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Form No. 102302

Operating Instructions
 for:

1750
 1750-A
 D-05223ST

Heavy Duty Engine Repair Stand

Max. Capacity: 6,000 lbs. (2,725 kg)

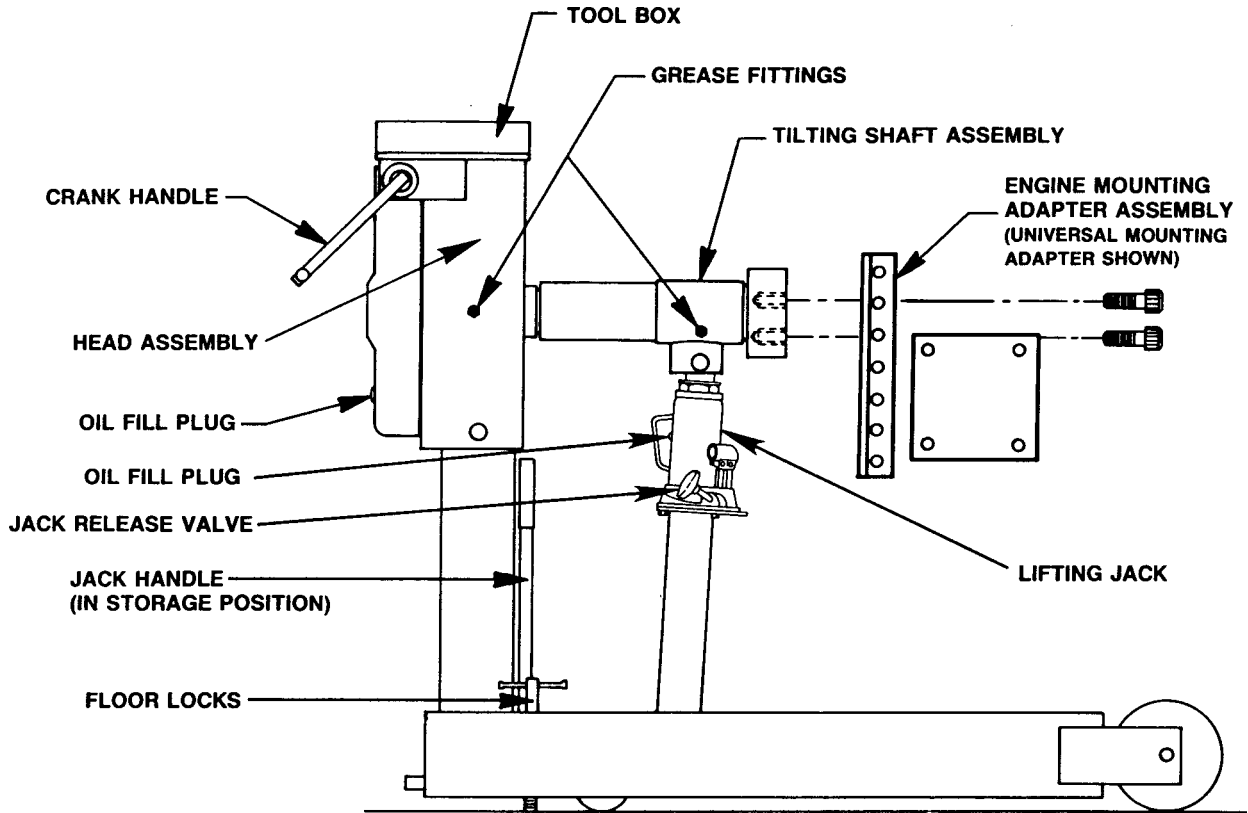


FIGURE 1

Assembly Instructions

(Item numbers refer to parts list #100300)

Note:

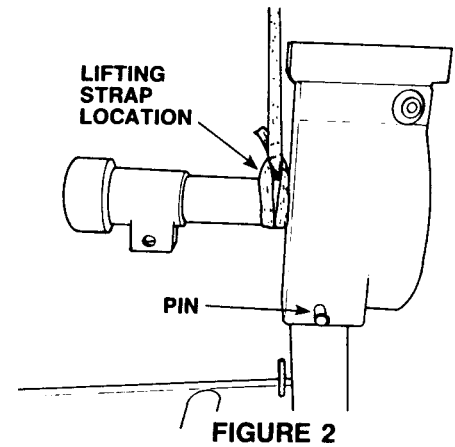
- It is easier to assemble the repair stand if you leave the base on the shipping pallet during assembly.
 - Use an overhead crane or lift when assembling this repair stand; a forklift can be used if other means are not available.
1. Place the head assembly in an upright position.
 2. Bolt the tool box to the top of the head assembly.
 3. Place the jack on the plate as shown in the parts list. Bolt the jack to the plate and move the completed assembly forward.
 4. Assemble a retaining ring on one end of each pin (Items #15 & #30).

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Issue Date: Rev. 9-1-92

5. Attach a lifting strap around the head assembly as shown in Figure 2. Lift the head assembly and lower it onto the post. Align the holes and insert the longer pin (#30). Place a retaining clip on the end of the pin.
6. Raise the lifting jack assembly and fit it into the mounting bracket located under the tilting shaft assembly. Insert a pin (#15) and fasten the pin in place with a retaining clip.
7. Place the jack handle in its storage position on the repair stand as shown in Figure 1.
8. Tighten the collar (#6) until it's snug against the bushing on the tube assembly (#3). Back the collar off 1/8 turn and tighten the set screw (#5).
9. If an engine mounting adapter assembly has been provided, attach it to the tilting shaft as shown in Figure 1. Torque the bolts at 450 ft. lbs.

Note: Use the hex stock (provided) as an adapter with a socket wrench on the allen head screws.

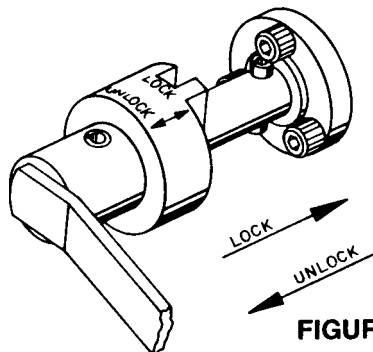


Safety Precautions

- ⚠ Caution:** To help prevent personal injury and equipment damage,
- Read and carefully follow the operating instructions and the safety precautions before assembling or using this engine stand. The engine stand should be used only by qualified service technicians who are familiar with this equipment.
 - Do not exceed the maximum rated capacity of 6,000 lbs. (2,725 kg). The maximum capacity is determined with the center of the engine located not more than 13" from the mounting hub surface of the engine stand. See Figure 5.
 - To maintain shear strength specifications, use alloy steel grade 8 or socket head cap screws to mount adapters or engines.
 - To ensure full thread engagement, tapped holes in adapters and engine blocks must be clean and not damaged. A thread length engagement equal to 1-1/2 screw diameters minimum is needed to maintain strength requirements.
 - To avoid having an unsafe, off-balance load, the engine's center of balance must be located within two inches of the engine stand rotating shaft. The center of balance is generally a few inches above the crankshaft.
 - The engine must be solidly mounted to the repair stand before removing the support from the lifting device.
 - Stay out from underneath a load that is being lifted or suspended. Accidental slippage can result in personal injury.
 - Use the lifting jack when it is necessary to lift the engine for rotation. While working on the engine, keep the jack at its lowest position to keep the center of gravity low and reduce the possibility of tipping.
 - Release system pressure SLOWLY to lower an engine. Do not unscrew the release valve knob more than two turns from its closed position.
 - Regularly check the cap screws on the repair stand assembly to be certain they are still torqued.

Handle Locking Mechanism

A positive-crank handle locking mechanism is provided to help ensure engine stability in all positions. See Figure 3.



To Engage: Slide the collar inward toward the gear housing. Align and engage the collar slots with the socket head cap screws of the housing. It may be necessary to rotate the crank slightly to engage the collar.

To Disengage: Slide the collar away from the housing beyond the shaft's ball detent.

Mounting the Engine (when using the Universal Mounting Adapter)

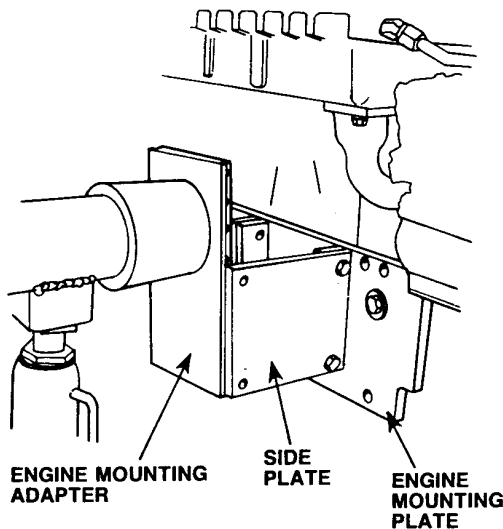


FIGURE 5

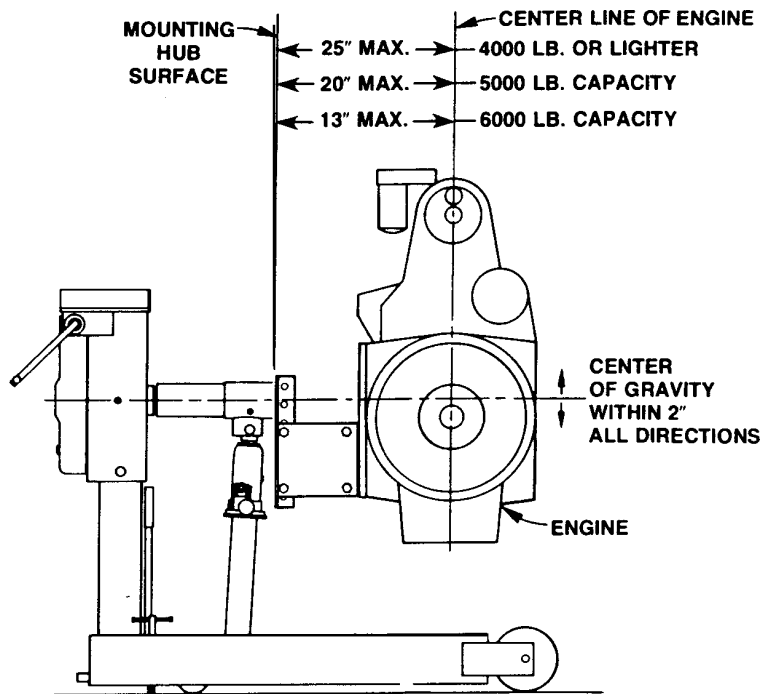


FIGURE 6

1. Select the engine mounting plate that has the correct bolt pattern for the engine to be serviced. Use the application chart provided to determine which holes adapt to the specific engine model.
2. Bolt the engine mounting plate to the engine using the spacers, bolts, and washers specified in the application chart. Wrench tighten the bolts.
3. Attach side plates to the engine mounting adapter plate but leave the cap screws and nuts loose.
4. Align the engine (with side plates attached to the adapter plate) with the universal mounting adapter plate. Raise or lower the engine until its center of balance is in-line with the rotating shaft of the engine stand. **Note: The engine's center of balance (or greatest concentration of weight) is usually about two inches above the center of the crankshaft.**
5. Align the closest tapped holes in the universal mounting adapter plate with the holes in the side plates. Securely tighten the side plates to the engine mounting adapter plate and to the universal mounting adapter plate on the engine stand.

Preventive Maintenance



Caution: It is absolutely required that the two grease fittings on the tilting shaft and the gear box are serviced regularly using a good quality grease. Failure to grease this area can cause equipment damage and possible injury to the operator.

- The worm and gear assembly operates in oil contained in the gear cover housing. The oil level should be just below the fill plug hole located on the lower part of the cover. Check the oil level regularly, and add oil if necessary (Mobilux, EP-023 or equivalent).
- Check the oil level in the hydraulic lifting jack: With the jack piston fully retracted, remove the small hex plug located on the main body. Add approved hydraulic jack oil until the oil level is just below the filler plug hole. Install the filler plug.
- If it is difficult to rotate an engine in one direction only, tighten the collar (Item #6) until it's snug against the gear box post. Back the collar off 1/8 turn, and tighten the set screw (#5).
- Do not tighten the jack release valve tighter than necessary; never use a pliers on the release valve.