

Power Rear Axle

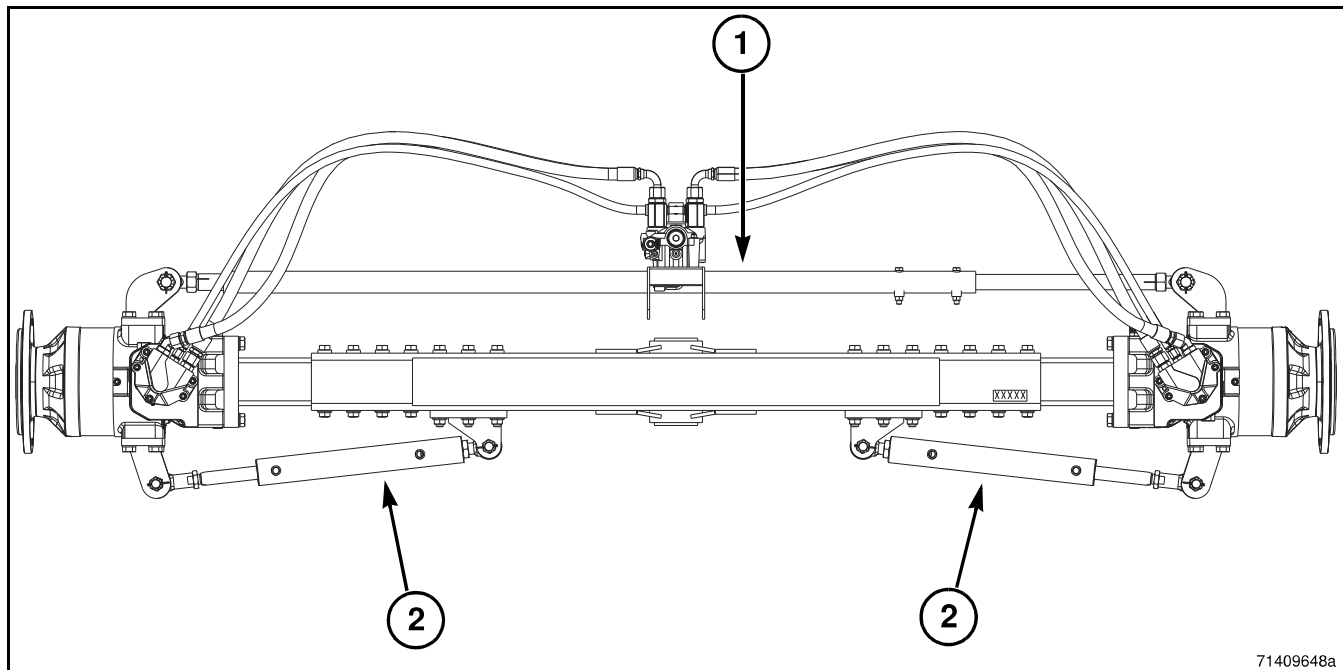


FIG. 3

FIG. 3: The steering system uses a drag link tie rod assembly (1) located in front of the axle. The steering cylinders (2) are two double acting cylinders located at the rear of the axle.

NOTE: Removal, installation, and service for the steering cylinders can be found in the Hydraulics Division, Steering Cylinders section.

FIG. 4: Steering is controlled through a power steering control unit (1) located under the cab.

Hydraulic fluid is sent to the steering cylinders through this unit to control the combine steering.

NOTE: Specifications, removal, installation, and service for the steering control unit can be found in the Hydraulics Division, Power Steering Control Unit section.

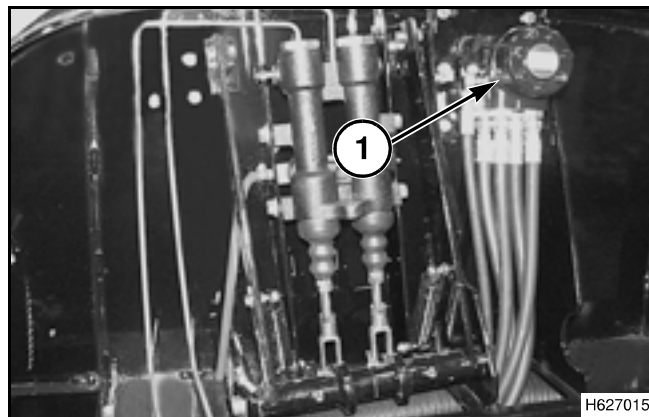


FIG. 4

POWER REAR AXLE IDENTIFICATION

FIG. 5: Be sure to correctly identify the power rear axle when ordering repair parts.

An identification tag (1) is located on the right-hand rear side of the axle extension and contains the following;

Manufacturer TUTHILL Transport Technologies (MUD HOG®)

Serial No. XXXXXX

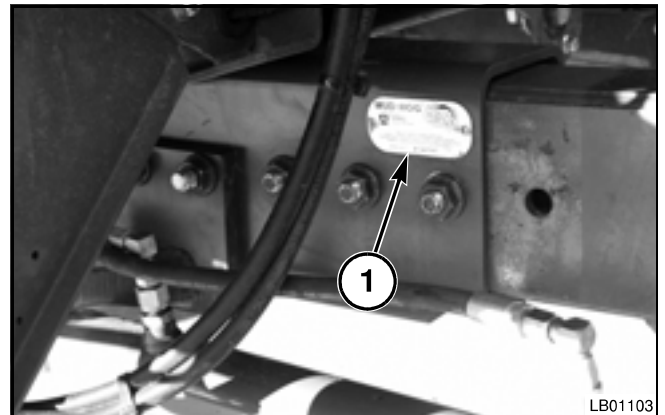


FIG. 5

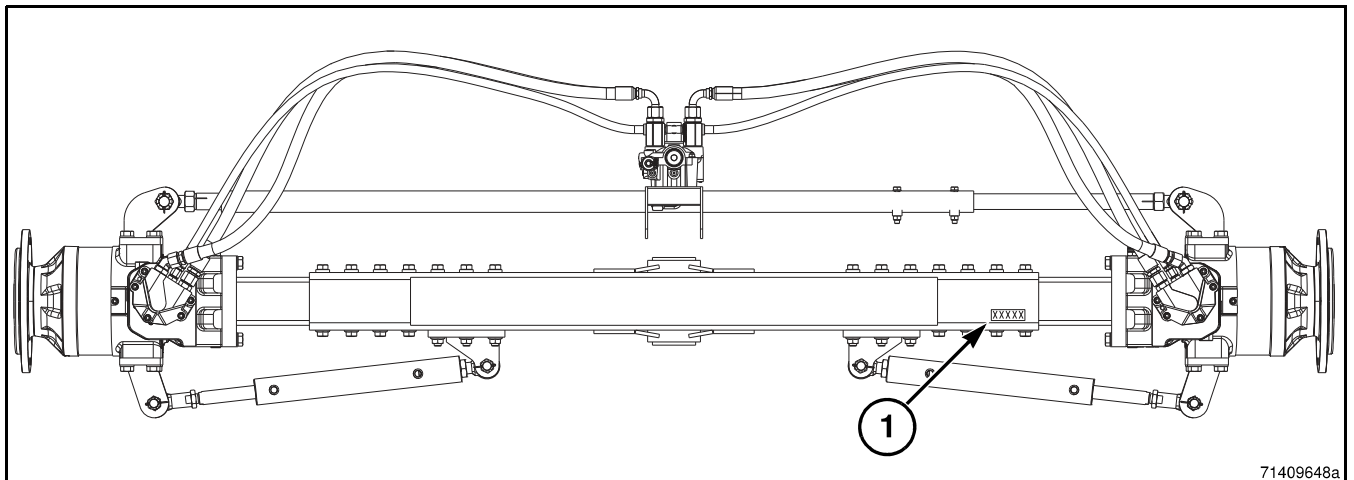


FIG. 6

FIG. 6: The power rear axle serial number (1) is also stamped on the top right-hand rear of the axle center member assembly.

Serial No. XXXXXX

POWER REAR AXLE WHEEL MOTOR IDENTIFICATION

FIG. 7: An identification tag (1) is located above the steering arm mounting pad on the right-hand rear top surface. The identification tag contains several numbers for properly identifying a wheel motor.

An identification tag is located above the steering arm mounting pad on the left-hand front top surface.

Be sure to correctly identify the wheel motor when ordering repair parts.

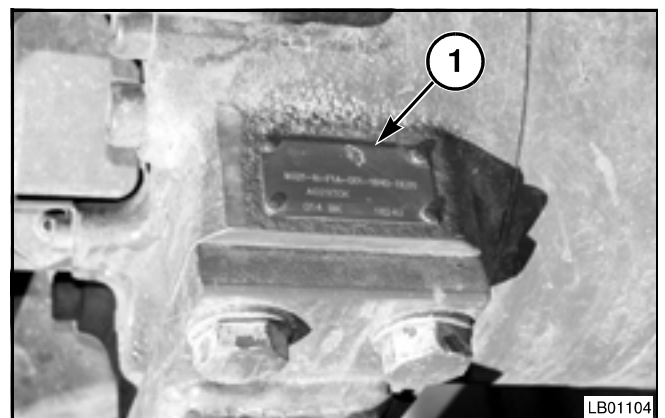


FIG. 7

Power Rear Axle

FIG. 8: On the first line of the tag is the manufacturer. On the second line is the Poclair commercial code identifying the axle. On the third line is the Poclair part number followed by the TUTHILL Transport Technologies (MUD HOG®) part number. On the fourth line is the unit number followed by the Poclair serial number.

- Manufacturer.....POCLAIN HYDRAULICS
- XXXXX-X-XXX-XXX-XXXX-XXX - Commercial Code
- P/No. XXXXXXXXXXXX - Poclair Part Number / Rev. XXXXXX - TUTHILL Transport Technologies Part Number
- No. XXX / SNo. XXXXXX - Poclair Serial Number

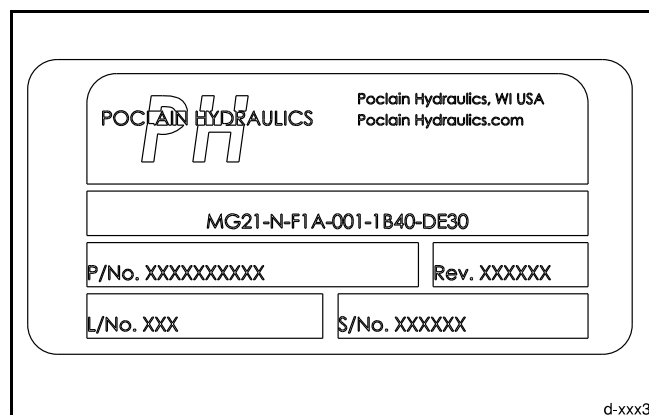


FIG. 8

BASIC MOTOR SPECIFICATIONS

FIG. 9: Basic wheel motor specifications:

Full Displacement: 1885 cu cm/rev (115 cu in/rev)

Half Displacement: 837 cu cm/rev (51 cu in/rev)

Number of pistons: 16

Type of Piston: Standard

Maximum Operating Pressure: 450 bar (6500 psi)

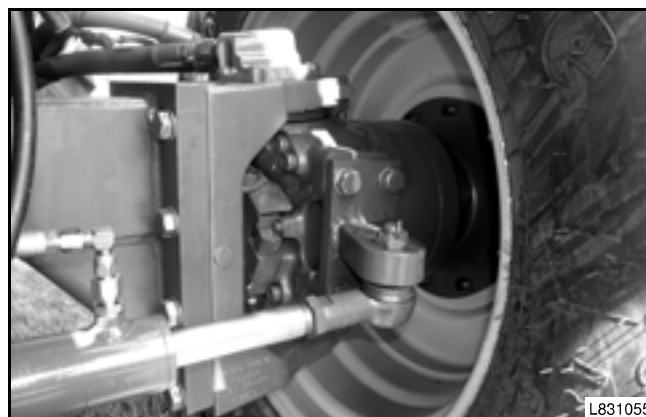


FIG. 9

POWER REAR AXLE PERFORMANCE

FIG. 10: For the best performance use the power rear axle at all times when working in the field.

The operator will add these advantages:

1. The propulsion drive will be operating at lower system pressures. This will help to extend the life of the main hydrostatic transmission and powertrain.
2. The operator will have better steering by powering the rear steerable wheels.
3. The temperature of the hydrostatic oil will normally be lower as a result of running the combine at lower system pressures.

For roading the machine, the operator can switch the power rear axle from low (L) to high (H) and then to off (O) to reach higher road speeds. The cam lobe motors automatically free wheel when the power rear axle is turned off. There is no limit to the distance the machine can be driven on the road at one time.



FIG. 10

FIG. 11: A power rear axle equipped combine has more overall traction to help get through tough field conditions such as heavy mud or soft, sandy soil.

The operator will also be able to keep better steering control in slippery conditions or on hillsides. Even in less muddy conditions with all four wheels driving, the machine will roll over the field with less rutting.

When the power rear axle is engaged, the selector valve sends some of the oil flow from the hydrostatic pump to the rear wheel motors. The oil flows to the path where resistance is the least until the hydrostatic pressure is balanced. This balance is between the hydrostatic motor on the main transmission and the rear wheel motors.

The two speed wheel motors will make the slow down or the increase in travel speed less sudden.

For field conditions, the operator can switch the power rear axle from off to high and then to low for higher wheel torque and lower speed.

FIG. 12: The rear wheel motors have a fixed displacement so the amount of wheel torque is determined only by hydrostatic pressure.

As long as all four wheels keep good traction, the pump will provide enough flow at the pressure that is required to keep a desired speed.

FIG. 13: If one or both of the front wheels start to spin because of loss of traction, most of the oil then flows to the hydrostatic motor on the main transmission. The pressure to the rear wheels is greatly reduced. It is important to keep traction with the front wheels in order to have the most help from the rear wheels.

Front wheel spin out can be stopped by shifting to the next higher gear, to reduce the amount of torque at the front wheels, or by lightly applying the brakes.



FIG. 11

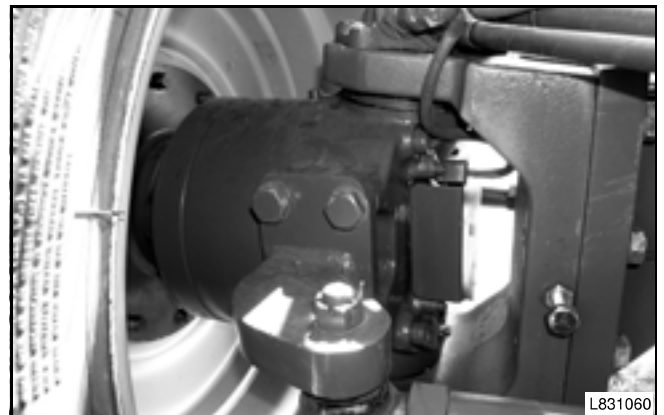


FIG. 12



FIG. 13