



450KG WORM DRIVE ENGINE STAND

MODEL NO: **ES480D**

Thank you for purchasing a Sealey product. Manufactured to a high standard, this product will, if used according to these instructions, and properly maintained, give you years of trouble free performance.

IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS & CAUTIONS. USE THE PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. KEEP THESE INSTRUCTIONS SAFE FOR FUTURE USE.



Refer to instructions



Wear safety footwear



Wear protective clothing



Wear protective gloves



Warning
Pinch crush hazard

1. SAFETY

- WARNING!** Ensure all Health and Safety, local authority, and general workshop practice regulations are strictly adhered to when using this equipment.
- ✓ Before using the stand ensure it is in good working order.
- ✓ Replace or repair damaged parts. Use recommended parts only. Unauthorised parts may be dangerous and will invalidate the warranty.
- ✓ Keep the stand clean for best and safest performance.
- ✓ Locate the stand in a suitable work area, keep area clean and tidy and free from unrelated materials. Ensure there is adequate lighting.
- ✓ Use on a firm, level surface capable of sustaining the stand and the load.
- ✓ Maintain correct balance and footing. Ensure the floor is not slippery and wear non-slip shoes.
- ✓ Ensure all non-essential persons keep a safe distance whilst the stand is in use.
- ✓ Lock mounting plate in position with locking pin before fixing a load and ensure the load is centred and securely mounted on the mounting plate.
- ✓ When an engine is mounted, take the weight of the engine on the handle before removing the locking pin.
- ✓ Ensure the stand and load are stable.
- ✓ To move a loaded stand, steady the load and push from behind the main post of the stand so that the castor wheels are ahead of the load.
- ✗ **DO NOT** pull the unit backwards, or push from the side, as this may cause the stand to tip.
- ✗ **DO NOT** concentrate a heavy load to either side or end of the Engine Stand. This can cause the balance to shift suddenly, tipping the Engine Stand and its load which can quickly cause severe injury and property damage!
- ✓ Ensure surface over which the stand is to travel is strong enough to take the stand and load and that it is not cracked, uneven, sloped or obstructed.
- ✗ **DO NOT** use unit if damaged.
- ✗ **DO NOT** allow untrained persons to use the stand.
- ✗ **DO NOT** exceed the rated capacity of 450kg.
- ✗ **DO NOT** use to support humans or animals.
- ✗ **DO NOT** climb on the Engine Stand.
- ▲ **DANGER! DO NOT** work under an engine mounted on the stand.
- ✗ **DO NOT** use the stand for purposes other than those for which it is designed.
- ✓ When not in use store stand in a safe, dry, childproof area.
- ✓ Use extreme caution while rotating the hand crank to rotate the load as a large, top-heavy engine or similar object could result in a sudden imbalance condition and cause the Engine Stand to suddenly tip.
- ▲ **DANGER!** While rotating, always stand behind the crank end of the stand and make constant observations of the casters. If any indication of instability occurs, STOP IMMEDIATELY! PINCH/CRUSH HAZARD!
- ✓ This Engine Stand has moveable components that can crush and pinch. Keep fingers and hands away from pinch points when operating.

2. INTRODUCTION

This engine stand accepts a wide variety of engines and transmissions. The 360° worm drive head allows for easy and accurate rotation in order to access all parts of the engine. Mounting head has four fully adjustable arms with bolt holes to accommodate various load sizes. Fitted with screw lock to ensure load is secured. Swivel castors provide excellent manoeuvrability. Assembled with clevis pins and clips so the stand can be folded for storage.

3. SPECIFICATION

Model No:.....**ES480D**
Capacity:..... 450kg
Size (W x D x H): 870 x 915 x 925mm

4. CONTENTS

4.1. COMPONENTS:

| | | |
|---|---------|-----|
| Centre beam | A | (1) |
| Front Beam | B | (1) |
| Rear Beam | C | (1) |
| 3-1/2" Locking Swivel Casters | D | (2) |
| 38/39/40/41 Caster Bushing Sleeves | E | (2) |
| 3-1/2" Fixed Casters | F | (2) |
| Main Post | G | (1) |
| Locking Pins | H | (3) |
| 'R' Clips | J | (3) |
| Support | K | (1) |
| Mounting Arms | L | (4) |
| 36mm Outside diameter. x 5mm thick Flat Washers | | (4) |

4.2. HARDWARE:

| | |
|---|------|
| M8 x 65mm Shoulder Bolts (for Fixed Casters)..... | (2) |
| M8 x 15mm Bolts (for Swivel Caster mounting) | (8) |
| M8 Flat Washers | (10) |
| M8 Lock Washers | (10) |
| M8 Nuts | (10) |
| M10 x 60mm Shoulder Bolts (for Beam assembly) | (4) |
| M10 Flat Washers | (4) |
| M10 Lock Washers | (4) |

4.3. TOOLS REQUIRED

| | |
|------------------------|----------------|
| Two 14mm spanners..... | (not included) |
| Two 17mm spanners..... | (not included) |
| Two 19mm spanners..... | (not included) |



5. ASSEMBLY

- WARNING!** The Engine Stand consists of heavy metal components which can cause potentially serious injuries if allowed to drop.
 - WARNING!** Avoid pinching hands while handling parts during assembly.
 - ✓ Get the assistance of a helper during assembly.
 - ✓ Assemble in a large, uncluttered area close to area of intended usage.
 - ✓ Allow sufficient area for operator and helper to remain clear when choosing operating area.
- NOTE** To protect the finish of the engine stand components from damage and scratches, use cardboard, carpet, blankets etc. to cover the area before beginning assembly.
- 5.1. CENTRE BEAM TO FRONT BEAM (FIG.1.A.B)**
- 5.1.1. Place the Front Beam (fig.1.B) with the two caster mounting plates downward and align the two holes in the face with those in the horizontal mounting angle of (fig.1.A) and secure them with two M10 x 60 Shoulder, Bolts, Flat Washers, Lock Washers and M10 Nuts using two 17mm spanners (not included).
- 5.2. CENTRE BEAM TO REAR BEAM (FIG.1.A.C)**
- 5.2.1. Place the Rear Beam (fig.1.C) with the four Caster Mounting tabs downward and Align the two holes in the face with those in the vertical mounting angles of (fig.1. A) and secure them with two M10 x 60 Shoulder Bolts, Flat Washers, Lock Washers and M10 Nuts using two 17mm spanners (not included).
- 5.3. CASTERS (FIG.1.D.E) TO MAIN FRAME ASSEMBLY (FIG 1.A.B.C)**
- 5.3.1. Raise the Front end of the Frame Assembly to allow the two Locking Swivel Casters to fit underneath.
- 5.3.2. Align all mounting holes and secure the Locking Swivel Casters (fig.1.D) to the mounting pads with eight M8 x 15 Bolts, Flat Washers, Lock Washers and M8 Nuts using two 14mm spanners (not included).
- 5.3.3. Add a moderate amount of a heavy bodied chassis grease to the Internal diameter and outside diameter of the 35mm x 10mm Bushing Sleeves (fig.1.E).
- 5.3.4. Insert one each of the 35mm x 10mm Bushing Sleeves (fig.1.E) into the centre bore of each Fixed Caster (fig.1.F).
- 5.3.5. Raise the Rear end of the Frame Assembly to allow the two Fixed Casters (fig.1.F) to fit between the mounting tabs.
- 5.3.6. Align the holes and Place one each of the M8 x 65mm Shoulder Bolts into the holes of the mounting tabs and each Fixed Caster (fig.1.F) and secure with two each 8mm Flat Washers, Lock Washers and M8 Nuts using two 14mm spanners (not included).
- 5.4. MAIN POST (FIG.1.G) TO MAIN FRAME ASSEMBLY (FIG.1.A.B.C)**
- The Main Post (fig.1.G) is heavy, cumbersome, and will want to tip forward. Obtaining the assistance of a helper during this phase of assembly is strongly recommended.
- 5.4.1. Stand the Main Post (fig.1.G) up with the bottom resting on the Centre Beam (fig.1.A) with the welded - on ferrule facing forward.
- 5.4.2. Align the through hole of the ferrule with the lower holes in the two vertical angle mounts of the Centre Beam (fig.1.A), insert a M12 x 70mm Shoulder Bolt and secure a 12mm Flat Washer, Lock Washer and M12 Nut using two 19mm spanners (not included).
- 5.4.3. Align the holes in the Rear Frame Member (fig.1.C) and bottom of the Main Post (fig.1.G) and slip a Locking Pin (fig.1.H) through. Secure the pin with a 13mm x 24mm Outside diameter. Flat Washer and a Pin Clip (fig.1.J).
- 5.4.4. Insert another Locking Pin (fig.1.H) through the upper holes of the vertical angle mounts of the Centre Beam (fig.1.A) and secure the pin with a 13mm x 24mm Outside diameter. Flat Washer and a Pin Clip (fig.1.J).
- 5.5. SUPPORT (FIG.1.K) TO ENGINE STAND POST/MOUNTING PLATE (FIG.1.G) AND CENTRE BEAM (FIG.1.A)**
- The Brace (fig.1.K) has a "U" shaped feature connecting the two rails. When properly assembled the "U" feature must be on the underside of the Brace (fig.1.K) to allow it to fold properly.
- 5.5.1. Align the through hole of the Centre Beam (fig.1.A) with holes in one end of the Support (fig.1.K), insert a M12 x 70mm Shoulder Bolt and secure with a 12mm Flat Washer, Lock Washer and M12 Nut using two 19mm spanners (not included).
- NOTE:** **DO NOT** fully tighten the bolts but allow some movement for Engine Stand.
- 5.5.2. Insert another Locking Pin (fig.1.H) through the opposite end of the Support (fig.1.K) and main post (fig.1.G) and slip a Locking Pin (fig.1.H) through. Secure the pin with a 13mm x 24mm Outside diameter. Flat Washer and a Pin Clip (fig.1.J).
- 5.6. MOUNTING ARMS (FIG.1.L) TO ENGINE STAND POST/MOUNTING PLATE (FIG.1.G)**
- NOTE:** There are 2 bolt patterns drilled into the Mounting Plate. First determine which set most closely match those of the particular engine or transmission to be mounted then add the Mounting Arms.
- 5.6.1. Arrange the bolting tube feature of the Mounting Arms (fig.1.L) outward and the offsets facing forward.
- 5.6.2. Insert the M12 x 65mm Shoulder Bolts through the open loops of the Mounting Arms (fig.1.L) and secure with the four 36mm outside diameter x 5mm thick Flat Washers (fig.1.M), Lock Washers and M12 Nuts using two 19mm spanners (not included).
- 5.6.3. The Engine Stand is ready for use.

6. OPERATION

- 6.1. Only use mounting bolts of the equivalent grade or stronger as those supplied by the vehicle manufacturer to mount an engine, transmission or other heavy assembly to this Stand.
- 6.2. The Mounting Plate is drilled with 2 bolt patterns, one small and one large. In addition, the Mounting Arms are elongated and provide for 90mm of adjustment and can be positioned anywhere within 360°. While these features allow for virtually unlimited combinations of mounting possibilities, it is the responsibility of the user to determine the best mounting arrangement and to follow all safety warnings presented in the Safety Information section of these instructions.
- 6.3. The Swivel Casters are equipped with a Locking Brake Feature. These **MUST** be locked before adding a load to prevent unintended movement of the Engine Stand while attaching the load.
- 6.4. **TO ROTATE:** Carefully grasp the Hand crank and slowly rotate it which will in turn rotate the Mounting Plate with the load attached in the desired direction.
- WARNING! TIP HAZARD!** Use extreme caution while rotating the Hand crank to rotate the load as a large, top-heavy engine or similar object could result in a sudden imbalance condition and cause the Engine Stand to suddenly tip.
- 6.5. **TO LOCK:** Screw in the handwheel on the side of the worm drive unit.
- 6.5.1. While rotating, always stand behind the crank end of the stand and make constant observations of the casters.
- 6.5.2. If any indication of instability occurs, **STOP IMMEDIATELY!**

7. STORAGE

7.1. FOLDING UP THE ENGINE STAND

- 7.1.1. Remove 'R' Clips and Flat Washers from the three Locking Pins and set aside for re-use.
- 7.1.2. First remove the Locking Pins securing the Engine Stand Post (fig.1.G) to the Centre Beam (fig.1.A).
- 7.1.3. Carefully hold the Engine Stand Post/Mounting Plate steady with one hand to prevent it from falling forward while pulling out the Lock Pin at the Support (fig.1.K) and Engine Stand Post (fig.1.G).
- 7.1.4. Rotate the Support (fig.1.K) forward and down over the Centre Beam (fig.1.A).
- 7.1.5. Carefully rotate the Engine Stand Post (fig.1.G) forward and down with the Mounting Plate resting atop the Centre Beam (fig.1.A).
- 7.1.6. Reinstall the Locking Pins, Washers and 'R' Clips in the open holes to avoid loss.

8. MAINTENANCE

- ✓ Keep all moving components of the Engine Stand well lubricated and free of any dirt or debris accumulations.
- ✓ The Engine Stand is finished in rugged powder coating which will provide many years of effort-free beauty, however it is advisable to keep the finish clean and free from excessive dust and dirt.
- ✓ Keep the Engine Stand in a clean and dry environment. **DO NOT** store it in or expose it to a damp or wet environment.
- ✓ Before each use, inspect all components for potential damage and proper alignment. Check all hardware for tightness
- ✗ **DO NOT** use if damage is discovered.
- ✓ Occasionally add a heavy-bodied chassis grease to the grease points located on the main pivot shaft and gearbox.



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.

Note: It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice.

Important: No Liability is accepted for incorrect use of this product.

Warranty: Guarantee is 12 months from purchase date, proof of which is required for any claim.

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