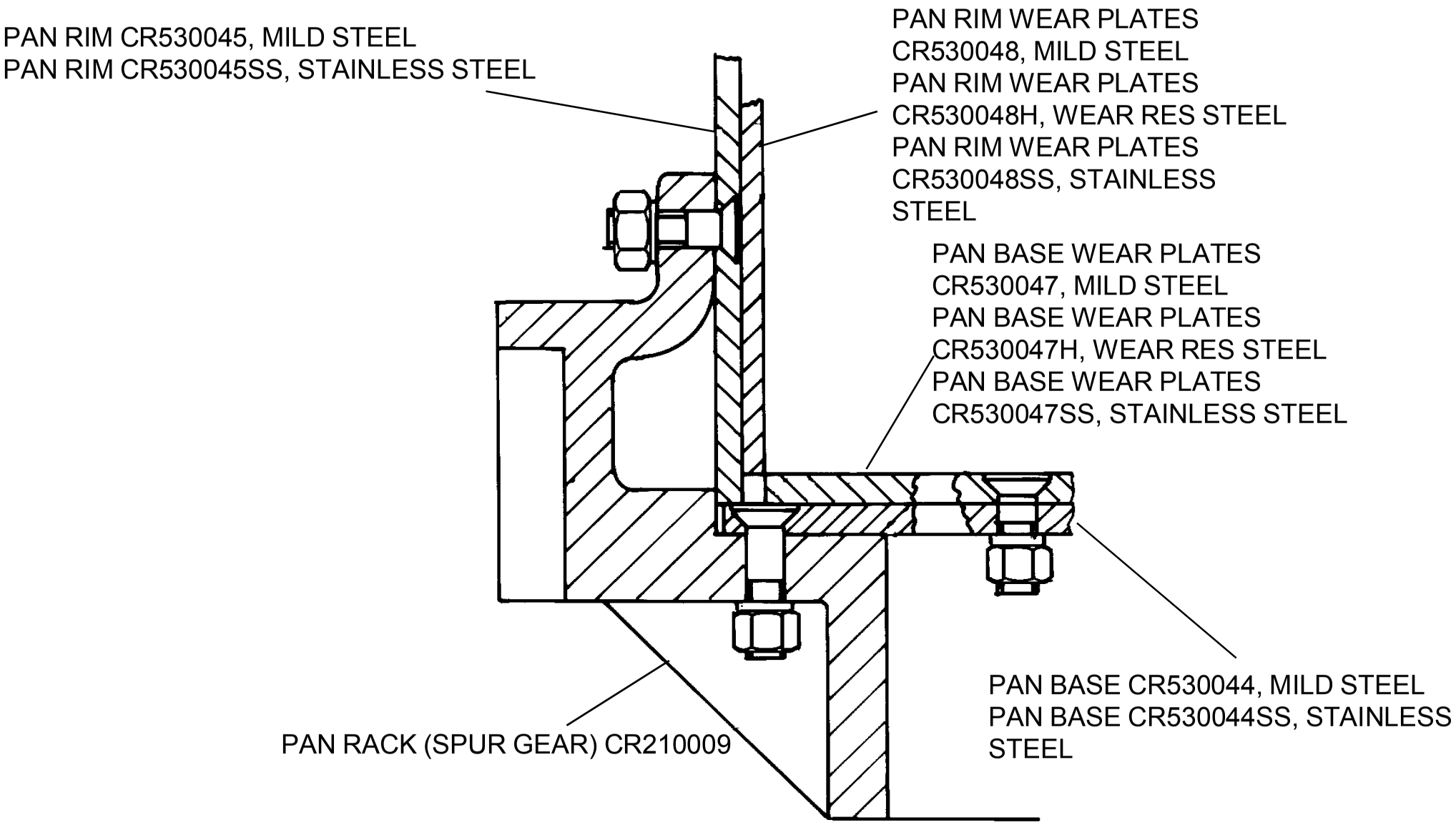
RP1250XD PAN LOCATING ROLLER



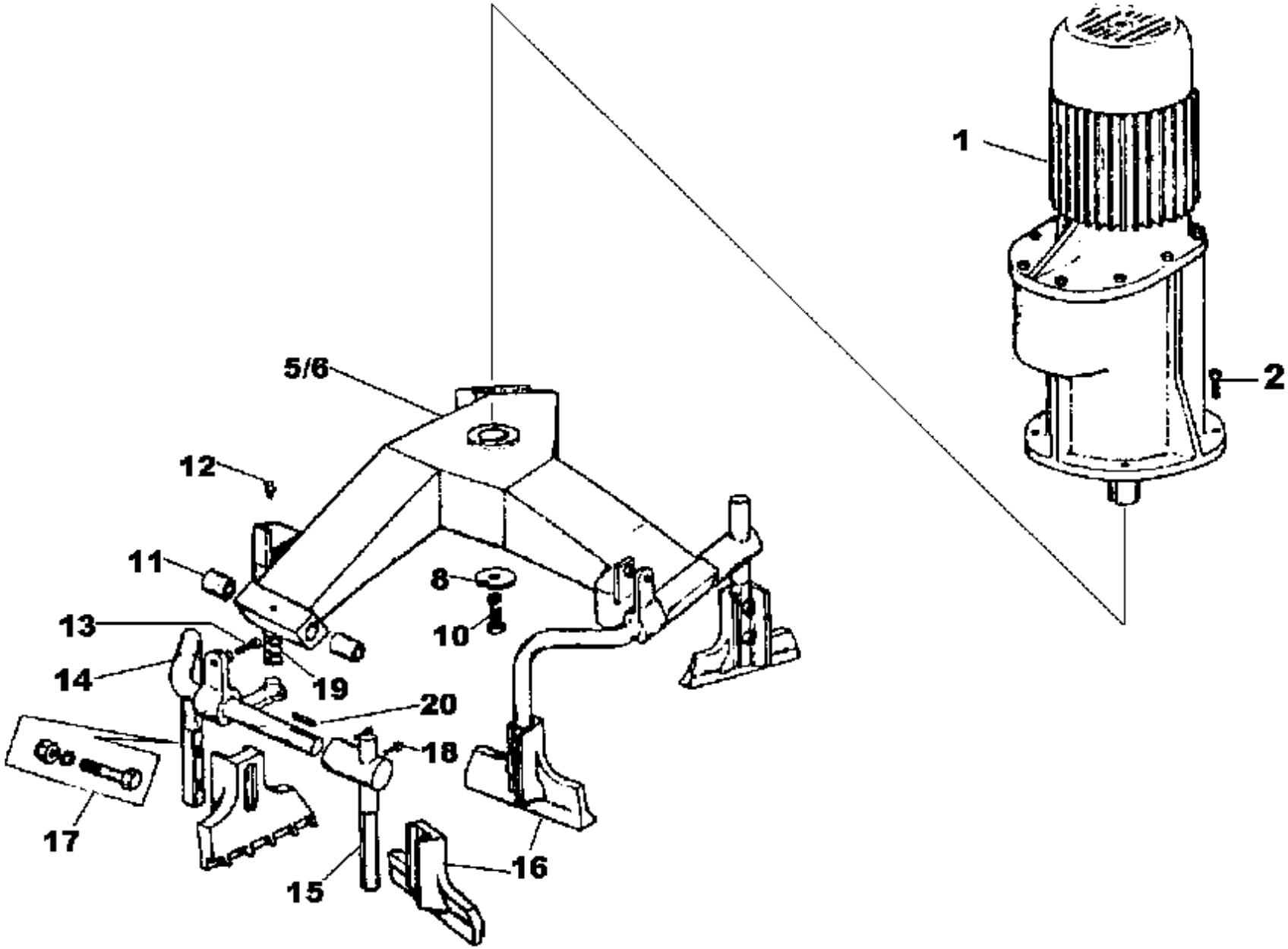
RP1250XD PAN LOCATING ROLLER ASSEMBLY

1	CR54100074	DUST WASHER	4
2	CR210003	PAN LOCATING ROLLER	4
3	CR520383	LOCATING ROLLER SPINDLE	4
4	CR490073	DUST WASHER	4
5	CR150125	BEARING (SMALL)	4
6	CR150126	BEARING (LARGE)	4
7	CR240006	RETAINER	4
8	CR240007	RETAINER	4

RP1250 PAN BASE, SIDE & RACK ARRANGEMENT



RP1250XD STAR DRIVE



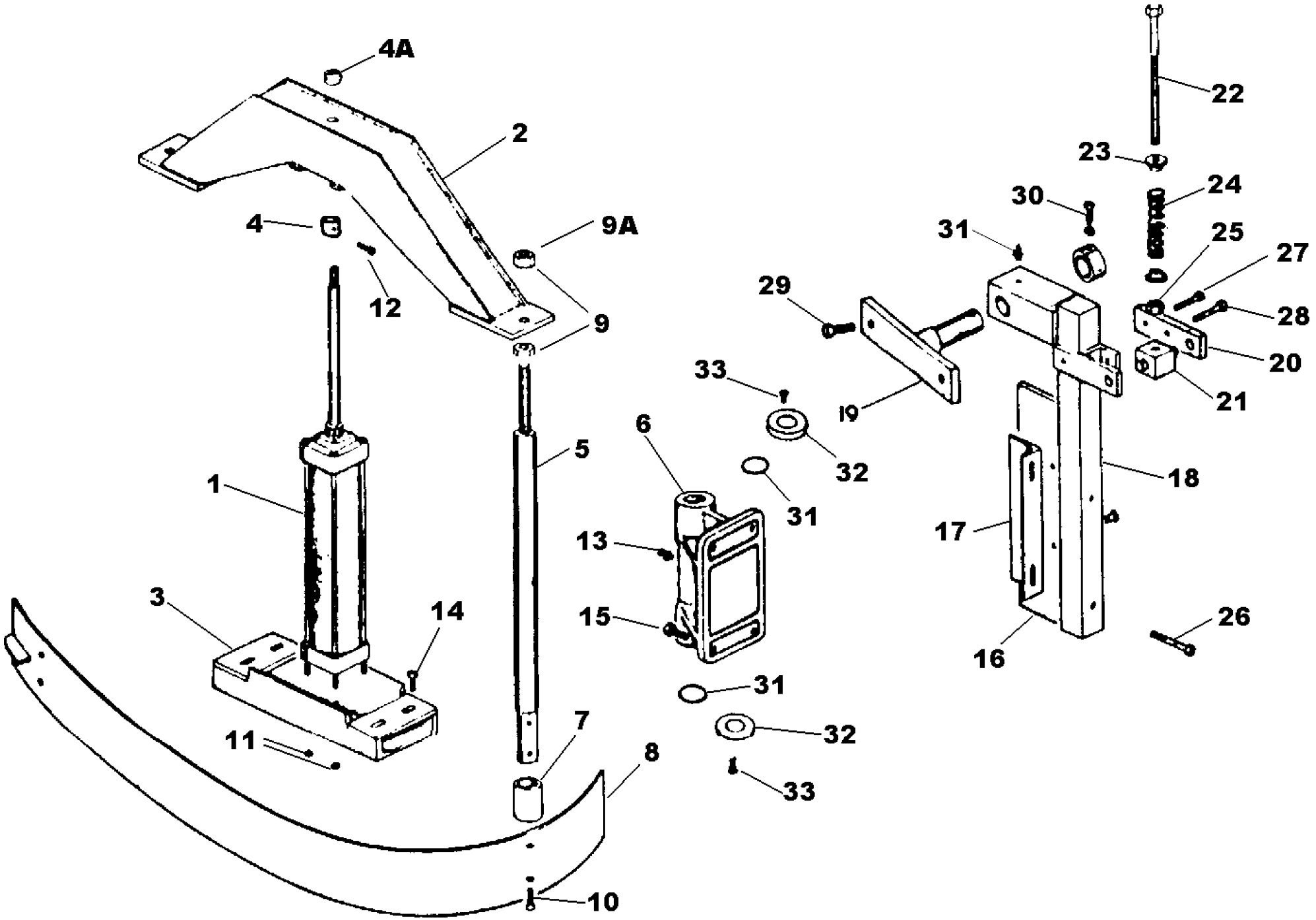
RP1250XD MIXING STAR & DRIVE

1	CR299111	GEARED MOTOR - UK SPEC RENOLD 18KW	1
1	CR22100672	GEARED MOTOR 60HZ-USA SPEC SEVER WEG MOTOR 15KW (20HP) 460V	1
1	CR299155	GEARED MOTOR 60HZ-USA SPEC SEVER BALDOR MOTOR 15KW (20HP) 460V	1
1	CR	GEARED MOTOR UK SPEC FLENDER	1
GEARED MOTOR UNIT M16 METRIC FIXING BOLTS			
2	11S06K	MOTOR FIXING BOLTS M16 X 60	8
2A	267S09	WASHER FLAT M16	8
2B	61S06	NUT BINS SELF LOCKING M16	8
GEARED MOTOR UNIT M20 METRIC FIXING BOLTS			
2	11S07K	MOTOR FIXING BOLTS M20 X 60	8
2A	267S10	WASHER FLAT M20	8
2B	61S07	NUT BINS SELF LOCKING M20	8
GEARED MOTOR UNIT M22 METRIC FIXING BOLTS			
2	8S10K	MOTOR FIXING BOLTS M22 X 70	8
2A	17S13	WASHER SPRING M22	8
2B	7S15	NUT M22	8
5	CR269291	STAR MIXING, MILD STEEL	1
5A	CR269291SS	STAR MIXING, STAINLESS STEEL	1
6	CR320060	STAR KEY, NOT ILLUSTRATED	1
8	CR630046	STAR RETAINING WASHER	1
10	8S06D	RETAINING WASHER CENTRE BOLT M16	1
10A	17S08	WASHER SPRING M16	1
11	CR180013	STAR FINGER BUSH	6
12	333601010	GREASE NIPPLE	3
13	11S07DD	ADJUSTING BOLT M20	3
13A	7S07	NUT M20	3
14	CR260044	STAR FINGER (LONG) MILD STEEL	3
14A	CR260044SS	STAR FINGER (LONG) STAINLESS STEEL	3
15	CR260034	STAR FINGER (SHORT) MILD STEEL	3
15A	CR260034SS	STAR FINGER (SHORT) STAINLESS STEEL	3
16	CR210035	STAR BLADE, OBSOLETE USE ITEM 16	
16	CR21100015	STAR BLADE, CAST	6
16A	CR219008P	STAR BLADE, POLYUREATHANE STANDARD DUTY	6
16B	CR219008HP	STAR BLADE, POLYUREATHANE HEAVY DUTY	6
17	8S06M	STAR BLADE FIXING BOLTS M16	12
17A	267S09	WASHER FLAT M16	12
17B	61S06	NUT BINX M16	12
18	11S05F	STAR FINGER LOCK SCREWS M12	6

RP1250XD MIXING STAR & DRIVE

18A	7S05	NUT LOCKING M12	6
19	CR330070	COMPRESSION SPRING	3
20	CR329015	STAR FINGER KEY	3

RP1250XD DISCHARGE BLADE & FIXED BLADE



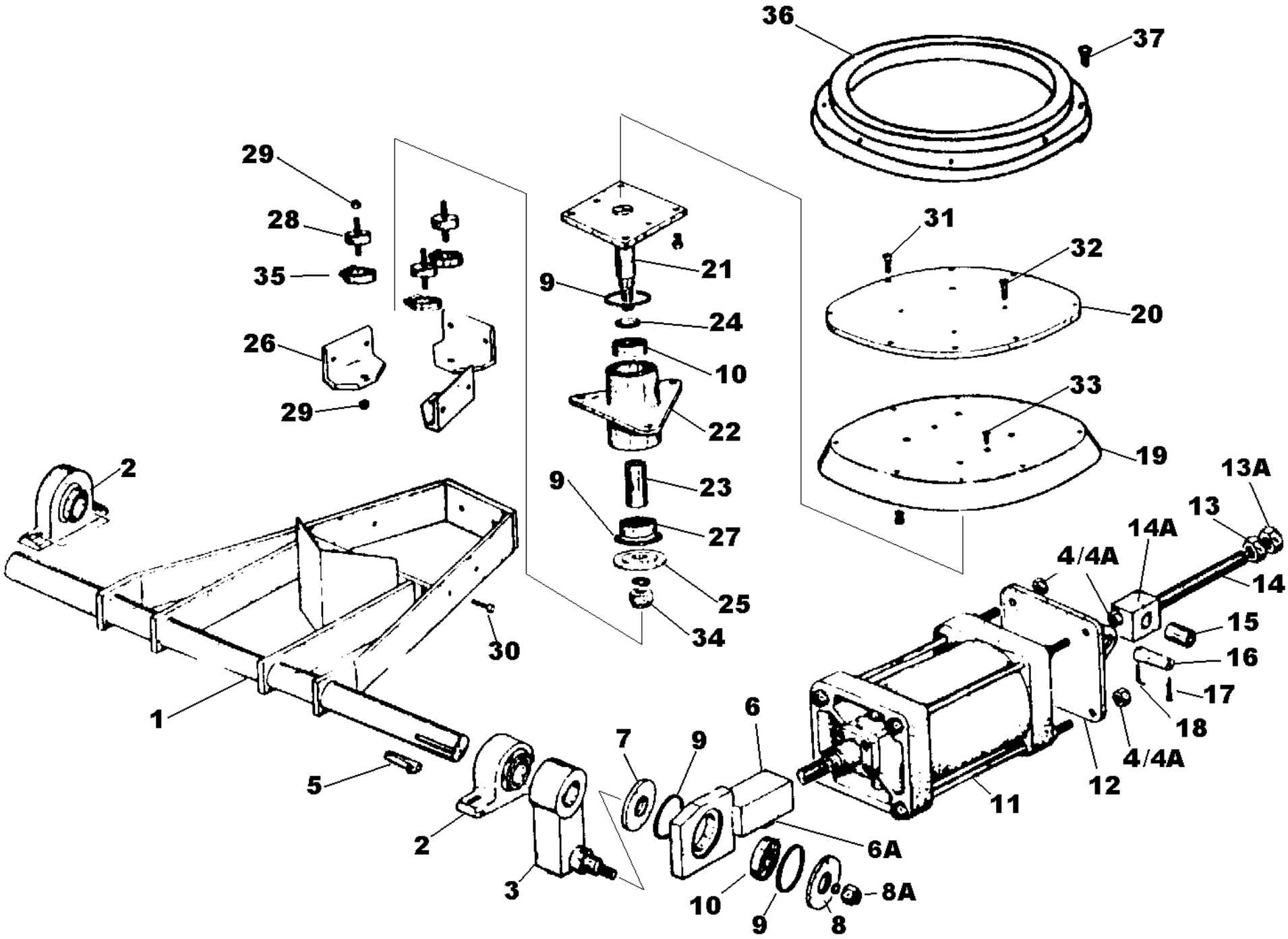
RP1250XD DISCHARGE BLADE & FIXED BLADE

1	CR110302	AIR CYLINDER	1
1A	CR110324	AIR CYLINDER SEAL KIT	1
2	CR261023	AIR CYLINDER BRIDGE	1
3	CR260164	AIR CYLINDER SUPPORT	1
4	CR630438	COLLAR SCREWED TOP	1
4A	CR630439	COLLAR SCREWED	1
5	CR520005	DISCHARGE BLADE FINGER, MILD STEEL	2
5A	CR520005SS	DISCHARGE BLADE FINGER, STAINLESS STEEL	2
6	CR210233	DISCHARGE BLADE FINGER BRACKET	2
7	CR531631	DISCHARGE BLADE FINGER STOP PIPE	2
8	CR540017	DISCHARGE BLADE, MILD STEEL	1
8A	CR540017H	DISCHARGE BLADE, WEAR RESISTANT STEEL	1
8B	CR540017SS	DISCHARGE BLADE, STAINLESS STEEL	1
9	253S09	FULL NUT 1" BSW	4
9A	78S08	NUT LOCKING 1" BSW	2
10	52S06R	DISCHARGE BLADE FIXING BOLTS M16	4
10A	17S08	WASHER SPRING M16	4
10B	7S06	NUT M16	4
11	59S03	NUT NYLOC M10	4
12	57S04E2	GRUB SCREW	1
13	333601010	GREASE NIPPLE	2
13A	176S01	COVER NIPPLE GREASE	2
14	11S04B	AIR CYLINDER SUPPORT FIXING BOLT M10	16
15	11S06H	FINGER BRACKET FIXING BOLTS M16	8
15A	17S08	WASHER SPRING M16	8
15B	7S06	NUT M16	8
16	CR53100512	FIXED BLADE, MILD STEEL	1
16A	CR53100512H	FIXED BLADE, WEAR RESISTANT STEEL	1
16B	CR53100512SS	FIXED BLADE, STAINLESS STEEL	1
16B	52S05N	BOLT FIXED BLADE M12	4
16C	17S06	WASHER SPRING M12	4
16D	267S07	WASHER FLAT M12	4
16E	7S05	NUT M12	4
17	CR53100040	FIXED BLADE ANGLE, MILD STEEL	1
17A	CR53100040SS	FIXED BLADE ANGLE, STAINLESS STEEL	1
18	CR260024	FIXED BLADE FINGER, MILD STEEL	1
18A	CR260024SS	FIXED BLADE FINGER, STAINLESS STEEL	1
19	CR260025	FIXED BLADE FINGER PIVOT	1
20	CR530036	ADJUSTING ROD TRUNNION PLATE	1
21	CR530037	ADJUSTING ROD TRUNNION	1
22	CR530038	ADJUSTING ROD	1
23	CR490062	ADJUSTING ROD WASHERS	2
24	CR330066	COMPRESSION SPRING	1
25	CR242020	FULL NUT	2
26	8S05M	BLADE ANGLE FIXING BOLT M12	2
26A	17S06	WASHER SPRING M12	2
26B	7S05	NUT M12	2
27	8S05N	BOLT, M12	2
27A	17S06	WASHER SPRING M12	2
27B	7S05	NUT M12	2
28	11S05F	SCREW SET M12	1

RP1250XD DISCHARGE BLADE & FIXED BLADE

28A	17S06	WASHER SPRING M12	1
28B	7S05	NUT M12	1
29	8S05N	FINGER FIXING BOLT, M12	2
29A	17S06	WASHER SPRING M12	2
29B	7S05	NUT M12	2
30	8S05N	FINGER PIVOT COLLAR BOLT M12	2
30A	17S06	WASHER SPRING M12	2
30B	7S05	NUT M12	2
*	CR530647	WASHER SQUARE, PIVOT FIXING BOLT	2
31	CR570061	WIPER SEAL, IMPERIAL	4
32	CR531629	WIPER SEAL HOUSING, MILD STEEL	4
32A	CR531629SS	WIPER SEAL HOUSING, STAINLESS STEEL	4
33	11S02D	SCREW SET M6	16
33A	17S03	WASHER SPRING M6	16

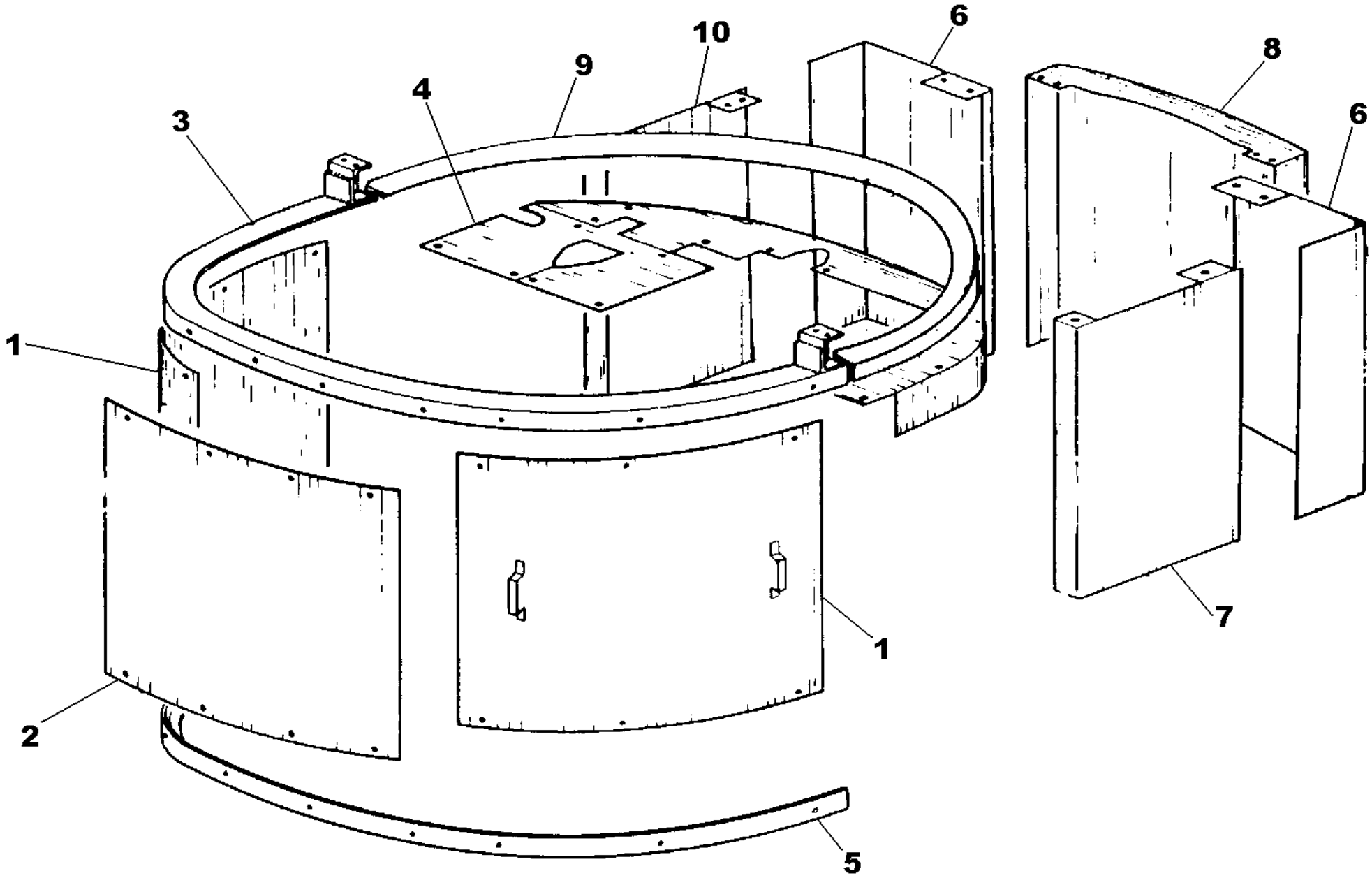
RP1250XD DISCHARGE DOOR & AIR CYLINDER



RP1250XD PAN DOOR CONTROLS

1	CR260161	DOOR ARM	1
2	CR151092	DOOR ARM BEARING	2
*	CR530039	BEARING STOP	2
3	CR260013	DOOR ARM LEVER	1
4	7S16	NUT M18	4
4A	17S15	WASHER SPRING M18	4
5	CR320029	DOOR ARM LEVER KEY	1
6	CR261136	PISTON ROD END	1
6A	57S07F1	SCREW GRUB M12 X 16	1
7	CR490056	PISTON ROD END SEAL WASHER (INNER)	1
8	CR490057	PISTON ROD END SEAL WASHER (OUTER)	1
8A	163S07	NUT NYLOC 3/4 BSF	1
9	CR560001	FELT	A/R
10	CR150850	BEARING	3
11	CR110299	AIR CYLINDER	1
11A	CR110328	SEAL KIT FOR ITEM 11	1
12	CR260015	AIR CYLINDER TRUNNION	1
13	2S11	NUT FULL 1.25" BSF	2
13A	74S10	NUT LOCKING 1.25" BSF	2
14	CR260016	AIR CYLINDER TRUNNION ADJUSTER	1
14A	131S01	NIPPLE GREASE STRAIGHT	1
14B	176S01	COVER NIPPLE GREASE	1
15	CR180008	BEARING	1
16	CR530025	AIR CYLINDER TRUNNION PIN	1
17	353308200	SPLIT PIN	2
19	CR530027	DOOR, MILD STEEL	1
19A	CR530027SS	DOOR, STAINLESS STEEL	1
20	CR530028	DOOR WEAR PLATE, MILD STEEL	1
20A	CR530028H	DOOR WEAR PLATE, WEAR RES STEEL	1
20B	CR530028SS	DOOR WEAR PLATE, STAINLESS STEEL	1
21	CR260017	DOOR PIN	1
22	CR260018	DOOR BEARING HOUSING	1
23	CR660002	DOOR SPACER SLEEVE	1
24	CR490058	DOOR SPACER WASHER	1
25	CR490061	DOOR SPINDLE SEAL WASHER	
26	CR530029	DOOR BEARING SUPPORT ANGLE	1
27	CR150849	BEARING	1
28	CR120003	RUBBER MOUNTING	3
29	61S04	NUT BINX M10 SELF LOCKING	6
29A	267S06	WASHER FLAT M10	6
30	11S05F	BOLT	6
31	CR249022	BOLT	8
32	52S04G	BOLT	4
33	52S04F	BOLT	2
34	163S09	NUT NYLOC	1
35	CR240003	RUBBER MOUNTING SLEEVE	3
36	CR530046	DOOR SEATING, MILD STEEL	1
36A	CR530046SS	DOOR SEATING, STAINLESS STEEL	1
37	52S04H	BOLT	8

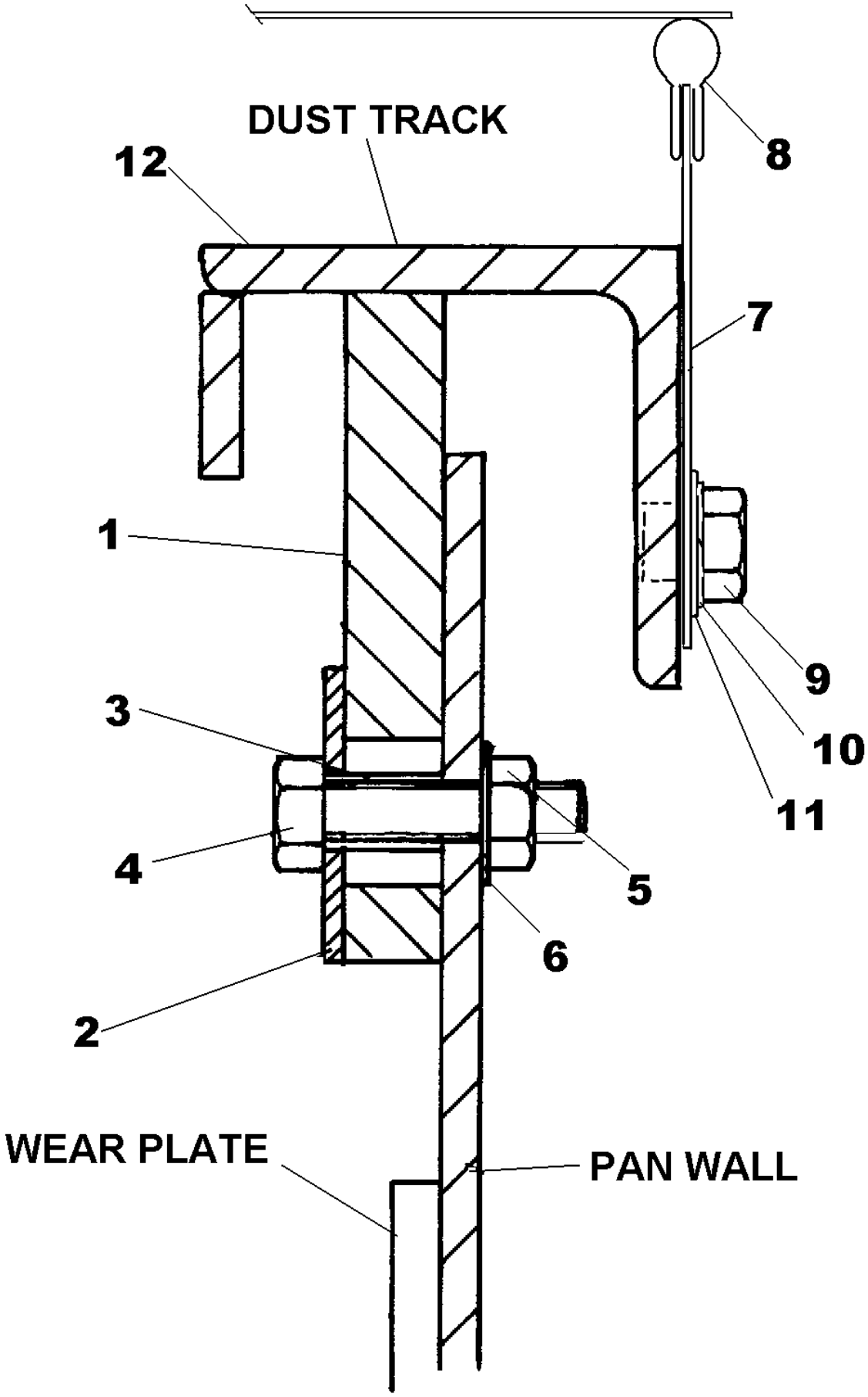
RP1250XD PAN GUARDS



RP1250XD ARRANGEMENT OF GUARDS

1	CR541742	PAN GUARD	2
2	CR541741	PAN GUARD (CENTRE)	1
3	CR541740	FRONT TRACK	1
4	CR089033	SPLASH GUARD COMPLETE	1
5	CR540020	PAN GUARD BOTTOM RIM	1
6	CR540216	PAN REAR GUARD (AIR GEAR SIDE)	1
7	CR540215	PAN REAR GUARD (MOTOR SIDE)	1
8	CR540021	PAN REAR GUARD (CENTRE)	1
9	CR541739	REAR TRACK	1
10	CR540500	COVER, DISCHARGE DOOR AIR CYLINDER	1

RP1250XD PAN SEALING STRIP



RP1250XD PAN SEALING STRIP

1	CR479051	Pan Sealing Rubber (Order by metre)	7
2	CR539126	Retaining Plate	4
3	CR529035	Spacer	20
4	8S03E	Screw Set M8 x 45	20
5	61S03	Nut Binx M8	20
6	267S05	Washer Flat M8	20
7	CR54100777	Guard Wrap Round	4
8	V2003587	Seal Rubber	4MT
9	11S03A	Screw M8	16
10	17S04	Washer Spring M8	16
11	267S05	Washer Flat M8	16
12	CR541739	Pan Dust Track, Rear	1
12A	CR541740	Pan Dust Track, Front	1

The following track retaining brackets are not illustrated

13	8S05D	Bolt M12 Track to top Structure Rear	2
13A	61S05	Nut Binx M12	2
13B	267S07	Washer Flat M12	4
14	11S05D	Screw Set M12 Track to rear Bracket	2
14A	61S05	Nut Binx M12	2
14B	267S07	Washer Flat M12	2
15	CR26100779	Bracket Track to Front Bracket	3
15A	11S03C	Screw Set M8	3
15B	17S04	Washer Set M8	3
15C	267S05	Washer Flat M8	3
16	CR26100778	Bracket, Track Bracket to Top Structure Front	3
16A	11S04B	Screw Set M10	3
16B	17S05	Washer Spring M10	3
16C	267S06	Washer Flat, M10	3

RP1250XD DECALS AND LOGOS

1 **CROKER CUMFLOW RP1250XD**

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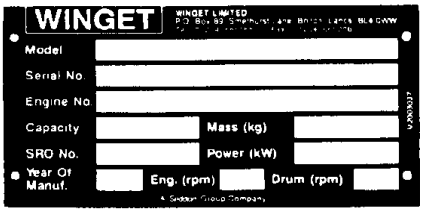

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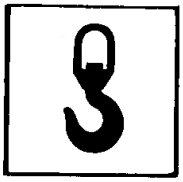

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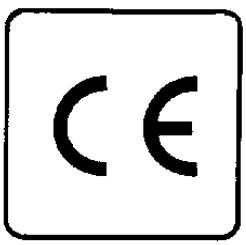
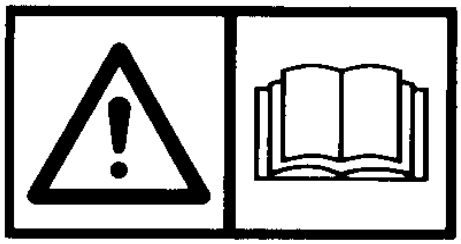


9



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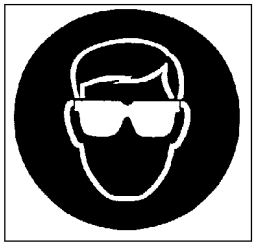

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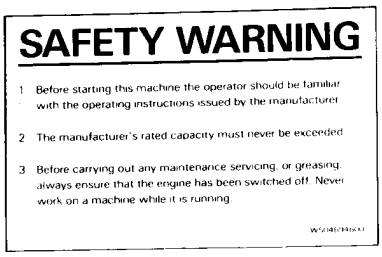

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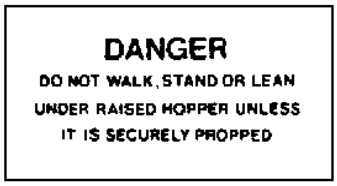

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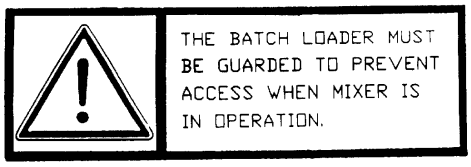

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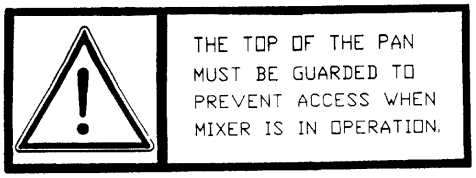

RP1250XD DECALS AND LOGOS

1	CR85100768	DECAL RP1250XD	3
2	V2003037	PLATE SERIAL NUMBER	1
3	101S05D	RIVET POP	4
4	V2003039	DECAL 'WINGET' MEDIUM	3
5	V2003665	DECAL SLING POINT	4
6	V2003598	DECAL BRITISH MADE	3
7	V2004307	DECAL ELECTRICAL HAZARD	5
8	V2004223	DECAL 'CE' MARK EC MACHINES ONLY	1
9	V2004229	DECAL OPERATORS HANDBOOK	3
10	V2004744	DECAL EYE PROTECTION	3
11	504694600	DECAL SAFETY	3
12	513331600	DECAL DANGER	8
13	CR85100771	DECAL BATCH LOADER GUARDING	2
14	CR85100772	DECAL PAN GUARDING	2

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OPERATING

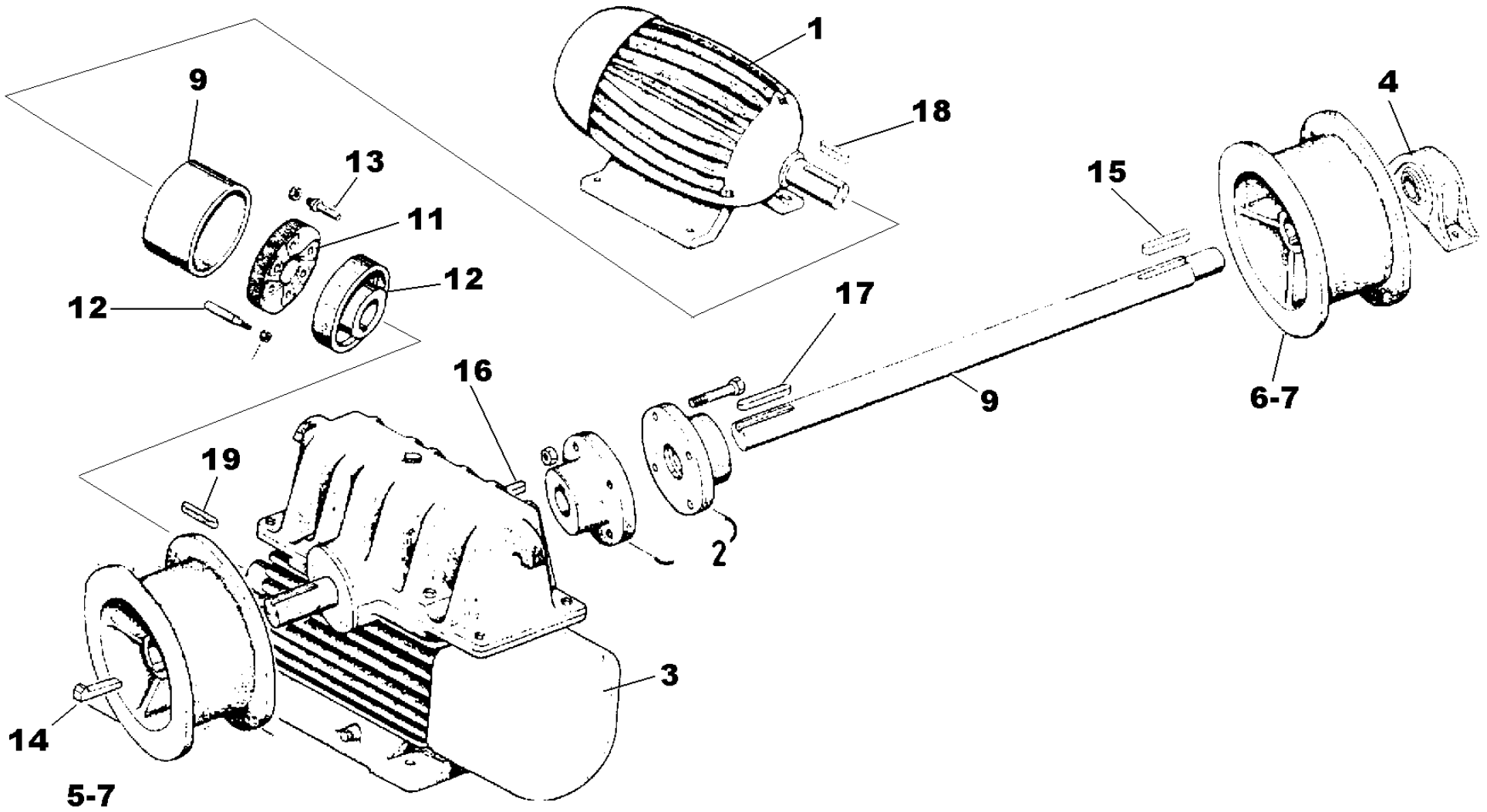
AND

MAINTENANCE MANUAL

SECTION 5

ANCILLARY EQUIPMENT
SPARE PARTS

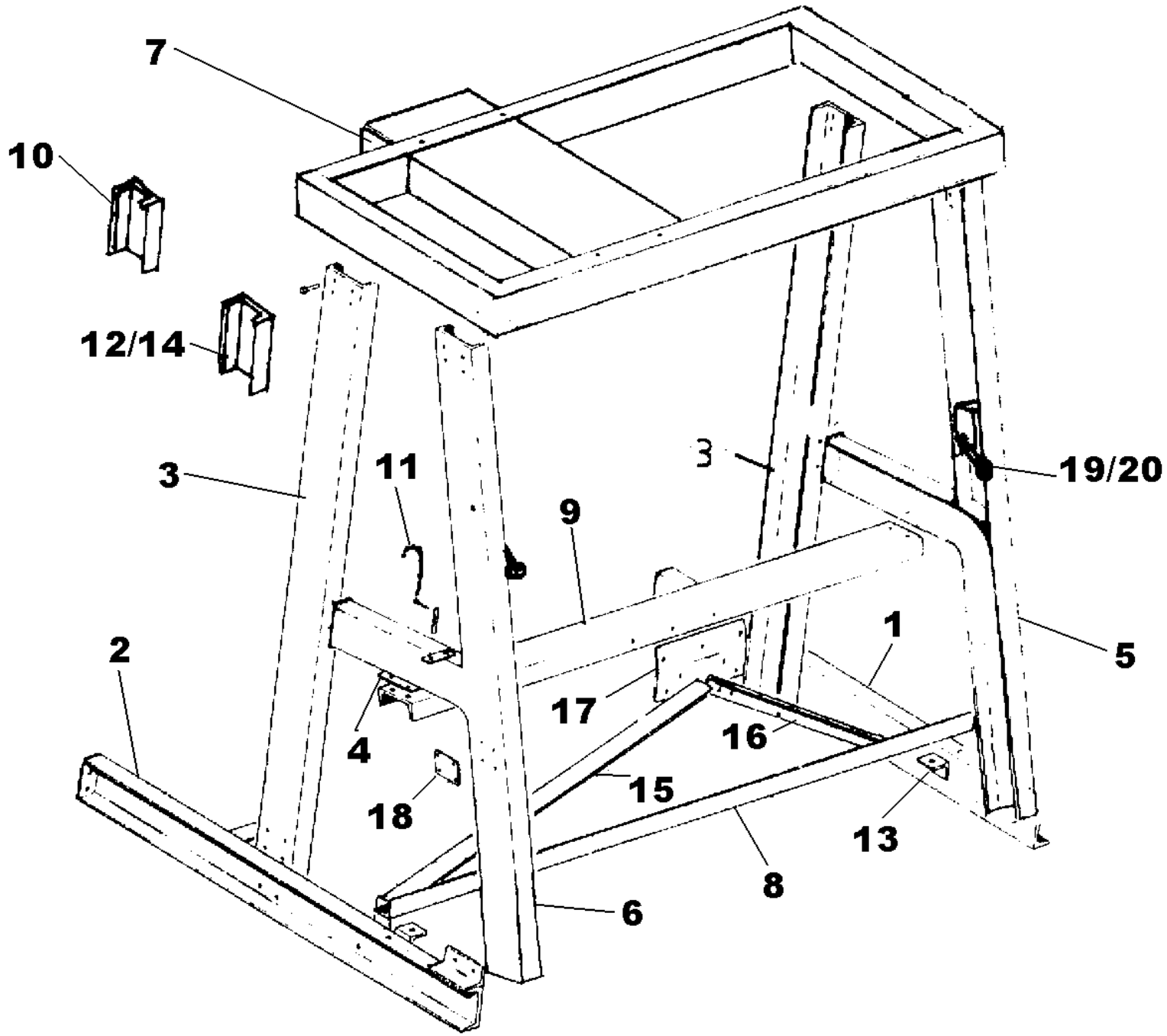
RP1250XD WINCH UNIT



RP1250XD LOADER WINCH

1	CR220003	ELECTRIC MOTOR	1
2	CR239012	WINCH COUPLING	1
3	CR670398	REDUCTION GEAR BOX	1
4	CR151093	BEARING	1
5	CR210010A	GEARBOX ROPE DRUM	1
6	CR210010B	ROPE DRUM	1
7	CR530064	ROPE DRUM ANCHOR BOLT	2
8	CR520009	ROPE DRUM SHAFT	1
9	CR210223B	BRAKE DRUM	1
10	CR230051D	HALF COUPLING	1
11	CR230048	FLEXIBLE COUPLING	1
12	CR230049	FLEXIBLE COUPLING PIN	3
13	CR520008	BRAKE DRUM PIN	3
14	CR320062	GEAR BOX ROPE DRUM KEY	1
15	CR320039	ROPE DRUM KEY	1
16	CR329078	GEAR BOX WINCH COUPLING KEY	1
17	CR329079	WINCH COUPLING KEY	1
18	CR329000	BRAKE DRUM KEY	1
19	CR329002	HALF COUPLING KEY	1
20*	CR559004	BRAKE UNIT	1
21*	CR549143	BRAKE COVER	1

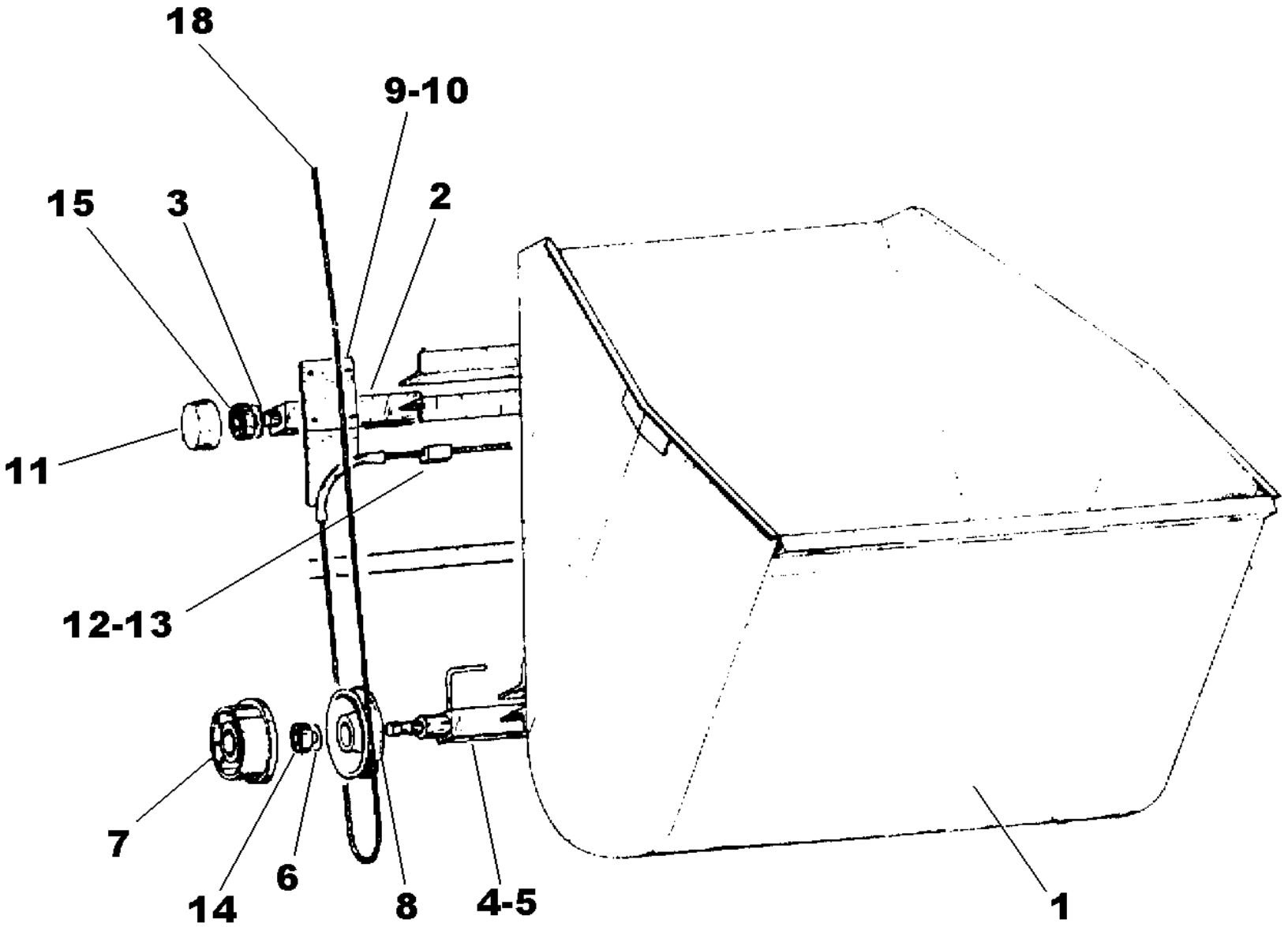
RP1250XD LOADER RUNWAY ASSEMBLY



RP1250XD RUNWAY

1	CR261083	CHASSIS EXTENSION OPPOSITE WINCH SIDE	1
2	CR261084	CHASSIS EXTENSION WINCH SIDE	1
3	CR539167	MAIN UPRIGHT	2
4	CR530059	PACKING	2
5	CR269185	RUNWAY OPPOSITE WINCH SIDE	1
6	CR269184	RUNWAY WINCH SIDE	1
7	CR269182	WINCH SUPPORT FRAME	1
8	CR530056	TIE ANGLE	1
9	CR539171	TIE CHANNEL	1
10	CR269183	FRONT BRACKET	2
11	CR530062	SAFETY BOLT AND CHAIN	2
12	CR269187	REAR BRACKET (L.H.)	1
13	CR530057	BRACING CLEAT	2
14	CR269188	REAR BRACKET (R.H.)	1
15	CR260050	BRACING	1
16	CR260049	BRACING	1
17	CR530066	BRACING SUPPORT	1
18	CR620006	CAUTION PLATE	2
19	CR229083	LIMIT SWITCH	2
20	CR539175	LIMIT SWITCH PLATE	2

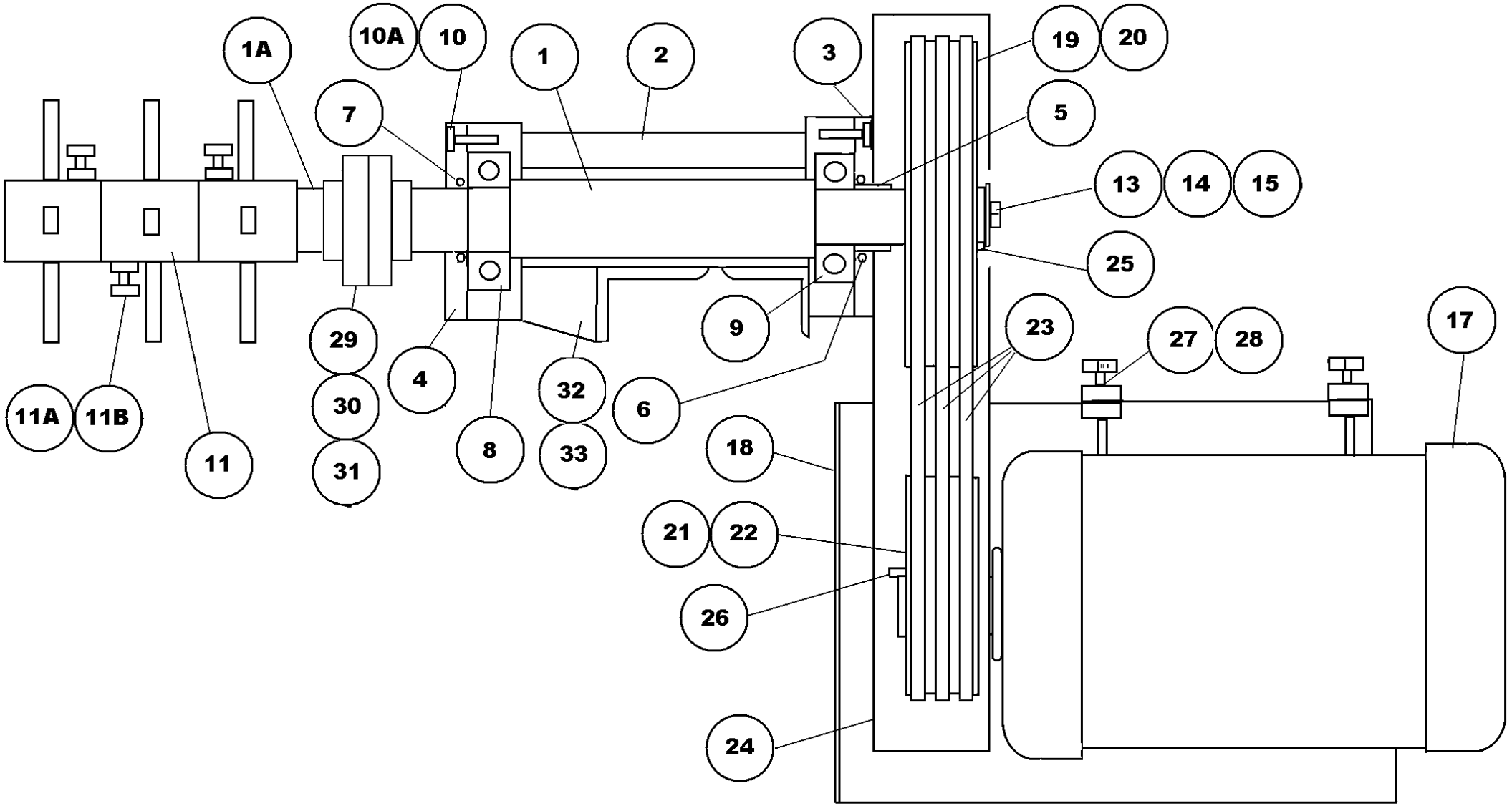
RP1250XD LOADING HOPPER



RP1250XD LOADING HOPPER

1	CR540029	LOADING HOPPER (STANDARD)	1
1	CR549142	LOADING HOPPER (SPECIAL)	1
2	CR130007	FRONT AXLE	2
3	CR490075	FRONT AXLE WASHER	2
4	CR130008	REAR AXLE (L.H.)	1
5	CR130009	REAR AXLE (R.H.)	1
6	CR490076	REAR AXLE WASHER	2
7	CR210014	REAR ROLLERS	2
8	CR210016	ROPER PULLEYS	2
9	CR269189	ROPE GUIDE (L.H.)	1
10	CR269190	ROPE GUIDE (R.H.)	1
11	CR210015	FRONT ROLLERS	2
12	CR530063	ROPE RETAINER BLOCK	2
13	CR530064	ROPE ANCHOR BOLTS	4
14	CR150517	REAR ROLLER BEARING	2
15	CR159000	FRONT ROLLER BEARING	2
16	CR240008	CIRCLIP	2
18	*	WIRE ROPE	QUOTE LENGTH REQUIRED

RP1250XD SPLIT SHAFT WHIRLER FROM SERIAL NUMBER 6066



RP1250XD SPLIT SHAFT WHIRLER FROM S/NO 6066

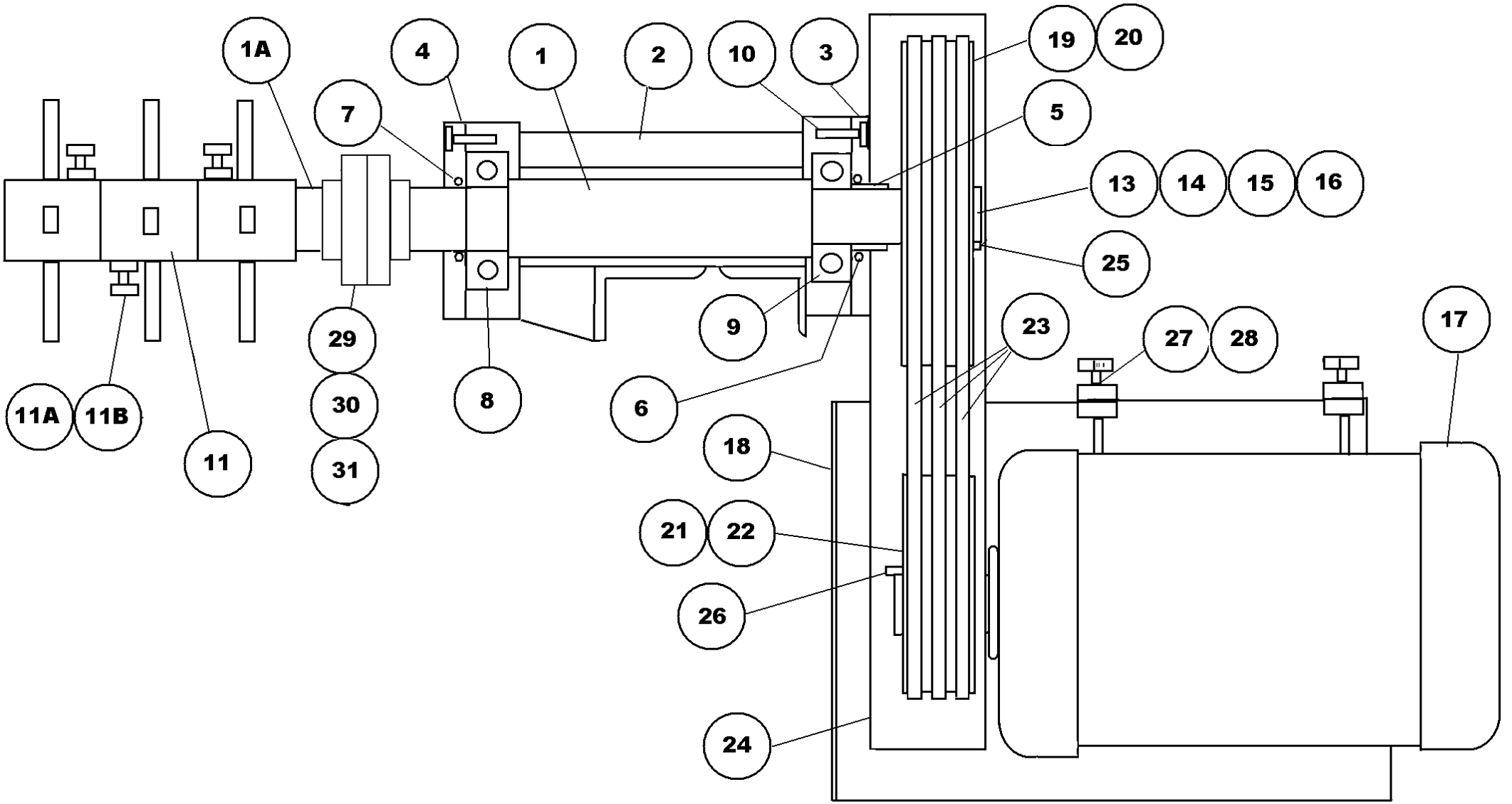
1	CR529154	WHIRLER TOP SHAFT	1
1A	CR529155	WHIRLER LOWER SHAFT	1
2	CR269163	BEARING HOUSING	1
3	CR532110	BEARING CAP	1
4	CR532111	BEARING CAP	1
5	CR532109	SPACER	1
6	CR569014	LIP SEAL	1
7	CR569016	LIP SEAL	1
8	CR150701	BEARING	1
9	CR150538	BEARING	1
10	68S05G	CAP SCREW M10 x 40	6
10A	17S05	WASHER SPRING M10	6
11	CR219006	BLADE WHIRLER, CAST	6
11	CR219006SS	BLADE WHIRLER, STAINLESS STEEL	6
11	CR219006SSA	BLADE WHIRLER, STAINLESS STEEL, ANGLED	6
11	CR219006H	BLADE WHIRLER, TUNGSTEN CARBIDE COATED	6
11	CR219006AH	BLADE WHIRLER, TUNGSTEN CARBIDE COATED, ANGLED	6
11	CR219017	BLADE WHIRLER, TWO BLADES, TUNGSTEN CARBIDE COATED	A/R
11A	11S05G	SCREW SET M12	6
11B	7S05	NUT M12	6
13	CR539005	RETAINER WASHER	3
14	11S05F	SCREW SET M12	1
15	17S05	WASHER SPRING M12	1
17	CR220102	MOTOR ELECTRIC	1
17A*	8S05G	BOLT M12 x 5	4
17B*	267S07	WASHER FLAT M12	4
17C*	17S06	WASHER SPRING M12	4
17D*	7S05	NUT M12	4
18	CR261350	BRACKET, SUPPORT MOTOR	1
19	CR340550	PULLEY, WHIRLER	1
20	CR340551	BUSH TAPERLOCK	1
21	CR340552	PULLEY, MOTOR (WHIRLER SPEED 720 RPM)	1
21A	CR349019	PULLEY, MOTOR (WHIRLER SPEED 575 RPM)	1
22	CR340546	BUSH TAPERLOCK (FOR PULLEY CR340552)	1
22A	CR349020	BUSH TAPERLOCK (FOR PULLEY CR349019)	1
23	CR160060	BELTS 'V' (USE WITH PULLEY CR340552)	1 SET(OF 3)
23A	CR169010	BELTS 'V' (USE WITH PULLEY CR349019)	1 SET(OF 3)
24	CR091013	BELT GUARD	1
25	CR329001	KEY	1
26	CR329000	KEY	1
27	11S05P	SCREW SET M12 x 80	2
28	7S05	NUT M12	2
29	CR329080	KEY PARALLEL	2
30	CR239026	COUPLING FENNER TAPERLOCK	1
31	CR239035	BUSH TAPERLOCK 65MM I/D (3020)	2
32	CR532092	GUSSET	2
33	CR532091	SUPPORT PLATE	1

ITEMS 32 & 33 USED ONLY WHEN RETROFITTING WHIRLER

RP1250XD SPLIT SHAFT WHIRLER FROM S/NO 6066

34*	11S06H	SCREW SET M16x50, ITEM 18 TO MAINFRAME	6
34A*	17S08	WASHER SPRING M16	6
34B*	267S09	WASHER FLAT M16	6
34C*	7S06	NUT M16	6
		ITEMS MARKED * NOT ILLUSTRATED	

RP1250XD SPLIT SHAFT WHIRLER

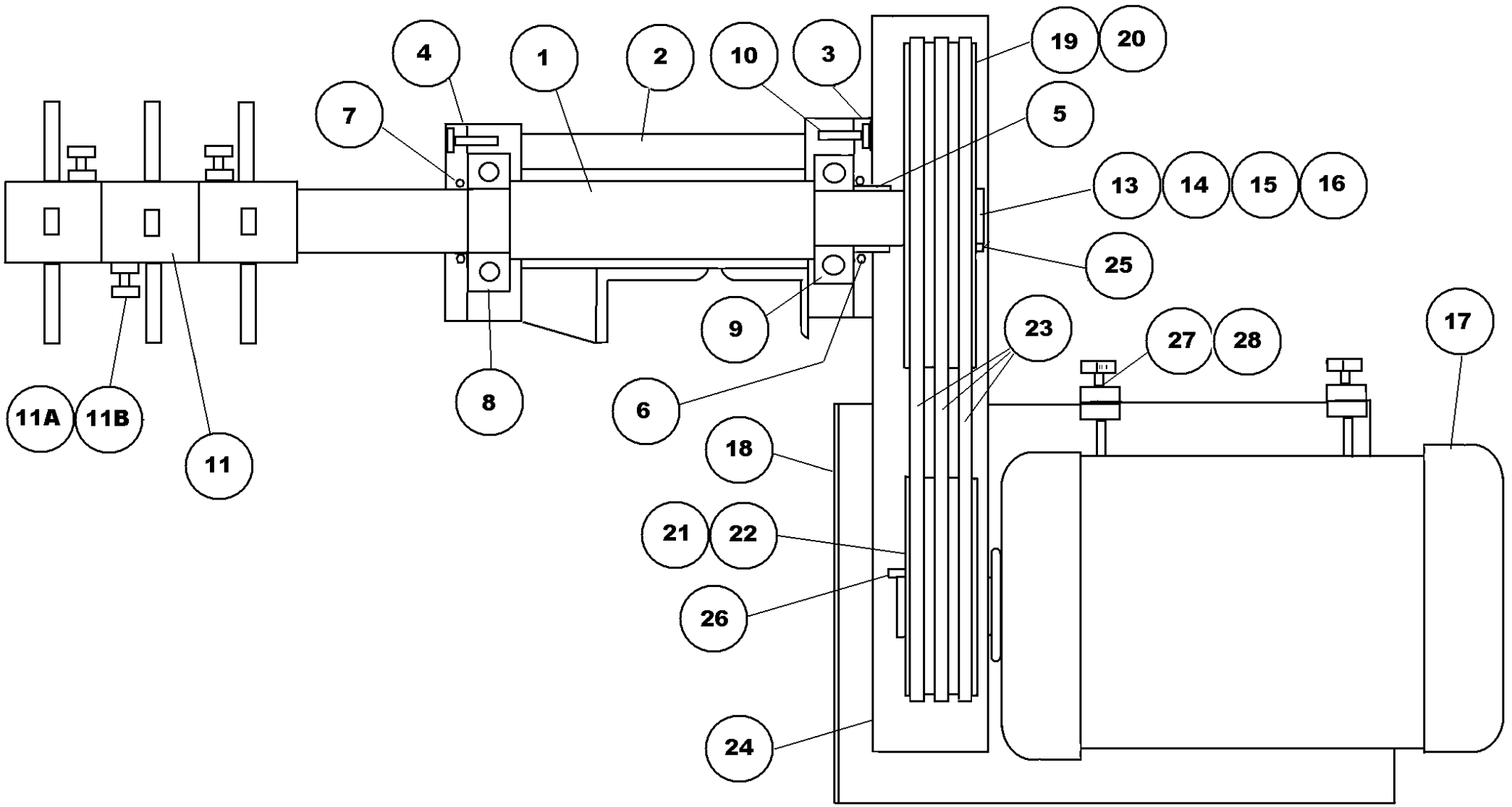


RP1250XD SPLIT SHAFT WHIRLER ASSEMBLY

1	CR529154	WHIRLER TOP SHAFT	1
1A	CR529155	WHIRLER LOWER SHAFT	1
2	CR269163	BEARING HOUSING	1
3	CR532110	BEARING CAP	1
4	CR532111	BEARING CAP	1
5	CR532109	SPACER	1
6	CR569014	LIP SEAL	1
7	CR569016	LIP SEAL	1
8	CR150701	BEARING	1
9	CR150538	BEARING	1
10	68S05G	CAP SCREW M10 x 40	6
11	CR219006	BLADE WHIRLER, CAST	6
11	CR219006SS	BLADE WHIRLER, STAINLESS STEEL	6
11	CR219006SSA	BLADE WHIRLER, STAINLESS STEEL, ANGLED	6
11	CR219006H	BLADE WHIRLER TUNGSTEN CARBIDE COATED	6
11	CR219006AH	BLADE WHIRLER TUNGSTEN CARBIDE COATED, ANGLED	6
11	CR219017	BLADE WHIRLER, TWO BLADES, TUNGSTEN CARBIDE COATED	A/R
11A	11S05G	SCREW SET M12	6
11B	7S05	NUT M12	6
13	CR539005	RETAINER WASHER	3
14	11S05F	SCREW SET M12	1
15	17S05	WASHER SPRING M12	1
16	CR539044	SLEEVE	1
17	CR220102	MOTOR	1
18	CR261350	BRACKET	1
19	CR340550	PULLEY WHIRLER	1
20	CR340551	BUSH TAPERLOCK	1
21	CR340552	PULLEY, MOTOR (WHIRLER SPEED 720 RPM)	1
21A	CR349019	PULLEY, MOTOR (WHIRLER SPEED 575 RPM)	1
22	CR340546	BUSH TAPERLOCK (FOR PULLEY CR340552)	1
22A	CR349020	BUSH TAPERLOCK (FOR PULLEY CR349019)	1
23	CR160060	BELTS 'V' (USE WITH PULLEY CR340552)	1SET (OF 3)
23A	CR169010	BELTS 'V' (USE WITH PULLEY CR349019)	1SET (OF 3)
24	CR091013	BELT GUARD	1
25	CR329001	KEY	1
26	CR329000	KEY	1
27	11S05M	SCREW SET M12	2
28	7S05	NUT M12	2
29	CR329080	KEY PARALLEL	2
30	CR239026	COUPLING FENNER TAPERLOCK	1
31	CR239035	BUSH TAPERLOCK 65MM I/D (3020)	2
32*	CR532092	GUSSET (NOT ILLUSTRATED)	2
33*	CR532091	SUPPORT PLATE (NOT ILLUSTRATED)	1

* NOT ILLUSTRATED

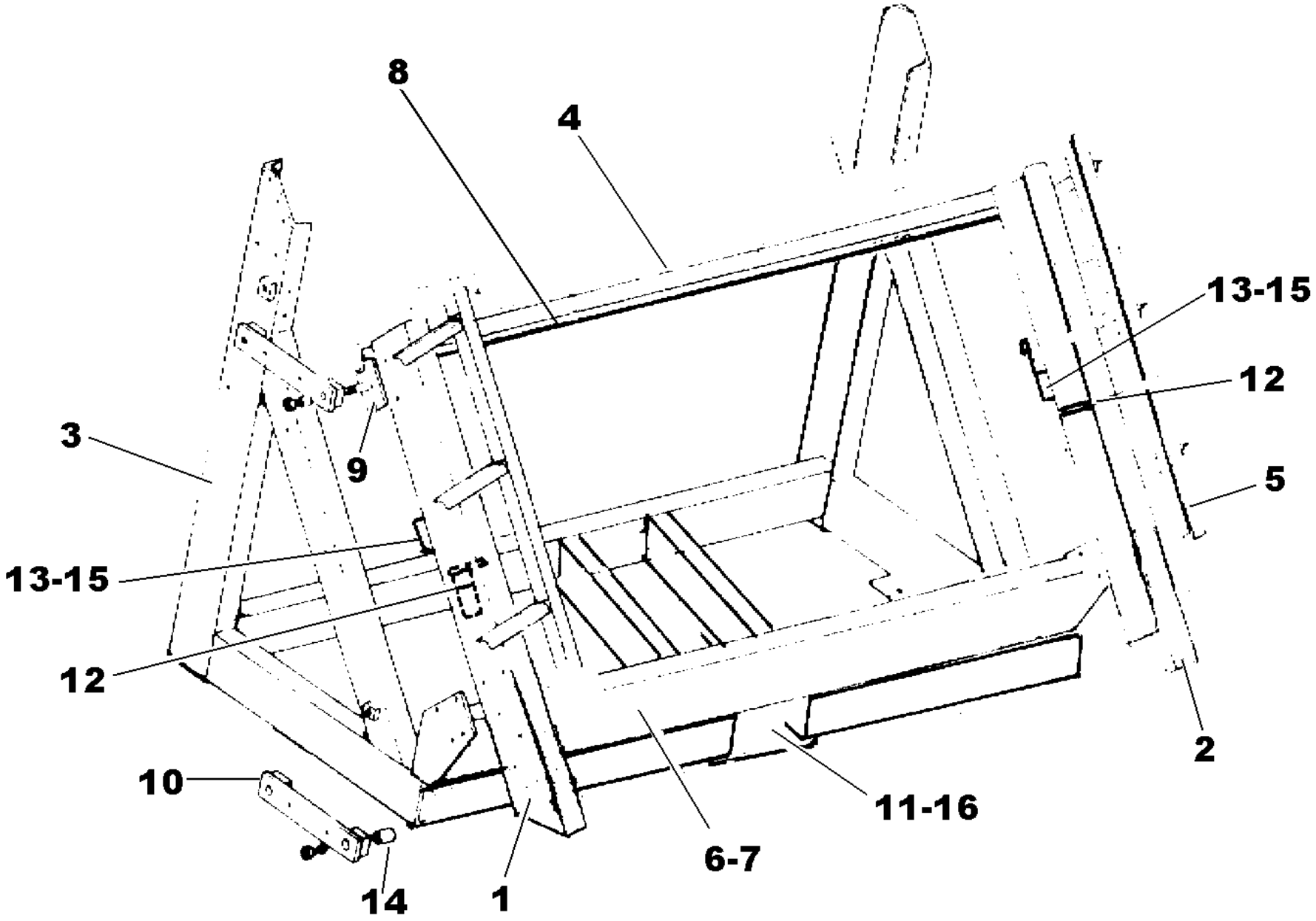
RP1250XD FIXED SHAFT WHIRLER



RP1250XD FIXED SHAFT WHIRLER ASSEMBLY

1	CR520520	WHIRLER SHAFT	1
2	CR261471	BEARING HOUSING	1
3	CR532110	BEARING CAP	1
4	CR532111	BEARING CAP	1
5	CR532109	SPACER	1
6	CR569014	LIP SEAL	1
7	CR569016	LIP SEAL	1
8	CR150701	BEARING	1
9	CR150538	BEARING	1
10	68S06E	CAP SCREW M12	1
11	CR219006	BLADE WHIRLER, CAST	6
11	CR219006SS	BLADE WHIRLER, STAINLESS STEEL	6
11	CR219006SSA	BLADE WHIRLER, STAINLESS STEEL, ANGLED	6
11	CR219006H	BLADE WHIRLER, TUNGSTEN CARBIDE COATED	6
11	CR219006AH	BLADE WHIRLER, TUNGSTEN CARBIDE COATED, ANGLED	6
11	CR219017	BLADE WHIRLER, TWO BLADES, TUNGSTEN CARBIDE COATED	A/R
11A	11S05G	SCREW SET M12	6
11B	7S05	NUT M12	6
13	CR539005	RETAINER WASHER	3
14	11S05F	SCREW SET M12	1
15	17S05	WASHER SPRING M12	1
16	CR539044	SLEEVE	1
17	CR220102	MOTOR	1
18	CR261350	BRACKET	1
19	CR340550	PULLEY, WHIRLER	1
20	CR340551	BUSH TAPERLOCK	1
21	CR340552	PULLEY, MOTOR (WHIRLER SPEED 720 RPM)	1
21A	CR349019	PULLEY, MOTOR (WHIRLER SPEED 575 RPM)	1
22	CR340546	BUSH, TAPERLOCK (FOR PULLEY CR340552)	1
22A	CR349020	BUSH, TAPERLOCK (FOR PULLEY CR349019)	1
23	CR169001	BELTS 'V' (USE WITH PULLEY CR340552)	1SET (OF 3)
23A	CR169010	BELTS 'V' (USE WITH PULLEY CR349019)	1SET (OF 3)
24	CR091013	BELT GUARD	13
25	CR329001	KEY	1
26	CR329000	KEY	1
27	11S05M	SCREW SET M12	2
28	7S05	NUT M12	2

RP1250 WEIGHING FRAME



RP1250XD ASSEMBLY OF WEIGHER

1	CR269194	RUNWAY LEFT HAND	1
2	CR269195	RUNWAY RIGHT HAND	1
3	CR269196	WEIGHER FRAME	1
4	CR269198	RUNWAY TOP BRACE	1
5	CR269199	GUIDE RAILS	2
6	CR539010	BRIDGE STOPS	4
7	CR269193	WEIGHER BRIDGE	1
8	CR269200	TORQUE TUBE	1
9	CR260062	HINGE PIN	2
10	CR260063	LINK	4
11	CR179011	LOAD CELL	1
12	CR260065	HOPPER STOP	2
13	CR539170	LIMIT SWITCH PLATE	2
14	CR18100277	BUSH	8
15	CR229083	LIMIT SWITCH	2
16	CR179012	LOAD CELL MOUNT	1

CROKER LOADER

WIRE ROPE RENEWAL PROCEDURE

1. Place the Loader Hopper onto the hopper stops. Loosen nut from rope anchor bolt, item 1, on one rope drum only, item 2.

2. Remove end of old wire rope from anchor bolt.

3. Fit end of new wire rope to anchor bolt and tighten nut.

4. Lay other end of new wire rope end to end with old wire rope removed in part 2. Bind both ends together with sticky tape (electrical or masking tape).

5. Carefully pull on the old wire rope to pull the new wire down to the bottom of the loader hopper and around the rear axle rope pulley, item 3, and up through the front axle rope guide, item 4.

6. Remove front axle rope retainer blocks, items 5 and 6, and slide onto the new rope.

7. Continue to pull the wire and thread through the second rope guide, item 7, and down around the second rope pulley, item 8, and up to the second rope drum, item 9.

8. Remove old wire from second anchor bolt, item 10, on second rope drum, item 9, and remove tape from ends of old and new wire.

9. Fit second end of new wire to second anchor bolt, item 10, on second rope drum, item 9.

10. Tighten anchor bolt nuts on both rope drums.

11. The new wire should now run over the front edges of both rope drums and down to front edges of both the lower axle rope pulleys, items 3 and 8, and up the back of the rope pulleys to the rope guides, items 4 and 7, with both rope retainer blocks, items 5 and 6, located on the section of wire rope between the two rope guides at the back of the hopper.

12. Start and stop the loader by hand, using the start and stop buttons, and take out all the slack of the wire rope in the raise direction (see important note on page 30), ensuring that the wire slots into both axle rope pulleys, item 2 and 9, and that the wire has wound evenly onto both rope drums.

    Make sure the loader hopper is level and sitting on weigher track stops before positioning rope retainer blocks, items 5 and 6, approximately 2

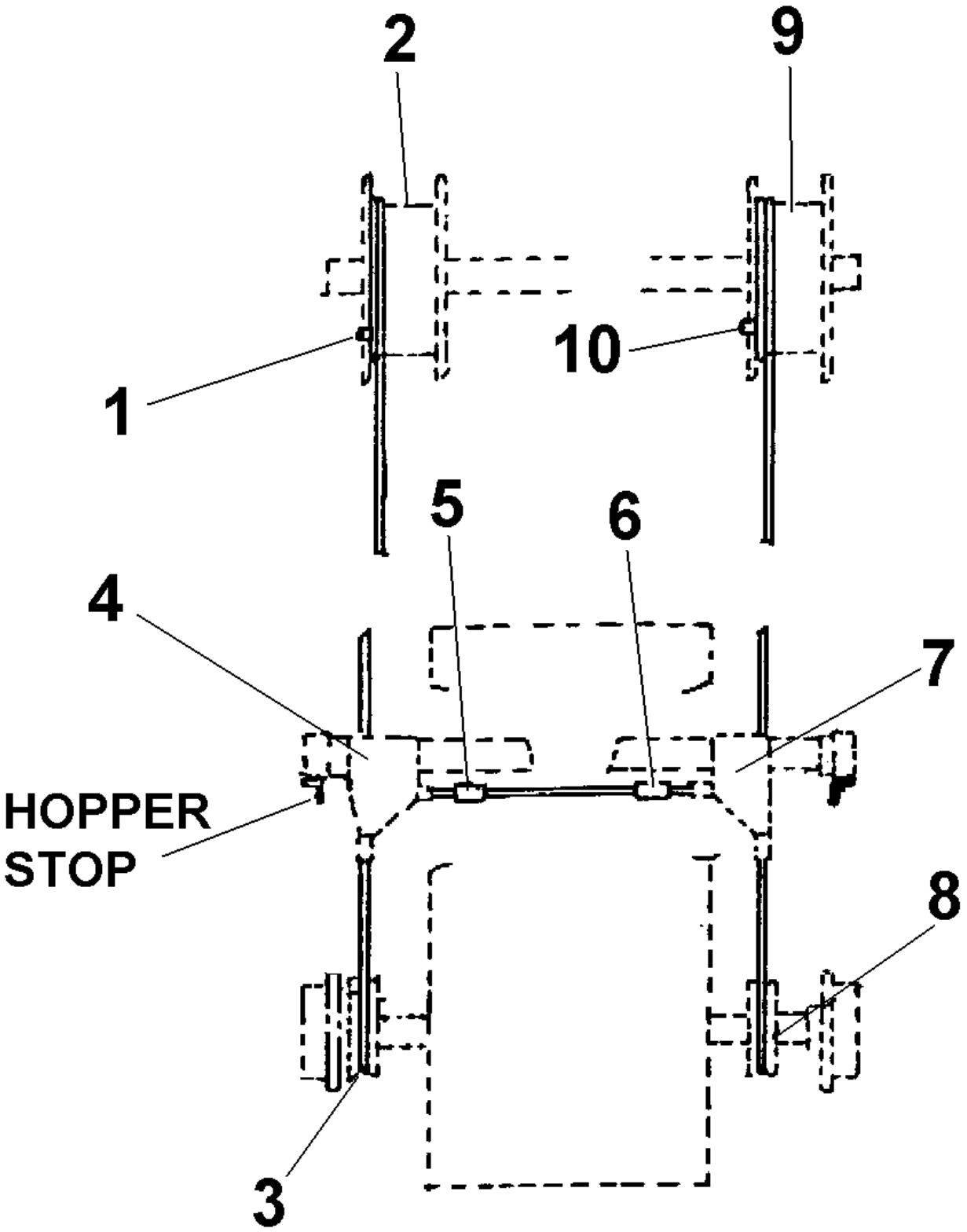
inches (50 mm) in board of rope guides, item 4 and 7, each side and make fast retainer blocks onto wire.

13. Check that both limit switches are working correctly.

14. Make sure loader hopper clears both sides of rope drums at the top of its operation.

    NOTE: Hopper reaches the end of its travel between the rope drums.

RP1250XD WIRE ROPE RENEWAL PROCEDURE



WIRE ROPES

SAFETY NOTES

ALWAYS

Store and handle the wire rope correctly, wear protective gloves and eye protection.

Check the rope test certificate is still in date especially if the rope has been in storage also check that the certificate is applicable to the rope.

Remove the rope from any reel or coil correctly and without kinking.

Only use correct end terminations and rope anchors.

Ensure that the rope is correctly located and seated on the rope drum.

Ensure that the rope is correct for the application and only use good quality ropes from reputable suppliers.

Inspect the wire rope for damage, wear, corrosion or abuse at the start of each shift.

Keep the wire rope clean and maintained in accordance with the manufacturers instructions.

NEVER

Try to shorten any wire rope by knotting.

Bend a wire rope over small radii.

Subject wire ropes to shock loadings.

Allow wire ropes to run over sharp edges or abrasive surfaces etc.

Subject wire ropes to extremes of temperature.

Use wire ropes with obvious signs of mechanical, corrosive or heat damage.

Use wire ropes that are worn, frayed, split or corroded.

STORAGE

Store wire ropes in a clean well ventilated, dry location preferably undercover and protected from extremes of temperatures.

If site conditions are such that undercover storage is not possible cover the rope with a waterproof cover and support clear of the ground.

Rotate stored wire ropes, reels or coils regularly to prevent migration of the rope lubricant, particular in warm environments.

Be aware that subjecting wire ropes to extremes of temperature as can affect the in service performance, high storage temperatures can reduce the effective strength of the rope.

SAFETY

Running wire ropes are hazardous and should be guarded or personnel should be prevented access to them whilst in motion.

Wire ropes develop broken strands during their working life which present a hazard to maintenance personnel, always wear suitable hand and eye protection when handling ropes.

Take care when unfastening a coiled rope as the inherent springiness when released may cause it to strike attendant personnel or other equipment causing damage or injury.

Take care when removing worn, damaged or failed ropes from equipment as they may be tightly coiled, grossly distorted and still retain their springiness.

IN SERVICE INSPECTION AND MAINTENANCE

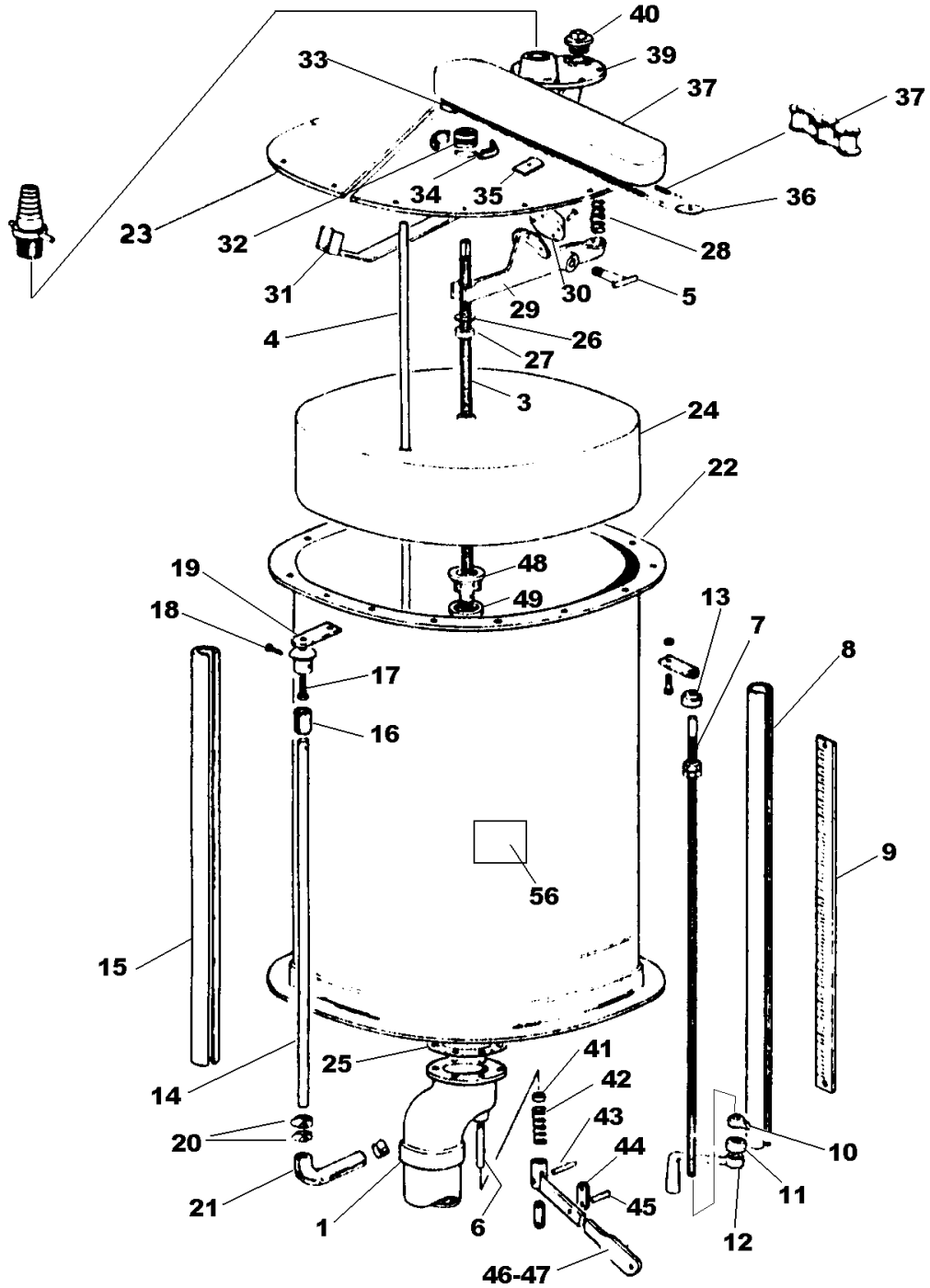
Wire ropes used for lifting operations should be regularly inspected by a competent person and inspection records kept upto date.

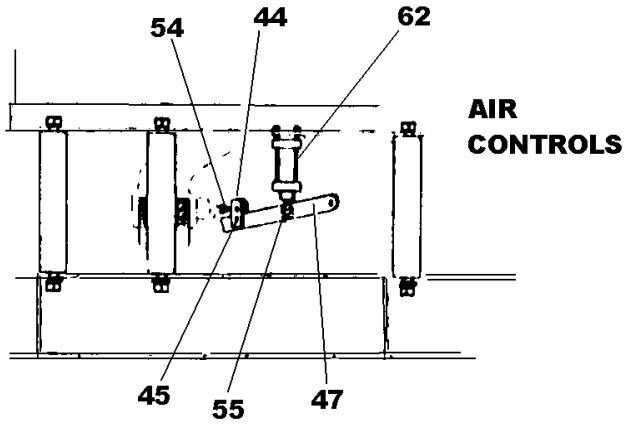
Inspections should not only concentrate on the rope but also extend to the condition of sheaves, drums, guides etc.

Decisions on whether a wire rope is suitable for continued service should only be made by a competent person.

IF IN DOUBT REPLACE THE ROPE.

180 LITRE WATER TANK





WATER TANK 180 LITRES

1	CR210153	OUTLET PIPE	1
3	CR520205	FLOAT CENTRE SPINDLE	1
4	CR520206	FLOAT GUIDE ROD	1
5	CR520207	FULCRUM PIN	1
6	CR520202	OUTLET VALVE SPINDLE	1
7	CR520203	INDICATOR ADJUSTING ROD	1
8	CR530545	INDICATOR GUIDE TUBE	1
9	CR479000	INDICATOR SCALE	1
*	CR530546	INDICATOR SCALE STIFFENER	1
*	CR540502	INDICATOR SCALE SUPPORT	1
10	CR210150	INDICATOR	1
11	CR660015	GUIDE TUBE BUSH	1
12	CR210149	INDICATOR ADJUSTING ROD HANDLE	1
13	CR630304	COLLAR	1
14	CR450026	GAUGE GLASS	1
15	CR540498	GAUGE GLASS GUARD	1
16	CR510475	GAUGE GLASS COVER RUBBER	1
17	CR260112	GAUGE GLASS COVER	1
18	CR240269	GAUGE GLASS GUARD BOLT	1
19	CR540141	GAUGE GLASS COVER SUPPORT	1
20	CR243005	CONNECTING CLIPS	1
21	CR510329	GAUGE GLASS CONNECTING PIPE	1
22	CR450003	TANK BODY	1
23	CR450037	TANK BODY LID	1
24	CR450038	FLOAT	1
25	CR560118	OUTLET PIPE JOINT	1
26	CR490025	WASHERS	1
27	CR630302	LOCATING COLLARS	1
28	CR330058	INLET VALVE LEVER SPRING	1
29	CR210151	INLET VALVE LEVER	1
30	CR210152	INLET VALVE	1
*	CR570015	INLET VALVE RUBBER	1
31	CR260445	LOCKING PLATE	1
32	CR210029	CENTRE BEARING	1
33	CR200009	CENTRE BEARING CHAIN PINION	1
34	CR210022	CENTRE BEARING HOUSING	1
35	CR540147	CHAIN GUIDE	1
36	CR200031	ADJUSTING ROD CHAIN PINION	1
37	CR200058	CHAIN	1
38	CR540497	CHAIN GUARD	1
39	CR210148	INLET VALVE BODY	1
40	CR450039	INLET VALVE LEVER SPRING ADJUSTER	1
41	CR560019	OUTLET VALVE SPINDLE SEAL	1
*	CR490031	OUTLET VALVE SPINDLE WASHER	1
42	CR330028	OUTLET VALVE SPRING	1
43	CR520058	OUTLET VALVE SPINDLE PIN	1
44	CR530118	LINK	1
45	CR520049	LINK PIN	1
46	CR530095	OUTLET VALVE SPINDLE END	1
47	CR450006	OPERATING HANDLE	1
48	CR210154	OUTLET VALVE	1
49	CR570016	OUTLET VALVE RUBBER	1

WATER TANK 180 LITRES

54	CR520056	FULCRUM BOLT	1
55	CR530118	OPERATING LEVER PIVOT (AIR CONTROL)	1
56	CR629000	SERIAL NO PLATE	1
62	CR110306	AIR CYLINDER	1

* NOT ILLUSTRATED

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OPERATING

AND

MAINTENANCE MANUAL

SECTION 6

ELECTRICAL SYSTEM

ELECTRICAL INFORMATION

1. The mixing pan and mixing star motors should be interconnected in the control to operate at the same time, as it is important that both are working before a mix is added. Ensure that suitable overloads are fitted. The mixing pan and mixing star rotate anti-clockwise when looking from the top.

   NOTE: With motors 5.5 kw and above, use Star Delta Starters. Below this, use Direct on Line Starters.

2. When a loader is attached a direct on line reversing starter is required complete with suitable overloads. The loader winch rotates anti-clockwise looking from the rope drum end and when the raise button is pressed.

   The upper and lower limit switches are positioned to break the electrical supply to the loader motor when the loading hopper is in the required position at the top and bottom of the runway.

3. The door control solenoid has to be energised when the mixer door is required in the open position.

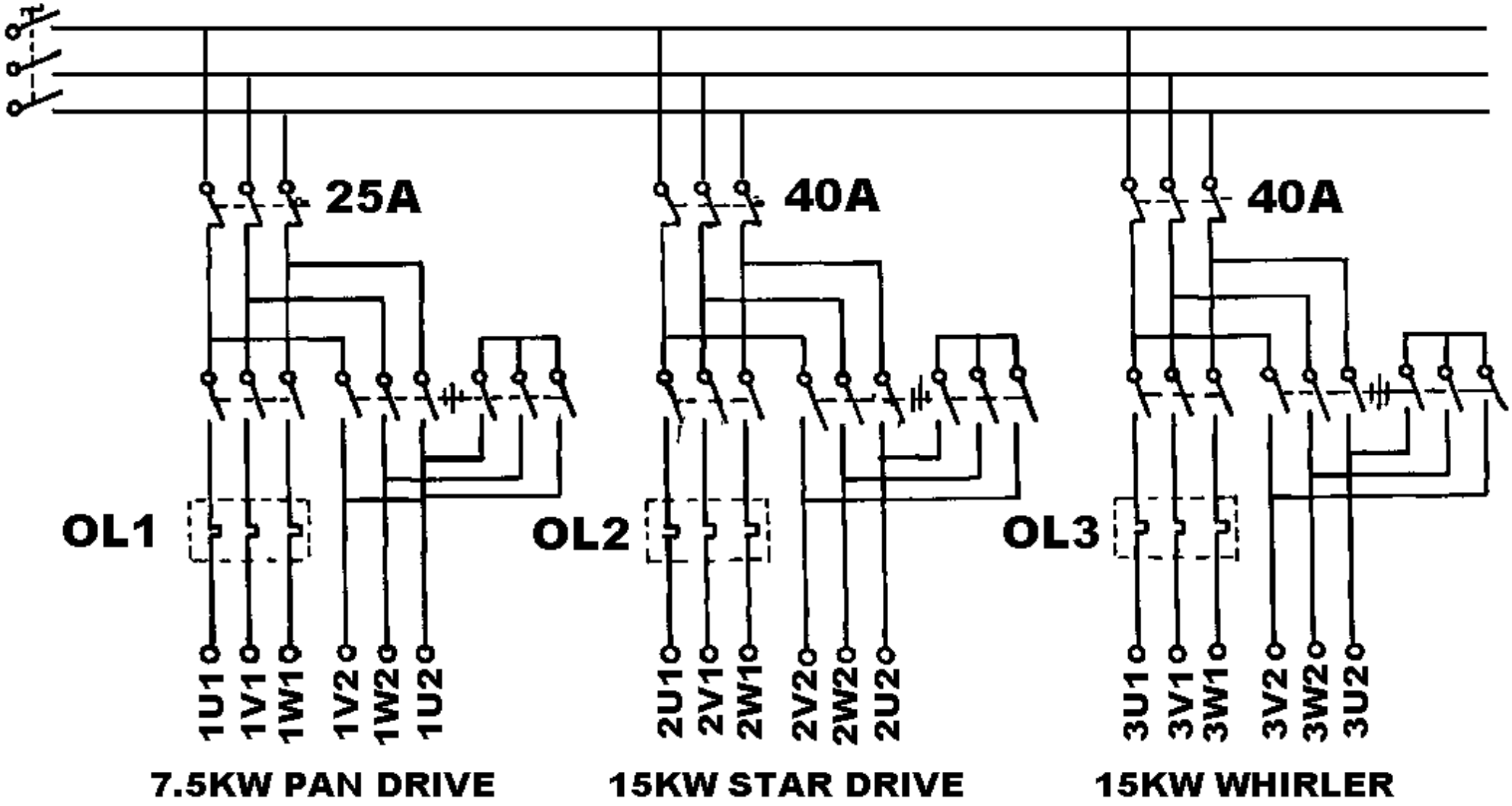
   It is advisable to mount the starters away from the machine on supports free from vibration.

4. **IMPORTANT NOTICE:** All work on plant electrics including control panel circuits to be under taken by a suitably qualified and competent electrical person.

NOTE

Electrical cables particularly those with copper conductors suffer from a condition known as ‘relaxation’ which may cause wiring to work loose over a period of time, it is recommended that the tightness of wiring connections and terminals are checked following the first month in service.

RP1250XD TYPICAL LAYOUT OF STARTERS

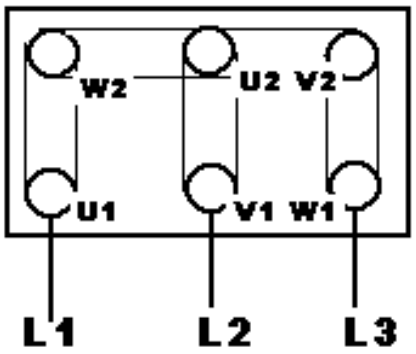


RP1250XD FLENDER MOTOR WIRING DIAGRAM

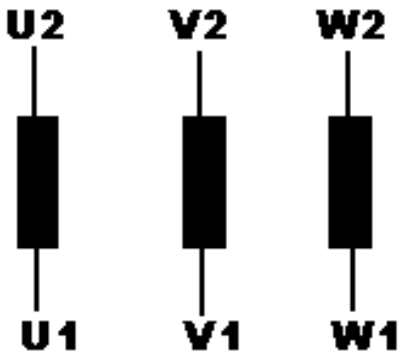
MOTORS UPTO & INCLUDING 4.0Kw

SEE SEPARATE PAGE FOR MOTORS

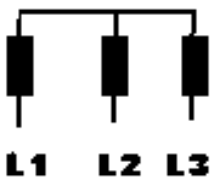
5.5Kw AND ABOVE



MOTOR TERMINAL BLOCK



TO REVERSE DIRECTION OF ROTATION CHANGE OVER ANY TWO SUPPLY LEADS

SUPPLY	METHOD OF START	CONNECTION STAR	LINK
415/3/50 380/3/50	DIRECT ON LINE		W2-U1 U2-V1 V2-W1

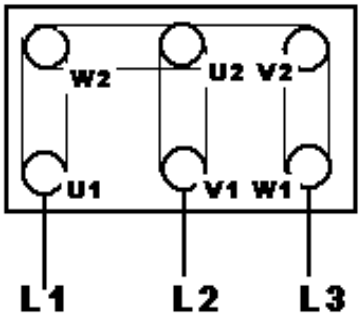
UPTO & INC 4.0Kw

RP1250XD FLENDER MOTOR WIRING DIAGRAM

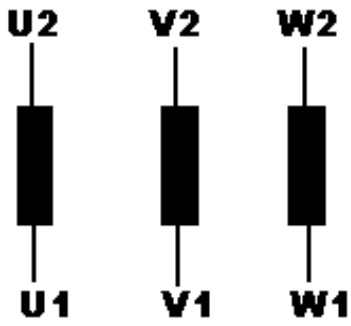
MOTORS 5.5Kw AND ABOVE ONLY

SEE SEPARATE PAGE FOR MOTORS

4.0Kw & BELOW



MOTOR TERMINAL BLOCK

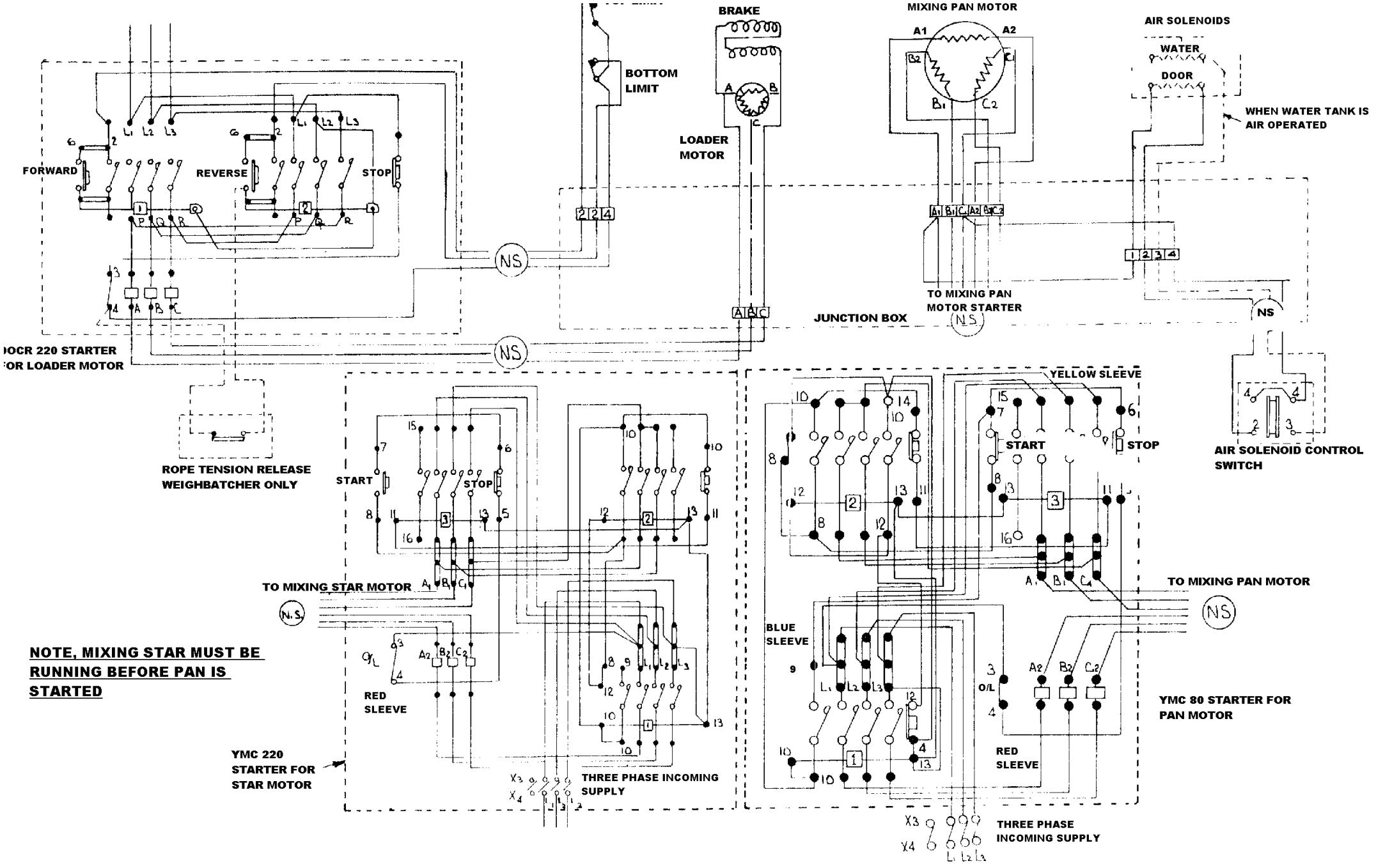


TO REVERSE DIRECTION OF ROTATION CHANGE OVER ANY TWO SUPPLY LEADS

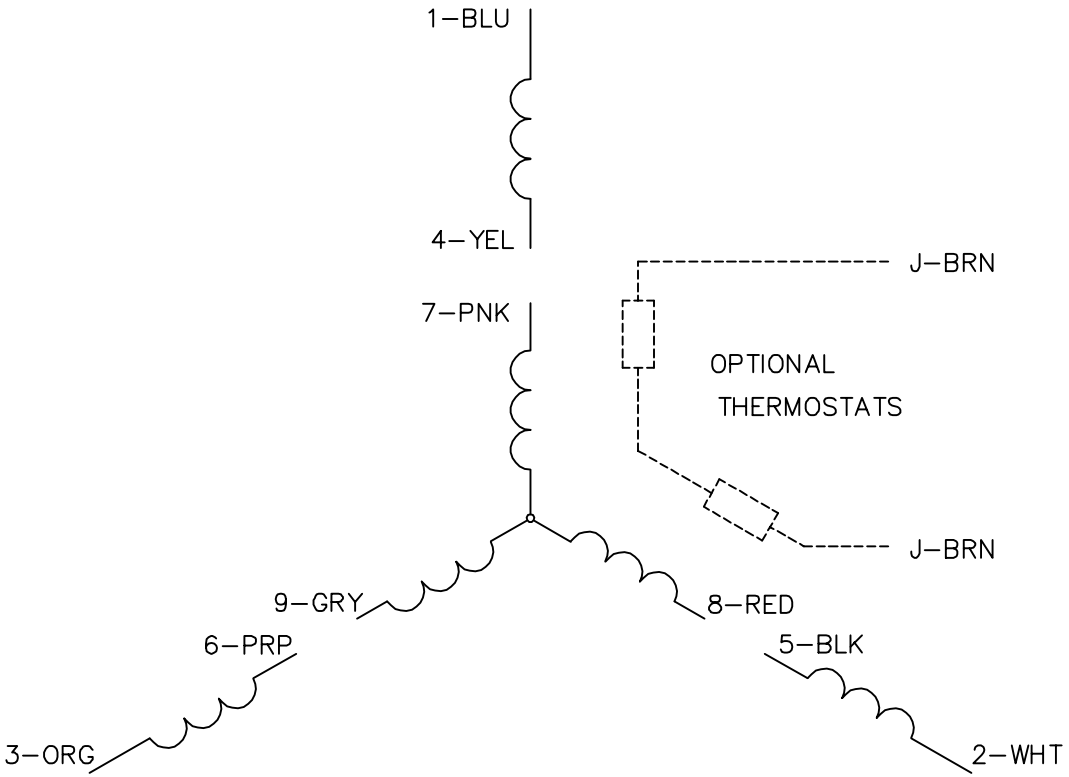
STAR DELTA STARTING NO LINKING REQUIRED

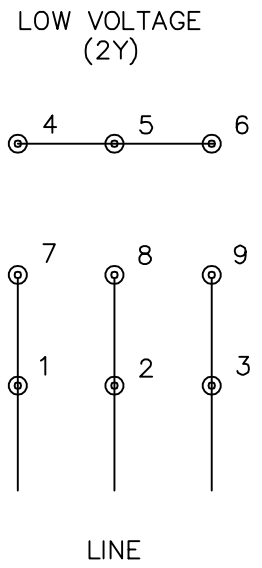
SUPPLY	METHOD OF START	CONNECTION DELTA	LINK
415/3/50 380/3/50	DIRECT ON LINE		W2-U1 U2-V1 V2-W1

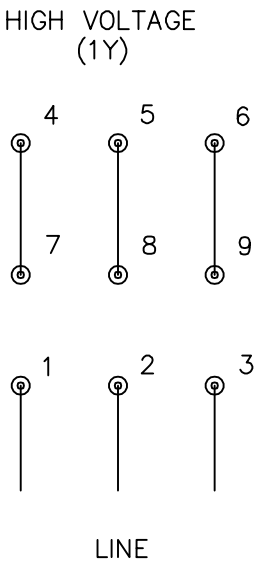
5.5Kw & ABOVE



WIRING DIAGRAM FOR RP1250XD MIXERS WITH LOADER, AIR OPERATED DISCHARGE GEAR & WATER TANK, FOR USE WITH A.E.I. STARTERS & MOTORS







NOTES:

1. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
2. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
3. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY BE A MULTIPLE OF THOSE SHOWN ABOVE.
4. LEAD COLORS ARE OPTIONAL. LEADS MUST ALWAYS BE NUMBERED AS SHOWN.

REV. DESC: REVISE TO SHOW OPTIONAL COLORS			
REV. LTR: E	BY: JLP	REVISED: 01/19/99 10:15	TDR: 0171435
CD0005		FILE: AAA00005140	MDL: –
		MTL: –	

BALDOR ELECTRIC Co.

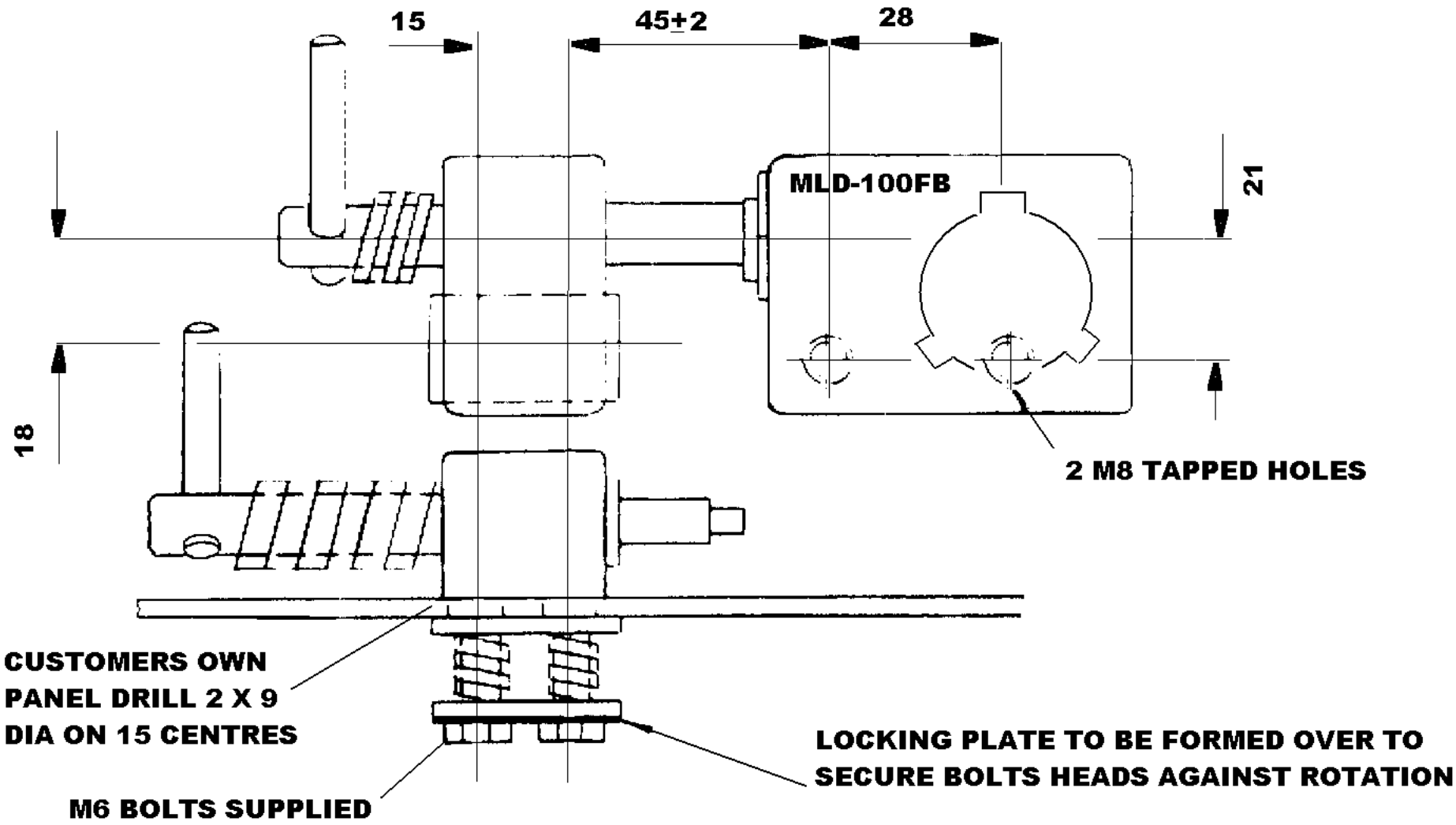
3PH, DV, 9 LEADS

CD0005

INTERLOCK DOOR MECHANISM

NOTE SUPPLY WITH FOLLOWING ITEMS

1. KEY STANDARD MLK100
2. DUST CAP MLM100



MISTURA DOOR INTERLOCK MECHANISM

1	CR719072	INTERLOCK DOOR MLD100FB	A/R
2	CR229093	KEY MLK100A CODE A	A/R
2A	CR229094	KEY MLK100B CODE B	A/R
2B	CR229124	KEY MLK100C CODE C	A/R
3	CR229125	CAP DUST MLM100	A/R

WHEN ORDERING REPLACEMENT KEYS QUOTE CODE OFF INTERLOCK MECHANISM

OPERATING

AND

MAINTENANCE MANUAL

SECTION 7

PNEUMATIC SYSTEM

SHUTDOWN PROCEDURE – PNEUMATICS

(This procedure to be read in conjunction with electrical procedure – see section six).

We Recommend

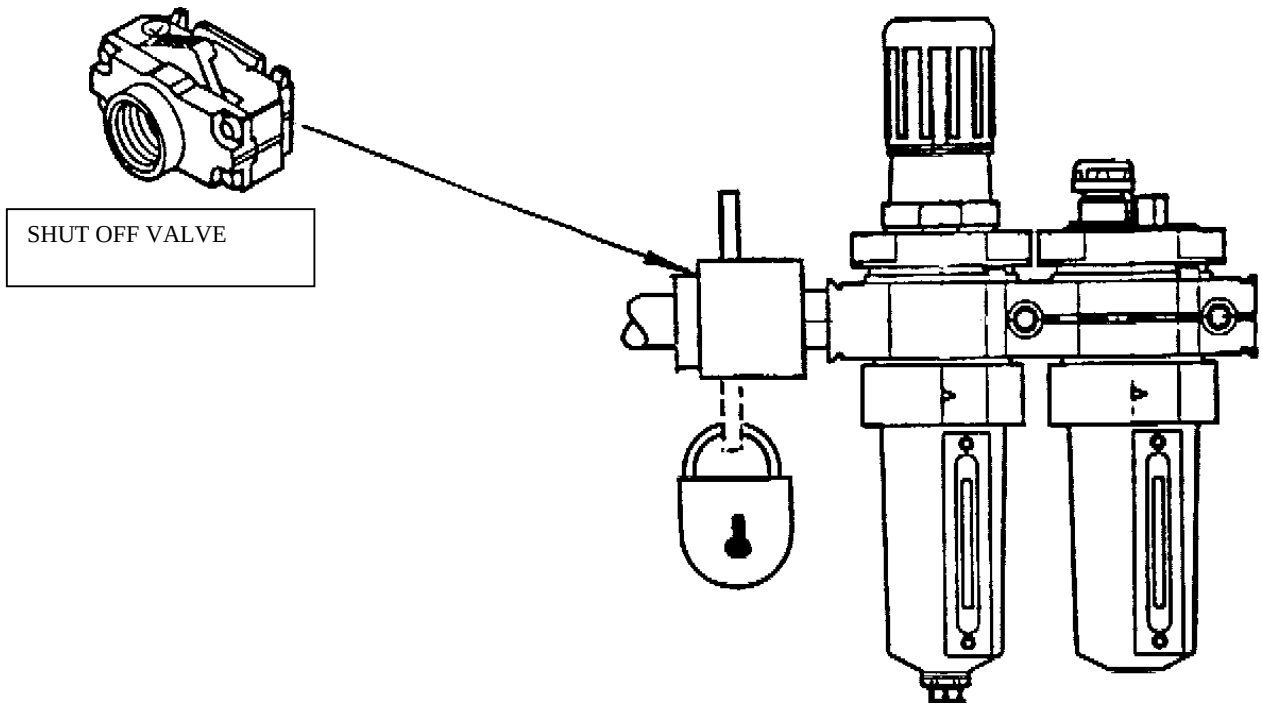
A lockable dump valve be fitted in the feed line to our mixing equipment (see drawing below).

Prior to any maintenance, the mixing equipment must be isolated using the above lockable shut off valve (a pad lock will suffice). When put to the dump position, air will be allowed to vent to atmosphere removing the potential stored energy hazard. With the system in this condition, the mixer door will open and the discharge blade will lower.

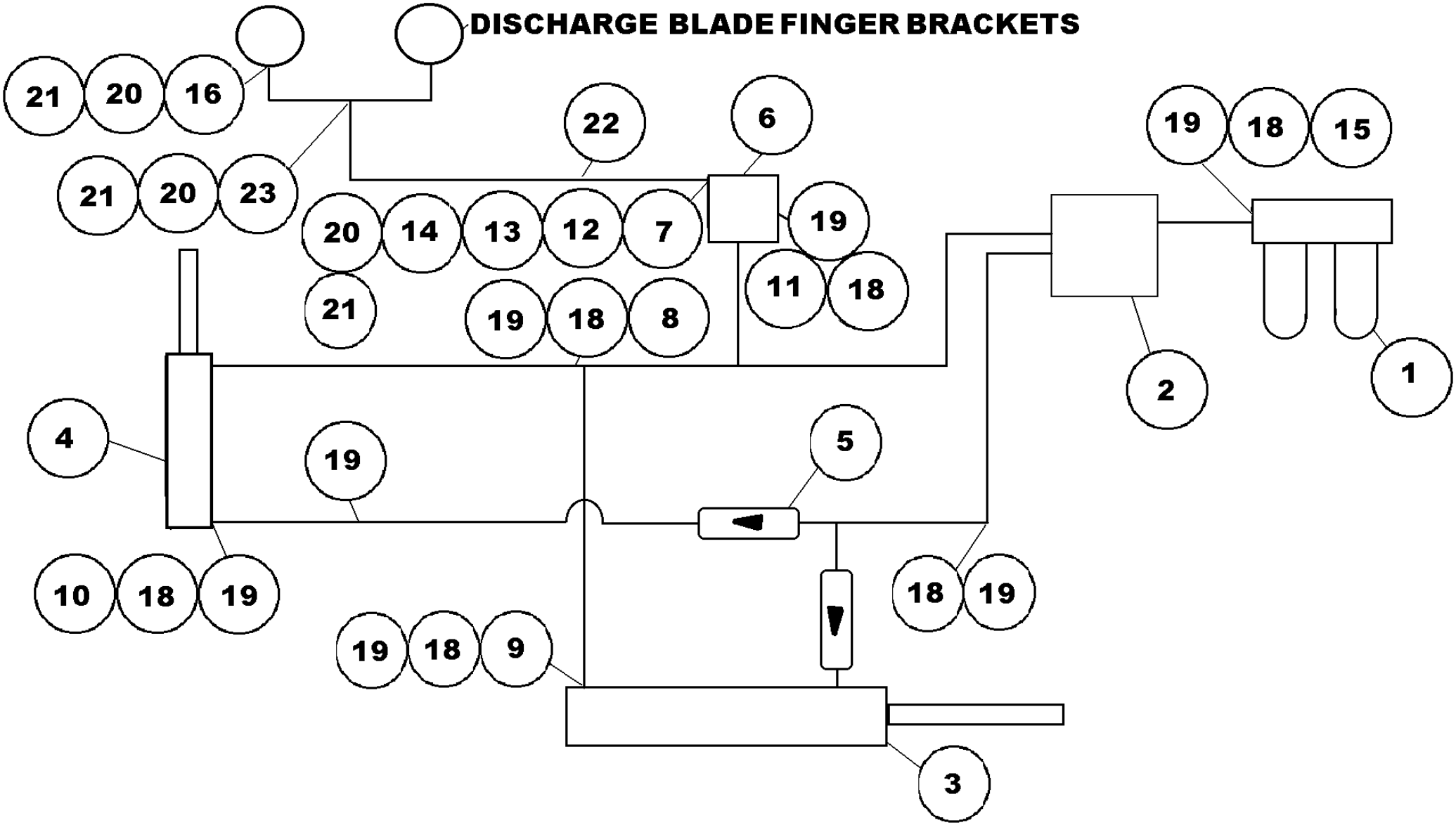
Important

Prior to entry into mixing pan, the air supply must be exhausted and isolated as above. Check door is fully open and the discharge blade rests upon pan base before commencing maintenance/cleaning. Also check that the pressure gauge reads zero.

Should blade or door remain up or partially closed, it is imperative that the cause is investigated and dealt with prior to entering mixing pan. See maintenance section.



RP1250XD PNEUMATIC CIRCUIT



RP1250XD PNEUMATIC LAYOUT

1	CR110005	AIR SERVICE UNIT	1

AVAILABLE SPARES FOR AIR SERVICE UNIT ITEMISED BELOW:

1A	CR119373	REGULATOR BOWL (NOT ILLUSTRATED)	1
1B	CR119374	LUBRICATOR BOWL (NOT ILLUSTRATED)	1
1C	CR119375	FILTER REPAIR KIT (NOT ILLUSTRATED)	1
1D	CR119376	FILTER ELEMENT (NOT ILLUSTRATED)	1
1E	CR119377	LUB REPAIR KIT (NOT ILLUSTRATED)	1
1F	CR119378	PRESSURE GUAGE (NOT ILLUSTRATED)	1
1G	CR119379	BRACKET MOUNTING (NOT ILLUSTRATED)	1
1H	CR119380	KNOB REGULATOR (NOT ILLUSTRATED)	1
2	CR119197	CONTROL BOX	1
3	CR110299	AIR CYLINDER	1
3A	CR110328	SEAL KIT FOR ITEM 3 (NOT ILLUSTRATED)	1
4	CR110302	AIR CYLINDER	1
4A	CR110324	SEAL KIT FOR ITEM 4 (NOT ILLUSTRATED)	1
5	CR110004	AIR FLOW REGULATOR	2
6	CR119159	OILER	1
7	CR119193	METER VALVE	1
8	CR119135	TEE CONNECTOR	2
9	CR119136	STRAIGHT CONNECTOR	2
10	CR119129	ELBOW	2
11	CR119144	ADAPTOR	1
12	CR119199	BANJO FITTING	1
13	CR119198	ADAPTOR	1
14	CR119200	ADAPTOR	1
15	CR119123	ADAPTOR	1
16	CR310012	ADAPTOR	2
17	CR119117	TUBE NUT	
18	CR119118	OLIVE	
19	CR119119	AIR PIPE	A/R
20	CR289004	NUT	
21	CR289007	OLIVE	
22	CR510415	TUBE	A/R
23	CR289007	TEE	1

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OPERATING

AND

MAINTENANCE MANUAL

SECTION 8

MISCELLANEOUS

MISCELLANEOUS

8..1 NOISE DETAILS

Measured in accordance with Directive 79/113EEC at four points around the machine at 1 metre radius and at a height of 1 metre the noise did not exceed 85LPA

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OPERATING

AND

MAINTENANCE MANUAL

SECTION 9

ELECTRONIC LOADCELL & INDICATOR/ READOUT BOX

SPECIFICATIONS

Power Requirements:	115 VAC 60 Hz (optional 230 VAC 50/60 Hz) powering a 12 VDC 300 mA wall plug-in UL/CSA listed power supply for the Desktop enclosure. 115 VAC 60 Hz (optional 230 VAC 50/60 Hz) at 0.1A for the NEMA 4X enclosure.
Battery Operation:	12 VDC input jack for operation from an external battery 12 volt, 1.6 Ah for 8 hours operation
Enclosure Size:	Desktop: 8.65" W x 6.5" H x 3" D NEMA 4X: 9.8" W x 7.3" H x 3.2" D
Operating Temperature:	14° to 104° F or -10° to +40° C
Display:	5-digit, 0.6" high, 7-segment red LED
Sensitivity:	0.7uV/graduation (0-3.3 mV/V), Class III
Signal Input Range:	1.0mV min. to 50 mV max.
Transducer Excitation:	8.0 VDC
Number of Load Cells:	8 each, 350 OHM minimum load cells
Load Cell Cable Length:	150' max.; 30' max w/o sense lines
Resolution:	1 part in 20,000 displayed - 1 part in 80,000 internal
Capacities:	1,000 to 10,000 divisions commercial Up to 99,999 divisions noncommercial
Graduation Value:	1, 2 or 5 x 1, 0.1, 0.01 or 0.001
Sample Rate:	1 to 12 samples per second selectable
Auto Zero Range:	0.5 or 1 through 9 graduations
Weighing Units:	Pounds, kilograms, ounces, grams or pounds/kilograms
Keyboard:	Membrane type with 21 keys

STANDARD FEATURES:

- Keyboard or Push Button Tare
- Gross, Tare, Net Conversion
- Metric Conversion
- Bi-directional Serial Interface
- Dual Preset Weight Comparator or Checkweigher with Outputs
- Auto Shut-Off Feature
- Selectable Sleep Mode
- Selectable Filtering
- Selectable Automatic Power On

OPTIONAL FEATURES:

- NEMA 4X Enclosure
- External Relay Box for Preset Weight Comparators or Checkweigher (desktop only)
- Internal Relay Board for Preset Weight Comparators or Checkweigher (NEMA 4X only)

INSTALLATION

The Model 708 Weight Indicating Instrument is available in either a stainless steel desktop enclosure or a stainless steel NEMA 4X wall-mount enclosure. Determine which enclosure version you have and refer to the appropriate section for installation and interconnection.

AUTO-ON

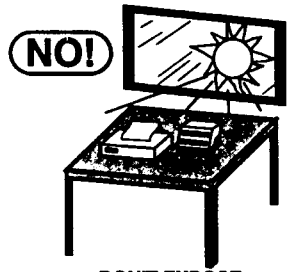
The AUTO-ON jumper J1, when connected, will cause the indicator to power on automatically whenever power is applied to the power input connector. If power is lost momentarily and then reapplied, the indicator will turn on without pressing the ON key. See Figure No. 9 for location.

INTERNATIONAL/ DOMESTIC JUMPER (J14Intl)

Install the International/ Domestic jumper, J14, to comply with OIML requirements (see Figure No. 9). With J14 installed, the 708 will perform the following functions:

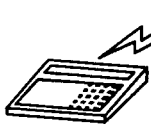
1. A "lamp test" will be performed on power-up.
2. The printout of keyboard tare will be designated as "PT."

Please note the installation precautions.



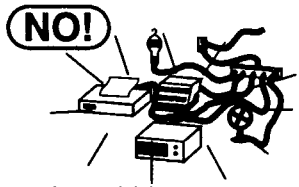
DON'T EXPOSE TO DIRECT SUNLIGHT

DON'T EXPOSE TO TEMPERATURE EXTREMES



PROVIDE ADEQUATE PROTECTION TO MINIMIZE LIGHTNING DAMAGE

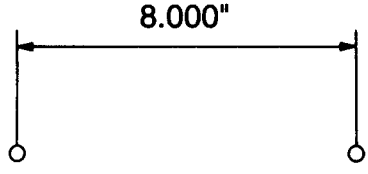
DON'T PLACE IN FRONT OF HEATING/COOLING VENTS



PROVIDE GOOD, SAFE GROUND AND CLEAN AC POWER

KEEP THE AREA AROUND THE SCALE CLEAR TO PROVIDE ADEQUATE AIR CIRCULATION

DESKTOP ENCLOSURE



The 708 desktop enclosure may be mounted on a desktop or other smooth, flat, horizontal surface or it may be mounted on a wall. Refer to Figure No. 1 for a layout of the wall-mounting bolts. Regardless of the manner in which the 708 is installed, the location chosen should be free of temperature extremes and water. It should be in a location where the display is easily viewed and is not subject to direct sunlight. The indicator should be mounted such that it is within easy reach of the operator. If wall mounted, make certain that the structure and mounting bolts are of sufficient strength to support the 708.

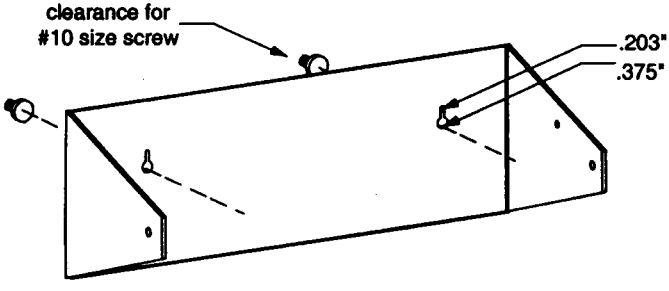


Figure No. 1

All terminations to the Model 708 Desktop Weight Indicating Instrument are made at the rear panel of the instrument. Connections for the Load Cell input, the PWC output and the Serial I/O are all made via "D" subminiture connectors while the 12VDC power is connected using a jack connector. Figure No. 2 illustrates the layout of the connector panel.

external load. When selecting the relays make certain that they are of sufficient capacity to drive the external load. A setup selection determines whether the device is on or off below the preset value. Refer to Figure No. 5 for the layout of the PWC Output connector.

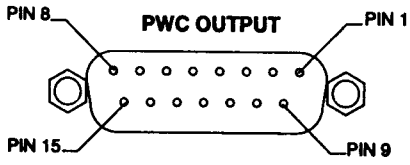


Figure No. 5

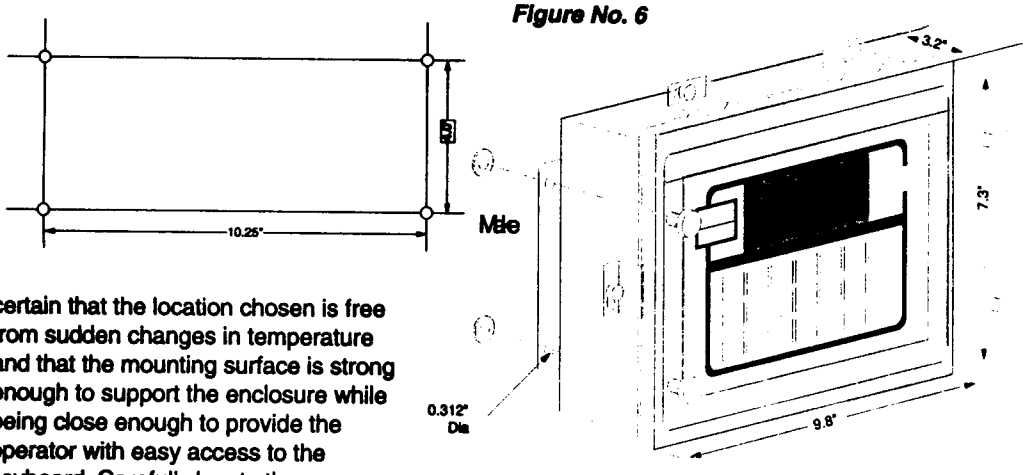
PIN NO.	FUNCTION
10	OVER/PWC1
2	UNDER/PWC2
1	ACCEPT
12	GROUND

NEMA 4X ENCLOSURES

For desk mounting of the 708 in the NEMA 4X enclosure, it is necessary to order separately a "DESK-MOUNT" kit. Refer to Assembly Instruction for Desk-Mount Kit (8539-M097-O1) for mounting instructions.

The Model 708 in a NEMA 4X enclosure is normally mounted on the wall or some other vertical surface. The enclosure is attached to the wall with four (4) bolts. Refer to Figure No. 6 for the hole layout for the NEMA 4X enclosure.

Figure No. 6



certain that the location chosen is free from sudden changes in temperature and that the mounting surface is strong enough to support the enclosure while being close enough to provide the operator with easy access to the keyboard. Carefully locate the mounting hole locations on the wall then drill and install the anchor bolts. Attached the enclosure to the wall and securely tighten the retaining bolts.

Continue installation by opening the front cover on the instrument enclosure. Loosen all four (4) retaining screws and rotate each of the clips to the side. DO NOT REMOVE THESE SCREWS. Fully open the front cover exposing the internal printed circuit board.

Load Cell Connection

Loosen the cable gland connector for the load cell cable. This gland connector is located on the bottom of the enclosure on the right-hand side. Refer to Figure No. 7 for an illustration of the connector layout.

Slip the single cable from the load cell or load cell junction box through the gland connector and into the enclosure. Remove 2 inches of the outer insulation jacket then remove 1/4 inch of insulation from each of the wires (either 4 or 6). Refer to Figure No. 8 for an illustration of the proper method of preparing and then connecting wires to the terminal blocks. Once the cable has been properly prepared, connect it to terminal block P4 on the main printed circuit board. Figure No. 9 shows the location of the terminal blocks on the main printed circuit board.

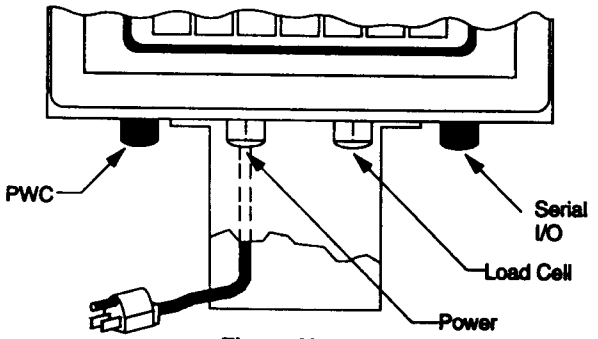


Figure No. 7

Locate the one for the load cell and connect the cable as shown. To install a wire in a terminal block, first press down on the release bar for the terminal, insert the wire into the terminal opening then release the bar locking the wire in place. Repeat this procedure until all of the wires and shield have been installed. NOTE! If the load cell cable does not contain sense leads, you must install plug-in jumpers at J2 and J3 to connect the sense inputs to the excitation leads on the PC board. If the load cell cable does contain sense leads, these jumpers must be removed and stored by placing them on one pin only.

Printer Cable Installation

Loosen the gland connector adjacent to the power cable gland connector (see Figure No. 7). Remove 2 inches of the outer insulating jacket from the cable then remove 1/4 inch of insulation from each of the wires (see Figure No. 8). These wires are to be connected to terminal block P8 at the bottom edge of the printed circuit board. Refer to Figure No. 9 for the location of this terminal block.

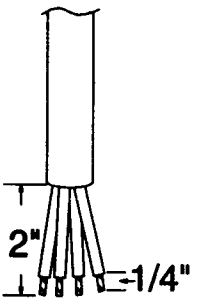
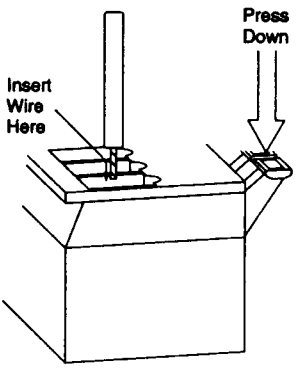


Figure No. 8



Terminal

To terminate the wires, first press down on the terminal release bar then insert the wire into the terminal opening and release the bar to lock the wire in place.

Preset Weight Comparator/Checkweigher Logic Level Output

If you so choose, you may use the logic level outputs from your 708 indicator's preset weight comparators or checkweigher to control peripheral devices used to manage the flow of material or signal when the weight is within preset limits. Note that these outputs are at logic level and cannot drive external devices directly. Solid state relays can be used to accept the logic level output from the 708 and in turn drive the external device.

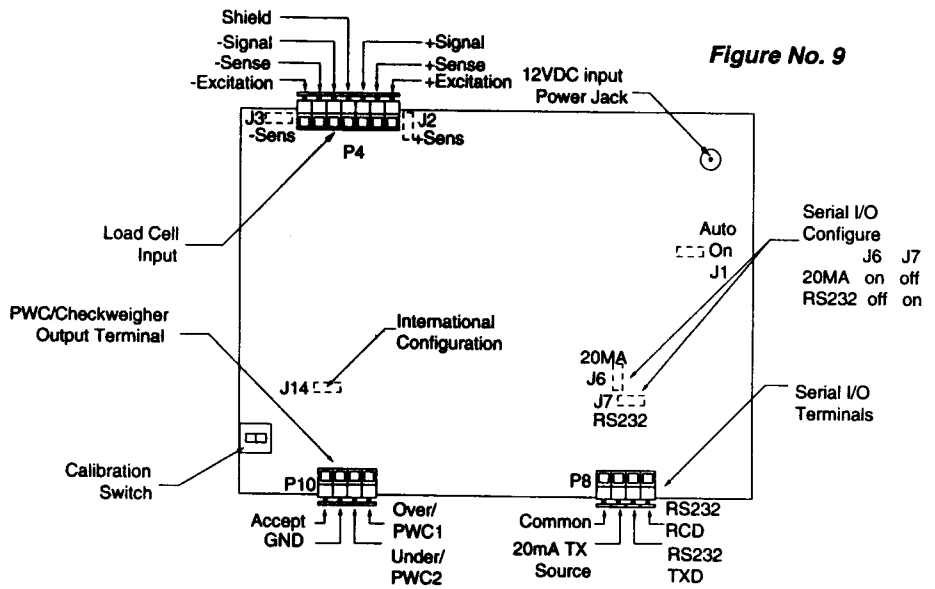


Figure No. 9

KEYPAD FUNCTIONS

The 708 is equipped with a 21-key keypad. The keypad is used to enter commands and data. This section describes each key along with the function it performs. It will be helpful to refer either to Figure No. 12 or to the actual 708 keypad while reading this section.

The membrane keyboard is not to be operated with pointed objects (pencils,pens, fingernails, etc.). Damage to keyboard resulting from this practice will ***NOT*** be covered under warranty.

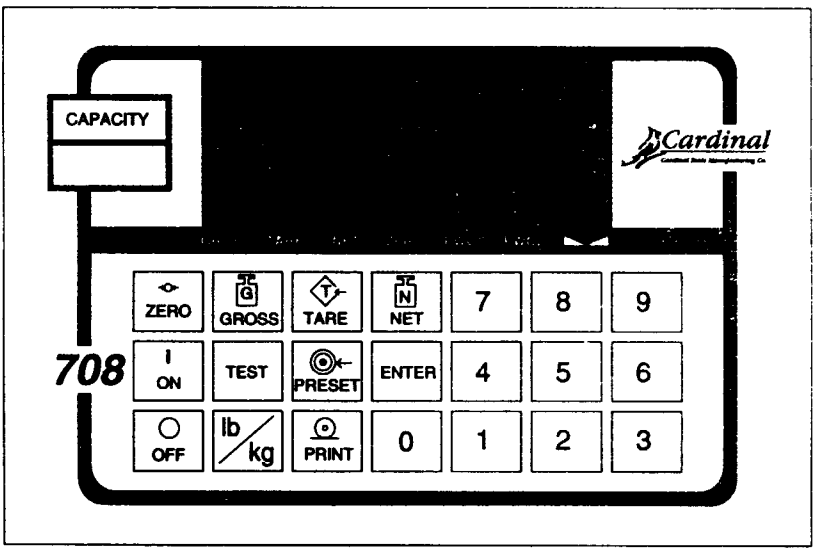


Figure No. 12

I
ON

ON KEY
Pressing this key applies power to the 708 and turns on the display.

OFF

OFF KEY
Pressing this key removes power from the 708 and turns the display off.

ZERO

ZERO KEY
This key is used to reset the gross weight to zero. If the gross weight exceeds the preset limit for this key an error message will be displayed when the key is pressed. The zero limit may be set to either 4% or 100% of scale capacity during setup and calibration of the 708.

G
GROSS

GROSS KEY
This key is used to return the weight display to the Gross Weight mode.In the gross weight mode, the total of all weight placed on the scale since the display was zeroed is displayed. The GROSS annunciator beneath the display window is turned on to signal the display of gross weight.

T
TARE

TARE KEY
This key is used to enter a tare weight of up to four (4) digits and can operate in one of two modes depending on the setup of the 708. If the push button tare feature was selected during the setup of the instrument, pressing this key will cause the 708 to enter the current gross weight as the new tare weight value and automatically enter the net weight mode. The NET annunciator will be turned on to indicate that the 708 is now displaying a net weight. If the push button tare feature was not selected, pressing the TARE key will cause the currently stored tare weight to be displayed and the TARE annunciator will be turned on. The numeric keys may be used to enter a new tare value and the ENTER key pressed to store the new value. Once the new tare value is entered the 708 will automatically enter the Net Weight mode indicated by turning on the NET annunciator.

NET KEY

Pressing this key will cause the 708 to enter the Net Weight mode where the weight displayed is the gross weight less the stored tare weight. The NET annunciator is turned on to show that the displayed weight is the net weight. Note that the 708 will only enter the Net Weight mode if a valid tare weight is currently stored.

TEST KEY

The TEST key is used to conduct a test of all display and memory elements. The test consists of 4 cycles each lasting 2 seconds:

1. All vertical display segments on (no annunciators).
2. All horizontal display segments on (no annunciators).
3. All annunciators and decimal points on.
4. All display elements off.

PRESET KEY

The PRESET key is used to enter the weight values for either the two preset weight comparators or for the checkweigher feature depending on which feature was selected during setup and calibration of the 708. If the Preset Weight Comparator feature was selected, the PWC1 annunciator will flash and the display will show the currently stored value for the number 1 preset weight comparator. If the value displayed is acceptable, press the ENTER key, otherwise, use the numeric keys to enter the new preset value and press the ENTER key. The PWC2 annunciator will now flash and the display will show the currently stored value for the number 2 preset weight comparator. As before, if the value displayed is acceptable, press the ENTER key, otherwise, use the numeric keys to enter the new value and press the ENTER key. If the Checkweigher feature was selected and the PRESET key pressed, the ACCEPT and UNDER annunciators will flash and the preset value for the minimum acceptable weight will be displayed. Press the ENTER key if the displayed value is correct or use the numeric keys and enter the new value and press the ENTER key. The ACCEPT and OVER annunciators will now flash and the display will show the minimum value of weight over the accepted range. As before, if the value shown is correct, press the ENTER key. If the value is incorrect, enter the new value and press the ENTER key to save it. Note that this value must be greater than the accept value. Remember that both the preset weight comparators and checkweigher functions operate on the absolute value of the weight ignoring the polarity. After the second preset value is entered, the 708 will return to normal operation.

lb / kg KEY

Pressing this key will change the weighing units to the alternate units of measurement if selected during setup of the instrument. With pounds displayed (lb annunciator turned on) pressing this key will change the weighing units to kilograms (kg annunciator turned on). Note that this feature must be enabled during setup and calibration for this key to be operational.

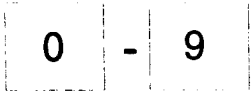
PRINT KEY

Pressing this key will initiate the transmission of weight data via the serial I/O port unless the continuous data output feature was enabled during setup and calibration or setup review. Note that if the continuous data output feature was selected, this key will be disabled.

ENTER KEY

The ENTER key serves two purposes. First, when reviewing setup parameters, pressing the ENTER key will cause the current setting of the parameter to be displayed. Second, the ENTER key is used to signal the completion of the entry of data and causes the 708 to process the data entered.

0 THROUGH 9 KEYS



These keys are used to enter numeric data during the setup and calibration as well as during normal operation of the instrument.

ANNUNCIATORS

Note that annunciators are turned on to indicate that the display is in the mode corresponding to the annunciator label or that the status indicated by the label is active. Some annunciators are flashed on and off to signal that the 708 is waiting for an input from the keypad for use by the feature indicated by the annunciator.

ZERO
The ZERO annunciator is turned on to indicate that the weight is within +/- 1/4 division of the center of zero.

GROSS
The GROSS annunciator is turned on to indicate that the displayed weight is the gross weight which is the total of all weight placed on the scale platform since the display was last reset to zero.

TARE
The TARE annunciator is flashed on and off to show that the 708 is in the tare weight input mode and that the new tare weight value should be entered on the numeric keys.

NET
The NET annunciator is turned on to show that the displayed weight is the net weight which is the gross weight less the tare weight.

PWC1
The PWC1 annunciator is turned on to indicate that the displayed weight is equal to or greater than the weight value stored as preset number 1. Note that this annunciator is active only when the Preset Weight Comparator feature has been enabled.

PWC2
The PWC2 annunciator is turned on to indicate that the displayed weight is equal to or greater than the weight value stored as preset number 2. Note that this annunciator is active only when the Preset Weight Comparator feature has been enabled.

STABLE
The STABLE annunciator is identified with two small triangular shapes and is turned on when the weight display is stable. This means that the change in successive weight samples is less than the motion limits selected during setup and calibration of the 708.

UNDER
The UNDER annunciator is located to the left of the weight display and is used to signal that the displayed weight is less than the minimum value of acceptable weight used in the Checkweigher feature. Note that this annunciator is active only when the Checkweigher feature is enabled.

ACCEPT
The ACCEPT annunciator is located just above the weight display and is used to signal that the displayed weight is within the acceptable weight limits for the Checkweigher feature. That is, it is equal to or greater than the minimum acceptable weight and equal to or less than the maximum acceptable weight. Note that this annunciator is active only when the Checkweigher feature has been enabled.

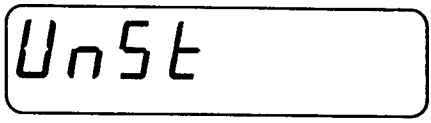
OVER
The OVER annunciator is located to the right of the weight display and is used to signal that the displayed weight is equal to or greater than the minimum value of over weight used in the Checkweigher feature. Note that this annunciator is active only when the Checkweigher feature has been enabled.

lb
The lb annunciator is located to the right of the weight display and is turned on to show that the displayed weight units of measure is pounds.

kg
The kg annunciator is located to the right of the weight display and is used to signal that the units of measurement for the displayed weight is kilograms.

ERROR CODES

The 708 is equipped with software that detects when an error in operation takes place. The following lists the error code displays supported by the 708 along with their meaning. Should you encounter an error display, please refer to this list for the cause and corrective action.

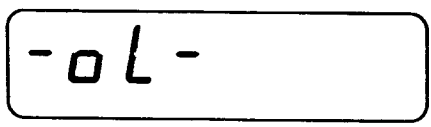


Motion is present when trying to power up, print, zero or perform a push button tare function. CORRECTIVE ACTION: wait for a stable weight display (STABLE annunciator on) before performing these operations.

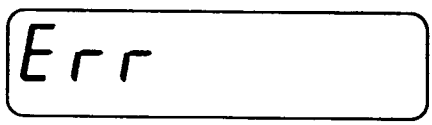
The weight on the scale exceeds the zero range when powering up. CORRECTIVE ACTION: remove the excess load from the scale then press the ZERO key. If the scale has not been calibrated previously, calibration should be completed before attempting further operation.

The scale deadload is less than the zero range when powering up. CORRECTIVE ACTION: replace the scale platform or items normally on the scale when it was calibrated and press the ZERO key. If the scale has not been calibrated previously, calibration should be completed before attempting further operation.

The 708 is attempting to display a positive number greater than 5 digits in length or a negative number of more than 4 digits. CORRECTIVE ACTION: return to the Gross Weight mode and review the Tare value.



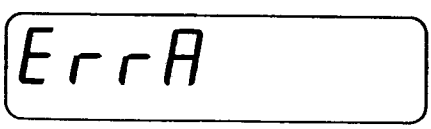
The load on the scale exceeds the scale capacity plus 9 divisions. CORRECTIVE ACTION: remove the over capacity load from the scale platform.



An invalid keypad entry was attempted:

1. PRINT key pressed with a negative weight displayed.
2. TARE key pressed to enter a push button tare value of zero or a negative value.
3. ENTER key pressed to enter a tare weight value that exceeds scale capacity.
4. ENTER key pressed to enter a tare weight value that is inconsistent with the scale's division value. (i.e. attempt to enter a tare value of 123 with scale division value of 5).
5. ZERO key pressed when the gross weight is outside the scale zero weight range.
6. lb/kg key pressed to change to kilograms when the kilogram tare weight value exceeds 4 digits in length.

CORRECTIVE ACTION: determine which of the reasons for the error display is applicable then take the appropriate corrective action.



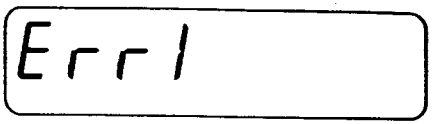
The proper load cell signal is not getting to the signal processing circuit for one or more of the following possible reasons with corrective action:

The load cell output is below the indicator minimum input of 1.0mV. Consult your scale serviceman;

Sense lead jumpers are not installed for four (4) wire load cells. Install both SENS jumpers (see Figure No. 9);

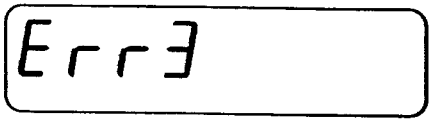
The load cell wiring is incorrect. Check load cell connector wiring;

Load cell or circuit failure. Consult your scale serviceman.

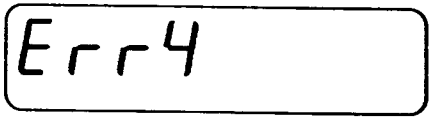


A program checksum mismatch has been detected. CORRECTIVE ACTION:contact your scale serviceman.

A write command to the NOVRAM was attempted while the NOVRAM was in a protected mode (loss of control by program). CORRECTIVE ACTION: contact your scale serviceman.



RAM test failure. CORRECTIVE ACTION: contact your scale serviceman.



NOVRAM failure during startup. CORRECTIVE ACTION: contact your scale serviceman.

NOVRAM response failure. CORRECTIVE ACTION: contact your scale serviceman.

MAINTENANCE

The maintenance on the Model 708 Weight Indicating Instrument should be limited to an occasional cleaning of the outside of the instrument enclosure. There are no user-serviceable components within the enclosure. To clean the enclosure and keyboard, use a soft cloth dampened with water. If you wish to use a detergent, make certain that it is safe and then use it sparingly. Do not wash the Desktop enclosure. Only the NEMA 4X version of the 708 may be washed down.

PERFORMANCE SPECIFICATIONS

Parameter	Units	LOAD CELL CAPACITY ≤ 7500 kg	LOAD CELL CAPACITY ≥ 10000 kg
Rated Output	mV/V ± 0.25%	2	2
Combined Error	%*	< ± 0.05	< ± 0.1
Non-repeatability	%*	< ± 0.025	< ± 0.03
Creep (30 minutes)	%*	< ± 0.05	< ± 0.05
Temperature Effect on Zero Balance	%* / °C	< ± 0.0025	< ± 0.0025
Temperature Effect on Span	%* / °C	< ± 0.008	< ± 0.008
Compensated Temperature Range	°C	-10 to +40	-10 to +40
Operating Temperature Range	°C	-40 to +80	-40 to +80
Safe Overload	%*	150	150
Ultimate Overload	%*	300	300
Zero Balance	%*	< ± 1	< ± 1
Input Resistance	Ω ± 30	380	380
Output Resistance	Ω ± 1.5	350	350
Insulation Resistance	MΩ @ 100 V	> 5000	> 5000
Recommended Supply Voltage	V	10	10
Maximum Supply Voltage	V	15	15

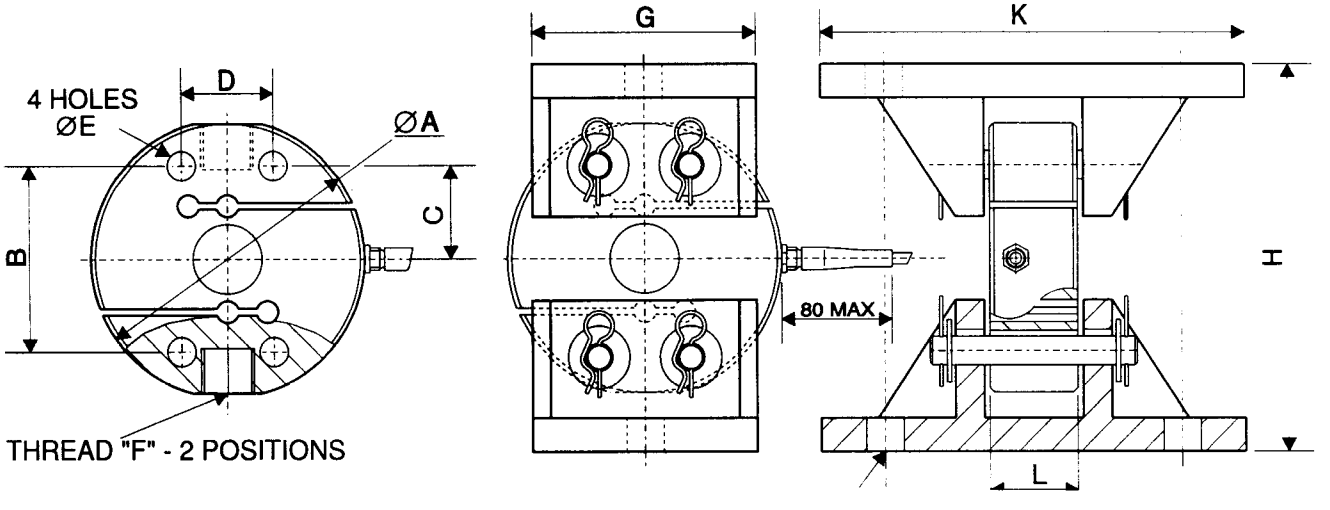
** WITH RESPECT TO RATED OUTPUT*

CABLE SPECIFICATIONS — 4 m - Four core screened, 6mm dia.. with polyurethane outer sheath

POSITIVE EXCITATION = RED — *POSITIVE SIGNAL = GREEN*
NEGATIVE EXCITATION = BLUE — *NEGATIVE SIGNAL = YELLOW*

PHYSICAL DIMENSIONS (mm)

RANGE (kg)	A	B	C	D	E	F	G	H	J	K	L	M	Wt (kg) (Cell)	Wt (kg) (LA90)
500	125	84	42	42	13	M16 x 2	102	174	16	193	40	135	**3**	**13.6**
1000 to 7500	125	84	42	42	13	M24 x 2	102	174	16	193	40	135	**3.6**	**13.6**
10000 / 15000	175	110	55	64	21	none	148	238	21	243	48	175	**8.8**	**22.5**
20000 to 30000	175	110	55	64	27	none	148	238	21	243	50	175	**9.3**	**23.6**



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