

2 Ton Folding Engine Crane

Stock Number W41029

OWNER'S MANUAL

1 YEAR LIMITED WARRANTY

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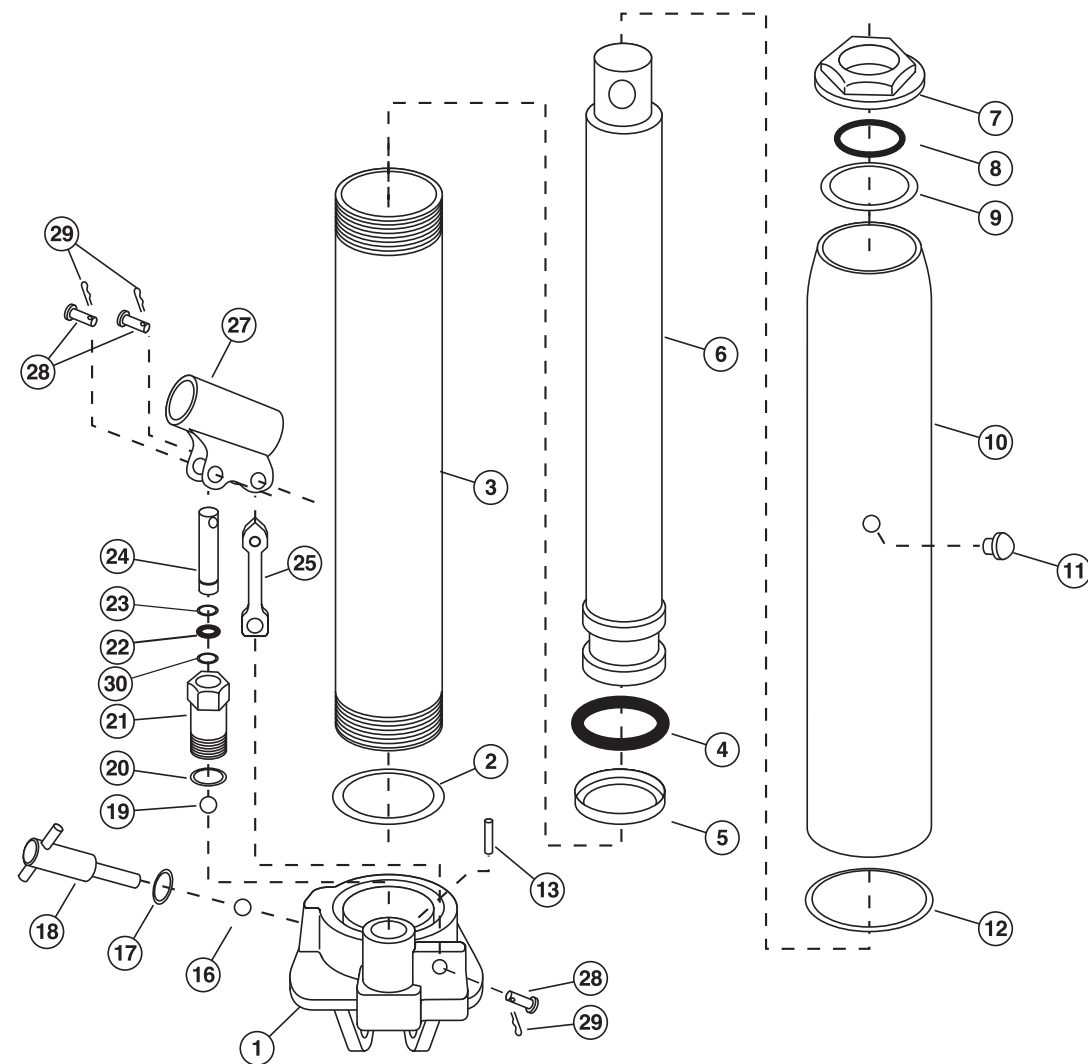
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FOR YOUR SAFETY,
please read these instructions carefully and retain them for future use.

**Performance
Tool®**

HYDRAULIC RAM ASSEMBLY



#	Description	Qty.	#	Description	Qty.	#	Description	Qty.
1	Valve Body	1	10	Oil Chamber	1	21	Pump Cylinder	1
2	Copper Washer	1	11	Oil Plug	1	22	O-ring	1
3	Cylinder	1	12	Seal Ring	1	23	Back-up Ring	1
4	O-ring	1	13	Tube	1	24	Plunger	1
5	O-ring Retainer	1	16	Steel Ball	1	25	Link Pin	1
6	Ram	1	17	Seal Ring	1	27	Handle Socket	1
7	Top Nut	1	18	Release Valve	1	28	Connecting Pin	3
8	O-Ring	1	19	Steel Ball	1	29	Cotter Pin	3
9	Sealing Gasket	1	20	Copper Washer	1			

MAINTENANCE and INSPECTION

1. Visual inspection must be made before each use of the crane, checking for cracks, cracked welds and missing and/or damaged parts. Any crane that appears to be damaged in any way must be removed from service immediately.
2. BECAUSE OF THE POTENTIAL HAZARDS ASSOCIATED WITH THE MISUSE OF EQUIPMENT OF THIS TYPE, NO MODIFICATIONS SHALL BE MADE TO THE PRODUCT.
3. Store crane with boom in fully lowered position and hydraulic ram valve closed when not in use to prevent machined surfaces from exposure. Keep all moving parts clean and well lubricated.
4. Replace worn or damaged parts with Performance Tool replacement parts. Be sure that only qualified personnel perform repairs.

SPECIFICATIONS

Max. Capacity: 4,000 lbs.
Base length: 69"
Base Width: 36"
Max. Height: (1/2 ton)..... 90-3/4"
Max. Height: (2 ton)..... 75-1/4"
Jack Capacity: (8 ton) 16,000 lbs.

Specifications are subject to change
without notice

IMPORTANT SAFETY INFORMATION

Read all safety warnings before operation.

WARNING!

Failure to obey these warnings may result in loss of load, damage to engine crane, and/or engine crane failure resulting in personal injury or property damage.

WARNING!

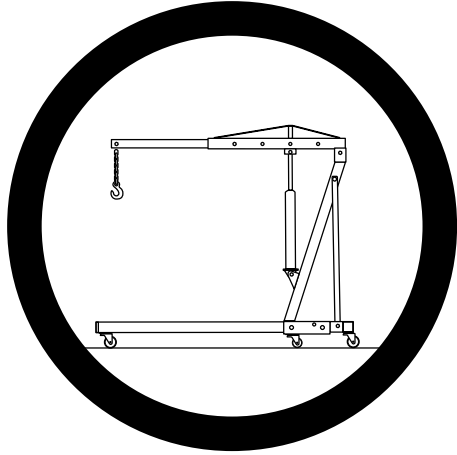
Do not overload engine crane beyond rated capacity of each specified boom position. Overloading can cause damage to or failure of the crane.

Always use crane on hard, level surface capable of sustaining the load. Use of crane on other than hard level surfaces can result in crane instability and possible loss of load.

Boom and load must be in lowest possible position before moving. Move load slowly and smoothly to avoid uncontrolled swinging and possible loss of load.

Be sure all personnel are clear of the load before lowering.

FRONT LEGS MUST ALWAYS BE LOCKED IN DOWN POSITION BEFORE APPLYING LOAD AND/OR RAISING BOOM (See Figure 2, page 5).



BOOM MUST BE IN FULLY LOWERED POSITION BEFORE RAISING LEGS. LEGS MUST NEVER BE RAISED WHEN CRANE IS CARRYING LOAD. LEGS MUST BE LOCKED IN PLACE WHEN RAISED (See Figure 3, page 5).

NEVER WORK UNDER LOAD.

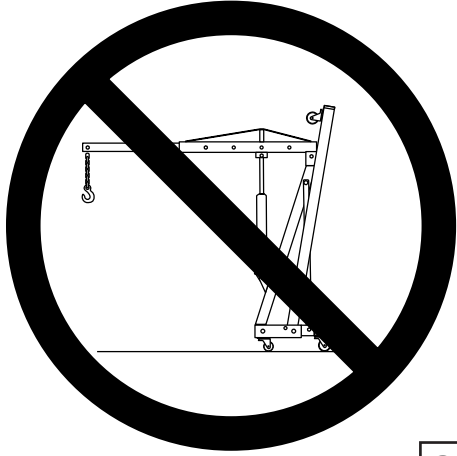


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Your Performance Tool Engine Crane was constructed with quality materials and workmanship and will give you many years of trouble free use when cared for as described in the "Care & Maintenance" section on page 6. However, as with any mechanical device, periodic adjustments are necessary to maintain a peak level of performance. Should your crane hydraulic ram be displaying any of the following symptoms, the simple procedures shown below should correct the problem.

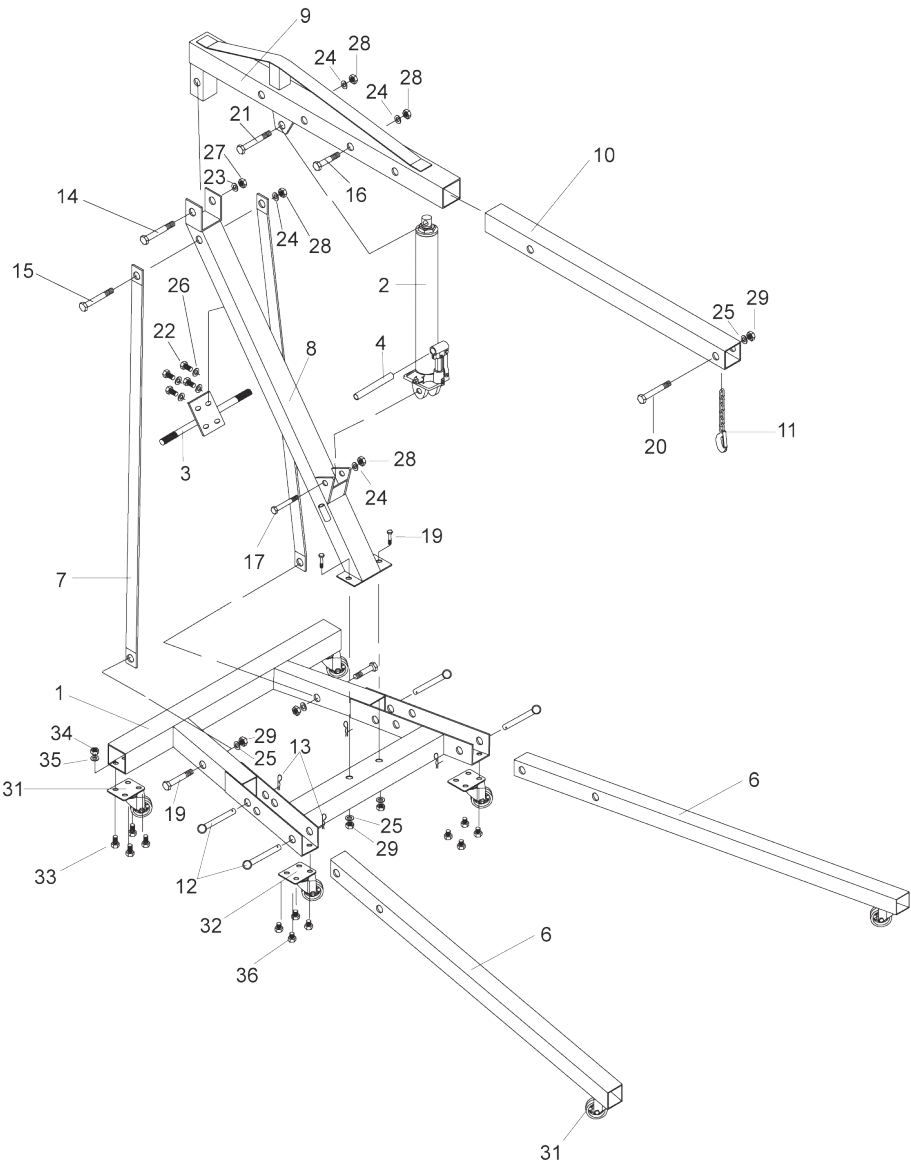
WARNING - Remove jack from service before making adjustments

Will not lift load	●	●	●
Will not hold load			●
Will not lift to full height	●	●	
Pump feels "spongy" under load	●	●	
Handle raises under load			●
Handle lowers under load			●
	Power unit may be low on fluid. With jack on level surface and in down position, remove filler plug and add clean hydraulic jack fluid to level of filler hole.	Power unit may be airbound. Open the release valve a minimum of 2 full turns. Pump the handle a minimum of 20 full strokes to purge air from the system.	Valves may not be closing completely. To seat valves: a.) Close release valve. b.) With jack in fully lowered position, manually raise lifting arm as high as possible. c.) Open release valve and allow jack to descend to lowered position.

NOTE:

Problems listed above with more than one solution may have a combination of causes. Please be sure that all solutions listed for each problem have been checked to eliminate possibility of further trouble. Sometimes solutions may need to be repeated for best results.

ASSEMBLY DIAGRAM



Carton 1 Contents		
#	Description	Qty.
1	Frame Base	1
2	8 Ton Hydraulic Ram	1
3	Handle	1
4	Jack Handle	1

Carton 2 Contents		
6	Front Leg	2
7	Support Strap	2
8	Main Support Post	1
9	Boom	1
10	Boom Extension	1
11	Hook & Chain Assembly	1
Hardware Box		
31	3-1/2" Caster	4
32	3" Caster	2

Hardware Box Contents		
12	Pivot Pin	4
13	R-Pin	4
14	Bolt M18 x 4-5/16", gr 8.8	1
15	Bolt M16 x 4-5/16", gr 4.8	1
16	Bolt M16 x 3-9/16", gr 4.8	1
17	Bolt M16 x 3-9/16", gr 8.8	1
19	Bolt M14 x 3-15/16", gr 4.8	4
20	Bolt M14 x 3-1/8", gr 8.8	1
21	Bolt M16 x 3-3/4", gr 8.8	1
22	Bolt M8 x 1/2"	4
23	Washer M18	1
24	Washer M16	4
25	Washer M14	5
26	Washer M8	4
27	Nut M18	1
28	Nut M16	4
29	Nut M14	5
33	Bolt M8 X 5/8"	16
34	Nut M8	16
35	Lock Washer M8	24
36	Bolt M8 X 1/2"	8

ASSEMBLY INSTRUCTIONS

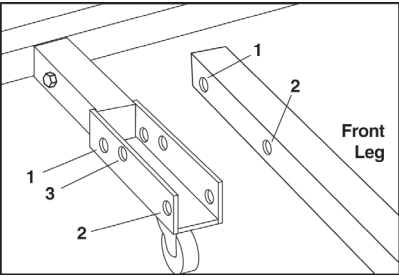
WARNING! To prevent Serious injury and death: The correct bolts must be used during assembly. Carefully compare bolts to Bolt Grade Identification illustrations and the measurements shown in the parts list and assembly diagrams near the end of this manual to make sure that the correct bolts are used in the correct place.

NOTE: All fasteners should be only "hand tight" until fully finished with assembly.

1. Attach Front Legs (6) to Frame Base (1) using all four Pivot Pins (12) as follows:
On each leg, insert one pin through Frame Base and Front Leg at rear hole #1 (See figures 1 & 2). This pin serves as a pivot pin and remains in hole #1 permanently. Insert a second pin through the Frame Base and Front Leg at forward hole #2. This serves as a Lock Pin to lock leg in down position (Figure 2).
2. Insert Hair Pins through Frame Pins to secure in place.
3. Attach Handle (3) to Main Support Post (8) using bolts (22) and washers (26).
4. Attach Main Support Post (8) to Frame Base using bolts (19), washers (25) and nuts (29).
5. Attach Support Straps (7) to top of Main Support Post using bolt (15), washers (24) and nut (28). NOTE: The bends of the Supports face out at the top and in at the bottom.
6. Connect Support Straps to Frame Base using bolts (19), washers (25) and nuts (29).
7. Connect bottom of Hydraulic Ram (6) to Main Support Post using bolt (17), washers (24) and nut (28).

ASSEMBLY CONT.

Figure 1



8. Connect Boom (9) to Main Support Post using bolt (14), washers (23) and nut (27).
9. While helper holds Boom up, connect top of Hydraulic Ram to Boom using bolt (21), washers (24) and nut (28).
10. Slide Boom Extension (4) into Boom making sure that slot for chain & hook faces down. Secure at desired capacity position with bolt (16), washers (24) and nut (28).
11. Install Chain & Hook Assembly (11) with bolt (20), washers (25) and nut (23).
12. Tighten all fasteners.

OPERATION

REFER TO VEHICLE MANUFACTURER'S APPROVED SERVICE MANUAL FOR PROPER ENGINE REMOVAL PROCEDURE.

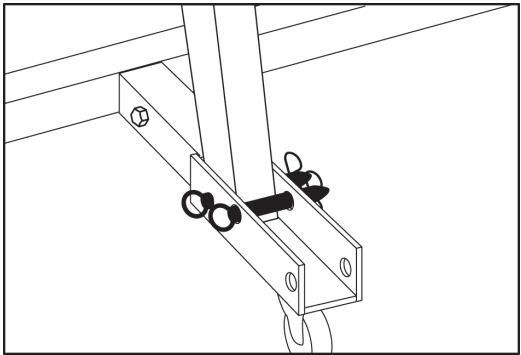
Be aware of load weight. Always position boom extension at correct location for the load you are lifting; 1/2 Ton, 1 Ton, 1-1/2 Ton or 2 Ton.

This folding crane features an easy to use Frame Pin locking system. The rear Frame Pin acts as a Pivot Pin (See Figure 2) and is a permanent fixture after being installed. The forward Frame Pin acts as a Lock Pin to safely lock the legs in the Down/Operational position (Figure 2) or to lock the legs in the Up/Storage position (Figure 3).

Figure 3

Leg Locked in Up Position

Crane is ready for storage



1. **FRONT LEGS MUST ALWAYS BE LOCKED IN DOWN POSITION BEFORE APPLYING LOAD AND/OR RAISING BOOM (See Figure 2).**
2. To raise load, close release valve and pump handle to raise boom to desired height.
3. To lower load, **SLOWLY** turn release valve counter-clockwise.
4. **BOOM MUST BE IN FULLY LOWERED POSITION BEFORE RAISING LEGS. LEGS MUST NEVER BE RAISED WHEN CRANE IS CARRYING LOAD. LEGS MUST BE LOCKED IN PLACE WHEN RAISED (See Figure 3).**

Figure 2

Leg Locked in Down Position

Crane is ready for Operation

