

SERVICE MANUAL



T8010 [Z8Rx06001 -]
T8020 [Z8Rx06001 -]
T8030 [Z8Rx06001 -]
T8040 [Z8Rx06001 -]
T8050 [Z8Rx06001 -]

Contents

INTRODUCTION

DISTRIBUTION SYSTEMS..... A

PRIMARY HYDRAULIC POWER SYSTEM..... A.10.A

PRIMARY HYDRAULIC POWER SYSTEM Electro-hydraulic remote valve..... A.10.C

PNEUMATIC SYSTEM..... A.20.A

ELECTRICAL POWER SYSTEM..... A.30.A

LIGHTING SYSTEM..... A.40.A

ELECTRONIC SYSTEM..... A.50.A

FAULT CODES..... A.50.A

POWER PRODUCTION..... B

ENGINE..... B.10.A

FUEL AND INJECTION SYSTEM..... B.20.A

ENGINE COOLANT SYSTEM..... B.50.A

LUBRICATION SYSTEM..... B.60.A

STARTING SYSTEM..... B.80.A

POWER TRAIN..... C

TRANSMISSION Powershift..... C.20.E

REAR PTO Hydraulic..... C.40.C

BAR AXLE..... C.60.A

TRAVELLING..... D

FRONT AXLE..... D.10.A

2WD-4WD SYSTEM Hydraulic..... D.14.C

STEERING Hydraulic..... D.20.C

SERVICE BRAKE Hydraulic..... D.30.C

PARKING BRAKE Hydraulic..... D.32.C

BRAKE CONNECTION Hydraulic..... D.34.C

BRAKE CONNECTION Pneumatic..... D.34.E

SUSPENSION Hydraulic..... D.40.C

WHEELS AND TRACKS	Wheels.....	D.50.C
BODY AND STRUCTURE	.....	E
SHIELD	.....	E.20.A
USER CONTROLS AND SEAT	.....	E.32.A
USER CONTROLS AND SEAT	Operator seat.....	E.32.C
USER PLATFORM	.....	E.34.A
ENVIRONMENT CONTROL	Heating, ventilation and air-conditioning.....	E.40.D
SAFETY SECURITY ACCESSORIES	Safety.....	E.50.B
WORKING ARM	.....	H
HITCH	Rear hitch.....	H.10.C

⚠ WARNING ⚠

Hydraulic fluid escaping under pressure can have enough force to penetrate the skin. Hydraulic fluid may also infect a minor cut or opening in the skin. If injured by escaping fluid, see a doctor at once. Serious infection or reaction can result if medical treatment is not given immediately. Make sure all connections are tight and that hoses and lines are in good condition before applying pressure to the system. Relieve all pressure before disconnecting the lines or performing other work on the hydraulic system. To find a leak under pressure use a small piece of cardboard or wood. Never use hands. Failure to comply could result in death or serious injury.

M252A

⚠ WARNING ⚠

When removing hardened pins such as a pivot pin, or a hardened shaft, use a soft head (brass or bronze) hammer or use a driver made from brass or bronze and a steel head hammer.

M497

⚠ WARNING ⚠

When using a hammer to remove and install pivot pins or separate parts using compressed air or using a grinder, wear eye protection that completely encloses the eyes (approved goggles or other approved eye protectors).

M498

⚠ WARNING ⚠

Use suitable floor (service) jacks or chain hoist to raise wheels or tracks off the floor. Always block machine in placed with suitable safety stands.

M499

⚠ WARNING ⚠

When servicing or repairing the machine. Keep the shop floor and operators compartment and steps free of oil, water, grease, tools, etc. Use an oil absorbing material and or shop cloths as required. Use safe practices at all times.

M500

⚠ WARNING ⚠

Batteries contain acid and explosive gas. Explosions can result from sparks, flames or wrong cable connections. To connect the jumper cables correctly to the battery of this machine see the Operators Manual. Failure to follow these instructions can cause serious injury or death.

M504

Hydraulic pump - Dynamic description

T8010, T8020, T8030, T8040, T8050

The tractor uses three hydraulic pumps which are driven through a drive housing on the right side of the range transmission. The pump drive housing gears are driven by the PTO drive line and all the pumps turn at approximately 1.33 times engine speed. A PFC (pressure and flow compensating) piston pump is attached to the front of the pump drive housing, while the tandem gear pumps are attached to the rear of the pump drive housing.

The front section of the tandem gear pump supplies the regulated pressure circuit: brake valve, transmission control valves, PTO and differential lock valve, auxiliary and hitch valve pilot circuits. The rear section supplies charge flow to the PFC pump(s). The PFC pump supplies flow to the priority valve, which directs flow to the steering system, remote valves and the three point hitch.

All hydraulic lines are equipped with O-ring face seals to ensure reliable, vibration-resistant connections.

Charge/lubrication pump

The charge/lubrication pump is the rear section of the dual gear pump and it is used to supply the main PFC pump with a charged inlet condition to prevent cavitation. The pump also supplies lubrication and cooling requirements for the transmission.

The pump draws oil from the transmission housing through a 100 mesh suction screen. The pump flow is directed across the main filter assembly to provide clean charge and lubrication oil.

The pump flow rate at rated speed **2667 RPM (2000 RPM engine speed)** is **177.0 l/min (47.0 US gpm)**.

Regulated circuit pump

The regulated circuit pump is the front section of the tandem gear pump. The pump draws oil from the system reservoir through a 100 mesh suction screen. The pump flow passes through the regulated circuit filter housing and into the priority regulator valve. The priority regulator valve maintains the regulated pressure circuit at **22.4 - 24.5 bar (325 - 355 psi)**. The regulated pump flow supplies the PTO/differential lock valve, transmission control valves and brake valve. The remote and hitch valves are also supplied with regulated pressure.

Once these circuits are satisfied, the excess regulated pump flow is directed through the oil coolers and joins up with the charge pump flow at the downstream side of the main filter head.

The pump flow rate at rated speed of **2667 RPM (2000 RPM engine speed)** is **102.0 l/min (27.0 US gpm)**.

PFC piston pump

The axial piston pump has a variable flow output and can operate at variable pressures. The pump matches the hydraulic power output to the actual load requirements to ensure maximum efficiency and the minimum use of fuel.

The pump inlet is charged to prevent cavitation. The pump output flow is supplied to the priority regulator valve. The priority regulator valve gives top priority to the steering system and trailer brake circuit. Once the steering system and trailer brake circuits are satisfied the priority regulator valve supplies pump flow to the remote auxiliary valves and three point hitch valve.

The maximum pump flow rate for the standard pump at rated speed of **2667 RPM (2000 RPM engine speed)** is **146.0 l/min (38.6 US gpm)**.

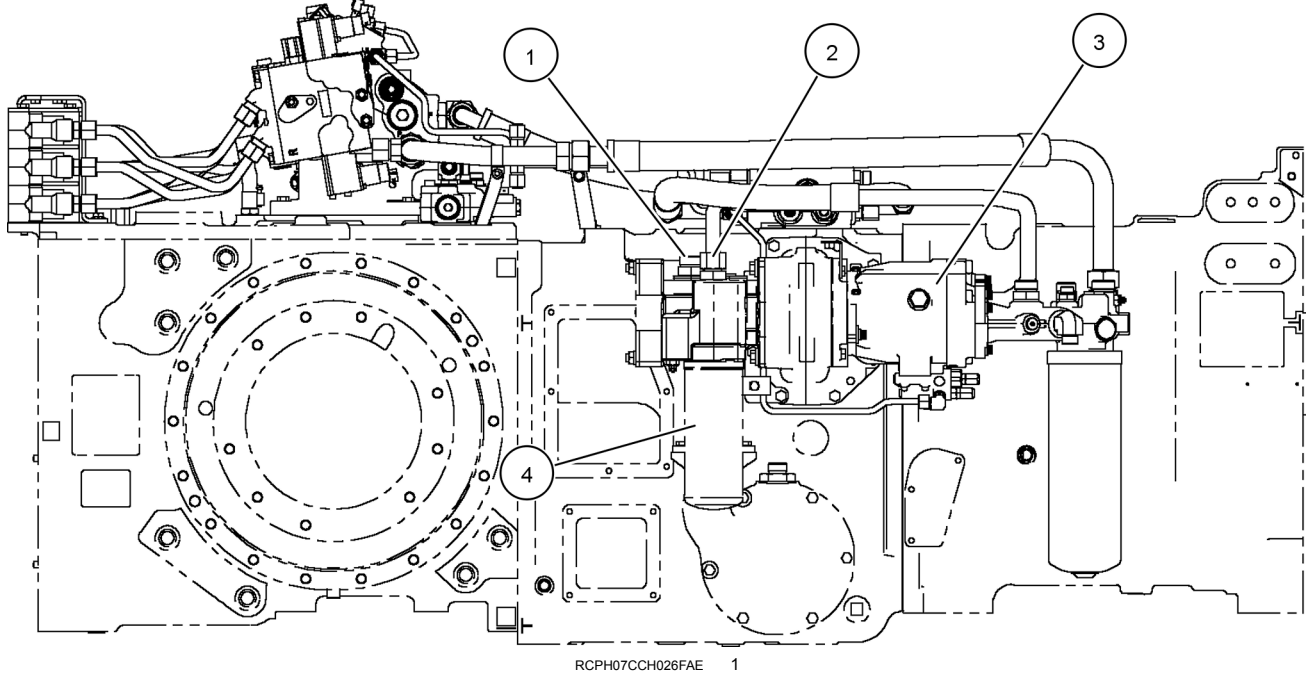
NOTE: *The standard pump system delivers approximately **113.6 l/min (30.0 US gpm)** through a single remote section. This is due to resistance created by oil flowing through restrictive passage ways and long lengths of tubing or hose.*

Optional high flow PFC piston pump

An optional high flow PFC piston pump is available. The high flow rate maximum pump flow rate at rated speed of **2667 RPM (2000 RPM engine speed)** is **220 l/min (58 US gpm)**.

NOTE: *The high flow pump system delivers approximately **113.6 l/min (30.0 US gpm)** through a single remote section. This is due to resistance created by oil flowing through restrictive passage ways and long lengths of tubing or*

hose. However, when operating two or more remote sections the high flow pump has approximately 75.7 l/min (20.0 US gpm) more flow than a standard pump system to supply the additional remote circuits.



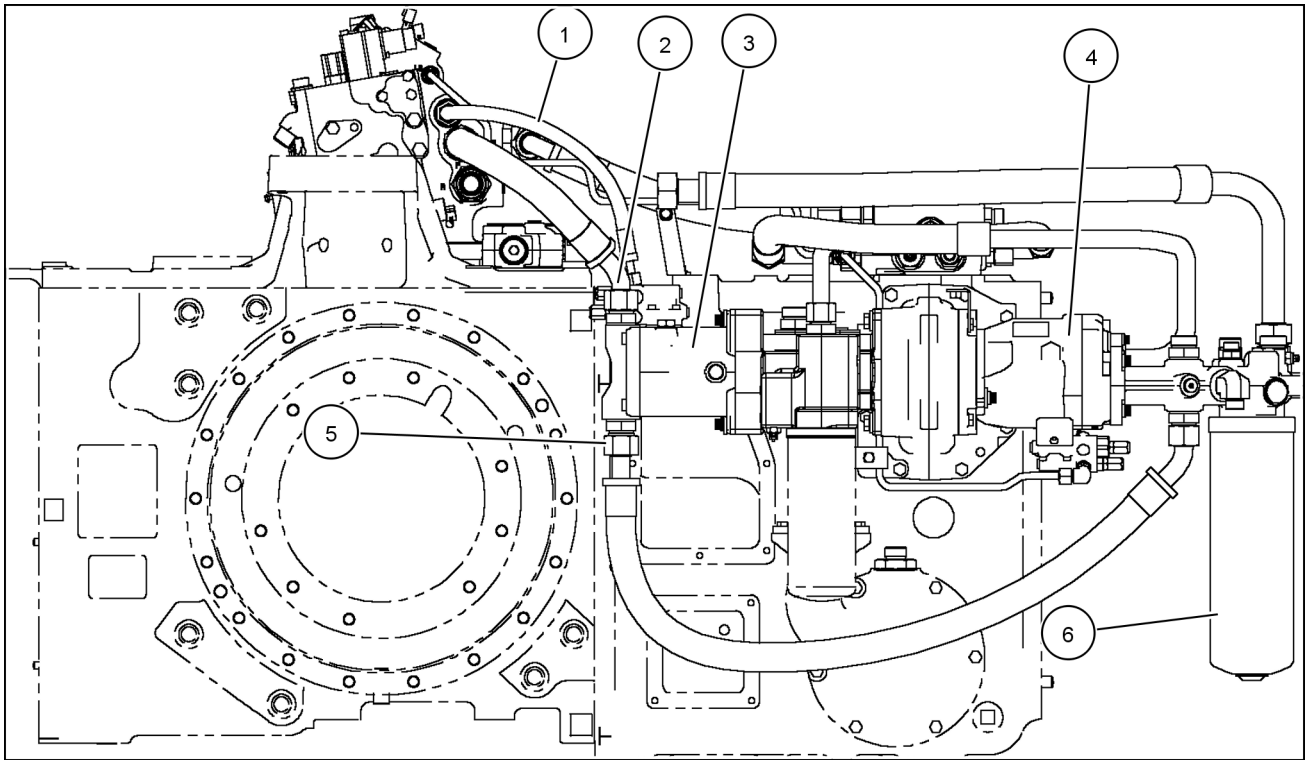
1. Charge/lubrication pump outlet (rear section)	3. High flow PFC piston pump
2. Regulated circuit pump outlet (front section)	4. Dual gear pump/regulated system filter housing

Optional Megaflow PFC piston pump

The axial piston pump has a variable flow output and can operate at variable pressures. The pump matches the hydraulic power output to the actual load requirements to ensure maximum efficiency and the minimum use of fuel. The maximum pump flow rate at rated speed **2667 RPM (2000 RPM engine speed)** is **117.0 l/min (31.0 US gpm)**.

The pump inlet is charged to prevent cavitation. The pump output flow is supplied directly to the remote auxiliary manifold. The manifold is equipped with internal plugs to separate the dual flow supply flow, signal line pressure and signal line pilot relief from the standard PFC piston pump circuit. The Megaflow pump supplies only the third, fourth or fifth remote sections. The two PFC pump hydraulic circuits operate independently.

NOTE: *The Megaflow pump system delivers approximately 113.6 l/min (30.0 US gpm) through a single remote section. This is due to resistance created by oil flowing through restrictive passage ways and long lengths of tubing or hose.*



RCPH07CCH027FAE 2

1. Megaflow signal line	4. Standard PFC pump
2. Megaflow outlet	5. Megaflow inlet
3. Megaflow PFC pump	6. Main filter assembly

Lubrication circuit

The lubrication flow is a combination of both dual gear pumps' outputs – filtered charge pump flow and filtered/cooled excess regulated circuit flow. Inlet charge pressure and lubrication are limited to **5.0 bar (75 psi)** by a lube relief valve.

The lubrication circuit provides a low pressure flow of oil to lubricate and cool the following transmission components: master clutch, bevel pinion gears, brakes, drop box, odd/even clutches, MFD/range, creep drive and PTO/differential lock lube.

**Thank you very much
for your reading.**

**Please click here to buy
After you pay.**

**Then, you can
download the complete
manual instantly.
No waiting.**