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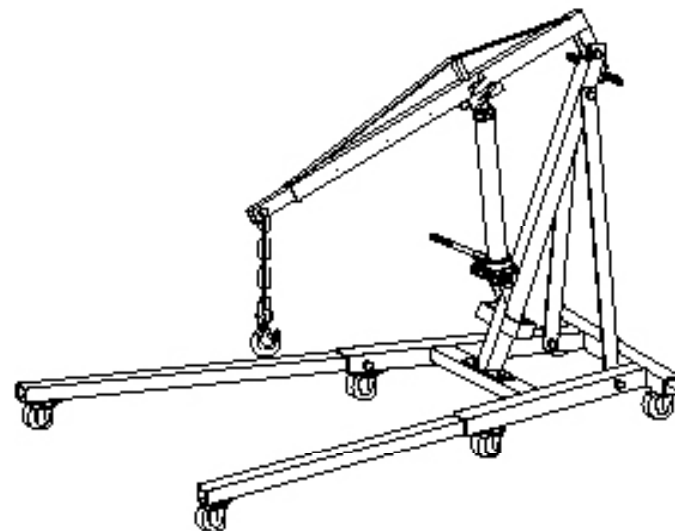


Heavy Duty Engine Crane

Operating Instructions & Parts Manual

Model Number
T-1481

Capacity
2 Ton



⚠ ATENCIÓN

- Leer, comprender, y seguir las instrucciones antes de utilizar el aparato.
- El manual de instrucciones y la información de seguridad deben estar comunicado en lengua del operador antes del uso.
- No seguir estas indicaciones puede

⚠ WARNING



To avoid crushing and related injuries:
NEVER work on, under or around a

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Printed in China

Save these instructions. For your safety, read, understand, and follow the information provided with and on this engine crane. The owner and operator of this equipment shall have an understanding of this engine crane and safe operating procedures before attempting to use. The owner and operator shall be aware that use and repair of this product may require special skills and knowledge. Instructions and safety information shall be conveyed in the operator's native language before use of this engine crane is authorized. If any doubt exists as to the safe and proper use of this product, remove from service immediately. **Inspect before each use.** Do not use if broken, bent, cracked or damaged parts are noted. Any engine crane that appears damaged in any way, or operates abnormally shall be removed from service immediately. If the engine crane has been or suspected to have been subjected to a shock load (a load dropped suddenly, unexpectedly), immediately discontinue use until product has been checked by an authorized service center. It is recommended that an annual inspection be done by qualified personnel. Labels and Owners Manuals are available from manufacturer.

PRODUCT DESCRIPTION

This Pro-Lift Engine Crane is designed to safely lift and lower rated capacity engines. Welded steel tube construction, safety hook, steel castors ensure safety, strength and stability.

BEFORE USE (refer to Fig.1 and Replacement Parts Illustration on Page 6 for location of components)

- 1. Inspect crane before each use. Do not use if bent, broken or cracked components are noted. Ensure that casters and boom move freely. Check for and tighten any loose assemblies.
- 2. Verify that the product and the application are compatible, if in doubt call Pro-Lift Customer Support @ (816) 891-6390.

BEFORE USE (continued)

3. Before using this product, read the owner's manual completely and familiarize yourself thoroughly with the product and the hazards associated with its improper use.

**WARNING**

Read, understand and follow all warnings and instructional material provided on and with this product. This engine crane is intended to be used to lift and lower rated capacity automotive and light truck engines. Do not exceed rated capacity for each boom position. When removing and installing engines, ensure that crane's power unit is not jammed against vehicle. Use only on hard, level surfaces. Use only chains and slings with a capacity equal to or greater than that of the crane. If loaded crane must be moved, make certain that load is stable, is in lowest possible position and is moved over a smooth, hard level surface. Make sure that boom is fully lowered before checking or adding fluid to power unit. Avoid shock loads caused by the rapid opening and closing of release valve. Shock loads may cause the load to swing, causing the crane to flip violently, bend or break. Do not allow load to swing or drop violently while lowering or moving. Do not stand over loaded boom nor in its intended line of travel. Do not modify this equipment. Failure to heed this warning may result in personal injury as well as property damage.

**ATENCIÓN**

- Leer, comprender, y seguir las instrucciones antes de utilizar el aparato.
- El manual de instrucciones y la información de seguridad deben estar comunicado en lengua del operador antes del uso.
- No seguir estas indicaciones puede causar daños personales o materiales.

SPECIFICATIONS

Model	Boom Position	Capacity	Min. Hook Height	Max. Hook Height	Boom Length
T-1481	1	2 Ton	15 9/16"	74"	52 3/4"
	2	1 1/2 Ton	11 5/8"	77 15/16"	59 3/8"
	3	1 Ton	7 1/2"	81 7/8 "	66 1/8"
	4	1/2 Ton	3 3/8"	85 13/16"	72 3/4"

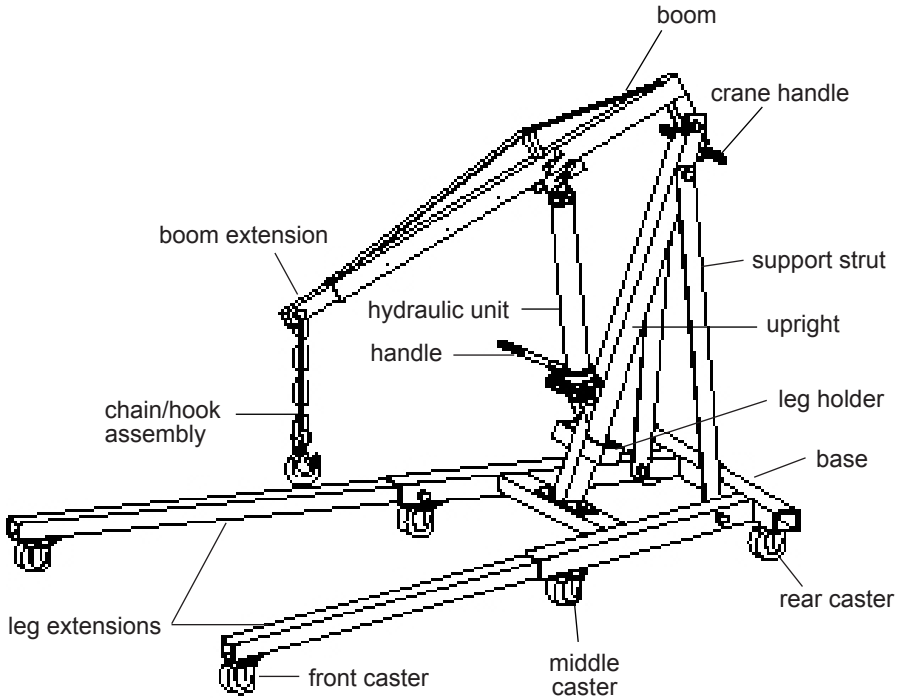


Fig. 1 - Engine Crane Nomenclature

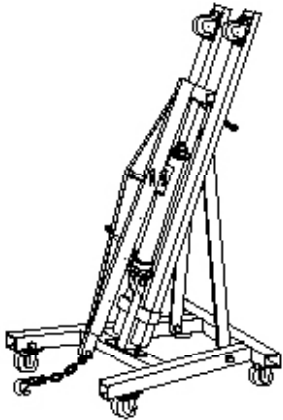


Fig. 2 - Engine Crane Storage Position

Instruction on how to transform the crane into storage position: (see Fig. 2)

- 1. Remove lock pin (Ref. No. 24 in figure 3) from the boom.
- 2. Lean hydraulic unit back against upright and slowly lower the boom to rest again hydraulic unit.
- 4. Remove bolts (Ref. # 8 in figure 3) of left and right legs of the crane.
- 5. Remove legs from crane and keep it in

ASSEMBLY

1. Attach (2) front casters (ref. no 1) to legs (ref. no 3) with M8 x 12 bolts (ref. no 2).
2. Attach (2) middle casters (ref. no 6) and (2) rear casters (ref. no 1) to base (ref. no 4) with M8 x 12 bolts (ref. no 2).
3. Slide (2) legs (ref. no 3) into the base (ref. no 4) and secure with M14 x 30 bolts (ref. no 8).
4. Attach upright (ref. no 7) to base (ref. no 4) with (2) M14 x 100 bolts (ref. no 9), washers (ref. no 10) and nuts (ref. no 11).
5. Attach (2) strut supports (ref. no. 12) to base (ref. no 4) and upright (ref. no. 7) with M16 x 100 bolts (ref. no. 13), washers (ref. no. 14), and nuts (ref. no. 15).
6. Place hydraulic unit (ref. no. 16) on upright's support bracket and secure with M16 x 90 bolt (ref. no 17), washer (ref. no. 18) and nut (ref. no. 19).
7. Attach boom (ref. no. 20) to upright (ref. no. 7) with M20 x 100 bolt (ref. no. 21), washer (ref. no. 22), and nut (ref. no. 23).
8. Pump jack until ram is extended approximately 2".
9. Align the hole on the hydraulic ram with the mounting hole of boom and secure with the lock pin (ref. no. 24) and retainer clip (ref. no. 25).
10. Slide boom extension (ref. no. 26) into boom (ref. no. 20) and secure with the lock pin (ref. no. 24) and retainer clip (ref. no. 25).
11. Attach chain/hook assembly (ref. no. 30) to boom extension (ref. no.26) with M14 x 80 bolt (ref. no. 27), washer (ref. no. 28) and nut (ref. no. 29).
12. Attach handle to upright with (4) M8 x

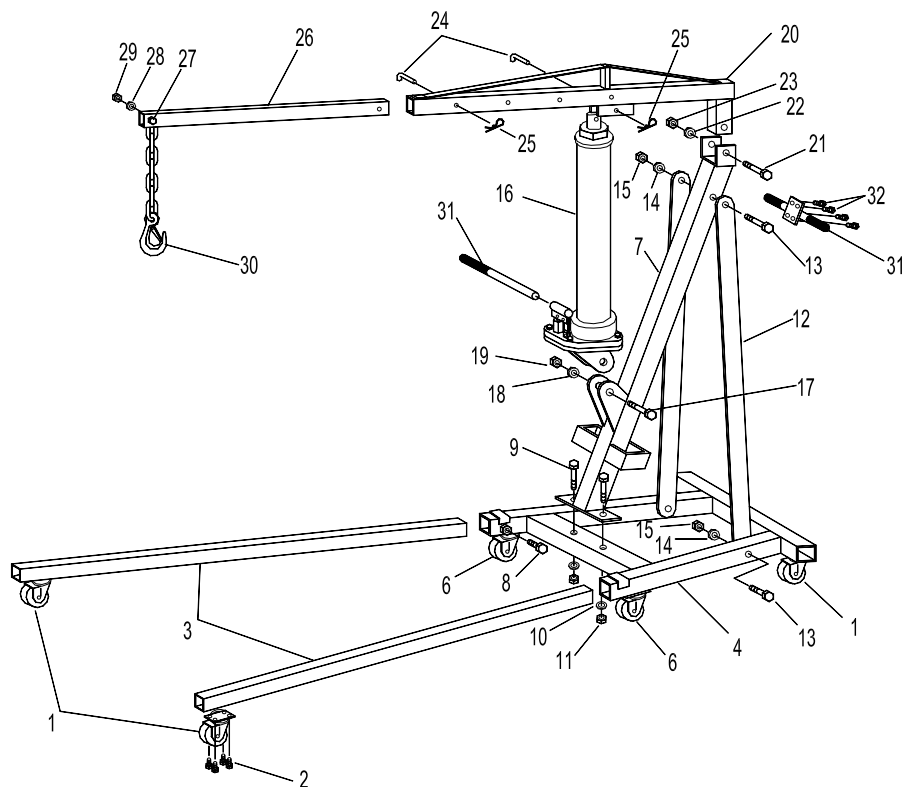


Fig. 3 - Assembly Illustration

OPERATION

1. Ensure application is compatible with product.
2. Read, understand and follow engine removal and installation instructions provided by vehicle service or shop manual.
3. Chains used in conjunction with this product shall have a rated capacity greater than the weight of the object being lifted. Secure chain/hook assembly to appropriate lifting point on engine. Refer to vehicle service or shop manual for the location of appropriate lift points. Ensure load is centered.
4. When ready to remove engine, turn release valve clockwise until firm. Pump handle until load is securely supported by crane.
5. Remove engine, then immediately transfer the engine to appropriate engine support device (engine stand).
6. Check to ensure stand is secure before working on or around.

WARNING

- Never extend leg extensions beyond factory marked position on each leg.
- Extend each leg extension an equal distance from frame.
- Never extend boom extension beyond furthest distance of leg extensions.
- Failure to heed these markings may result in personal injury and/or property damage.

! SAFETY MESSAGE !

Be sure all tools and personnel are clear before lowering load. No alterations shall be made to this device. Only attachments and/or adapters supplied by the manufacturer shall be used.

MAINTENANCE

Important: Use only a good grade ***hydraulic jack oil**. Avoid mixing different types of fluid and NEVER use brake fluid, turbine oil, transmission fluid, motor oil or glycerin. Improper fluid can cause failure of the jack and the potential for sudden and immediate loss of load.

MAINTENANCE (continued)

Adding oil

1. With jack fully lowered and handle sleeve fully depressed, carefully remove from crane. Set jack in an upright, level position. Remove oil filler plug.
2. Fill with hydraulic oil until just below the rim of the oil filler plug hole. Reinstall the oil filler plug.

Changing oil

For best performance and longest life, replace the complete hydraulic oil supply at least once per year.

1. With jack fully lowered and handle sleeve fully depressed, remove jack from crane body. With jack in it's upright, level position, remove oil filler plug.
2. Lay the jack on its side and drain the oil into a suitable container.

Note: Dispose of hydraulic oil in accordance with local regulations.

3. Set jack in it's upright, level position.
4. Fill with hydraulic oil until just below the rim of the oil filler plug hole. Reinstall the oil filler plug.

Lubrication

A periodic coating of light lubricating oil to pivot points, axles and hinges will help to prevent rust and assure that casters and pump assemblies move freely.

Cleaning

Periodically check the pump piston and ram for signs of rust or corrosion. Clean as needed and wipe with an oily cloth.

Note: Never use sandpaper or abrasive material on these surfaces !

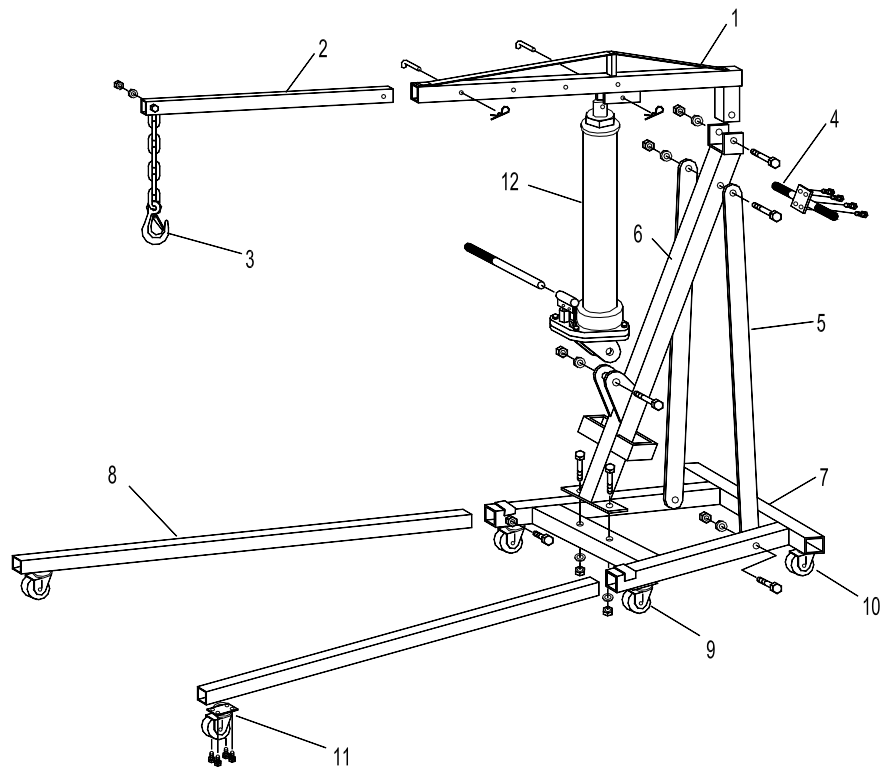
Storage

Refer to Fig. 2 on page 3 for detail storage instruction.

REPLACEMENT PARTS

Not all components of the jack are replacement items, but are illustrated as a convenient reference of location and position in the assembly sequence. When ordering parts, give model number, serial number and description below. Call or write for current pricing: phone (816) 891-6390, fax (816) 891-6599 or contact Pro-Lift Customer Support. 10939 N. Pomona Ave., Kansas City, MO 64153.

Part No.	Description	Qty	Part No.	Description	Qty
01	boom	1	09	middle caster assy.	2
02	boom extension	1	10	rear caster assy.	2
03	hook assy.	1	11	front caster assy.	2
04	crane handle	1	12	hydraulic unit assy.	1
05	support strut	2	--	hardware kit	all (fasteners, washers)
06	upright	1	--	label(s)	2
07	base	1	--	manual	1
08	leg	2			



TROUBLESHOOTING

Symptom	Possible Causes	Corrective Action
Jack will not lift load	• Release valve not tightly closed • Overload condition	• Ensure release valve tightly closed • Remedy overload condition
Jack bleeds off after lift	• Release valve not tightly closed • Overload condition • Hydraulic unit malfunction	• Ensure release valve tightly closed • Remedy overload condition • Contact Pro-Lift Customer Support
Jack will not lower after unloading	• Reservoir overfilled • Linkages binding	• Drain fluid to proper level • Clean and lubricate moving parts
Poor lift performance	• Fluid level low • Air trapped in system	• Ensure proper fluid level • With ram fully retracted, remove oil filler plug to let pressurized air escape, then reinstall oil filler plug
Will not lift to full extension	• Fluid level low	• Ensure proper fluid level

* “Bleeding off” means that jack begins to slowly lower rather than keep load at height.