

A SELECTION FROM THE VAST RANGE OF

Clarke[®]

QUALITY PRODUCTS

AIR COMPRESSORS

From DIY to industrial. Plus air tools, spray guns and accessories.

GENERATORS

Prime duty or emergency standby for business, home and leisure.

POWER WASHERS

Hot and cold, electric and engine driven - we have what you need.

WELDERS

Mig, Arc, Tig and Spot. From DIY to auto/industrial.

METALWORKING

Drills, grinders and saws for DIY and professional use.

WOODWORKING

Saws, sanders, lathes, mortisers and dust extraction.

HYDRAULICS

Cranes, body repair kits, transmission jacks for all types of workshop use.

WATER PUMPS

Submersible, electric and engine driven for DIY, agriculture and industry.

POWER TOOLS

Angle grinders, cordless drill sets, saws and sanders.

STARTER/CHARGERS

All sizes for car & commercial use.



Clarke INTERNATIONAL

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

020 - 8988 - 7400

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

Clarke[®] STRONG-ARM HEAVY DUTY CRANE HDC RANGE

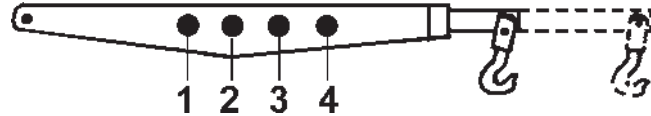


OPERATING & MAINTENANCE
INSTRUCTIONS



SPECIFICATIONS

MAXIMUM SAFE WORKING LOADS (kg)



	HDC50	HDC100	HDC150	HDC200
1	500	1000	1500	2000
2	400	800	1200	1500
3	250	500	800	1000
4	150	300	500	600

SPARE PARTS & SERVICE

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

PARTS - 020 8558 6696 : SERVICE - 020 8556 4443

PARTS & SERVICE FAX - 020 8558 3622

PARTS E-MAIL - Parts@clarkeinternational.net

SERVICE E-MAIL - Service@clarkeinternational.net

cont...

No.	Description	Part No.	No.	Description	Part No.
79	Extension jib/jib link pin	R2108	118	Seal kit	R2156
81	Connecting rod	R2110	119	Mast	R2157XX
82	Connecting rod	R2111	120	Right strut	R2158XX
83	Connecting rod	R2112	121	Left strut	R2159XX
84	Connecting rod	R2113	122	Base	R2160XX
87	Compression cylinder	R2125	123	Pivoting wheel kit	R2161
88	Rod guide bush	R2126	124	Mast	R2163XX
89	Oil reservoir	R2127	125	Right strut	R2164XX
90	Cylinder head	R2128	126	Left strut	R2165XX
91	Rod	R2129	127	Base	R2166XX
93	DE 500 pump-cylinder	R2131	128	Main jib	R2167XX
94	Pump body	R2132	129	Telescopic extension jib	R2168
95	Pumping element	R2133	130	Hook 1500 kg. Capacity	R2169
96	Plug	R2134	131	Fixed wheel kit	R2171
97	Rear plug	R2135	133	Pivoting wheel - 25166	R2174
98	Compression valve spring	R2136	134	Mast	R2175XX
99	Seal kit	R2137	135	Right strut	R2176XX
100	Pump body	R2138	136	Left strut	R2177XX
101	Seal Kit	R2139	137	Base	R2178XX
102	Pump-cylinder	R2140	138	Main jib	R2179XX
103	Pump body	R2141	139	Hook with 2000 kg. Cap.	R2180
104	Compression cylinder	R2142	140	Fixed wheel kit	R2181
105	Rod guide bush	R2143	141	Pivoting wheel - 25175	R2184
106	Oil reservoir	R2144	142	Locking ring nut	R2204
107	Cylinder head	R2145	143	Copper washer	R2205
108	Rod	R2146	144	Screw M12	R2206
109	Oil filtering spring	R2147	145	Screw M12	R2207
110	De pumping element	R2148	146	Locking ring nut	R2208
111	Front plug	R2149	147	Screw M16 x 90	R2210
112	Rear plug	R2150	148	Screw M18 x 90	R2212
113	Cylinder	R2151	149	Nut M18	R2213
114	Seal kit	R2152	150	Screw M16 x 45	R2214
115	Pump-cylinder	R2153	151	Screw M18 x 110	R2215
116	Rod guide bush	R2154	152	Screw M18 x 45	R2216
117	Rod	R2155			

PARTS LIST

No.	Description	Part No.	No.	Description	Part No.
1	Retaining ring	A0185	39	Nut M16	R2031
2	Plain washer	A0346	40	Screw M12	R2032
3	Retaining ring	A0444	41	Extension Jib	R2033
4	Retaining ring	B4045	42	Main jib	R2034XX
5	Retaining ring	C0159	43	Extension jib/jib link pin	R2035
6	Aluminium washer 14 x 18	C0625	44	Screw M10	R2038
7	Copper washer 14 x 20	C0630	45	Fixed wheel kit	R2040
8	Nut M12	R0046	46	Pivoting wheel kit	R2041
9	Retaining ring	R0049	48	Compression cylinder	R2051
10	Retaining ring	R0068	49	Rod guide bush	R2052
11	Retaining ring	R0103	50	Oil reservoir	R2053
12	Sphere 1/4"	R0128	51	Cylinder head	R2054
13	Mast	R2000XX	52	Rod	R2055
14	Right strut	R2001XX	53	Release handwheel	R2056
15	Left strut	R2002XX	54	Release handwheel pivot	R2057
16	Base	R2003XX	55	Handwheel return spring	R2058
17	Main Jib	R2004XX	56	Spring cover bush	R2059
18	Telescopic extension jib	R2005	57	SE pumping element	R2060
19	Hook with 500 kg. Cap.	R2006	59	Pawl for relief valve spring	R2062
21	Pump lever	R2008	60	Relief valve spring	R2063
23	Lever/mast link pin	R2010	61	Relief valve screw plug	R2064
24	Lever/conn. rod link pin	R2011	62	Relief valve plug	R2065
25	Conn. rod/pump link pin	R2012	63	Inlet valve spring	R2066
26	Hook/extension jib link pin	R2013	64	Compression valve spring	R2067
27	Link pin	R2014	66	Oil filtering spring	R2069
28	Cylinder rod link pin	R2015	67	Head locking ring nut	R2070
29	Pump/mast link pin	R2016	68	Blind plug M14 x 1.5	R2071
30	Extension jib/jib link pin	R2017	69	Vent plug M14 x 1.5	R2072
31	Short handle	R2019	70	Sphere 3/8"	R2073
32	Hook with 1000 kg. Cap.	R2020	71	Dowel M6	R2074
33	Hook extension jib link pin	R2021	73	Fixed wheel kit	R2088
34	Hand grip	R2024	74	Jib/mast link pin	R2100
35	1000 pump-cylinder	R2025	75	Pump/mast link pin	R2103
36	Long handle	R2028	76	Cylinder rod/jib link pin	R2104
37	Retaining pin - split type	R2029	77	Jib/mast link pin	R2105
38	Screw	R2030	78	Hook/extension jib link pin	R2107

Thank you for purchasing this CLARKE Strong Arm Hydraulic Crane.

Before attempting to use the crane please read this leaflet thoroughly and follow the instructions carefully, in doing so you will ensure the safety of yourself and that of others around you, and you can look forward to the crane giving you long and satisfactory service.

GUARANTEE

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

Faulty goods should be returned to their place of purchase, no product can be returned to us without prior permission.

This guarantee does not effect your statutory rights.

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SAFETY PRECAUTIONS

WARNING

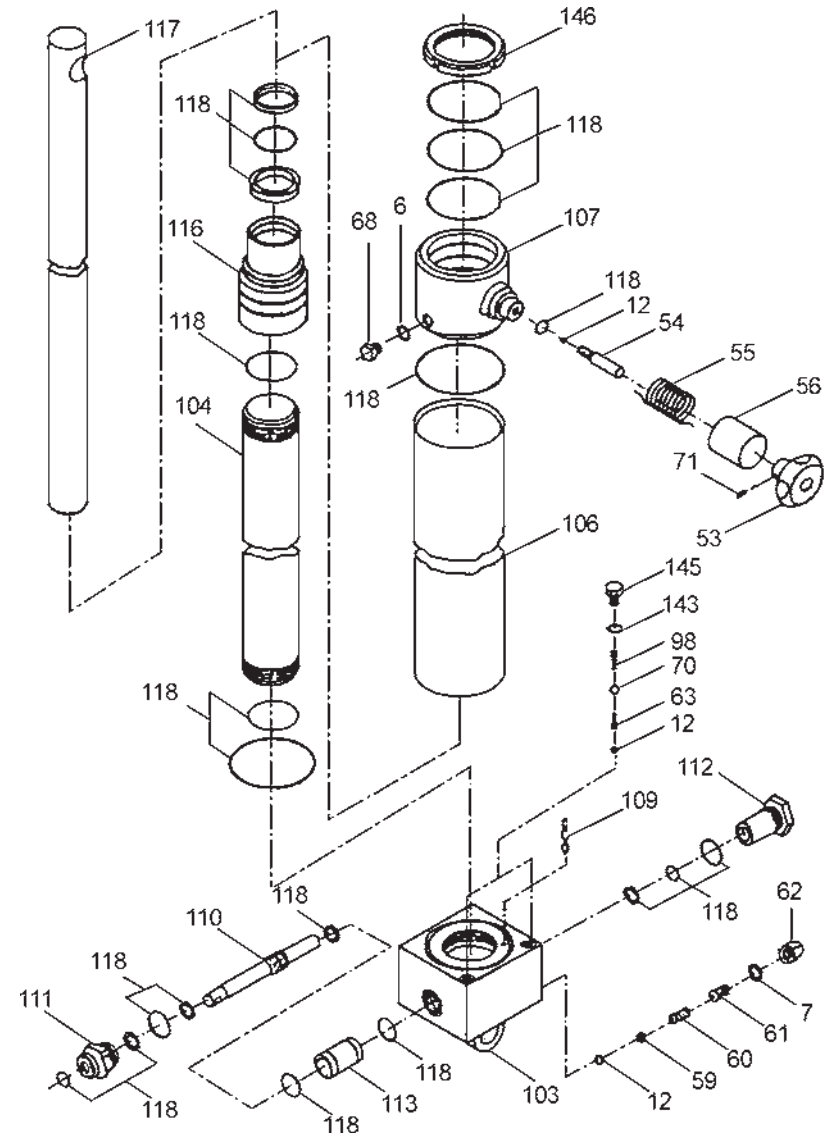
Failure to comply with these rules and precautions, may result in loss of load, damage to, or failure of the equipment, or even personal injury.

1. **DO NOT** exceed the load capacity for each jib position (as marked on the jib). The capacities for each model are shown in tables on the inside front cover.

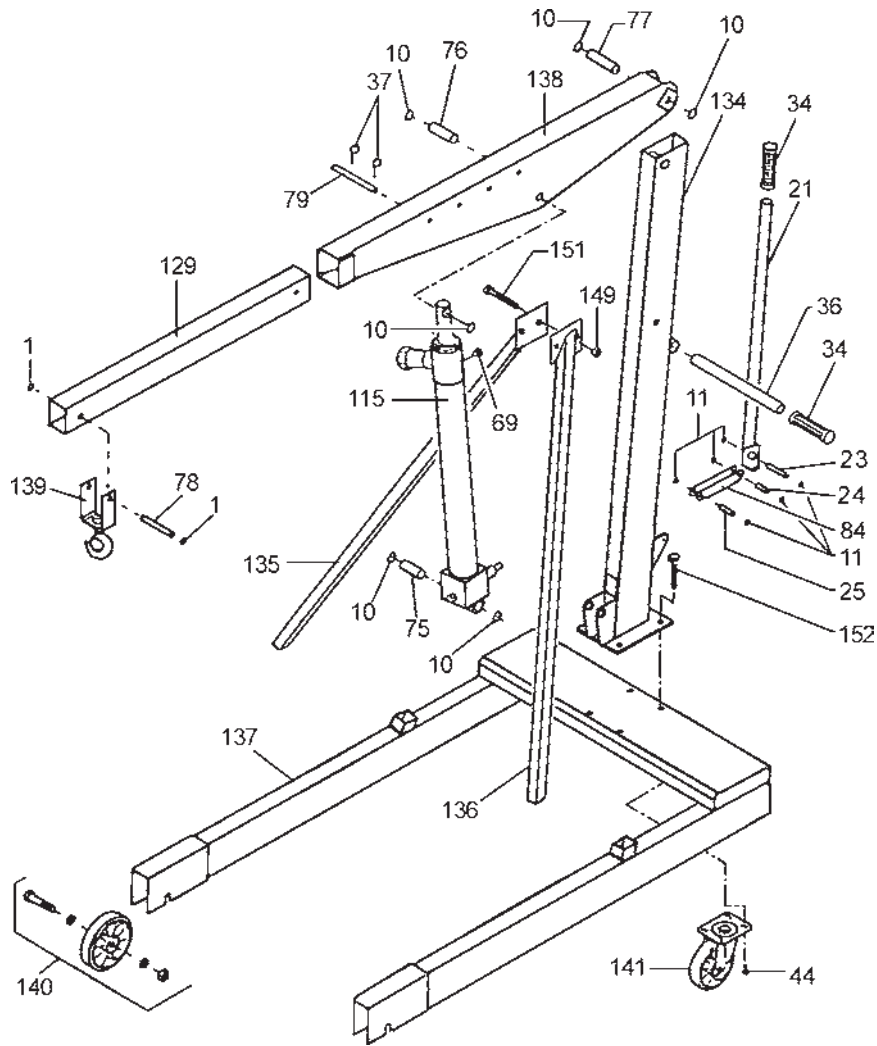
IMPORTANT: If the load capacity decal becomes worn or illegible, contact Clarke International Spares Division, on 020 8558 6696 for replacement.

2. Ensure that the equipment is correctly assembled, and that all the bolts and pins are in place and secure.
3. Only use chains, slings, hooks etc. with a rated capacity equal to, or greater than that of the load. Check that they are secure and will not slip under load.
4. Only use the crane on a solid, flat, level surface which is capable of taking the load. Avoid moving the crane over rough surfaces.
5. Lower the load as much as possible before moving the crane. Do not use the crane to transport loads.
6. Do not stand under the load, or above the jib. Be aware that if the load slips or falls, the jib may rise suddenly.
7. Use appropriate safety equipment, such as protective footwear, when using this crane.
8. Ensure the crane operator is skilled and trained in both operation and safety aspects.
9. Always inspect the crane before use to ensure it is in good condition, and replace any damaged or worn parts.
10. When replacing parts, use only those supplied by Clarke International. Refer to Parts List.
11. Ensure that the crane is properly maintained, and lubricated at all times, and that no rust or other forms of corrosion is allowed to weaken any part of the crane.
12. If the crane has been subjected to an abnormal load or shock, it should be removed from service immediately and fully inspected by qualified personnel

HDC200 HYDRAULIC RAM



HDC200



PRE-ASSEMBLY

Unpack the components on a clean flat area of hard standing, and ensure that all parts are present according to the packing list, as follows:

- Base Assembly complete with nuts and bolts for securing the mast, and two mast support struts, (inserted in the open end of the Base).

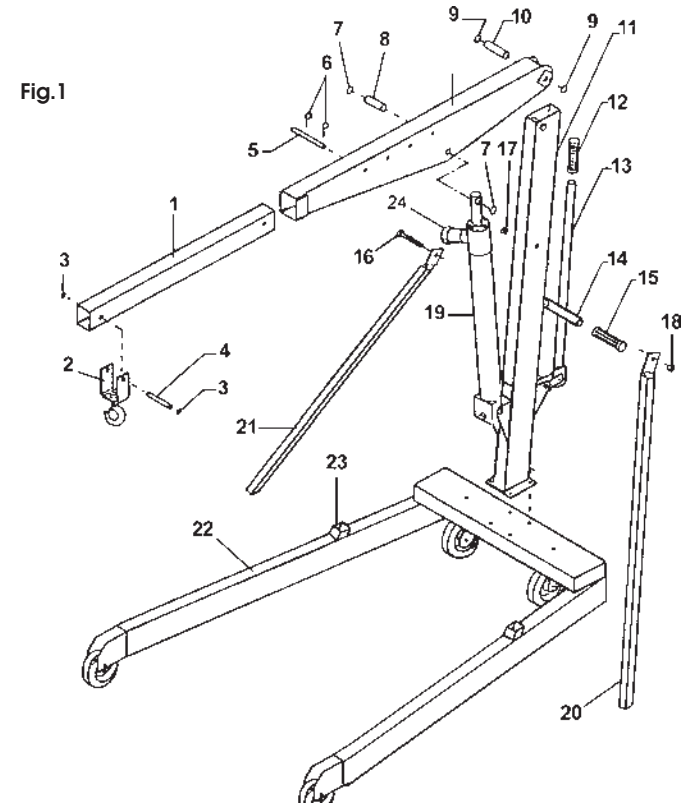
NOTE: Castors and fixed wheels are pre-assembled.

- Mast Assembly complete with Hydraulic Ram and pumping handle,
- Jib Assembly with Extension Arm and Hook.

Additionally, a wallet containing:

- This instruction manual • One handle (Tube) • Two handle grips
- Bolt/s with nut/s (for securing mast support struts to the mast - see parts diagram).
- One plastic Vent Plug for the hydraulic ram.

Visually inspect all components to ensure that no damage was suffered in transit. Any damage should be reported to your CLARKE dealer immediately.



ASSEMBLY (Numbers Refer to Fig. 1)

NOTE:

All pivot pins should be greased during assembly

1. With the Base assembly (22) resting on its wheels, remove the bolts (used for securing the mast), from the base, and withdraw the two mast support struts (20 & 21) from the open end of the Base, which, for transit purposes, are wired in place.
2. Lift the mast, with assistance, and taking all necessary precautions considering its weight, place it in position on the base. Insert the securing bolts and screw on the nuts, leaving them loose.
3. Locate each Mast Support Strut in its square housing (23), on the Base assembly, so that the flat end of the strut lies alongside the mast. Insert the bolt/s (16) through the holes in the strut, mast and opposite strut, then screw on the nut/s, (18), leaving it/them finger tight. (Models 1500 & 2000 have two securing bolts).

NOTE:

Do not be concerned if the holes do not line up initially. It may be necessary to slacken off the nuts securing the mast to the base slightly, in order for the holes in the mast to line up, and the bolt to be inserted. This is normal because when all bolts are fully tightened, the struts are designed to be under stress.

Fully tighten the mast support bolts at the base, and the strut bolt at the mast.

4. Remove a circlip (9) from the Jib to Mast locating pin (10), and withdraw the pin from the jib. With assistance, raise the jib to its position on top of the mast, and insert the pin (10) thereby locating the jib to the mast. Replace the circlip ensuring it is correctly located
5. Remove the Ram to Jib locating pin (8) from the jib, as above, then lower the jib so as to line up the hole in the ram with the holes in the jib bracket. Insert the pin (8), and replace the circlip ensuring it is correctly located.

NOTE:

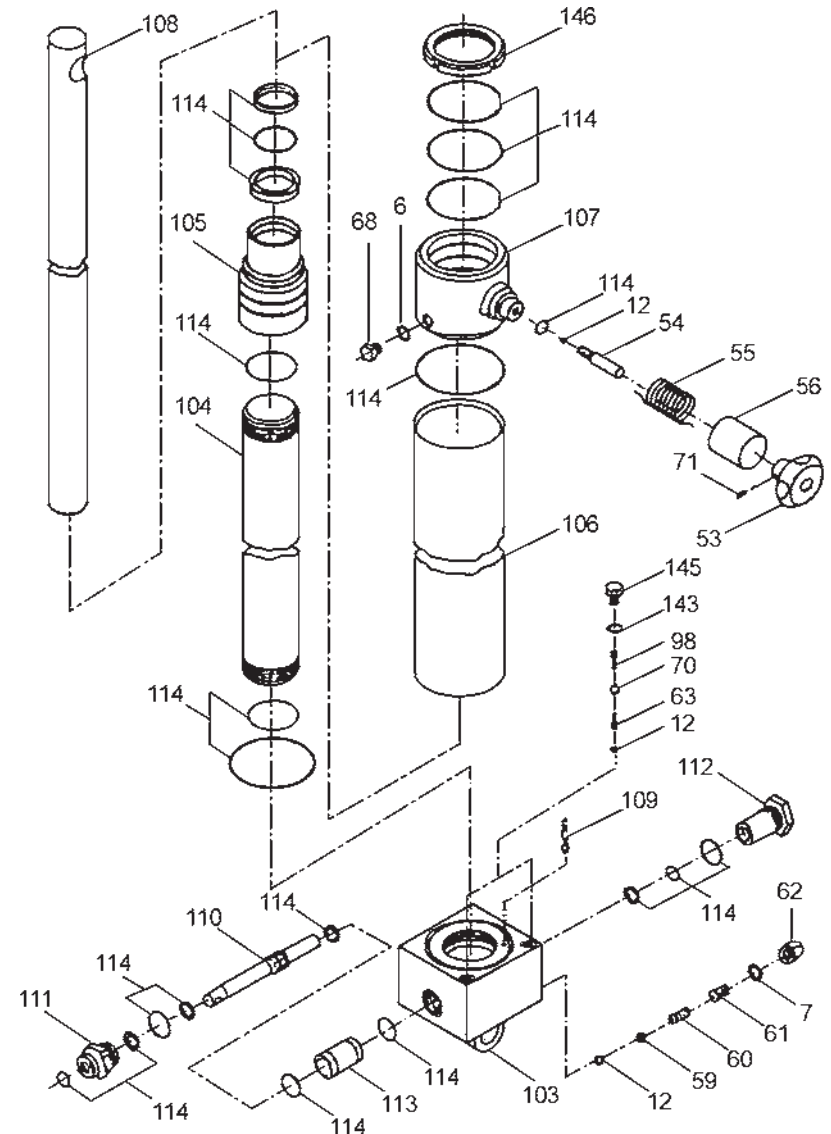
Ensure the ram is central within its housing in the jib when inserting the pin (8). Tap the jib to one side with a piece of wood if necessary to align.

6. Slide the handle (14) through its holder on the mast, and attach the grips (15).
7. Remove the transit plug (17) from the ram, and replace it with the vent plug provided. Retain the transit plug.
8. Finally, carry out a check to ensure that all parts are correctly located and secure, then raise and lower the jib a few times, as described below, WITHOUT a load being applied.

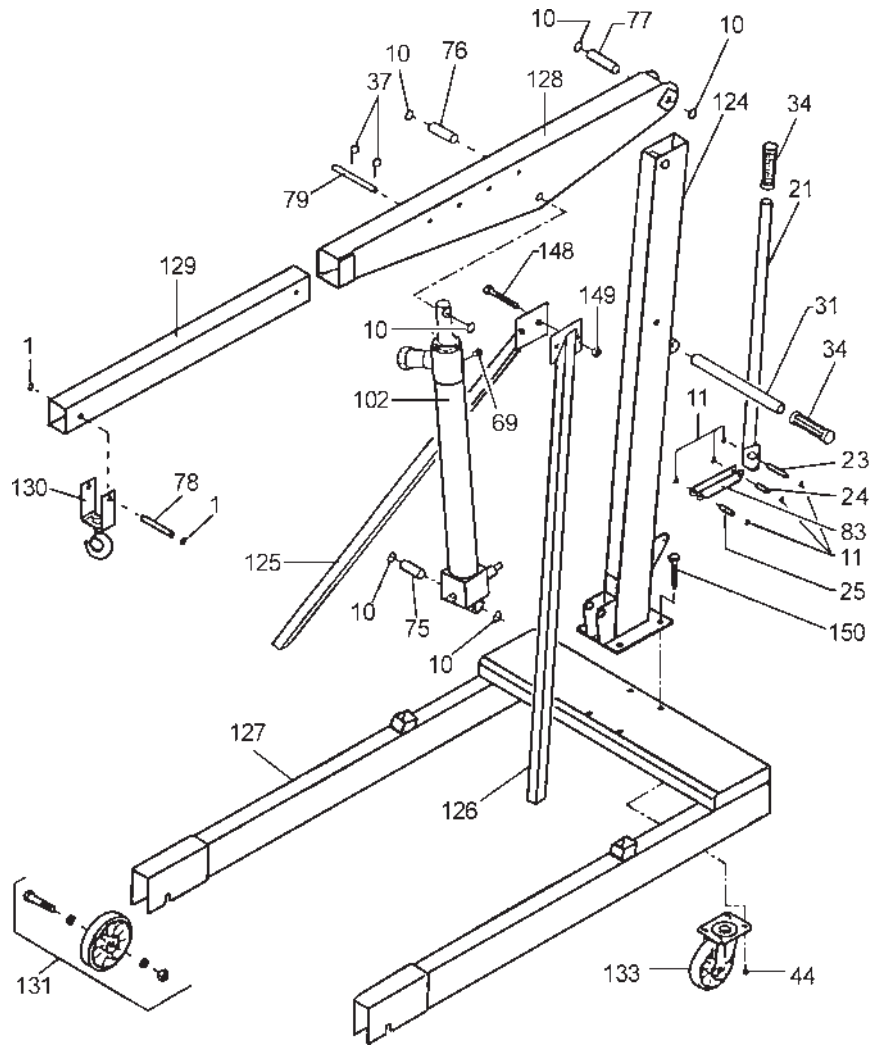
WARNING

On no account must the crane be used with the Mast Support Struts removed. They must be correctly in place at all times.

HDC150 HYDRAULIC RAM



HDC150



OPERATION (Numbers Refer to Fig.1)

A. Raising the jib

1. **IMPORTANT:** Ensure the hook is directly above the point of lift, and the point of lift is directly above the centre of gravity of the load.
2. Close the valve (24) by turning it fully clockwise, and pump the handle (13) to reach the desired height.

B. Lowering the jib

Turn the valve (24) VERY SLOWLY anticlockwise, and the jib will lower.

NOTE:

The more the valve knob is turned, the faster the rate of descent. **Be extremely careful when lowering heavy loads.**

C. Jib Extension

The jib is extended by first raising it to a horizontal position, then removing the 'R' clip (6), securing the locating pin (5), and withdrawing the pin.

Reposition the arm extension to the desired length, and replace the pin ensuring the 'R' clip is firmly in place.

NOTES:

- a. During transit or storage, it is possible that an air pocket may have developed within the hydraulic ram, and the ram action may therefore appear to be 'spongy'. As the ram is self bleeding, any air will be dispelled and the ram action normalised by fully raising and lowering the jib a few times.
- b. Should the jib not reach its full height, the oil level should be checked, as described in the Maintenance section.

MAINTENANCE

1. Always visually inspect the crane before use, to ensure that all parts are correctly located and secure. Check for hydraulic leaks, signs of damage or worn parts and check the wheels and castors for serviceability.
2. A slight dampness on the ram is normal, but where leakage is apparent, the ram seals must be renewed.
3. Pivot pins should be removed and inspected for wear, deformation, cracks etc., every 3 months. If serviceable they should be greased and replaced.

If any deformation or cracks are apparent, the pin should be renewed.

4. The crane should be fully inspected annually by a competent person.
 - a. All pivot pins should be removed, inspected and greased before reinsertion or replacement.
 - b. Check for cracks and deformation of components.
 - c. Check wheels and castors to ensure they move freely without undue wear to their bores, and that the wheels are not cracked or damaged in any way.
 - d. Check the hydraulic ram operation and check oil level. (see below).
 - e. Remove completely, any rust or corrosion and repaint to prevent further corrosion.
 - f. Ensure that all decals and warning notices are in place and perfectly legible.
5. It may be necessary from time to time to top up the Hydraulic oil level. Proceed as follows.
 - a. Lower the jib to its lowest position, and remove the Ram to Jib locating pin (item 8, Fig1).
 - b. Rest the ram against the Mast whilst raising and propping the jib.
 - c. Remove the vent plug (Parts list item 69) from the ram, and using an oil can, filled with hydraulic oil (see below), slowly top up the oil until it begins to overflow. When the excess oil has completely drained off, replace the vent plug.

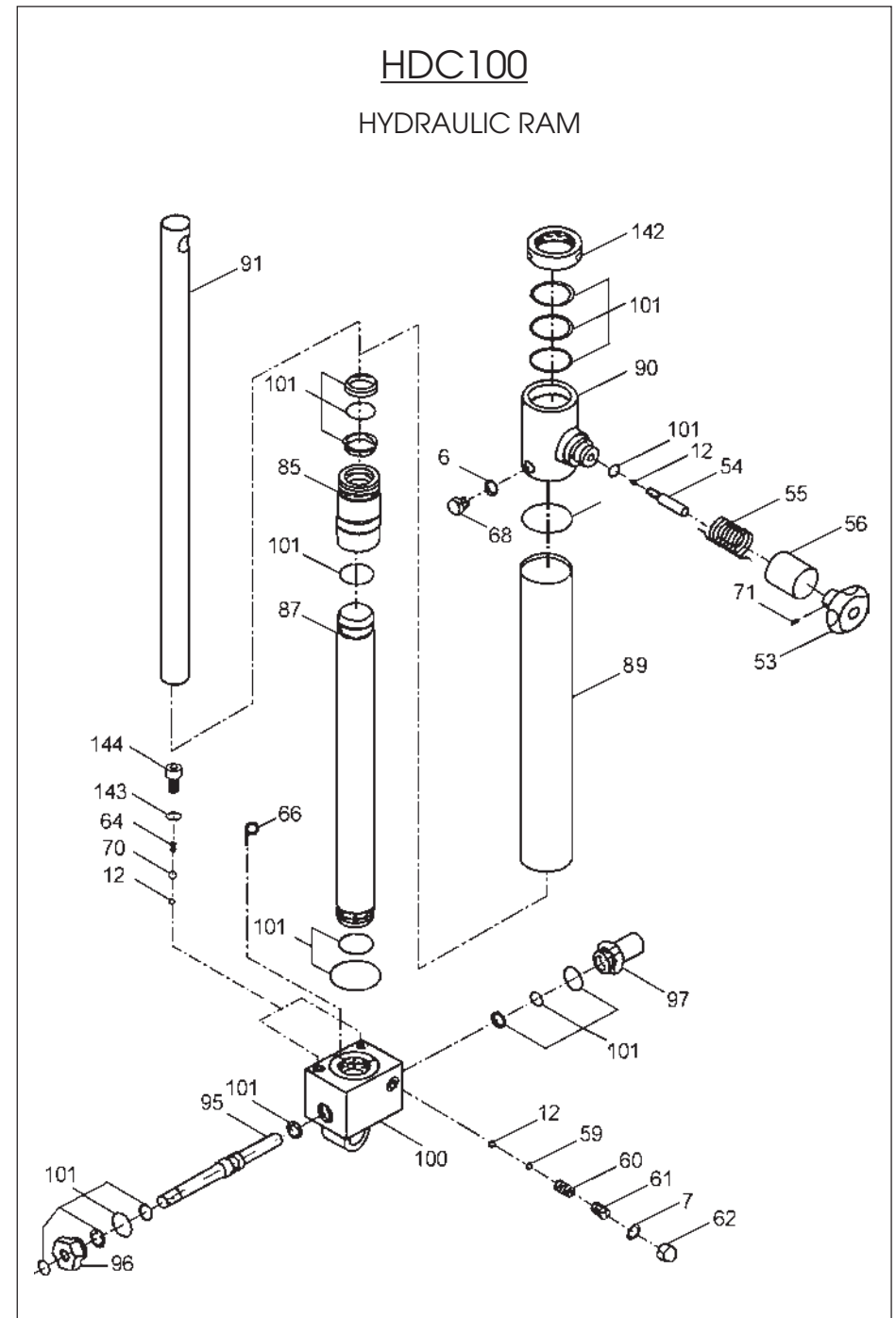
We recommend that the hydraulic oil is changed after every 100 hours of operation.

NOTE: *Top up using Clarke hydraulic oil (part number 3050830).*

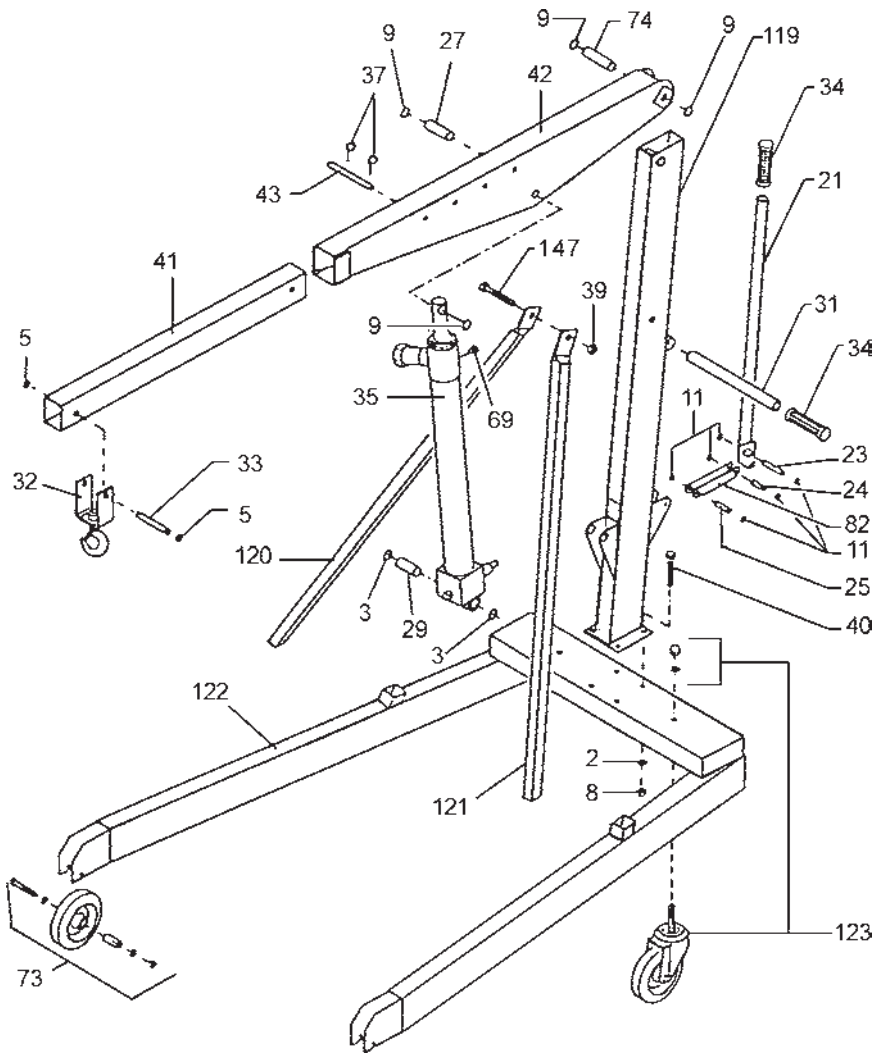
6. After use, wherever possible, store the crane with the jib in its lowest position. This not only relieves the hydraulic ram, but also prevents any possibility of corrosion to the ram.
7. Do not leave the crane in the open, exposed to the elements. Keep under cover.
8. DO NOT remove the pump Pressure Relief Valve, or attempt to adjust the pump settings.

HYDRAULIC RAM OIL CAPACITIES

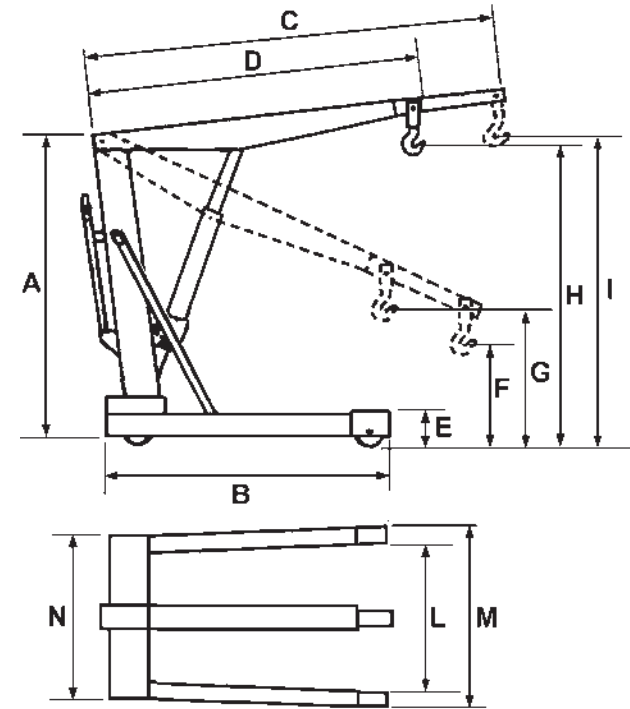
HDC50	-	0.6 litres
HDC100	-	1.0 litres
HDC150	-	2.3 litres
HDC200	-	2.3 litres



HDC100

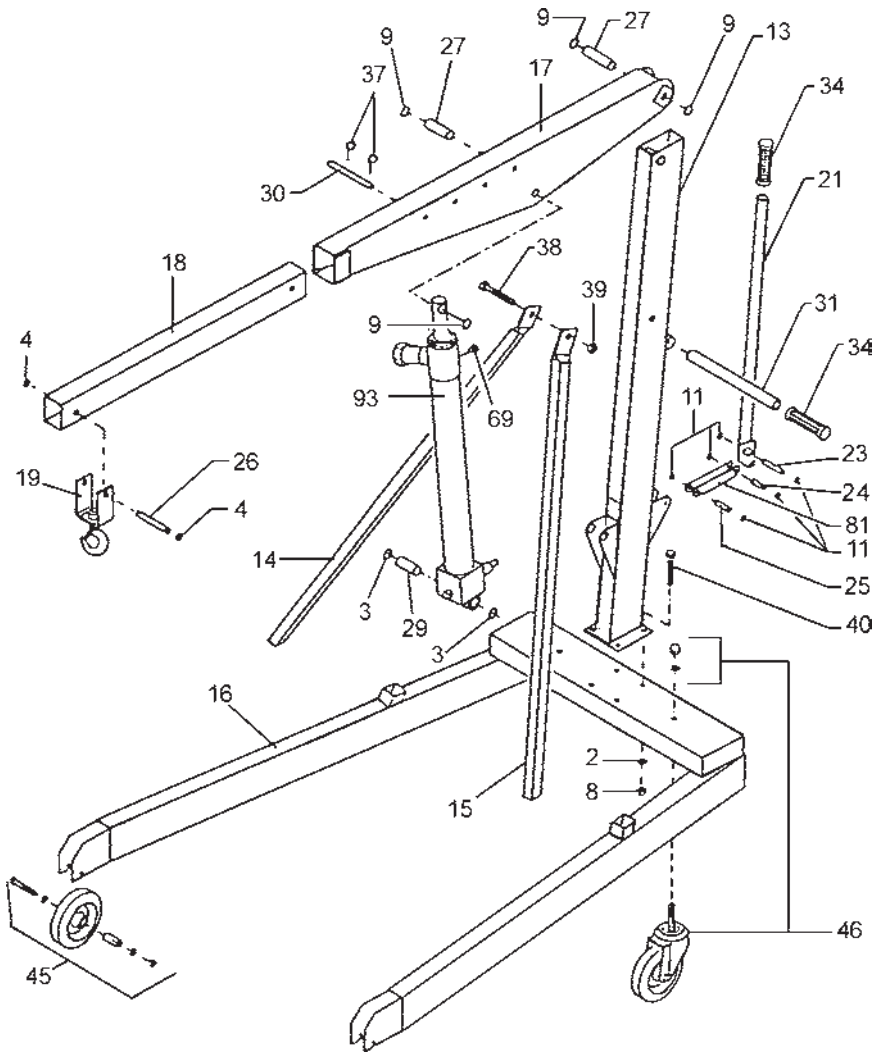


DIMENSIONS (mm)



	HDC50	HDC100	HDC150	HDC200
A	1610	1740	1850	1995
B	1230	1515	1690	1930
C	1340	1550	1850	1950
D	1040	1250	1400	1500
E	155	160	200	225
F	520	615	420	530
G	725	795	705	815
H	2245	2490	2870	2950
I	2475	2720	3095	3295
L	800	945	860	970
M	880	1065	1000	1000
N	645	740	1000	1100

HDC50



HDC50 HYDRAULIC RAM

