

DRAPER[®]

INSTRUCTIONS FOR

1 Tonne Folding Hydraulic Engine Crane

Stock No.02610

Part No.EC1001

IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY TO ENSURE THE SAFE AND EFFECTIVE USE OF THIS PRODUCT.



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GENERAL INFORMATION

These instructions accompanying the product are the original instructions. This document is part of the product, keep it for the life of the product passing it on to any subsequent holder of the product. Read all these instructions before assembling, operating or maintaining this product.

This manual has been compiled by Draper Tools describing the purpose for which the product has been designed, and contains all the necessary information to ensure its correct and safe use. By following all the general safety instructions contained in this manual, it will ensure both product and operator safety, together with longer life of the product itself. All photographs and drawings in this manual are supplied by Draper Tools to help illustrate the operation of the product. Whilst every effort has been made to ensure the accuracy of information contained in this manual, the Draper Tools policy of continuous improvement determines the right to make modifications without prior warning.



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GUARANTEE

Draper tools have been carefully tested and inspected before shipment and are guaranteed to be free from defective materials and workmanship.

Should the tool develop a fault, please return the complete tool to your nearest distributor or contact Draper Tools Limited, Chandler's Ford, Eastleigh, Hampshire, SO53 1YF, England.
Telephone Sales Desk: (023) 8049 4333 or Product Helpline (023) 8049 4344.

A proof of purchase must be provided with the tool.

If upon inspection it is found that a fault occurring is due to defective materials or workmanship, repairs will be carried out free of charge. The guarantee period covering parts/labour is 12 months from the date of purchase. This guarantee does not apply to normal wear and tear, nor does it cover any damage caused by misuse, careless or unsafe handling, alterations, accidents, or repairs attempted or made by any personnel other than the authorised Draper warranty repair agents.

Note: If the tool is found not to be within the Terms of Warranty, repair and carriage charges will be quoted and made accordingly.

This guarantee applies in lieu of any other guarantee expressed or implied and variations of its terms are not authorised.

Your Draper guarantee is not effective unless you can produce upon request a dated receipt or invoice to verify your proof of purchase within the guarantee period.

Please note that this guarantee is an additional benefit and does not affect your statutory rights.
Draper Tools Limited.



SPECIFICATION

Whilst every effort has been made to ensure accuracy of information given in this manual is correct at the time of going to print, the Draper Tools policy of continuous improvement determines the right to change specification without notice.

Stock no.	02610
Part no.	EC1001
Lifting capacity position 1	1000kg
Lifting capacity position 2	750kg
Lifting capacity position 3	500kg
Lifting capacity position 4	250kg
Maximum height of jib	2460mm
Length of jib position 1	900mm
Length of jib position 2	990mm
Length of jib position 3	1080mm
Length of jib position 4	1170mm
Height of frame	1400mm
Length of frame	1450mm
Width of frame max.	1000mm
Distance between centre of rear wheels	540mm



SAFETY INSTRUCTIONS

- Do not overload. Overloading could cause damage or failure of the engine crane.
- Never use the crane on an uneven floor surface as this could result in the crane tipping over.
- Ensure the workfloor is able to support the crane when loaded, we recommend operation on concrete. Never use the crane on tarmacadam or other soft surfaces.
- Always lock the legs and jib in position before lifting a load.
- The nuts and bolts supplied with the crane are all high strength and should not be substituted for inferior types.
- Before each use ensure that all nuts, bolts, pins and locking pins are correctly fitted and tight.
- Never exceed the safe working loads indicated on the jib.
- Keep children and unauthorised persons away from the working area.
- Before lifting the load ensure that the crane jib is in the lowest practical position, that there are no obstacles which may snag the load whilst it is being lifted and that the area above the jib is clear.
- Ensure the centre of gravity always remains inside the crane base.
- DO NOT harness the load at an angle or use any attachments not verified as fit for purpose.
- DO NOT allow the load to swing during lifting.
- DO NOT allow the load to drop suddenly. Lower load with care, ensuring that you are fully aware of the condition of the surface onto which the load is to be placed.
- DO NOT position any part of your body beneath the load.
- DO NOT use the crane to move, or transport, a load other than for repositioning. The crane is a lifting device only.
- DO NOT apply any sideways pressure to any part of the crane during lifting or when a load is suspended.
- DO NOT use this product to perform a task for which it is not designed.
- DO NOT climb on the crane.
- This crane is designed for lifting within a garage or workshop environment.

FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN LOSS OF LOAD AND/OR PERSONAL INJURY OR DAMAGE TO PROPERTY.



- | | |
|--------------------------|----------------------------|
| ① Push/pull handle. | ⑥ Pump lock/release valve. |
| ② Hydraulic pump handle. | ⑦ Hydraulic pump unit. |
| ③ Rear casters. | ⑧ Load hook. |
| ④ Leg locking pins. | ⑨ Jib. |
| ⑤ Front casters. | ⑩ Jib locking pin. |

- **UNPACKING:** After removing the packing material, make sure the product is in perfect condition and that there are no visible damaged parts. If in doubt, do not use the product and contact the dealer from whom it was purchased.

The packaging materials (plastic bags, polystyrene, etc.), must be disposed of in an appropriate refuse collection container. These materials must not be left within the reach of children as they are potential sources of danger.

NOTE:

- UNPACKING (Fig.1.):

It is recommended that two people assemble the crane. First carefully unpack the crane, lay out all of the parts and check everything is ready for assembly. During the assembly procedure, nuts and bolts should be hand-tightened only. Once assembly is complete, nuts and bolts may be fully tightened.

FIG. 1



- ATTACH CASTER WHEELS (Fig.2.):

Attach the front castor wheels to the legs using the nuts, bolts and washers supplied. Then attach rear castor wheels to the frame using the nuts and bolts supplied.

FIG. 2



- SECURE LEGS (Fig.3.):

Insert the left hand leg into the base and lock the leg in place using two locking pins. Secure these in place using two split-type pins. Now repeat this procedure for the right hand leg.

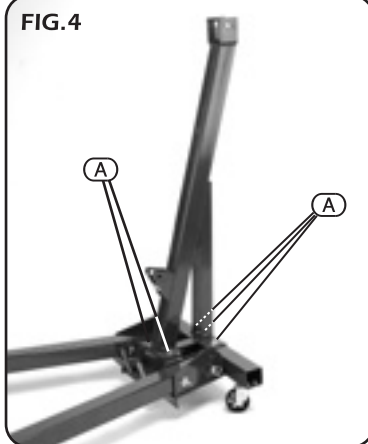
FIG. 3



- **MAIN SUPPORT (Fig.4.):**

Attach the main support post to the base assembly using five bolts, washers and nuts (A).

FIG.4



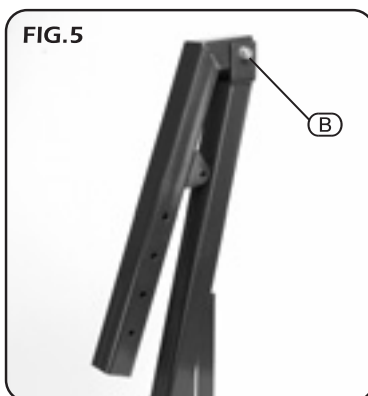
- **SECURE THE BOOM (Fig.5.):**

Now secure the boom to the main support post using bolt, washer and nut (B).

- **NOTE:**

Ensure you remove the sliding section of the boom before attempting to fit the main boom.

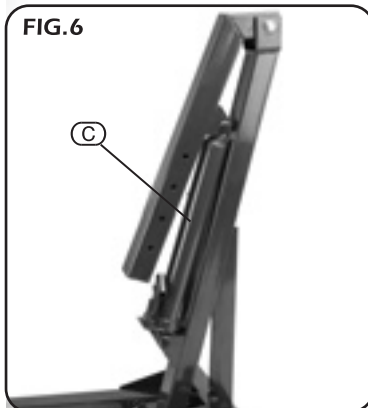
FIG.5



- **ATTACH HYDRAULIC RAM (Fig.6.):**

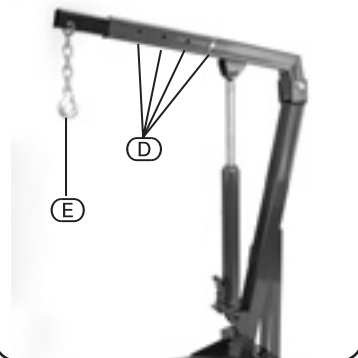
Next the ram unit (C) should be attached to the main support post using bolt, nut and washer. Then secure the ram unit to the boom using bolt, nut and washer.

FIG.6



- **EXTENSION BOOM PLUS HOOK (Fig.7.):**
Insert the boom extension into the main boom, secure in one of the four positions (D) using lock pin and split pin. Attach the hook and chain assembly (E) to the boom using nut, bolt and washer.

FIG.7



- **SECURING HANDLE (Fig.8.):**
Secure handle to the main support post using two bolts and two washers (F).
Now tighten all nuts and bolts.

NOTE:

Before folding crane, jib **MUST** be locked at 1000kg and fully lowered or crane will become unstable.

FIG.8





OPERATING INSTRUCTIONS

- **WARNING:**

- THIS CRANE RAM IS DESIGNED FOR LIFTING PURPOSES ONLY - NOT FOR SUPPORTING LOADS.
- DO NOT LOAD BEYOND ITS RATED CAPACITY.
- **IMPORTANT:** During transportation it is likely that air will enter the hydraulic system, this is normal. It can cause poor lifting performance. Before use you must purge any air from the system by fully opening the release valve (turn handle counterclockwise as shown), then while holding the boom down, operate pump handle through it's FULL stroke a minimum of 15 times.

Connect the crane hook to the load using a suitable certified sling or support beam. Ensure you are aware of the load weight, and check that it is within the capacity of the crane (at the jib extension you are using) and the sling or support beam. When removing engines ensure you know the weight to be lifted. Use only the lifting points recommended by the vehicle manufacturer.

- **TO RAISE LOAD**

Close release valve by turning handle CLOCKWISE, HAND-TIGHT. (DO NOT OVERTIGHTEN).

- **TO LOWER LOAD**

Open release valve by turning handle ANTI-CLOCKWISE very slowly. The speed of lowering the load is controlled by how much you turn the handle.

Lift only from directly above the load. **WARNING! DO NOT LIFT THE LOAD AT AN ANGLE!**

- **NOTE:** Before raising the legs to the storage position, the stay bar must be lowered and locked using pin and split pin each time. If this procedure is not followed the unit may fall over. Only move carefully on flat, level ground and do not let unit move too quickly as it may become unstable.



MAINTENANCE

- **IMPORTANT:** When adding or replacing oil, always use a good monograde grade hydraulic jack oil such as Shell Tellus 22.

Avoid mixing different grades/types of oil. DO NOT use brake fluid, alcohol, glycerine, detergent motor oil or dirty oil. Improper fluid can cause serious internal damage to ram.

When adding oil, be VERY CAREFUL not to permit dirt or foreign matter to get into the system. Check ram and plunger every 3 months for any signs of rust or corrosion. Clean as needed and wipe with an oily cloth.

When not using the long ram, always leave the jib in the fully lowered position.

Oil all working parts at least monthly.

- Inspection and Examination of Crane Before Use.
- Before each use of the crane you must perform an inspection for leaks, damage, loose or missing parts.
- The workshop crane must be examined immediately if it has been subject to an abnormal load or shock. It is recommended that such an examination is made by an authorised service agent.

- The owner and/or operator must be aware that repair of this equipment will require specialised knowledge and facilities.

It is recommended that an annual examination of the workshop crane is made by an authorised service agent.

- Unauthorised parts may be dangerous and will invalidate the warranty.

NOTE:

Please see the Definition of 'inspection' and 'examination' below.

Inspection:

Physically check the crane for defects and correct operation of the controls, limiting and indicating devices without loading the crane. This is much more than a check but does not normally require any part of the crane to be dismantled.

Examination:

Verification that the crane can safely continue in service including a functional test of all safety devices i.e. limiting, indicating equipment, safety valves etc to verify that they operate within the required tolerances. An examination is more thorough than an inspection.

The following accessories are available from your Draper stockist.

Engine stand: Max. load 450kg.

Part No. ES450.

Stock No. 53092.



Trouble	Probable Cause	Remedy
Will not hold load.	Dirt on valve seats.	<ol style="list-style-type: none"> 1. Lower lifting boom. Close the release valve and remove oil filler plug. 2. Place one foot on the leg and pull up the lifting boom to its full height by hand. 3. Open the release valve to lower the lifting boom. 4. Worn seals - replace.
<p>Will not lift load.</p> <p>Will not lift to its full height.</p> <p>Pump feels unsteady under load.</p> <p>Pump will not lower completely.</p>	Air block.	<ol style="list-style-type: none"> 1. Open the release valve and remove oil filler plug. 2. Pump handle a couple of full strokes and close the release valve.
<p>Pump will not lift to its full height.</p> <p>Pump feels unsteady under load.</p>	<p>The reservoir could be overfilled.</p> <p>Low hydraulic oil level.</p>	<p>Check the oil level. Remove the filler plug.</p> <p>Top up oil to correct level.</p>
Pump feels unsteady under load.	The pump cup seal could be worn out.	Replace cup seal with a new one.
Will not lower completely.	<p>Air block.</p> <p>Unit requires lubrication.</p>	<p>Release air from hydraulic pump by removing filler plug.</p> <p>Oil external moving parts.</p>

- NOTE:

Damaged or faulty cranes **MUST** be immediately removed from use and any necessary repairs are to be conducted by an approved person only.

- **DRAPER TOOLS LIMITED,**
Hursley Road, Chandler's Ford,
Eastleigh, Hampshire. SO53 1YF. U.K.
- **Helpline:** (023) 8049 4344
- **Sales Desk:** (023) 8049 4333
- **Internet:** www.draper.co.uk
- **E-mail:** sales@drapertools.com
- **Sales Fax:** (023) 8049 4209
- **General Enquiries:** (023) 8026 6355
- **Service/Warranty Repair Agent**
For aftersales servicing or warranty repairs, please
contact the Draper Tools Helpline for details of an
agent in your local area.

YOUR DRAPER STOCKIST

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