



Edition : 1.0
Date: (01/26)

Instruction Manual

ROTATING ENGINE STAND ESR-450W

Order Code: (A3375)

MACHINE DETAILS

MACHINE

Rotating Engine Stand

MODEL NO.

ESR-450W

SERIAL NO.

DATE OF MANF.

DISTRIBUTED BY



www.machineryhouse.com.au

www.machineryhouse.co.nz

NOTE:

This manual is only for your reference. At the time of the compiling of this manual every effort to be exact with the instructions, specifications, drawings, and photographs of the machine was taken. Owing to the continuous improvement of the HAFCO machine, changes may be made at any time without obligation or notice.

SAFETY SYMBOLS

The purpose of safety symbols is to attract your attention to possible hazardous conditions

Indicates a potentially hazardous situation causing injury or death



WARNING

Indicates an alert against unsafe practices.



CAUTION

Used to alert the user to useful information



NOTE:

In order to see the type and model of the machine, please see the specification plate. Usually found on the back of the machine. See example (Fig.1)

Fig.1



SPECIFICATIONS

These stands accept a wide variety of engines and transmissions. The head swivels 360° for accessibility to all parts of the engine. Fully adjustable mounting arms. Swivel castors provide excellent manoeuvrability and also features folding legs for storing.

Load Capacity	450kg
Rotating Head.....	360°
Nett Weight.....	56kg

(Full load capacity rating is also on the specification plate on the engine stand (Fig. 2))



(Fig.2)

SAFETY PRECAUTIONS



DO NOT use this machine unless you have been instructed in its safe use and operation and have read and understood this manual. It is the responsibility of the owner to make sure all personnel read this manual prior to using the device. It is also the responsibility of the device owner to keep this manual intact and in a convenient location for all to see and read. If the manual or product labels are lost or not legible, they need to be replaced before operating.

THE NATURE OF HAZARDOUS SITUATIONS WARNING!

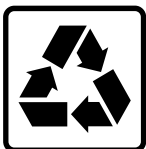
The use of portable automotive lifting and support device is subject to certain hazards that cannot be prevented by mechanical means, but only by the exercise of intelligence, care, and common sense. It is therefore essential to have owners and personnel involved in the use and operation of the equipment who are careful, competent, trained, and qualified in the safe the operation of the equipment and its proper use. Examples of hazards are dropping, tipping or slipping of loads caused primarily by improperly securing loads, overloading, off-centered loads, use on other than hard level surfaces, and using equipment for a purpose for which it was not designed.

METHODS TO AVOID HAZARDOUS SITUATIONS WARNING!

- Read, study, understand and follow all instructions before operating this device.
- User and bystanders must wear eye protection that meets the Australian and New Zealand standards.
- Inspect the engine stand before each use. Do not use if damaged, altered, modified, in poor condition, or has loose or missing hardware or components. Take corrective action before using the engine stand.
- Do not use beyond the rated capacity.
- Use only on hard level surface capable of supporting the load.
- Make sure all mounting hardware is securely tightened and setup is stable before rotating the engine.
- Always use high strength SAE grade 8 bolts for mounting engine to mounting fingers.
- Make sure that the widest set of mounting fingers are nearest the ground when mounting engine to the stand.
- Ensure the load is centered, balanced and secured to the mounting head and fingers. The engine's weight should be balanced within 25mm of the mounting head's rotational axis.
- Adequately support the vehicle before starting repairs.
- Never loosen mounting head bolts or engine mounting bolts unless engine is supported by a crane or hoist.
- Only attachments and/or adapters supplied by the manufacturer should be used.
- Do not use the stand to dolly or transport engine.
- Do not crawl under engine or place any part of your body under engine at any time.
- Refer to engine manufacturer's service manual for proper lifting points, mounting points and bolt sizes. Mounting bolts should be torqued at appropriate amount to maintain load.

CONSEQUENCES OF NOT AVOIDING HAZARDOUS SITUATIONS WARNING!

Failure to read this manual completely and thoroughly, failure to understand its OPERATING INSTRUCTIONS, SAFETY WARNINGS, MAINTENANCE INSTRUCTIONS and comply with them, could cause accidents resulting in serious or fatal personal injury and/or property damage.



ENVIRONMENT PROTECTION

Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment. When the product becomes completely unserviceable and requires disposal, drain any fluids (if applicable) into approved containers & dispose of the product and fluids according to local regulations.

ASSEMBLY

The engine stand must be fully assembled before use or operation. Before starting, clean any parts coated in rust preventative to ensure smooth assembly.

Using the **Parts Diagram and Parts List:**

- Check that all parts, fasteners, and components listed are included.
- Refer to the diagram and proceed to assemble all components, including wheels, pins, supports, turning plate, etc.

Important:

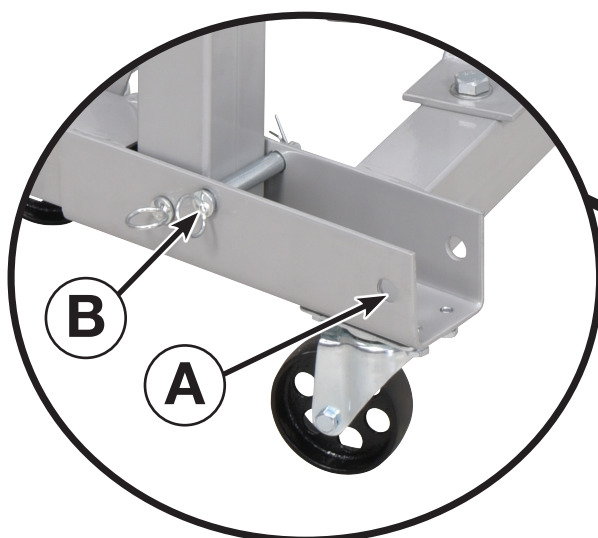
During assembly, do not fully tighten any nuts or bolts. Keep all fasteners loosely fitted (finger tight) until the entire engine stand has been assembled. This allows all components to align correctly and prevents unnecessary strain during assembly.

Once the engine stand is fully assembled and properly aligned, tighten all nuts and bolts using appropriate hand tools, such as spanners or socket sets.

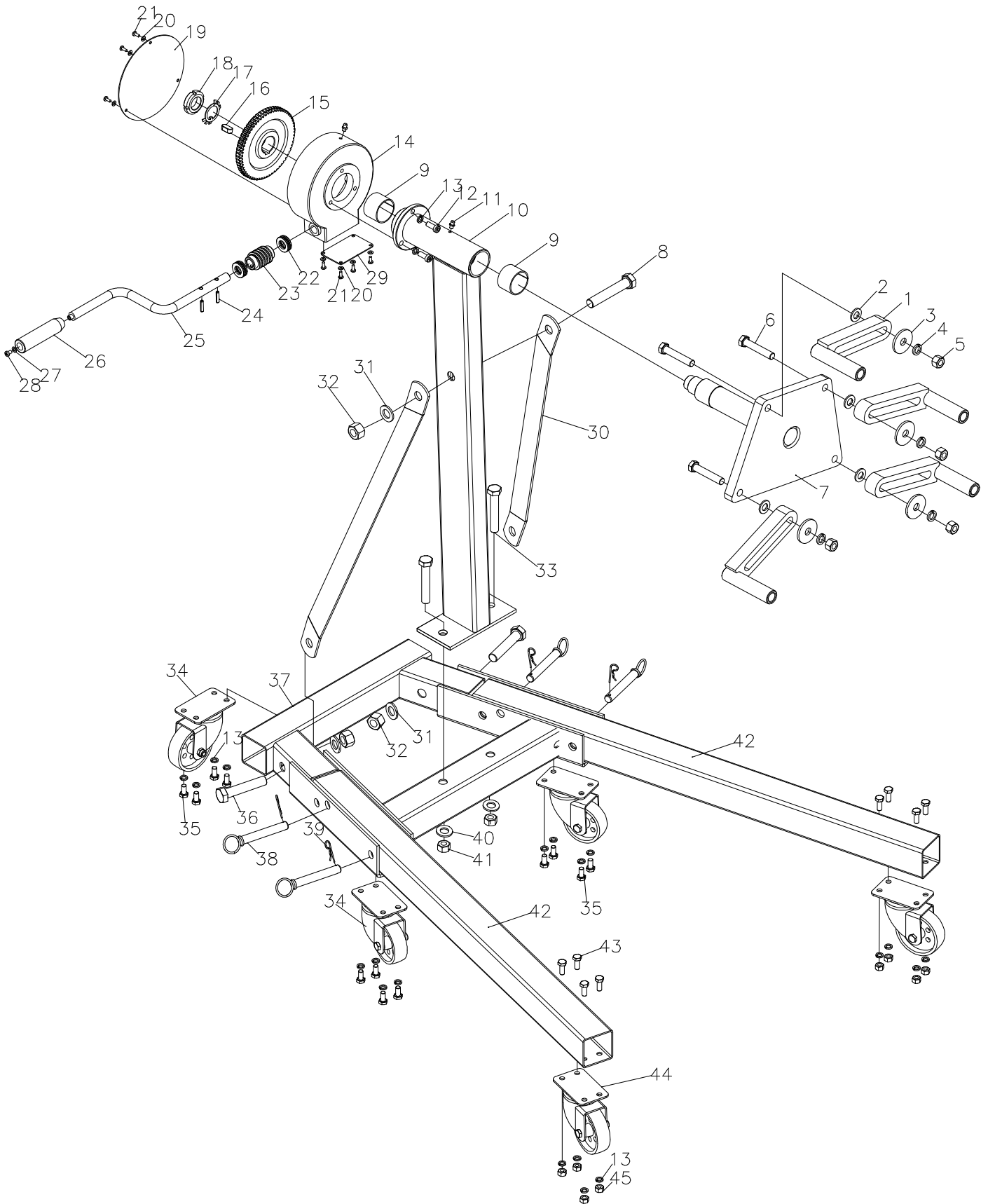
Folding Engine Crane Legs Up for Storage:

Warning: The legs and crane can move unexpectedly. Always handle with care and have someone hold the crane while folding.

- Step 1. Remove the pin from **Position A**.
- Step 2. Fold one **leg at a time** and secure it by inserting the pin into **Position B**.
- Step 3. To unfold the legs, simply reverse this procedure.



PARTS DIAGRAM



PARTS DIAGRAM

Part No.	Description	Qty
1	Shifting Stand	4
2	Washer 12	4
3	Big Washer 12	4
4	Spring Washer 12	4
5	But 12	4
6	Bolt M12	4
7	Turning Plate	1
8	Bolt M16x75	1
9	Oilless Bearing	2
10	Main Post	1
11	Oil Bolt	2
12	Screw M8	3
13	Spring Washer 8	23
14	Box	1
15	Worm Wheel	1
16	FLat Key	1
17	Washer 25	1
18	Round Nut	1
19	Box Cover	1
20	Washer 4	7
21	Screw M4	7
22	Bearing	2
23	Worm	2

Part No.	Description	Qty
24	Spring Pin	2
25	Worm Shaft	1
26	Handle	1
27	Washer 5	1
28	Screw M5	1
29	Box Cover 11	1
30	Support	2
31	Washer 16	3
32	Nut M16	3
33	Bolt M14	2
34	3.5" Caster	3
35	Bolt M8x12	12
36	Bolt M16x90	2
37	Base Frame	1
38	Locking Pin	4
39	R-pin	4
40	Washer 14	2
41	Nut M14	2
42	Leg	2
43	Bolt M8x20	8
44	3" Caster	2
45	Nut M8	8

OPERATING INSTRUCTIONS



This safety warning is used for the SETUP INSTRUCTIONS section of this manual to alert you to potential personal injury hazards. Obey all instructions to avoid possible injury or death.

- Consult the vehicle or engine manufacturers service manual or technical bulletins that provide information on suggested engine mounting tips, proper size bolts and the engine's center of balance. The engine's center of balance must be aligned with the rotational axis of the engine stand's mounting head assembly.
- Drain oil and coolant and remove clutch bell housing and flywheel from the engine before mounting. Attach a lifting bar or sling to the engine and secure to a shop crane or hoist. Slowly lift the engine from its compartment making sure no other components, wires or hoses obstruct the free movement of the engine. Raise the engine high enough so its center of balance is close to the rotational axis of the stand's mounting head.
- Make sure, the four mounting fingers are loosely connected to the mounting head plate. Secure the four mounting fingers to the bell housing end of the engine with the appropriate bolts and washers. Reposition the mounting, fingers and engine so the engine's center of balance is within 25mm of the mounting head's rotational axis. Tighten all bolts to a sufficient torque requirement that prevents any slippage.
- Slowly lower the crane or hoist so the engine stand supports full weight of the engine. Check engine balance and secure setup of the engine to the stand by slowly rotating the engine with the indexing position handle. If balance or setup are not stable, rotate the engine to its original position, raise the crane or hoist so the weight of the engine is taken by the hoist and make the correct adjustments. After adjustments are made, tighten all bolts. This adjustment procedure may need to be performed several times until correct. After the setup is balanced and secure, the lifting bar or sling can be removed from crane or hoist.
- To remove the engine from the stand, connect the lifting bar or sling to the crane or hoist and raise the engine high enough to take the weight off the stand. Carefully remove the bolts that connect the four mounting fingers to the engine. Be aware there will be a slight movement as the total engine weight is transferred to crane or hoist.
- This engine stand has a folding feature that can save space and make storage easy. Remove the pins so the 2 feet can be folded up vertically. The pins and clips can be stored in the open holes.

PREVENTATIVE MAINTENANCE

1. Always store the engine stand in a well protected area where it will not be exposed to inclement weather, corrosive vapors, abrasive dust, or any other harmful elements. The engine stand must be cleaned of water, snow, sand, grit, oil, grease or other foreign matter before using.
2. Lubricate the wheels, casters, fittings and rotating shaft with a general purpose grease.
3. Every engine stand owner is responsible for keeping the engine stand label clean and readable. Use a mild soap solution to wash the external surfaces of the stand.
4. Inspect the stand before each use. Do not use the stand if any component is cracked, broken or bent. Do not use the stand if it has loose or missing hardware or components, or is modified in any way. Take corrective action before using the stand again.

OPTIONAL ACCESSORIES

ESDT-16 - Engine Stand Drip Tray
(Order Code: A338)



AET-900 - Engine Tilter - Heavy Duty
(Order Code: A3425)



HC-1.25T - Hydraulic Engine Crane
(Order Code: A350)



The **ESR-450W** and **HES-907F** engine stands are designed to be compatible with the **HC-1.25T Engine Crane**.
(Order Code: A350)





ENVIRONMENT PROTECTION

Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment. When the product becomes completely unserviceable and requires disposal, drain any fluids (if applicable) into approved containers and dispose of the product and fluids according to local regulations.

IMPORTED BY

HARE&FORBES
MACHINERYHOUSE

Australian Distributor

Hare & Forbes
Machineryhouse
Sydney - Melbourne
Adelaide - Brisbane - Perth

Ph: 1300 202 200
www.machineryhouse.com.au

MACHINERYHOUSE

New Zealand Distributor

Machineryhouse
Auckland
Christchurch

Ph: 0800 142 326
www.machineryhouse.co.nz