SERVICE MANUAL

TT4.55 / TT4.75

Tractor

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NEW HOLLAND AGRICULTURE

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Mechanical transmission - Troubleshooting

Problem	Possible Cause	Correction
Noisy operation with range in neutral and main lever engaged	Input and output shaft support bearing misadjusted.	Remove transmission housing and adjust bearings.
	Failed or defective inner components.	Remove housing, overhaul transmission and replace faulty parts.
	Internal component seizure due to poor lubrication.	Overhaul transmission and top up oil up to correct level.
Noisy operation with tractor stationery, idling engine and transmission in neutral	Faulty clutch plate springs.	Replace clutch plates.
Self disengagement of speed, range gears	External linkage and levers misadjusted.	Adjust correctly
	Failed control rail retaining springs	Replace springs.
	Partial engagement travel	Correct reasons for problem and restore full travel
Difficult engagement of speed and range gears	External levers wrongly adjusted.	Adjust correctly.
	External levers stiff or seized.	Check pivot points and correct
	Internal control items (rails, forks and sleeves) slide with difficulty.	Overhaul control items.

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Mechanical service brakes - Technical Data SPECIFICATIONS

Type	
Service Brake	Wet disc acting on differential axle Shafts
Parking Brake	Wet disc acting on differential axle shafts
Control	
Service Brake	Suspended Type Mechanical, Independent pedal control (or latched for joint operation)
Parking Brake	Mechanical, Hand lever, cable operated with pawl release (Sector fitted on left side of transmission housing)
No. of Discs per side	
	2
	3
Brake oil specification	API GL4 20W/30
Service Brake/ Parking brake Disc Material	Organic compound
Nominal Brake disc thickness.	Organic compound
Nominal Brake disc thickness	**4.75 - 4.9 mm**
Service/Parking brakes disc discard thickness	**4.30 mm**
Hand Brake free play at 1st teeth of ratchet	**0 mm**
Brake Pedal Support	
RH pedal I.D	**32.00 - 32.03 mm**
Bushing thickness	**1.97 - 2.01 mm**
RH pedal bushing fitted I.D	**28.005 - 28.060 mm**
RH pedal bushing/housing interference	**0.085 mm**
LH pedal shaft diameter	**26.3 - 26.6 mm**
Clearance between LH pedal shaft and RH pedal bushing	**1.405 - 1.760 mm**
LH pedal I.D	**28.00 - 28.052 mm**
Clearance between LH pedal shaft and housing	**0.064 - 0.087 mm**
Bushing thickness	**1.442 - 1.474 mm**
LH pedal bushing/housing interference	**0.085 mm**
Handbrake shaft diameter	**21.967 - 22.000 mm**
LH brake bushings	**0.052 - 0.170 mm**
Diameter of bushing housing in steering column casing. mm I.D. of LH brake shaft support bushing in transmission casing	**32.045 - 32.085 mm**
Bushing thickness	**1.92 - 2.01 mm**
Clearance between bushings and transmission casing	**0.097 mm**
Interference between bushings and transmission casing	**0.020 - 0.085 mm**

Mechanical service brakes - Torque TIGHTENING TORQUES

Description	Thread size	Torque
Final drive housing to axle casing bolts (C1)	**M14x1.5**	**200 N·m**
Fender bolts (C2)	**M16x1.5**	**210 N·m**

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Steering control - General specification

Type	Hydrostatic
Make	DANFOSS / Ognibene
Hydraulic circuit	Independent, separate pump
Oil reservoir	Common oil with transmission and hydraulic
Oil filter	Common filter with hydraulic
Hydraulic Pump	
Type	Gear
Mode	C—25
Make	Dynamatics/Rex .
Drive	From engine
Rotation (Seen from rear)	Clockwise
Drive ratio	**1 - 1.08 :**
Rated speed (at engine governed speed)	**2300 RPM**
Rated output at maximum rat	**28.5 L/min**
On-bench output at **1450 RPM** (70 102 kg/cm2)	**17.3 L/min**
New or reconditioned pump	**50 °C**
Test oil temperature	SAE 20
Test oil viscosity	
Control valve type	DANFOSS/Ognibene with steering column operated rotary valve (permitting steering also in case of pump failure)
Outfit code:	
DANFOSS (with valves in control valve)	OSPJ 1 00 0N
Relief valve setting	**100 - 115 bar**
Power cylinder overload valve setting	**200 bar**
Power cylinder	
Type	Double acting, located behind front axle
Make	OGNIBENE
Cylinder bore diameter	**48 mm**
Piston rod diameter	**22 mm**
Maximum piston stroke with cylinder make	**214 mm**

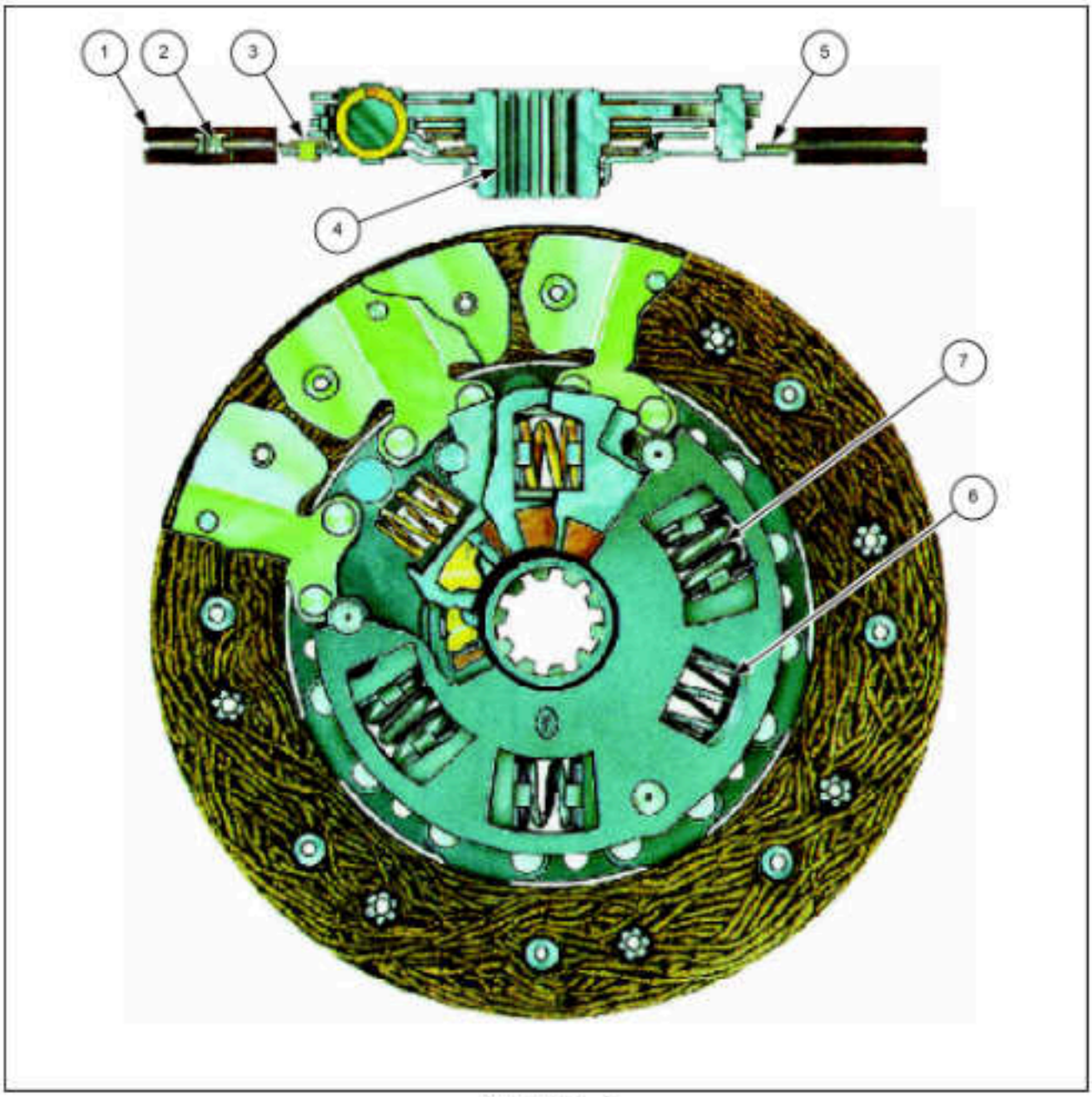
Steering control - Torque

Description	Thread size	Torque
Capscrew, steering motor mounting	**M10x1.5**	**45 N·m**
Capscrew, steering column mounting	**M10x1.5**	**45 N·m**
Connectors on steering motor	¾- 16UNF - 2A	**35 N·m**
Banjo bolt on steering motor	¾- 16UNF - 2A	**49 N·m**
Ferrule nut to adopter on steering motor	1-1/16-16UN-2A	**49 N·m**
Hoses to steering cylinder	**M16x1.5**	**29 N·m**
Steering cylinder mounting bolt (Pivot pin side)	**M18x1.5**	**170 N·m**
Steering cylinder mounting bolts (steering arm side)	**M16x1.5**	**170 N·m**
Steering pump suction side adopter	**M8x1.25**	**10 N·m**
Steering pump delivery side adopter	**M6x1.0**	**10 N·m**

Steering control - Special tools

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Mechanical version

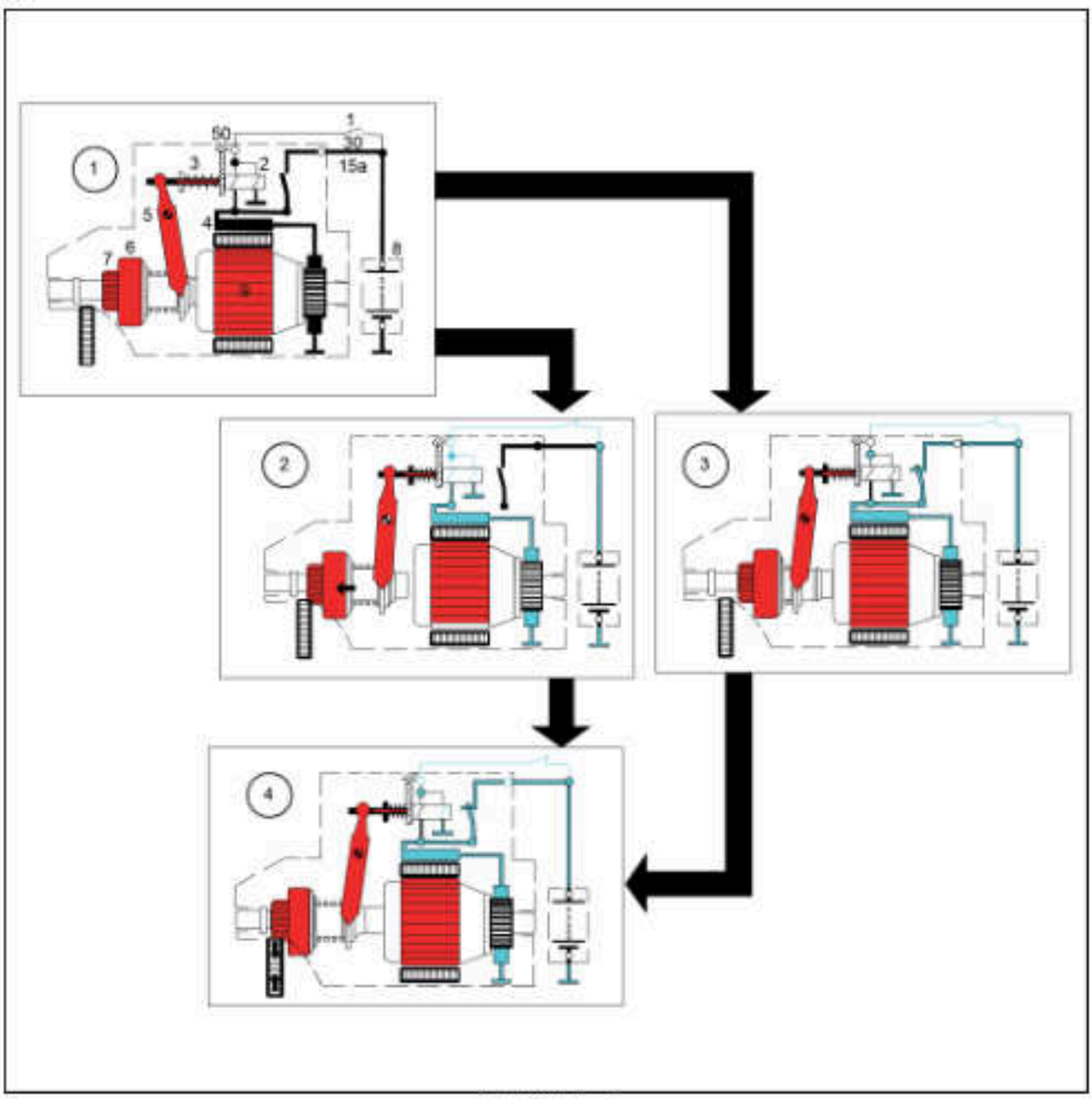
1. Clutch facing
2. Facing rivet
3. Segment rivet
4. Hub
5. Segment
6. Idle damper spring
7. Main damper spring

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Engine starting system - Overview

DESCRIPTION AND OPERATION

Tractor is fitted with a **12 V** , solenoid operated pre-engaged type starter.
When the key is turned to the start position, an electrical circuit is made, from the key switch, through gearbox mounted safety start switch to the starter solenoid. The electricity in this circuit energizes the solenoid coils and the solenoid plunger is magnetically attracted into the solenoid core. This movement, transmitted through a mechanical linkage pulls the drive pinion to mesh with the flywheel ring gear. When the pinion gear is fully meshed with the ring gear the solenoid plunger reaches the end of its travel and contacts with a switch connecting the battery directly to the starter motor. This switch directs battery power directly to the starter motor; which causes it to rotate and as a consequence, the engine is cranked to start.
When the key switch is released, battery power to the solenoid is removed. The solenoid plunger returns to rest position (aided by the solenoid plunger spring) and the starter pinion is released from the flywheel ring gear, this also breaks the battery connection.
To protect the starter motor from high engine speed, an over run clutch is fitted between the starter motor and pinion gear.



1. Ignition/starter/driving switch

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