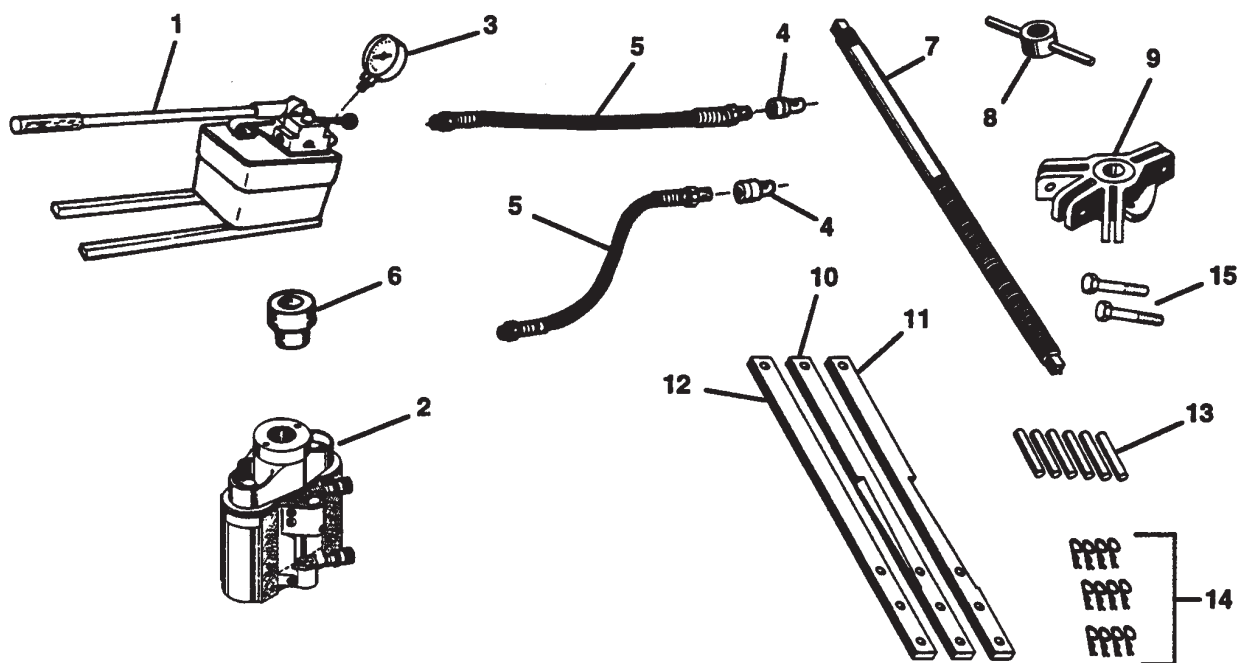


**Parts List &
Operating Instructions for:**1648
1649
PS100

Sprocket Removal & Installation Tool Set

Max. Capacity: 100 Tons

This Tool Set can deliver up to 100 tons of force for sprocket removal and replacement. These tools are designed for the removal and replacement of sprockets only. Removal or installation of sprocket shafts and outer bearing supports requires additional tools, which are available from the tractor manufacturer.



Item No.	Part No.	No. Req'd	Description
1	4009	1	Hand Pump w/ 4-way Valve (1648)
	P460D	1	Hand Pump w/ 4-way Valve (PS100)
2	4130	1	100 Ton Double Acting Ram (1648)
	RT1004	1	100 Ton Double Acting Ram (PS100)
3	10492	1	100 Ton Gauge (1648 & PS100)
4	25599	2	Hose Half Coupler (1648 & PS100)
5	36888	2	Hose
6	24196	1	Plain Insert (1648 & PS100)
7	32699	1	Ram Adjusting Screw
8	34136	1	Speed Nut
9	51012	1	Puller Head

Item No.	Part No.	No. Req'd	Description
10	42094	1	Left Hand Puller Leg
11	42098	1	Right Hand Puller Leg
12	42300	1	Puller Leg
13	23688	6	Leg Pin
14	14528	12	Hair Pin
15	17457	2	Cap Screw (mounts ram to puller head)

Parts Included but not Shown

10645	1	45° Fitting (1648 & PS100; mounts gauge to pump)
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Shaded area reflects
last revision made to
this form.

GENERAL SAFETY PRECAUTIONS

WARNING

- This equipment is to be used only by qualified personnel familiar with the correct method of operation.
- Read all instructions before using this equipment.
- Wear proper eye protection and use all necessary shielding recommended for an operation involving high hydraulic pressures.

Hydraulic Hose

- Should a hydraulic hose ever burst or rupture, immediately shut off the pump before attempting to remedy the situation. *Never attempt to grasp a leaking hose under pressure with your hands. The force of the escaping hydraulic fluid could cause serious and permanent injury.*
- Avoid any conditions which could damage the hose and impair the pump's performance. Never allow the hose to kink, twist, curl or bend so tightly that the oil flow within the hose is blocked or reduced. This could damage the hose and possibly result in serious injury to persons working in the immediate vicinity.
- Do not overtighten the connections. Connections need only be tightened securely and leak-free. Over-torque may cause premature thread failure or may cause high pressure fittings to split at pressures lower than their rated capacities.
- Do not subject the hose to any potential hazard (ex: fire, extreme heat, heavy impact or sharp surfaces) which might rupture or weaken the hose.
- Do not use the hose to lift or move the equipment connected to it.
- Before each use, inspect the hose for cuts or signs of wear. *Never use a defective hose with any pressurized equipment!*

Cylinder

- Do not exceed either the pump or cylinder's rated capacity.
- Do not set poorly-balanced or off-center loads on the cylinder.

HYDRAULIC CONNECTIONS

- The use of quick couplers is recommended to keep air and contamination out of the system.
- Clean all the areas around the oil ports of the pump and cylinder. Inspect all threads and fittings for signs of wear or damage and replace as needed. Clean all hose ends, couplers or union ends.
- Remove the thread protectors from the hydraulic oil outlets.
- Seal all pipe connections with a high quality, non hardening pipe sealant. Teflon tape may also be used to seal hydraulic connections provided only one layer of tape is used. Apply carefully to prevent the tape from being "pinched" by the coupler and broken off inside system. Any loose pieces of tape could travel through the system and obstruct the flow or cause jamming of precision fit parts.

OPERATING INSTRUCTIONS

SPROCKET REMOVAL

1. Refer to the Sprocket Removal illustrations for make and model being worked on to determine the letters of the tools required to remove the sprocket. Locate these letters on the Tractor Tool Identification Charts (Caterpillar, Allis Chalmers, Komatsu or International Hough) to determine the exact tool part number.
2. Refer to vehicle service manual for proper disassembly procedures which will permit access to the sprocket for sprocket removal.
Note; Removal and installation of sprocket shafts and outer bearing supports will require additional tools which are available from the tractor manufacturer.
3. Assemble the tools from step 1 as shown in the Sprocket Removal illustrations for make and model being worked on.
4. Apply hydraulic pressure and remove the sprocket.

SPROCKET INSTALLATION

1. Refer to the Sprocket Installation illustrations for make and model being worked on to determine the letters of the tools required to install the sprocket. Locate these letters on the tractor tool identification charts (Caterpillar, Allis Chalmers, Komatsu or International Hough) to determine the exact tool part number.
2. Assemble the tools from the above step as shown in Sprocket Installation Instructions for make and model being worked on.
3. Apply hydraulic pressure and install the sprocket.

Important: The cylinder piston must be retracted before it is removed.