

Clan-Be® STRONG-ARM



ENGINE STAND MODEL NO: CES450

PART NO: 7610121

USER INSTRUCTIONS

INTRODUCTION

Thank you for purchasing this CLARKE Engine Stand.

Before attempting to operate the product, it is essential that you read this manual thoroughly and carefully follow all instructions given. In doing so you will ensure the safety of yourself and that of others around you, and you can also look forward to the stand 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 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.

TECHNICAL SPECIFICATIONS

Max Capacity	450 kg (0.45 Tonne)
Net Weight	21 kg
Dimensions L x W x H	815 x 800 x 900

SAFETY PRECAUTIONS

1. Do not allow personnel to use the stand unless they have read these safety precautions.
2. Never tamper with the product or modify it in any way, as this could prove to be dangerous and will invalidate the guarantee. Only use the product for the purpose for which it is intended.
3. Ensure that the stand is in good working order. Have any damaged parts repaired or replaced immediately. Use genuine Clarke parts only. The use of unauthorised parts may be dangerous and invalidate the guarantee.

4. Do not use the stand if it is damaged.
5. Use the stand in a suitable, well lit work area.
6. Keep the work area clean and tidy and free from unrelated items.
7. Do not use the stand when you are tired or under the influence of alcohol, drugs or intoxicating medication.
8. Use the stand on level and solid ground, preferably concrete. Avoid soft/ unmade ground as the castors may sink in.
9. Ensure all bystanders keep at a safe distance whilst the stand is in use.
10. Do not work underneath an engine mounted on the stand.
11. Never climb on, or attempt to ride on the stand.
12. Take care not to trap your fingers in the adjustable parts of the stand.
13. Due to the weight of the loaded stand, the help of an assistant will be beneficial when moving the stand around.
14. Never attempt to move a loaded engine stand across a floor having cracks, pebbles, or other obstacles which might impede its movement.
15. The components of this engine stand are designed to withstand the rated capacity. Do not substitute any other components or exceed the rated capacity of the stand.
16. To move a loaded stand, push it from the load side. DO NOT move the stand from the handle end and never pull the stand towards yourself.
17. Always ensure the engine is properly bolted to the stand.
18. Do not over-reach. Keep your proper footing and balance at all times.
19. Safety equipment such as gloves and non-skid shoes will reduce personal injuries.
20. Failure to heed these warnings may result in damage to the equipment, or serious personal injury.

INSPECTION BEFORE USE

1. Always visually inspect the stand before use, to ensure that all parts are correctly located and secure. Check for cracks, deformation or other signs of damage or worn parts and check the castors for damage. Do not use the stand unless it is totally sound.
2. Check castors to ensure they move freely without undue wear to their pivots, and that the wheels are not cracked or damaged in any way.
3. Remove any rust or corrosion and repaint for protection.

UNPACKING



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:

1	1 x Column assembly	6	2 x Wheels
2	1 x Rear cross-member	7	1 x Mounting plate
3	1 x Centre Spine	8	1 x Mounting plate handle
4	1 x Front cross-member	9	4 x Engine mounting arm
5	2 x Castors with brake	10	1 x Fixings kit including nuts, bolts, washers and locating pin.

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

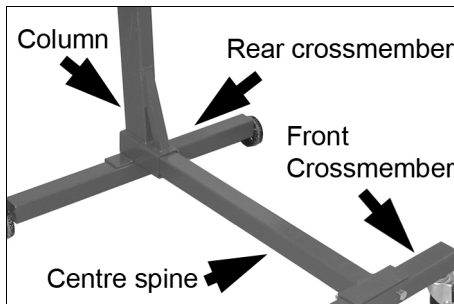
TOOLS REQUIRED

Open/combination wrench (12, 17, 19 & 29 mm) or an adjustable wrench.

ASSEMBLY

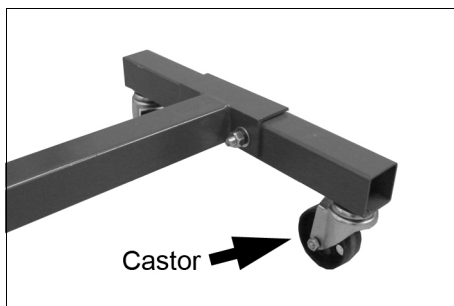
IMPORTANT: Due to the weight of the components, we recommend that you get assistance during assembly. Refer to the parts diagram on page 7 for parts identification.

1. Loosely bolt the upright column to the rear cross member.
2. Insert the centre spine to the rear cross member and loosely bolt together from underneath.
3. Loosely bolt the short (front) cross-member to the centre spine.

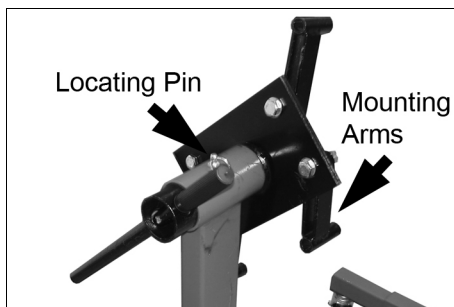


4. Attach the castors to the short front cross member using the nuts and washers.
5. Fit the wheels to the spindles on the rear cross-member and secure with the washers and split pins.

NOTE: the wheel hubs have an inner and outer face as shown on page 7.



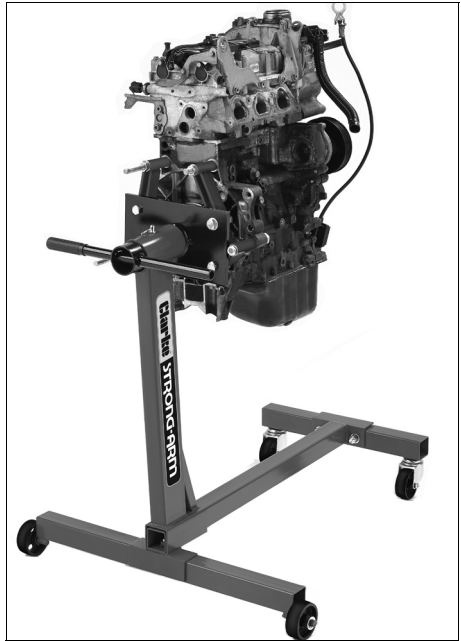
6. Fit the engine mounting plate to the upright column and secure with the locating pin.
7. Loosely attach the four mounting arms to the head mounting plate with nuts, bolts and washers.



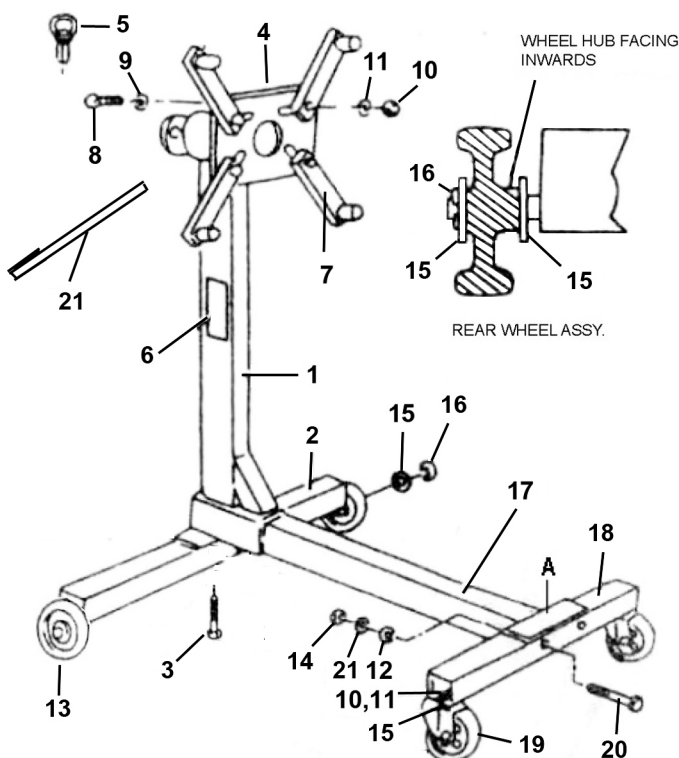
8. Ensure that all weight is spread evenly over the crossmembers, making sure that all four wheels are on level ground and that the assembly is sitting square and true. Tighten all nuts and bolts.
9. Pass the handle through the hole in the stem of the mounting plate.

MOUNTING THE ENGINE TO THE STAND

1. The mounting plate has four adjustable arms with long bolt holes. This is where the engine will mount to the engine stand, using suitable bolts which are compatible with threaded holes in the engine block.
2. If the bellhousing bolts are too short, obtain bolts that have the same diameter and thread pitch. The bolts must be long enough to go through the mounting arms and go at least one inch into the engine block.
3. Lift the engine with an engine hoist and move it towards the engine stand.
4. Remove the locating pin and remove the mounting plate assembly from the engine stand.
5. Using compatible bolts, pass them through the mounting arms and bolt them to the engine where the transmission was mounted to the block. Mount two arms low down on the engine and bolt the other two as high as possible.
6. Adjust the arms on the engine stand mounts so that the centre of the mounting plate is aligned with the centre of the engine crankshaft. By doing this you can ensure that the engine is balanced on the stand. Tighten the bolts securely.
7. Lower the engine until the spindle is at the same level as the engine stand. Slide the spindle of the mount into the engine stand. Replace the locating pin to secure the mounting.
8. Slowly lower the engine hoist so that the engine stand starts to support the weight of the engine. Double-check all fasteners and be sure that the engine is secure.
9. Once you are confident that the stand is supporting the weight of the engine, disconnect the hoist. Now that the engine is mounted to the stand it can be rotated around to access all sides of the engine. Use the locking pin to lock the engine at one of four different working angles.



PARTS DIAGRAM



PART NO	DESCRIPTION
1	Main Column
2	Rear Crossmember
3	Bolt (1/2" x 3")
4	Mounting Plate
5	Locking Pin
6	Adhesive Label
7	Mounting Arm
8	Bolt 1/2" x 2.1/2"
9	Flat Washer
10	Hex Nut (1/2")
11	Locking Washer

PART NO	DESCRIPTION
12	Flat Washer 3/8"
13	Wheel
14	Hex Nut 3/8"
15	Flat Washer 3/4"
16	Locking Clip
17	Centre Spine
18	Short Crossmember
19	Castor with brake
20	Bolt 3/8"x2.3/4"
21	Mounting Plate Handle

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