

OIL FILTER (TT-560, TT-660, AND TT-680 ONLY)



A replaceable element oil filter is located outside the crankcase. Replace the filter element each time the crankcase oil is changed or every 1,000 hours.

The oil filter and all other oil pump system components are protected from excessive internal oil pressure by a pressure relief valve between the oil filter and the oil pump.

Time between oil changes depends upon local or operating conditions. Ordinarily, if the crankcase is kept closed, it should not be necessary to change oil more often than once in 1,000 working hours. However, the oil must be changed anytime water or other contamination is found. Check the oil pressure gauge and oil level gauge frequently.

WARNING

Check the oil for contamination whenever pumped fluid sprays or splashes against a pony rod. This is especially critical when the fluid contains salts or solids, as these contaminants can plug lubricating passages and cause rapid power end failure. PUMPS MAY BE SHIPPED WITHOUT OIL IN THE CRANKCASE.

STARTING A NEW PUMP

1. Fill crankcase with oil of proper grade to proper level.
2. The proper oil level is to the top plug or halfway up the sight glass while the pump is not running or static. The oil plugs and sight glass are located on either side of the crankcase.

CRANKCASE OIL REQUIREMENTS

Recommended oil is an API-GL5 grade oil in 80W-90

An 80°F (27°C) crankcase oil temperature rise over ambient air temperature is typical for the pumps covered by this manual when operating at or near rated horsepower.

Oil viscosity must not exceed 7,000 SSU at start-up and must be between 1,500 SSU and 130 SSU while operating, regardless of the oil temperature or grade used. A crankcase heater and/or an oil heat exchanger may be needed to meet these requirements.

Failure to follow these lubrication requirements will void the warranty.

Some operating conditions and/or oil brands produce excessive oil foaming, even when the specified GL-5 oils containing anti-foaming additives are used. Oil foaming can cause pump damage, as oil bubbles will not lubricate moving parts properly. If significant oil foaming occurs, contact Tulsa Rig Iron.

NOTICE

Priming is important! It lubricates plungers or pistons and liners. If these parts are not lubricated they could be severely damaged in operation.

Oil capacities of each model are listed below:

The TT-100 through TT-540 models are closed splash lube system.	
TT-100	2.25 gallons crankcase and 6.5 gallons chainbox
TT-150	6.25 gallons crankcase and 9.5 gallons chainbox
TT-250	16 gallons crankcase and 25 gallons chainbox
TT-540	16 gallons crankcase and 25 gallons chainbox
The TT-560 through TT-680 models are lube pump system operated. For Tulsa Rig Iron factory installed lube systems, add 2 additional gallons to the crankcase capacities. Changes made to the length of hoses and size, as well as pump type, will cause oil capacities to vary.	
TT-560	25 gallons crankcase and 28 gallons chainbox
TT-660	25 gallons crankcase and 28 gallons chainbox
TT-680	26 gallons crankcase and 28 gallons chainbox

To prevent excessive wear on fluid pistons or plungers and packing when starting, remove the discharge valve cover plates and discharge valves and prime the pump. Replace the discharge valves and caps.

Start the pump slowly and operate it for several minutes with little or no discharge pressure.