SERVICE MANUAL

T4.55S / T4.65S / T4.75S

Tractor

Part number 51489991

English

May 2018

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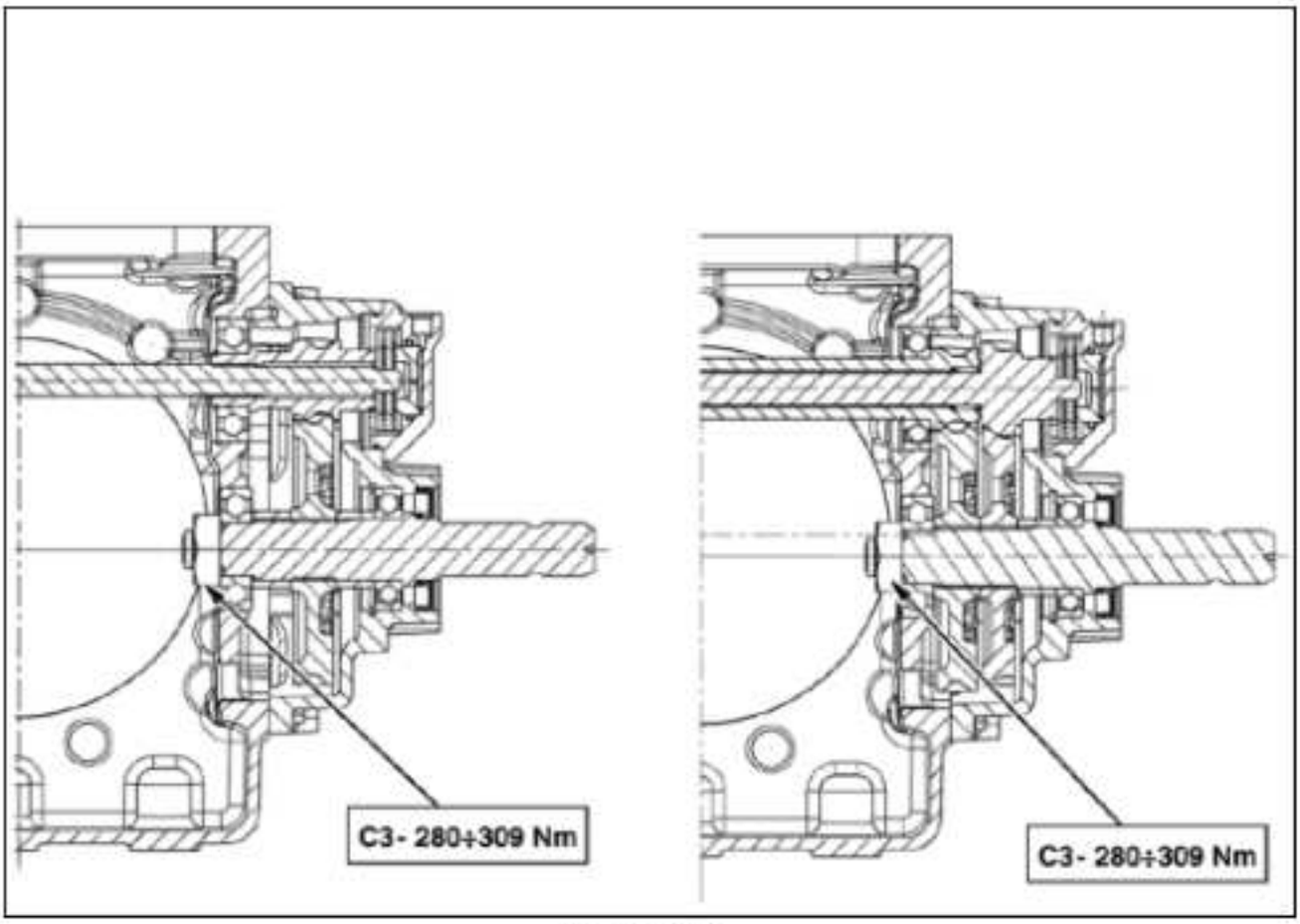
Powered front axle - General specification

Type	Centrally supported, load bearing steering
Final drive and differential	
Final drive gear ratio: (4WD) **40 km/h** **30 km/h** Final drive waiting clearance	 11/38 9/38 **0.18–0.23 mm**
Final Drive and Differential	
Thickness of the conical bearing clearance shim All Models	**2.5-2.55-2.6-2.65-2.7-2.75-2.8-2.8 5-2.9-2.95-3.00-3.05-3.10- 3.15-3.2-3.25-3.3-3.35-3.4-3.45 -3.5-3.55-3.6-3.65-3.7 mm**
Sun gear positioning shim All Models	**2.5-2.6-2.7-2.8-2.9-3.00-3.1- 3.2-3.3-3.4-3.5-3.6-3.7 mm**
Operating clearance of the pinion gear-axle gear Thickness of the axle gear pressure washer Thickness of the pinion gear pressure washer	**0.15 mm** **1.470 - 1.530 mm** **1.50–1.60 mm**
Pinion gear shaft diameter Pinion gear hub diameter Pinion gear – shaft clearance	**21.939 - 21.960 mm** **22.040 - 22.961 mm** **0.080 - 0.122 mm**
Axle gear bearing diameter Diameter of the axle gear housing of the differential box Axle gear – housing clearance	**37.961 - 38.000 mm** **0.77 - 0.83 mm** **38.080 - 38.199 mm** **0.080 - 0.158 mm**
Axles and brackets	
Axle shaft diameter Internal diameter of the axle bushing (when collapsed) Axle housing clearance measurement Bushing snug fit measurement Thickness of the king pin bearing shim	**29.914 - 29.935 mm** **30.050 - 30.105 mm** **0.115 - 0.191 mm** **0.064 - 0.129 mm** **0.10-0.15-0.20-0.25-0.30 mm**
Planetary gear final reducers	
Speed reduction ratio Thicknesses of the planetary gear pressure washer	**15:(15+54) = 1:4.6 mm** **0.77-0.83 mm**
Middle bracket	
Swing angle (both sides) Clearance of the bracket pin movement of the middle pin Wear space (max)	**11°** **0.3 - 1.1 mm** **2 mm**
Diameter of the front axle central pin Internal diameter (with front bushing mounted) Central pin/bushing clearance	**52.652-52.671 mm** **52.720-52.790 mm** **0.049-0.138 mm**
External diameter of the support bracket of the rear differential bevel drive Internal diameter (with rear bushing mounted) Bracket/bushing clearance Thicknesses of the front and rear pressure washers of the axle bracket	**99.040-99.72 mm** **99.146-99.221 mm** **0.074-0.181 mm** **4.95-5.00 mm**

Powered front axle - Torque Tightening Torque Values

PART	External Size	Nm	Kgm
Bevel drive lock nut (C1)	M 40 x 1.5	**294 N·m**	**30 kgm**
Bolt, differential – gear housing connection (C2)	M 12 x 1.25	**113 N·m**	**11.5 kgm**
Bolt, bevel gear differential box connection (C3)	M 12 x 1.25	**113 N·m**	**11.5 kgm**
Bolt king pin connection (C4)	M 12 x 1.25	**64 N·m**	**6.5 kgm**
Bolt axle head connection (C5)	M 12 x 1.25	**113 N·m**	**11.5 kgm**

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Mechanical control 540 RPM and 540/540E RPM PTO

Rear mechanical control - Technical Data

Troubleshooting

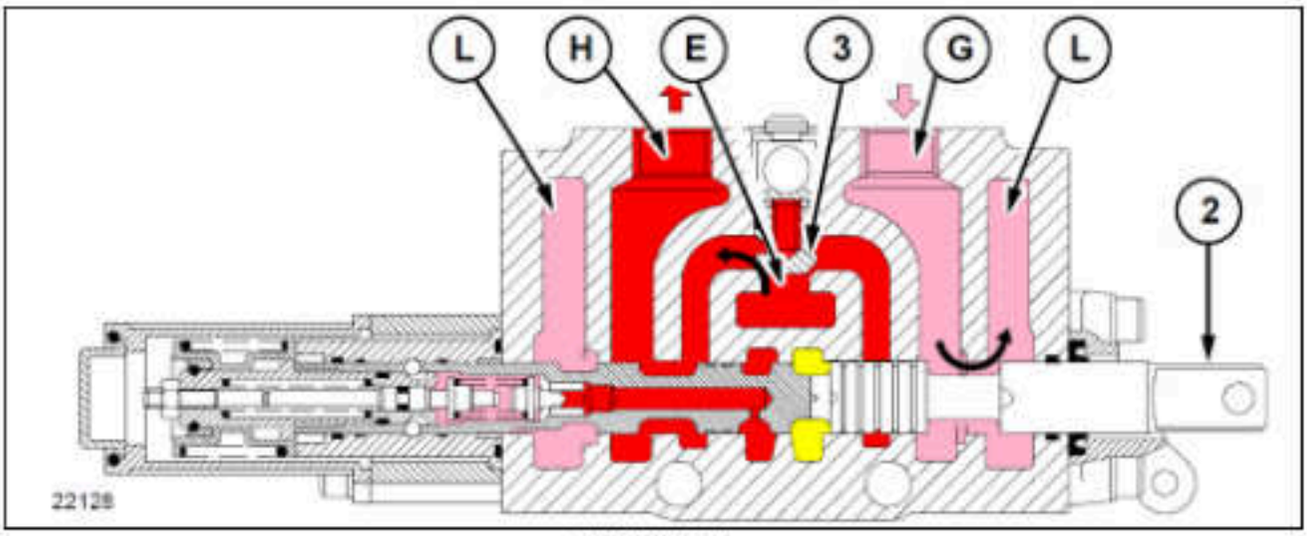
Problems	Possible causes	Solutions
Slipping and speed loss on the PTO canal shaft.	Wear of the clutch disk or engine flywheel pressure plate. PTO clutch not calibrated.	Check the information in Section 18. Replace worn parts and calibrate the clutch lever.
Difficulty selecting PTO speed with the control lever.	The external controller has hardened or the controls are not calibrated.	Lubricate the control cable sheath. Adjust the controllers

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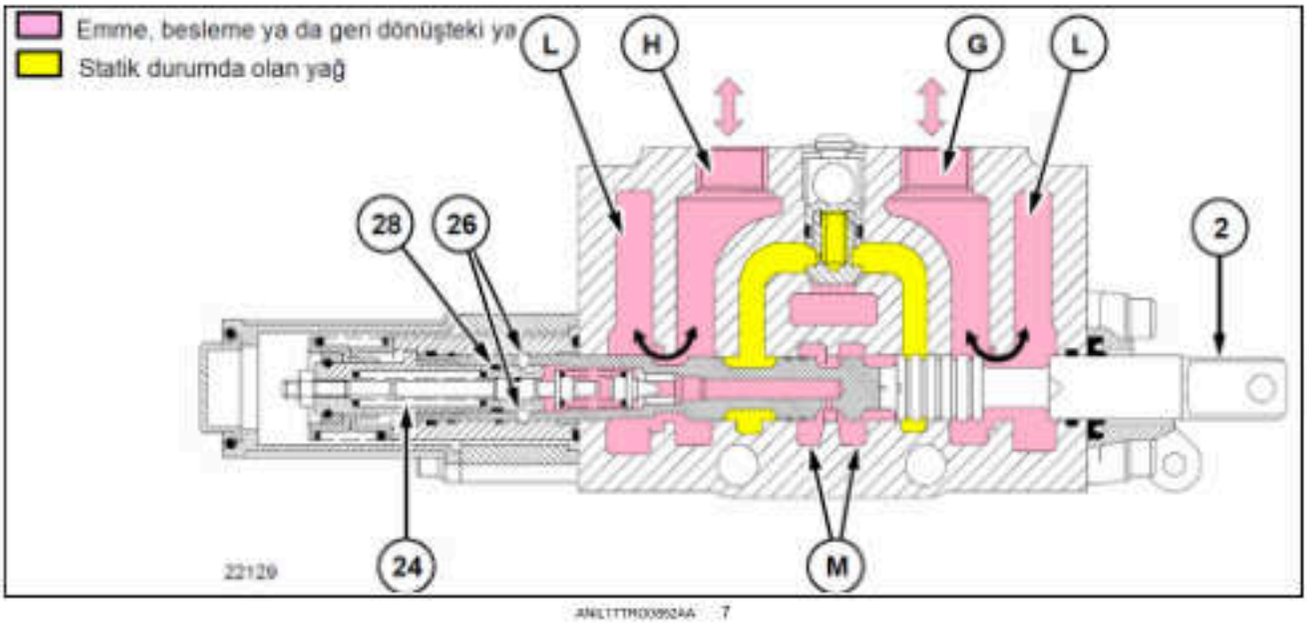


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LOWERING

Push the control lever (in the cab) to lower the agricultural equipment. The control valve handle **(2)** slides to enable the lock balls **(26)** to sit in the middle groove via the bracket **(28)** and spring **(24)**. Under these conditions, as the oil situated in the lower reservoir of the cylinder travels to the exhaust line **(L)** via the **(G)** line, the top reservoir **(H)** is connected to the feeding line **(E)** via the feeding line and the check valve **(3)**. Upon completion of the lowering operation, the lock moves to the idle position automatically as described previously.

OPERATIONAL STAGES OF AUTOMATIC KICK OUT AND FLOATING REMOTE CONTROL VALVE WITH SINGLE-ACTION CYLINDER



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FLOAT MODE

For float mode, push the control lever (in the cab). Handle **(2)** slides and balls **(26)** enter into the groove on the right, to be held in place by the bracket and the spring **(24)**. The handle **(2)** connects the following lines: two **(M)** lines that feed the entire pump flow into the lifting control valve. Also, via the **(H)** and **(G)** lines it connects two exhaust **(L)** lines with the upper and lower reservoirs of the cylinder. Under these conditions, the only force exerted on the agricultural equipment will be its own weight, which allows the equipment to follow the terrain, enabling the use of its hydraulic lifter. Since there is no pressure in the remote control valve, automatic kick out will not take place during float control.

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Steering to the right

When the steering wheel is rotated clockwise, the springs contract to enable the rotation of the valve to interact with the sleeve **(11)**.

Under these conditions, the following will take place:
- In the neutral position, the position where oil flow is cut with channels aligned with part number **(11)** and **(12)** will change.
- The channels align and enable oil flow from pump to steering cylinder **(2)**. This allows the wheels to be steered to the right.

Steering to the left

When the steering wheel is rotated counter-clockwise, the internal channels **(11)** and **(12)** change positions with the channel line of the output to the steering cylinder.

Manual steering to the right

If the hydrostatic pump is defective or lacking pressure, steering can be performed manually.
When the steering wheel is rotated clockwise it serves as a rotor hand pump in the hydrostatic steering valve and transfers oil to the control cylinder shaft **(2)**. This enables the wheels to rotate to the right manually.

Manual steering to the left

When the steering wheel is rotated counter-clockwise, it helps the rotor in the hydrostatic steering control valve to function, as mentioned before, like a hand pump. This helps oil sent to the cylinder piston. The wheels will be manually rotated to the left.

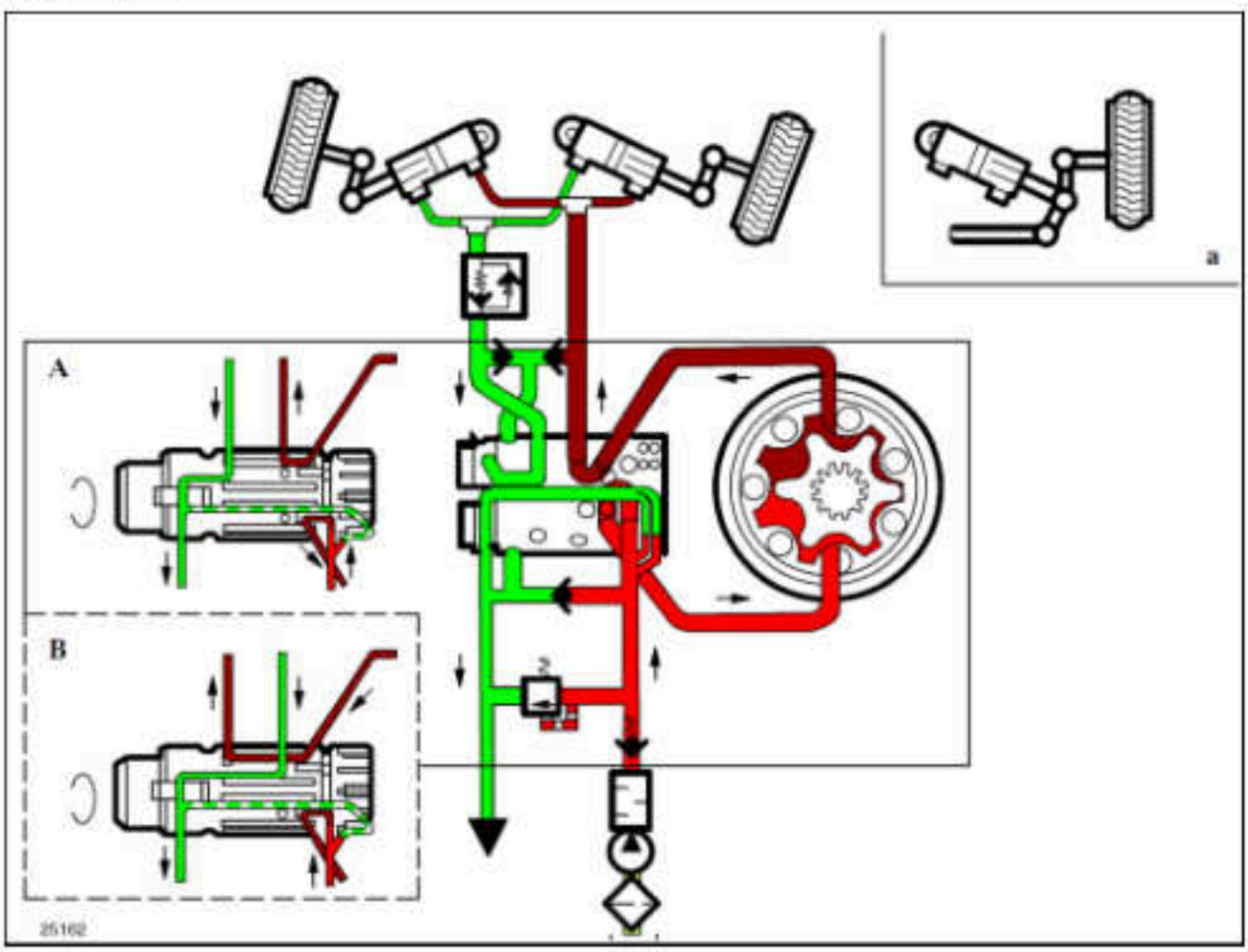
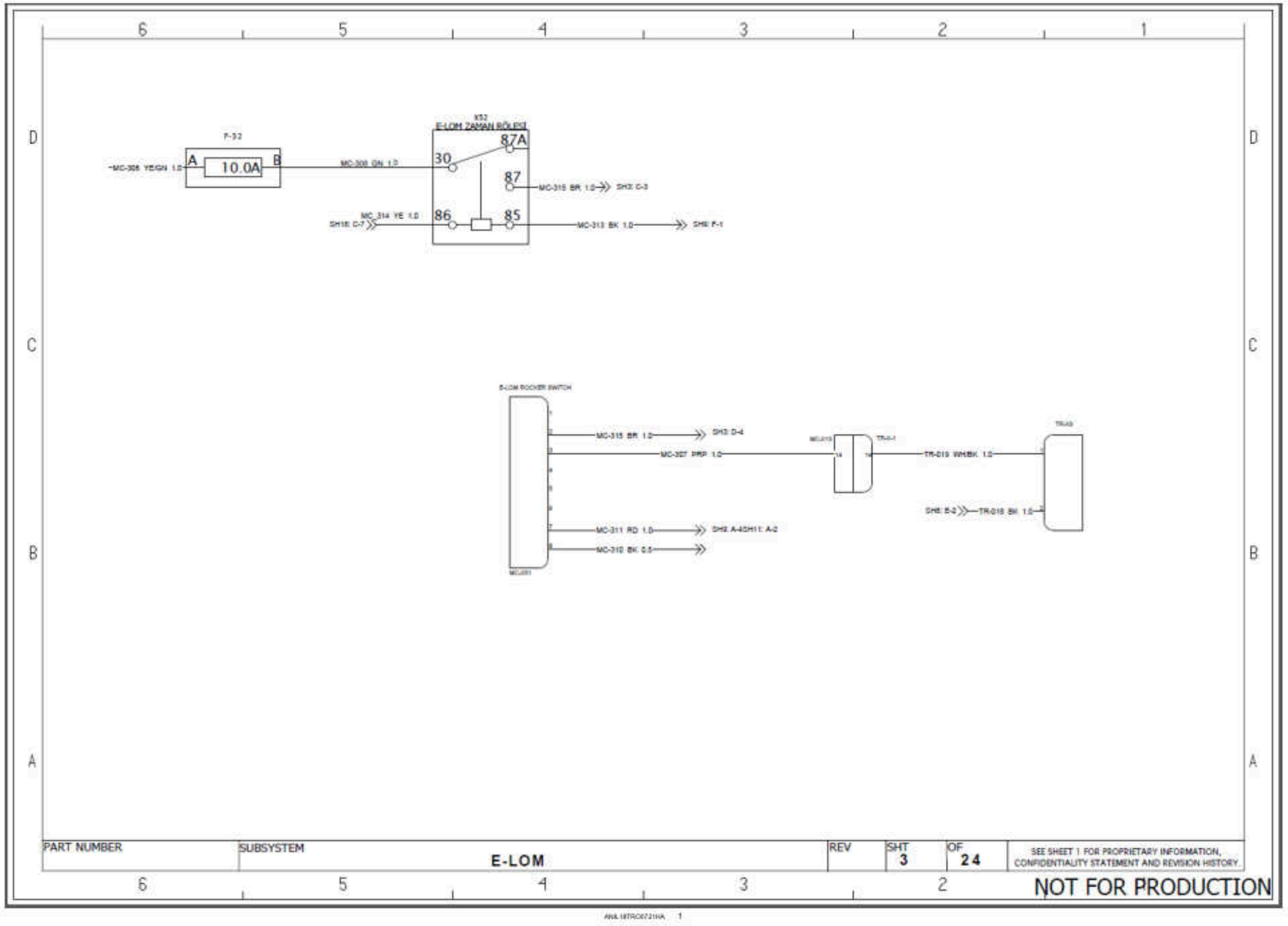


Diagram showing the operation of hydrostatic steering

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