Form No. 102620



HYDRAULIC TECHNOLOGIE

Hydraulic Technologies 5885 11th Street Rockford, IL 61109-3699 USA Tech. Services: (800) 477-8326 Fax: (800) 765-8326 Order Entry: (800) 541-1418 Fax: (800) 288-7031 Parts List and Operating Instructions for:

> J58T J109T

Internet Address: http://www.powerteam.com

## HYDRAULIC TOE JACK (Model A)

Model J58T Max. Capacity: 5 Ton Model J109T Max. Capacity: 10 Ton

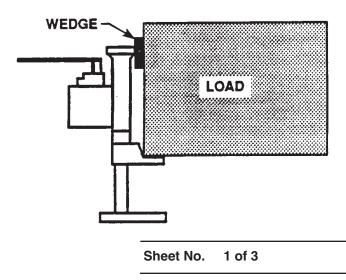
Read and carefully follow the warnings and operating instructions before using this jack. Most problems with new equipment are caused by improper operation or setup.

NOTE: Inspect the pump upon arrival. The carrier, not the manufacturer, is responsible for any damage resulting form shipment.

# SAFETY PRECAUTIONS

WARNING: To help prevent personal injury or damage to equipment,

- Do not exceed the maximum load capacity of the jack.
- Do not add additional load to a lifted load.
- Do not use in unstable or hazardous positions.
- Unit must be used on flat surfaces able to carry the load.
- Keep clear of lifted loads.
- The load must be stable during lifting. An unstable load may cause the jack or load to slip.
- Do not use the jack(s) if damaged, altered, or in poor condition.
- Do not lift people or loads with people on them.
- This hydraulic jack is for professional use only and should be used only by persons trained in its use.
- Do not lift at the end of the toe. Fully engage the load with the toe.
- Use only recommended hydraulic fluid in this unit.
- Do NOT, under any circumstances, tamper with the adjustment of the jack's internal relief valve screw. To do so may cause the jack to fail.
- When lifting by the toe, wedge the head of the jack on the load to avoid bending the column. Refer to illustration at left.
- Read operating instructions and A.N.S.I. B30.1 safety code for jacks.
- The owner of the jack must ensure that all safety-related decals are maintained and replaced as they become hard to read.
- This guide cannot cover every situation, so always do the job with safety first.



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Note: Shaded areas reflect last revision(s) made to this form.

Rev. 4 Date: 13 June 2008

## **OPERATION OF THE JACK**

IMPORTANT: Do not carry the jack by the jacking lever.

#### Lifting a Load

1. Position the load on the toe of the jack.

WARNING: Do not lift at the end of the toe. Fully engage the load with the toe. IMPORTANT: When lifting by the toe, wedge the head of the jack on the load to avoid bending the column.

- 2. Turn the release valve knob in a clockwise direction until it will turn no more.
- 3. Pump the jacking lever in an up and down motion.

#### Lowering a Load

1. Slowly loosen the release valve knob by turning it in a counterclockwise direction. The more the knob is loosened, the faster the load will be lowered. To stop the jack instantly from lowering a load, tighten the release valve knob by turning it in a clockwise direction.

## **DISASSEMBLY OF THE JACK**

NOTE: Refer to parts list on back page 2 of 3 and page 3 of 3.

#### **Draining the Jack**

- 1. Extend the jack to full stroke. Wedge the toe of the jack on the base to hold in this position.
- 2. Remove the cylinder plug (6) and drain oil.

#### **Disassembly of the Pump**

- 1. Remove the hinge pin (7).
- 2. Pull out the lever assembly (2), piston (23), and connecting link (5).
- 3. Remove the four screws (27) that hold the pump to the reservoir. Separate the pump from the reservoir.
- 4. Remove the bladder (20) and drain the oil from it. Using a clean, absorbent cloth, wipe any remaining oil out of the bladder.

#### **Disassembly of the Cylinder**

- 1. Remove the spring clip (15) with a locking pliers.
- 2. Pull out the cylinder rod/base plate assembly (9) and the toe (17) from the jack body.
- 3. Heat the cylinder guide (8) slightly to soften the locking compound on the threads. Disassemble it from the cylinder rod.
- 4. Remove the o-ring (14) and U-cup (16) from the toe.

#### **Disassembly of the Pump**

- 1. Unthread the inlet check valve body (21).
- 2. Remove the inlet check found at the bottom of the body by unscrewing the perforated screw (12). Remove the ball (13) and the spring (18).
- 3. Remove the breather valve screws (2) found at the top of the pump barrel (28) and remove the ball (4) and spring (3).
- 4. Unthread the outlet check screw (12) found between the o-rings (24) and, remove the spring (11) and ball (13).
- 5. Drive out the spring pin (4) and remove the release valve knob (3).
- 6. Remove the retaining ring (2) before removing the release valve.
- 7. Using a small press or a mallet and a piece of soft metal tubing, push the piston cartridge (29) out of the pump body.
- 8. Remove o-ring (26), wiper (25), and U-cup (30).

#### **Disassembly of the Release Valve**

1. Unscrew the seat (9) which will give you access to then remove the ball (8), ball follower (7) and spring (6).

#### Lever Disassembly

1. Remove the pins (4) that will make it possible to separate the lever (2), piston (23) and link (5).

NOTE: Clean all jack parts (except o-rings, wipers, and bladder) with a degreasing agent and dry completely.

# ASSEMBLY OF THE JACK

### Assembly of the Cylinder

- 1. Replace o-ring (14) and U-cup (16) on the toe (17).
- 2. Grease the bore of the toe (17) with a non-silicone lubricant.
- 3. Mount the toe (17) on the cylinder rod (9).
- 4. Tighten the guide (8) on the cylinder rod using a thread locking compound. Clean away any excess compound.
- 5. Grease the exterior machined portion of the toe (17) with a non-silicone lubricant.
- 6. Assemble the cylinder rod/base plate assembly (9), the toe (17), and the guide (8) into the body of the jack.
- 7. Drive the spring stock (15), round end first, into the hole at the base of the jack body using a pliers to guide the spring.

### Assembly of the Pump

- 1. Install o-ring (26), U-cup (25), and wiper (30) on the piston cartridge (29). Grease the pump barrel with a suitable lubricant.
- 2. Seat the piston cartridge into its housing in the pump barrel (28) using a small press or mallet and a piece of soft metal.
- 3. Replace the inlet check valve into the pump body (21) by installing the ball (13), spring (18) and perforated screw (12).

NOTE:

- The inlet check valve may be reconditioned by coining the ball into its seat with a hammer and soft punch.
- Springs (11 & 18) look very much alike and must not be confused. Spring (18) is a lighter rate than spring (11).
- 4. Replace o-ring (22) on the inlet check valve body. Thread the valve body onto the pump barrel (29).
- 5. Reassemble the outlet check valve into the pump barrel (28) by installing the ball (13), spring (11) and screw (12) respectively.
- 6. Reinstall the breather valve into the top of the pump barrel (28) by first installing the spring (3), then the ball (4) and last the screw (2).
- 7. Coat the inside of the jack body with a suitable lubricant to accept the pump body.

### Assembly of the Release Valve

- 1. Reassemble the spring (6), ball follower (7), ball (8), and seat (9).
- 2. Grease and replace o-ring (1).
- 3. Install the release valve in the pump body.
- 4. Install the retaining ring (2).

### Assembly of the Lever

1. Using two pins (4), attach the connecting link (5) and the piston (23) to the lever (2). **IMPORTANT: Do NOT** damage the piston.

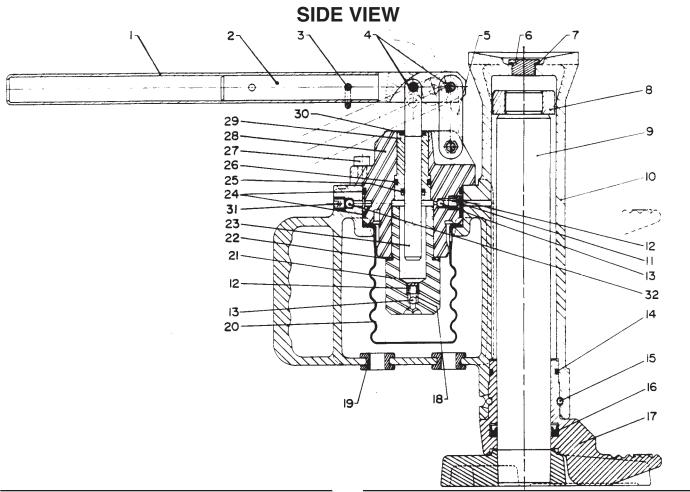
#### Final Assembly of the Jack

- 1. Place the bladder (20) in the reservoir of the jack body.
- 2. Mount the pump into its housing on the jack body. Tap the pump into place with a mallet, while protecting the top of the pump with a piece of wood. Secure with four screws (27).
- 3. Position the jack vertically and hold it in the extended position by wedging the toe on the base.
- 4. Open the release valve.
- 5. Using a funnel with a filter, fill the jack with Power Team hydraulic fluid through the cylinder cap hole while holding the breather valve ball off its seat with a pin or punch. Fill until fluid comes out of the breather valve. Allow the breather valve ball to reseat.
- 6. Close the release valve and continue to fill the jack with oil until oil comes out of the top of the cylinder.
- 7. Replace the cylinder plug (6) and the o-ring (7).
- 8. Fill the piston cavity with oil.
- 9. Install the lever assembly (2) with pin (7), nut (8) and washer (6).
- 10. Turn the jack upside down for a few seconds.
- 11. Push the breather valve ball off of its seat until oil stops coming out of the screw.

12.	Install	protective scre	w (1).
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### Parts List and Operating Instructions, Form No. 102620, Back sheet 2 of 3



ltem No.		No. Req'd	Description	Item No.	Part No.	No. Req'd	Description
1	250072	2 1	Tube	17	250062	: 1	Toe (For J58T)
2	250071	1	Lever		250107	'1	Toe (For J109T)
3	250073	3 1	Straight Pin	18	† <b>250088</b>	1	Spring
4	250075	<b>i</b> 2	Pin	19	250068		Perforated Rubber Plug
5	<b>25007</b> 4	1	Link	20	▲250067	'1	Bladder
6	250065	<b>i</b> 1	Plug	21	250081	1	Valve Body
7	250066	<b>i</b> 1	O-ring	22	250082	: 1	O-ring
8	250061	1	Guide (For J58T)	23	250083	1	Piston
	250106	<b>i</b> 1	Guide (For J109T)	24	▲250086	2	O-ring
9	250059	) 1	Cylinder and Base Plate (For J58T)	25	250085	1	U-cup
	<b>25010</b> 4	1	Cylinder and Base Plate (For J109T)	26	250084	1	O-ring
10	250058	8 1	Body (For J58T)	27	250070	4	Screw
	250103	8 1	Body (For J109T)	28	250079	1	Pump Barrel
11	+250089	) 1	Spring	29	250080	1	Piston Cartridge
12	+250090	2	Perforated Screw	30	250217	'1	Wiper
13	+250087	2	Ball	31	<b>†250091</b>	1	Screw
14	*250063	3 1	O-ring (For J58T)	32	<b>†250087</b>	'1	Ball
*	**250108	8 1	O-ring (For J109T)				
15	*250060	) 1	Retaining Ring (For J58T)		PARTS	S INCL	UDED BUT NOT SHOWN
*	**250105	<b>i</b> 1	Retaining Ring (For J109T)		250110	1	Warning Decal
16	*250064	1	U-cup (For J58T)		250111	1	Trade Name Decal (For J58T)
*	**250109	) 1	U-cup (For J109T)		250112	: 1	Trade Name Decal (For J109T)

Part numbers marked with an asterisk (\*) are contained in Column Assembly Repair Kit No. 250113 (for J58T). Part numbers marked with two asterisks (\*\*) are contained in Column Assembly Repair Kit No. 250114 (for J109T). Part numbers marked with a dagger (†) are contained in Valve Assembly Repair Kit No. 250117. O-ring Set Repair Kit No. 250116. (Discontinued)

Part numbers marked with a triangle ( $\blacktriangle$ ) are contained in Bladder Change Repair Kit No. 250115.

Note: Shaded areas reflect last revision(s) made to this form.

2 Section B 3 Δ 5 9 A A ₽ ₽ B Detail A See back pg. 3 of 3 7 8 6

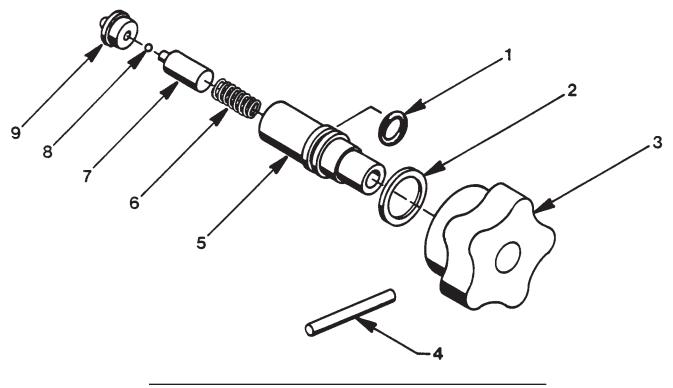
Item	Part	No.		
No.	No.	Req'd	Description	
1	+250091	1	Screw	
2	<b>†250090</b>	1	Perforated Screw	
3	250088	1	Spring	
4	† <b>250087</b>	1	Ball	
5	250069	1	Сар	
6	250078	1	Washer	
7	250076	1	Hinge Pin	
8	250077	1	Nut	
9	250069	1	Сар	

Part numbers marked with a dagger (†) are contained in Valve Assembly Repair Kit No. 250117.

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DETAIL A



Item No.	Part No.	No. Req'd	Description
	-		•
1	250098	1	O-ring
2	250099	1	Ring
3	250100	1	Handle
4	250101	1	Pin
5	250092	1	Release Valve
6	250096	1	Spring
7	250095	1	Ball Follower
8	250094	1	Ball
9	250093	1	Seat