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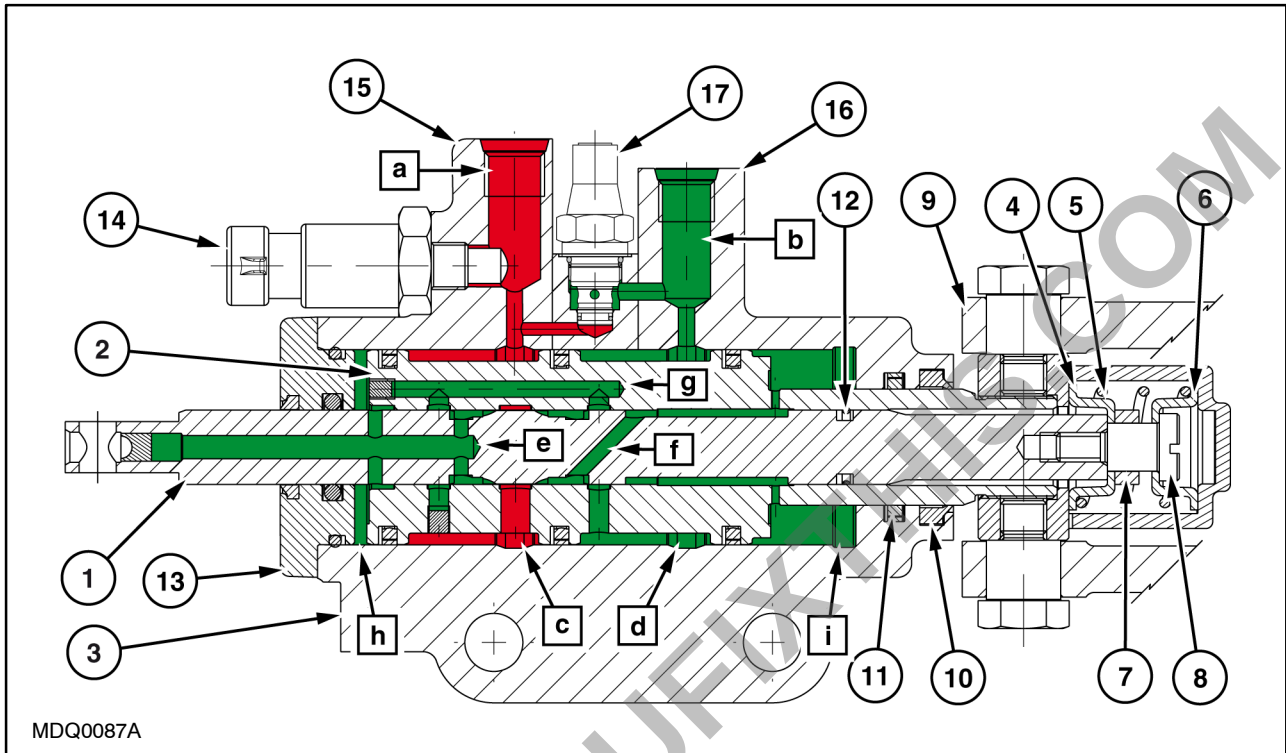
NEF Engine	Thread	Tightening torque		
PARTS TO BE TIGHTENED		Nm	kgm	Angle tightening
Oil pump	M 8X1.25X30	8 ± 1	0.8 ± 0.1	–
Front box cover	M 8X1.25X45	24 ± 4	2.4 ± 0.4	–
	M 8X1.25X30	24 ± 4	2.4 ± 0.4	–
Oil sump installation	M 8X1.25X25	24 ± 4	2.4 ± 0.4	–
	M 18x1.5	60 ± 9	6.0 ± 0.9	–
Fuel pump installation	M8	24 ± 4	2.4 ± 0.4	–
	M6	10 ± 1	1.0 ± 0.1	–
Fuel pump retaining bolts:	–	–	–	–
pre-tightening	M 10x1.25	10 ÷ 15	1.0 ÷ 1.5	–
end torque	M 10x1.25	50 ÷ 55	5.0 ÷ 5.5	–
Fuel pump gear:	–	–	–	–
precision torque	–	15 ÷ 20	1.5 ÷ 2.0	–
end torque	–	85 ÷ 90	8.5 ÷ 9.0	–
Inspection cover on the gearbox	–	30 ÷ 35	3.0 ÷ 3.5	–
Head retaining bolts (*):	–	–	–	–
1 st phase – 2 nd phase	M12X70	50	5.0	90°
1 st phase – 2 nd phase – 3 rd phase	M12X140	40	4.0	90° + 90°
1 st phase – 2 nd phase – 3 rd phase	M12X180	70	7.0	90° + 90°
Rocker covers	M8X1.25X65	24 ± 4	2.4 ± 0.4	–
Oil by-pass valve fastening on the filter head	M22X1.5X10	80 ± 8	8.0 ± 0.8	–
Plug	M12X1.25X12	10 ± 1	1.0 ± 0.1	–
Coolant pump fastening	M8X1.25X25	24 ± 4	2.4 ± 0.4	–
Coolant inlet connector assembly	M8X1.25X35	24 ± 4	2.4 ± 0.4	–
	M8X1.25X70	24 ± 4	2.4 ± 0.4	–
Fan hub fastening	M10X1.25X20	33 ± 5	3.3 ± 0.3	–
Fan pulley fastening	M6	10 ± 2	1.0 ± 0.2	–
	M10	43 ± 6	4.3 ± 0.6	
Rear lifting bracket fastening	M12X1.75X30	77 ± 12	7.7 ± 1.2	–
Crankshaft pulley	M12X1.75 (10.9)	110 ± 5	11.0 ± 0.5	–
Fuel injectors	–	60 ± 5	6.0 ± 0.6	–
Fuel priming pump fastening	–	24 ± 4	2.4 ± 0.4	–

(Continued)

The diagram illustrates the electrical connections for a control system. It includes a power supply section with inputs 8-AA, 2-AI, and 8-AB. The power supply section contains a fuse F-001 (30 A), a battery BAT-83, and a sensor SEN-96. The control section features a switch SW-83A, a fuse F-169 (50 A), and a relay RLY-157/158. The motor section includes a motor M-85 and a relay RLY-157/158. The terminal block section shows connections for 10-AD, 9-AE, 8-AF, 10-AH, and 11-AG. The diagram is labeled with various component names and values, and includes a large diagonal watermark reading 'REVIEW YOUR EXHIBITS.COM'.

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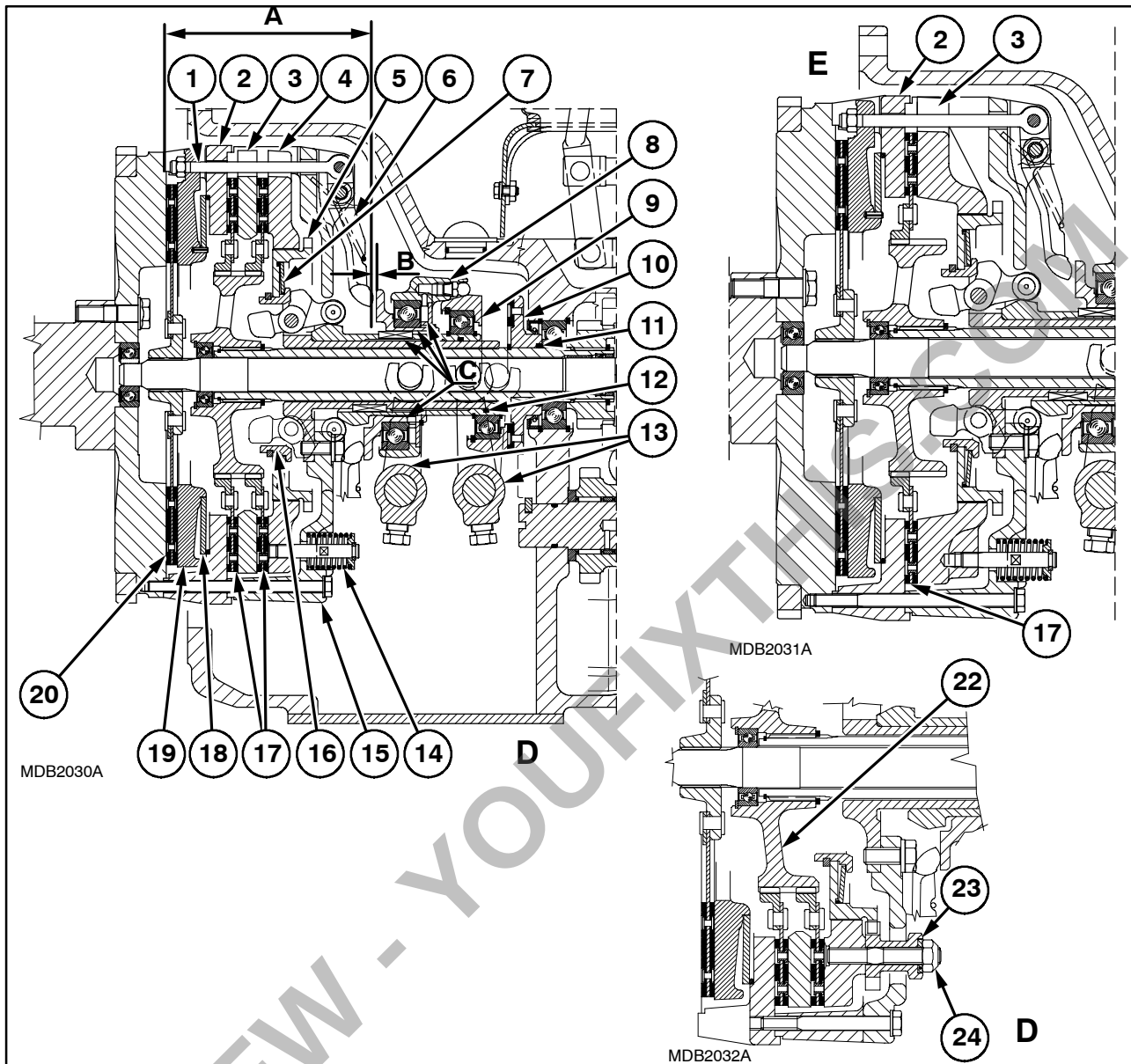
DESCRIPTION AND OPERATION OF ACTUATOR CYLINDER



6

Actuator key.

- | | |
|---|--|
| 1. Spool. | 9. Clutch linkage control fork. |
| 2. Piston. | 10. Oil ring. |
| 3. Cylinder. | 11. Seal. |
| 4. Top cap. | 12. Seal. |
| 5. Spring to return spool to neutral with piston. | 13. Cylinder bottom. |
| 6. Bottom cap. | 14. Pressure transducer. |
| 7. Spacer. | 15. Delivery coupling. |
| 8. Screw retaining device for return to neutral of spool with piston. | 16. Drain connector. |
| a. Delivery line. | 17. Safety valve, setting 65 bar (66.3 kg/cm ²). |
| b. Discharge line. | f. Spool bottom gap. |
| c. Discharge chamber. | g. Piston gap. |
| d. Discharge chamber. | h. Top ring chamber. |
| e. Spool top gap. | i. Bottom ring chamber. |



5

Longitudinal views of clutch

- A.** = 152 mm Nominal distance of release levers (6) from clutch contact surface on flywheel.
- B.** = 2.5 mm. Nominal distance between release levers (6) and disengagement ring.
- C.** On assembly the housings must be filled with **AMBRA GR9** grease.
- D.** Clutch mod. TK4040, TK4050 and TK4060. Clutch mod. TK4020 and TK4030 (from chassis no).
- E.** Clutch mod. TK4020 and TK4030.
1. Power take-off clutch disengagement lever adjustment tie rod and relative stop nut.
 2. Main clutch fixed pressure plate.
 3. Main clutch intermediate disk.
 4. Main clutch mobile pressure plate.
 5. Main clutch adjustment ring nut.
 6. Power take-off clutch disengagement levers.
 7. Main clutch Belleville spring disk.
 8. Power take-off clutch disengagement sleeve.
 9. Main clutch disengagement sleeve.
 10. Main clutch brake.
 11. Seal.
 12. Seal.
 13. Sleeve fork levers.
 14. Mobile pressure plate return spring.
 15. Clutch body.
 16. Lever support ring.
 17. Main clutch disks.
 18. Power take-off clutch Belleville spring disk.
 19. Power take-off clutch pressure plate.
 20. Power take-off clutch plate.
 21. Main transmission clutch release levers.
 22. Main clutch disks gear unit.
 23. Main clutch adjustment gear unit.
 24. Locknut

START UP

- Never run the engine in confined spaces that are not equipped with adequate ventilation for exhaust gas extraction.
- Never place the head, body, limbs, feet, hands or fingers near fans or rotating belts.

ENGINE

- Always loosen the radiator cap slowly before removing it to allow any remaining pressure in the system to be discharged. Filling up with coolant should only be carried out with the engine stopped or idling (if hot).
- Never fill up with fuel when the engine is running, especially if hot, in order to prevent the outbreak of fire as a result of fuel spillage.
- Never check or adjust fan belt tension when the engine is running.
Never adjust the fuel injection pump when the vehicle is moving.
- Never lubricate the vehicle when the engine is running.

ELECTRICAL SYSTEMS

- If it is necessary to use auxiliary batteries, remember that both ends of the cables must be connected as follows: (+) with (+) and (–) with (–). Avoid short-circuiting the terminals. **GAS RELEASED FROM BATTERIES IS HIGHLY INFLAMMABLE.** During charging, leave the battery compartment uncovered to improve ventilation. Never check the battery charge using “jumpers” (metal objects placed on the terminals). Avoid sparks or flames near the battery zone. Do not smoke to prevent explosion hazards.
- Before servicing operations, check for fuel or current leaks: eliminate any eventual leaks before proceeding with work.
- Do not charge batteries in confined spaces: make sure that there is adequate ventilation in order to prevent accidental explosion hazards as a result of the accumulation of gases released during charging operations.
- Always disconnect the batteries before performing any kind of servicing on the electrical system.

HYDRAULIC SYSTEMS

- A liquid leaking from a tiny hole may be almost invisible but, at the same time, be powerful enough to penetrate the skin. Therefore, **NEVER USE HANDS TO CHECK FOR LEAKS**, but use a piece of cardboard or wood for this purpose. If any liquid penetrates skin tissue, call for medical aid immediately. Failure to treat this condition with correct medical procedure may result in serious infection or dermatosis.
- In order to check the pressure in the system use suitable instruments.

WHEELS AND TYRES

- Make sure that the tyres are correctly inflated at the pressure specified by the manufacturer. Periodically check the rims and tyres for damage.
- Stand away from (at the side of) the tyre when checking inflation pressure.
- Only check pressure when the vehicle is unloaded and the tyres are cold, to avoid incorrect readings as a result of over-pressure. Do not use parts of recovered wheels as incorrect welding brazing or heating may weaken and eventually cause damage to the wheel.
- Never cut or weld a rim mounted with an inflated tyre.
- To remove the wheels, lock both the front and rear vehicle wheels. After having raised the vehicle, position supports underneath, according to regulations in force.
- Deflate the tyre before removing any object caught in the tyre tread.
- Never inflate tyres using inflammable gases; as this may result in explosions and injury to bystanders.

REMOVAL AND RE-FITTING

- Lift and handle all heavy parts using suitable hoisting equipment. Make sure that parts are sustained by appropriate hooks and slings. Use the hoisting eyebolts for lifting operations. Extra care should be taken if persons are present near the load to be lifted.
- Handle all parts with care. Do not put your hands or fingers between parts. Wear suitable safety clothing – safety goggles, gloves and shoes.
- Avoid twisting chains or metal cables. Always wear safety gloves when handling cables or chains.

GENERAL SPECIFICATIONS	“NEF” Engines	“F5A” Engines
Engine, technical type:		
– mod. TK4020 (BOSCH pump)	–	F5A E9484 A*A 003
– mod. TK4030 (BOSCH pump)	–	F5A E9484 B*A 003
– mod. TK4040 (BOSCH pump)	–	F5A E9484 G*A 005
– mod. TK4050 (BOSCH pump)	F4C E9487 N*J 601	–
– mod. TK4060 (BOSCH pump)	F4C E9487 A*J 600	–
Cycle	diesel, 4–stroke	
Fuel injection	Direct	
Number of cylinders in line	4	
Cylinder liners	obtained by machining with a machine tool	
Piston diameter		
– mod. TK4020, TK4030, TK4040	–	99
– mod. TK4050, TK4060	104	–
Piston stroke		
– mod. TK4020, TK4030, TK4040	–	104
– mod. TK4050, TK4060	132	–
Total displacement:		
– mod. TK4020, TK4030, TK4040	–	3202
– mod. TK4050, TK4060	4485	–
Compression ratio:		
– mod. TK4020, TK4030, TK4040	–	17 ± 0.5 : 1
– mod. TK4050, TK4060	17.5 ± 0.5 : 1	–
Maximum Power Output:		
– mod. TK4020	–	48kW – 65HP
– mod. TK4030	–	57kW – 78HP
– mod. TK4040	–	65kW – 88HP
– mod. TK4050	70kW – 95HP	–
– mod. TK4060	74kW – 101HP	–
Maximum power speed:		
– mod. TK4020, TK4030, TK4040	–	2300 rpm
– mod. TK4050, TK4060	2500 rpm	–
Maximum torque:		
– mod. TK4020	–	290Nm
– mod. TK4030	–	330Nm
– mod. TK4040	–	350Nm
– mod. TK4050	384.4Nm	–
– mod. TK4060	390.5Nm	–
Maximum torque speed		
– mod. TK4020, TK4030	–	1250 rpm
– mod. TK4040	–	1300 rpm
– mod. TK4050, TK4060	1400 rev/min	–
Number of main bearings	5	
Sump pan	structural, cast iron	

(continued)

(overleaf)

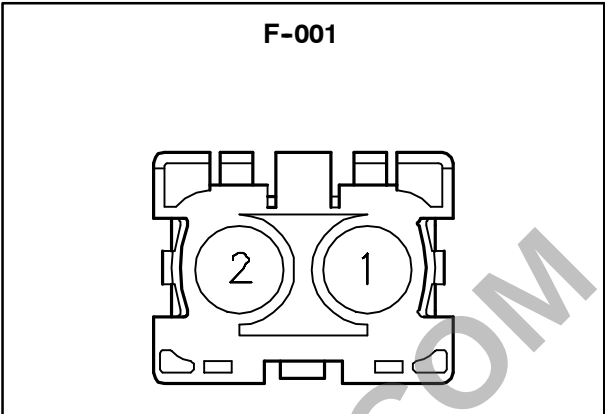
GENERAL SPECIFICATIONS	“NEF” Engines	“F5A” Engines
Lubrication	forced, with lobe pump	
Pump drive	with crankshaft	
Engine speed/oil pump speed ratio	1 : 1	1.24 : 1
Oil filtration	mesh screen on oil pick-up and filter cartridge in delivery line	
Normal oil pressure with motor warmed-up and running on full power:		
– mod. TK4020, TK4030	–	3.9 ± 0.5 bar
– mod. TK4040	–	4.5 ± 0.5 bar
– mod. TK4050, TK4060	3.1 ± 0.5 bar	–
Pressure relief valve	mounted on the oil pump cover mounted on the crankshaft under the phonic wheel, left-hand side under the socket head screw.	mounted on the crankcase on the right-hand side under the cooler pipe (hex screw with 27mm wrench).
Cooling	coolant circulation	
Radiator for all models	3 lines of vertical pipes with copper fins	
Fan, attached to coolant pump pulley	intake, ten-blade in sheet-metal	
Coolant pump	centrifugal vane-type	
Engine speed/coolant pump speed ratio	1.86 : 1	1.44 : 1
Temperature Control	thermostat	
Coolant thermometer	coloured scale divided into three sections	
Temperature ranges corresponding to each section:		
– Initial blue section	40° ÷ 65° C	
– middle green section (normal working conditions)	65° ÷ 110° C	
– red end sector	110° ÷ 120° C	
Speedometer/tachometer	LCD incorporated in control panel	
Control	electronic	
Hour meter above the reported minimum of	500 rpm	

(continued)

TRACTOR REFUELLING

COMPONENT TO BE FILLED OR TOPPED UP	QUANTITY dm ³ (litres)	RECOMMENDED NEW HOLLAND PRODUCT	NEW HOLLAND SPECIFI- CATION	INTERNATIONAL SPECIFICATION
Cooling system: Without cab - TK4020, TK4030 - TK4040, TK4050, TK4060 .. With Cab - TK4040, TK4050, TK4060 ..	10.5 13.0 14.0	Water and AMBRA AGRIFLU fluid 50% + 50%	NH 900 A	-
Washer fluid reservoir	2.0	Water & cleaning liquid	-	-
Fuel tank: - TK4020, TK4030 - TK4040, TK4050, TK4060 ..	83 111	Decanted, filtered diesel fuel	-	-
Engine oil sump: without filter: - TK4020, TK4030, TK4040 .. - TK4050, TK4060	8.5 9.5	AMBRA SUPER GOLD HSP oil	NH 330G (SAE 15W-40) NH 324G (SAE 10W-30)	API CI-4/CH-4 ACEA E7/E5
Central clutch servo-control (version on request)	0.8	AMBRA SHIFTSPEED oil	NH 622 HV	SAE 75W
Steering clutches	1.4	AMBRA SUPER 10W oil	NH 301 C	API CE MIL-L-2104E SAE 10W
Drive line: (gearbox, bevel drive, brakes and hydraulic lift) - TK4020, TK4030 - TK4040, TK4050, TK4060 ..	33.3 39.0	AMBRA MULTI F oil	NH 420 A	API GL4 ISO 46/68 SAE 20W-30
Final drives (each) - TK4020, TK4030 - TK4040, TK4050, TK4060 ..	2.0 3.5	AMBRA HYPOIDE 90 oil	NH 520 A	API GL5 MIL-L-2105D SAE 80W-90
Grease fittings	-	AMBRA GR9 grease	NH 710 A	NLGI 2

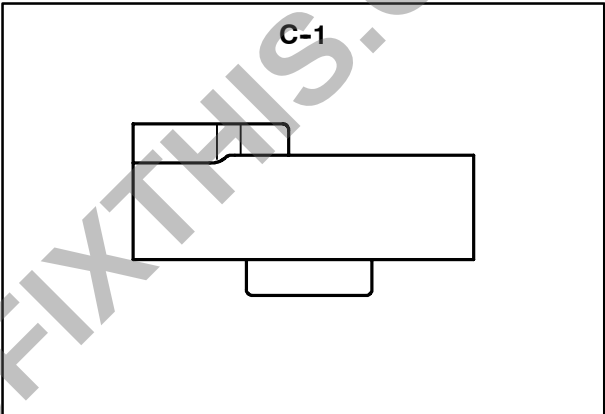
Pin	Col.	Sect.	Pin	Col.	Sect.
1	AB	1.0	2	AB	10



10

Pin	Col.	Sect.	Pin	Col.	Sect.
-	-	-	2	L	10

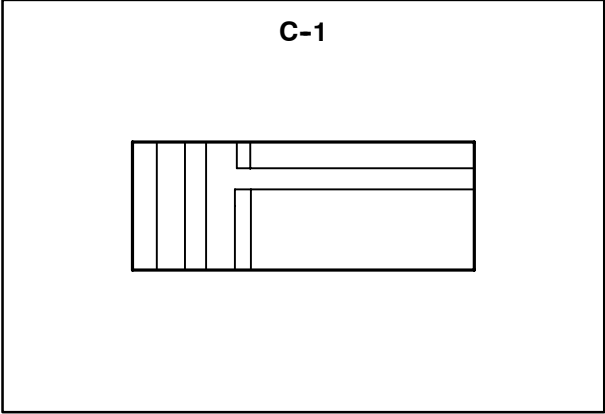
MAIN CABLE SIDE



11

Pin	Col.	Sect.	Pin	Col.	Sect.
1	L	10	-	-	-

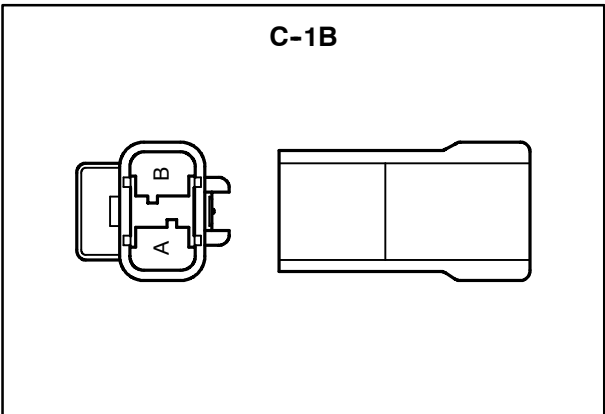
POWER CABLE SIDE



12

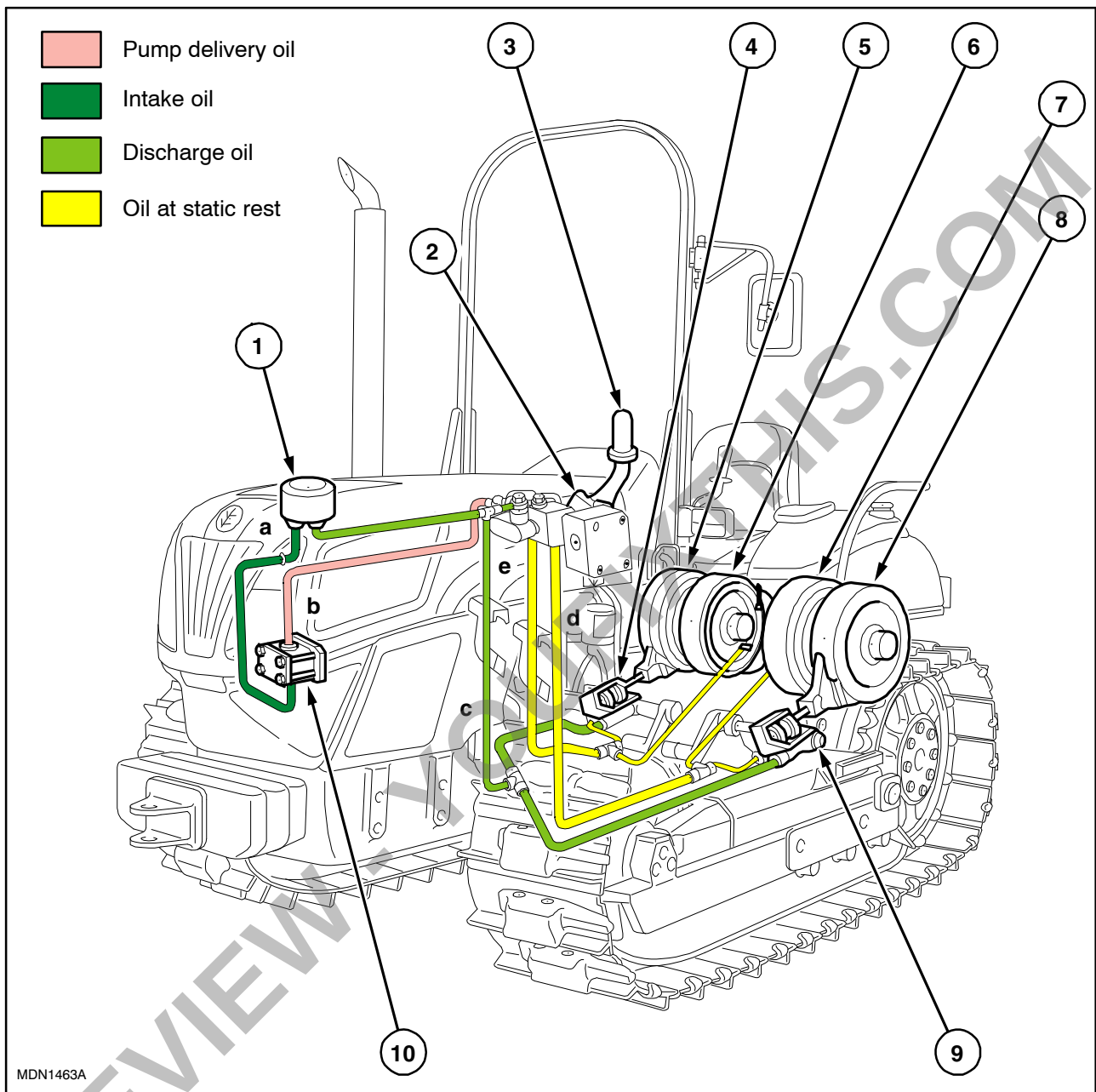
Pin	Col.	Sect.	Pin	Col.	Sect.
A	R	10	B	L	10

For model with cab.
MAIN CABLE SIDE



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HYDRAULIC SYSTEM



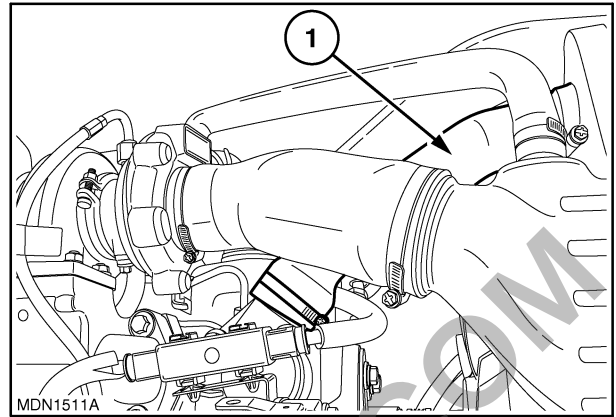
10

1. Oil tank with filter inside.
2. Steering-o-Matic Full Drive control valve
3. Manipulator lever.
4. Right-hand brake hydraulic actuator.
5. RH brake.
6. Right-hand steering clutch.
7. Left-hand steering clutch.
8. LH brake.
9. Left-hand brake hydraulic actuator.
10. Pump.

- a. Pump intake.
- b. Pump delivery.
- c. Brake actuators outlet.
- d. Left-hand actuator and steering clutch delivery.
- e. Right-hand actuator and steering clutch delivery.

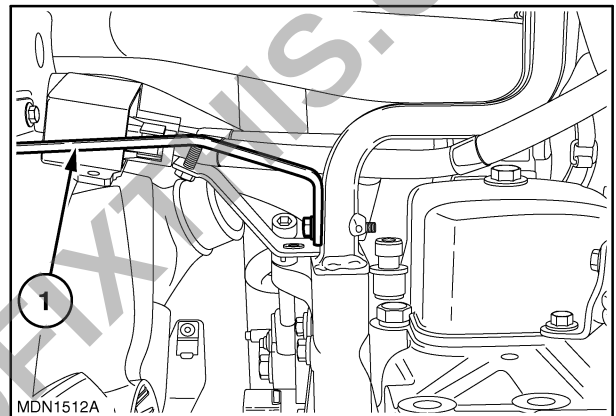
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4. Disconnect the top right-hand sleeve (1).



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5. Detach the radiator bracket (1), from under the bonnet damper support remove the two screws fixing the radiator to the support and remove the related plugs and washers.
6. Remove the radiator, then take off any guards, gaskets and shroud.



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7. To refit, proceed as follows:



ATTENTION



Use suitable tools to align the holes. NEVER USE FINGERS OR HANDS.

- Fit the shroud and guards on the radiator and any gaskets on the support.
- Position it on the support and secure it with the two screws, then refit the upper bracket.
- Reconnect all the various sleeves and fit the plug back on.
- Refit the radiator fan guards on both sides.
- Fill up with engine coolant using the product and quantity prescribed on page 7, sect. 00.
- Carry out operations relative to the **Rear fuel tank installation** (Sect. 10, chap. 1, page 25).

ADJUSTMENTS

Adjust Joystick and central clutch control kinematic unit.



ATTENTION



Use suitable tools to align the holes. NEVER USE FINGERS OR HANDS.

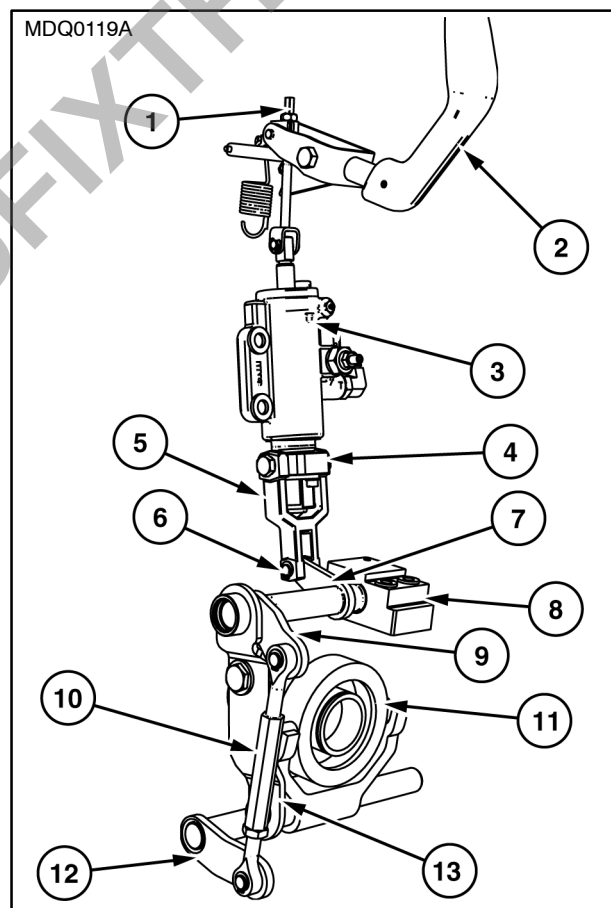
If there is any trouble with the steering clutch engagement kinematic unit operation, it is possible to make the adjustment as described below.

First phase

Adjust linkage on Joystick

1. Take out the pin (6) to disconnect the cylinder from the transmission unit.
2. Check that all the pivots of the kinematic unit are connected and make sure the Joystick (2) is in a central position in relation to the centre line of the travel of the transverse steering or of the handrail.

1. Upper adjuster.
2. Joystick.
3. Hydraulic cylinder.
4. Pivot pawl.
5. Cylinder fork.
6. Transmission pin fork pivot pin.
7. Transmission pin.
8. Transmission pin internal support, secured on the top of the clutch housing.
9. External relay rod.
10. Lower adjuster.
11. Central clutch engagement sleeve.
12. Sleeve control lever.
13. Relay rod side support, secured on the left-hand side of the clutch housing.



DESCRIPTION AND OPERATION

The rear transmission transmits drive from the gearbox to the final drives, through the steering clutches, by means of the bevel gear. The bevel gear pair is of the helical tooth type and is supported by taper-roller bearings.

The final drives are of the cascade-type and are operated by the steering clutches and controlled by the bevel gear.

BEVEL GEAR TROUBLESHOOTING

Problems	Possible failures	Solutions
Transmission is noisy when tractor is under or released from load.	1. Internal part faulty.	Remove the rear transmission casing and replace the worn parts.
Transmission noisy and assembly overheats.	1. Insufficient coupling clearance between the teeth of the pinion and of the bevel crown wheel.	Remove the rear transmission gearbox and correctly adjust the bevel gear support bearings.

FINAL DRIVE FAULT DIAGNOSIS

Problems	Possible failures	Solutions
Final drives are noisy while the tractor is moving, even when the gears are in neutral.	1. Internal part faulty.	Remove the final drive housing and replace the damaged parts.
	2. Excessive clearance between gear-shaft keyed groove and steering clutch casing.	Remove the final drive housing and replace the damaged parts.

MAIN DATA

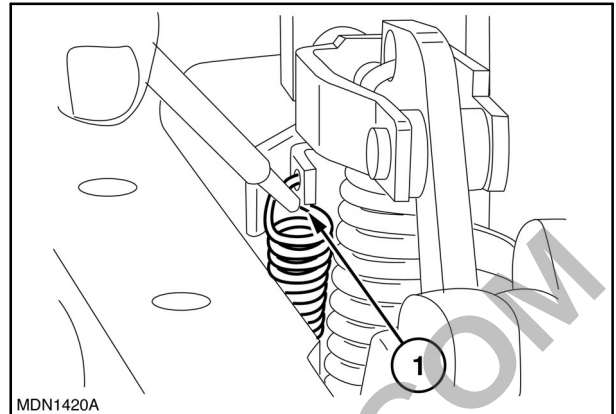
Type: – service brake	oil-immersed brakes acting on the final drive shafts
Driving: – service brake – parking brake	mechanical, independent operation pedal mechanical, by means of hand lever that acts simultaneously on the service brakes
Number of discs (4, figs. 7 and 8) service brakes: – mod. TK4020 and TK4030 – mod. TK4040, TK4050 and TK4060 Service brake disks material Service brake disks thickness mm	2 2 HDT303 4.8 ÷ 4.9
Number of reaction discs (3, figs. 7 and 8) service brakes: – mod. TK4020 and TK4030 – mod. TK4040, TK4050 and TK4060 Service brake reaction disks material Service brake reaction disks thickness: – mod. TK4020 and TK4030 mm – mod. TK4040, TK4050 and TK4060 mm	2 1 Steel 4.42 ÷ 4.58 2.56 ÷ 2.69
Brake hydraulic actuator Pressure reduction valve adjustment shim (5, fig. 10) mm Actuator pressure with hand grip at a pressure of: – 27 ÷ 29 bar (27.5 ÷ 29.5 kg/cm ²) first click bar – 84 ÷ 86 bar (85.6 ÷ 87.7 kg/cm ²) full steering bar	1 0 bar (0 kg/cm ²) 55 ÷ 59 bar (56 ÷ 60.1 kg/cm ²)

LIFT ADJUSTMENTS

The following adjustments refer to a lift without hydraulic control valve block and mounted on a rotating stand.

NOTE: These adjustments must be carried out in the order specified.

The LIFT-O-MATIC PLUS device must be kept in the OFF position, unhook the spring (1) inside the lift assembly (external control lever (1, fig. 51) locked in the vertical position) unless otherwise indicated.

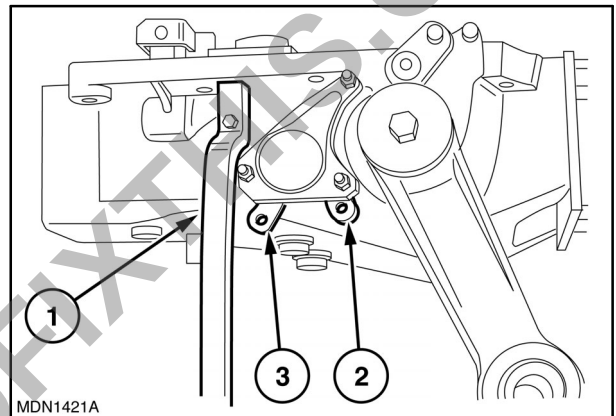


50

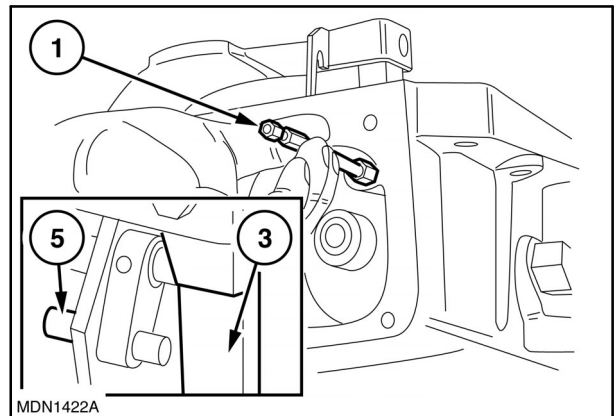
Adjusting position control

Proceed as follows.

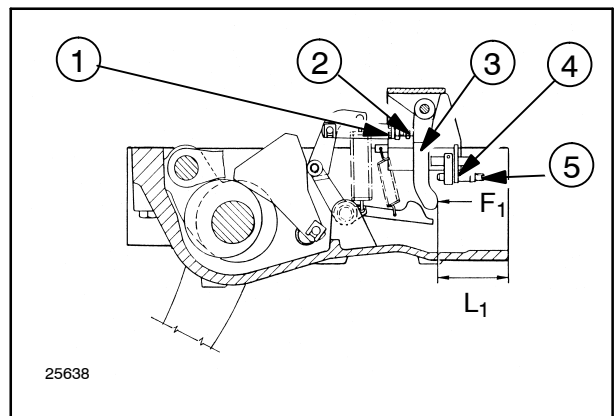
28. Move the external position control lever (2) completely back against the spacer for the stud bolt securing the spring retaining bracket, and the internal draft control lever (3) completely forward against the spacer.
29. Turn the arm control shaft so that the internal arm comes into contact with the lift body.
30. Using wrench **380002902** (1) loosen the locknut (4, fig. 53) and totally unscrew the adjustment screw (5, fig. 53), until it no longer makes contact with the control valve lever (3).



51



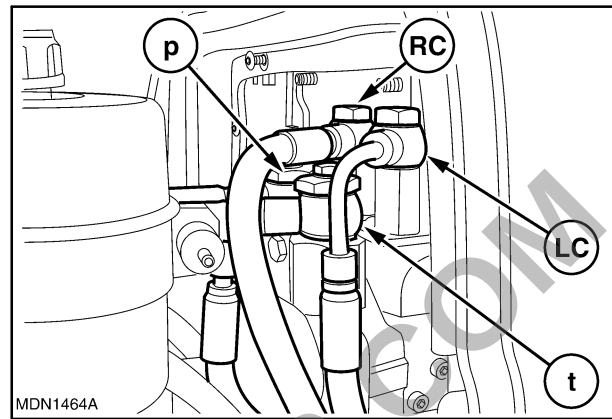
52



53

Legend figures 7 and 8, page 9 and 10

1. Pressure adjuster screw for left-hand clutch.
2. Pressure adjuster screw for right-hand clutch.
3. Manipulator rod.
4. Manipulator rod cap (pressure regulating valve cap).
5. Springs.
6. Manipulator control lever passage length adjuster shim; between the control valve rod and the rod endpiece.
7. Manipulator control rod endpiece.
8. Manipulator control lever inside the control valve.
9. Pin for internal manipulator control lever.
10. Plug.
11. Spring positioning internal manipulator control lever poppet ball.
12. Internal manipulator control lever poppet ball.
13. Seal.
14. Non-return valve.
15. Bearing.
16. Seal.
17. Retaining pin.
Note: This retaining pin must be positioned with the junction facing towards the poppet ball.
18. Bolt securing manipulator control lever support closing plate, (C₅).
19. Bolt securing manipulator control lever support, (C₅).
20. Bolt securing manipulator cover, (C₅).
21. Manipulator control valve side plate.
22. "R-Ring" seal.
23. Hole for the bite to pass through to secure the control valve to the support on the machine, (C₄).
24. Hole for the bite to pass through to secure the control valve to the support on the machine, (C₄).
25. Bolt securing parts of the control valve, (C₄).
26. Oil inlet side panel to the control valve.



9

- LC** Oil outlet for left-hand steering clutch.
RC Oil outlet for right-hand steering clutch.
p Coupling for delivery from the pump.
t Outlet coupling

TRACK TENSIONER WHEEL

Removal – Installation



DANGER

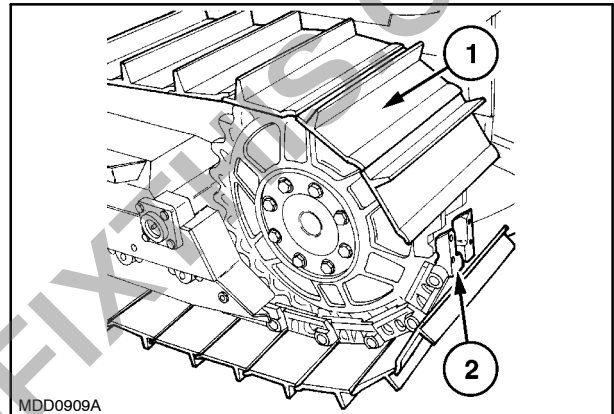


Lift and handle all heavy parts using suitable lifting equipment.

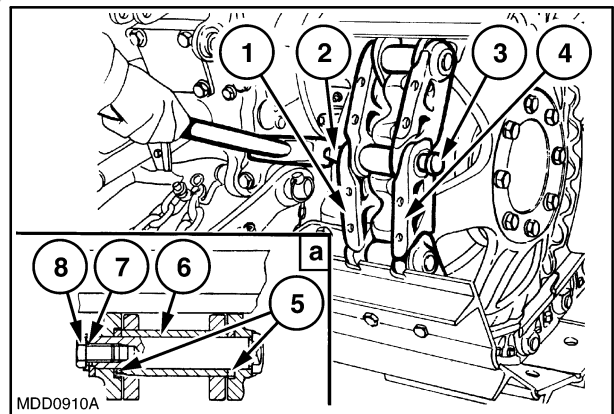
Make sure that assemblies or parts are supported by means of suitable slings and hooks. Ensure that no-one is in the vicinity of the load to be lifted.

Proceed as follows:

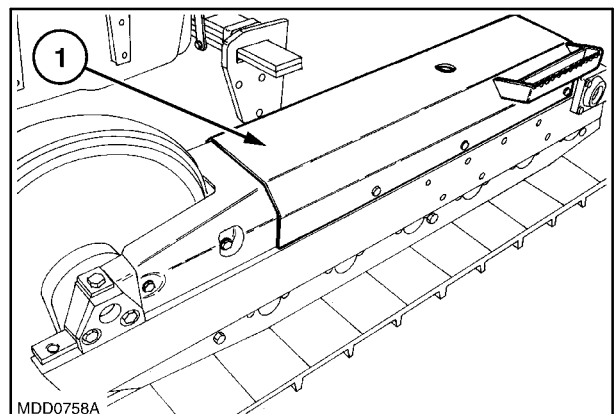
1. Adjust the tracks so as to move the chain joint links towards the rear part of the tractor in the middle of the drive wheels.
2. Loosen the right and left-hand chains by means of the track tensioner devices.
3. **For models with joint links**, remove the bolts fixing the shoe (1) fitted on the semi-joint links (2) of the right and left-hand chains and unwind the chains towards the front part of the tractor.
4. **For models with joint pins**, remove the bolts fixing the two shoes next to the joint pin (3), remove the bolt (8) fixing the joint pin on the right and left-hand chains and recover the two safety washers (7).
5. Tighten the extraction punch (2) **75291250**, for 125 mm pitch chains, or punch **290808** for 140 mm pitch chains, extract the joint pin (3), recover the shim rings (5) and unwind the chains towards the front part of the tractor.
6. Remove the upper guards (1) on the track carriage.
7. Remove the bolts (C₄, fig. 5) fixing the track tensioner spring support to the track tensioner wheel support and remove the wheel using the hooked tongs **291426**.



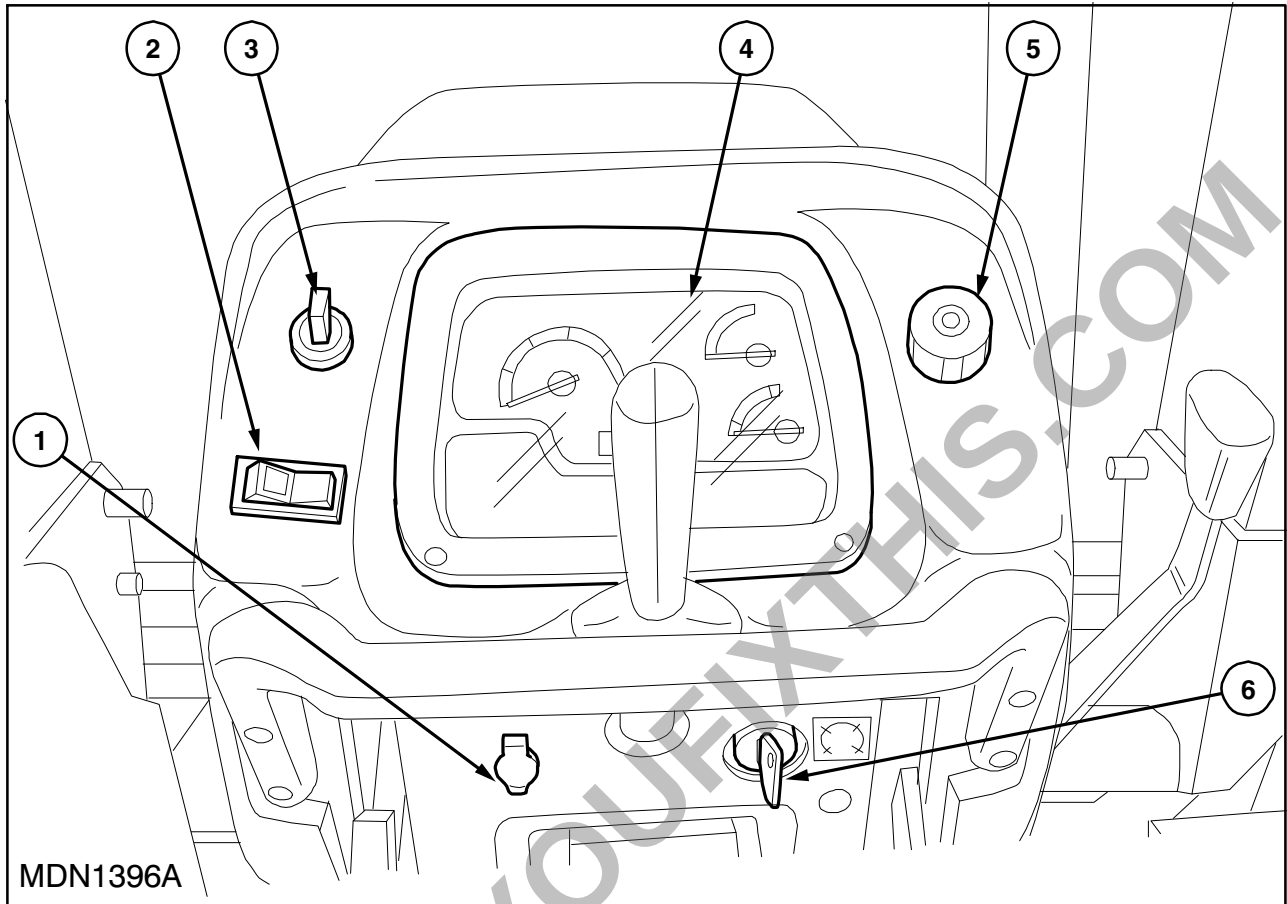
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39



40

ANALOG CONTROL PANEL

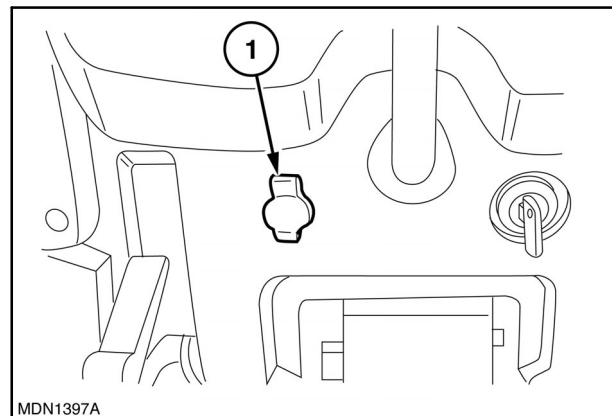
1

1. 8 amp socket.
2. Emergency switch.
3. Direction indicator and headlights flasher switch.

4. Analog instrument panel (see section 55 chapter 1).
5. Side lights and horn switch.
6. Ignition switch

8A POWER SOCKET (C-46)

This is a two-pole socket (1) that enables connecting a 12 volt electric service with a maximum input of 8A. This socket is not key controlled and is connected directly to the battery.



2

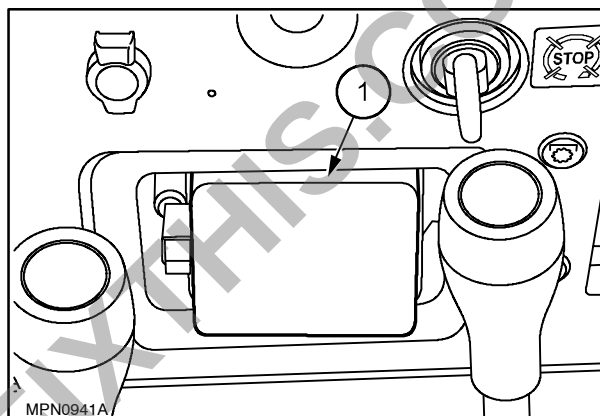
LOCATION OF FUSES AND RELAYS



If electrical system relays need to be changed, check that correct spare parts are used and that they are fitted in the correct positions. The use of structurally or functionally different relays - even if interchangeable - could seriously compromise tractor control with dangerous results.

Version without central clutch servo-control

The fuse box (1) is located in the middle of the instrument panel and is directly accessible by opening the plastic cover.

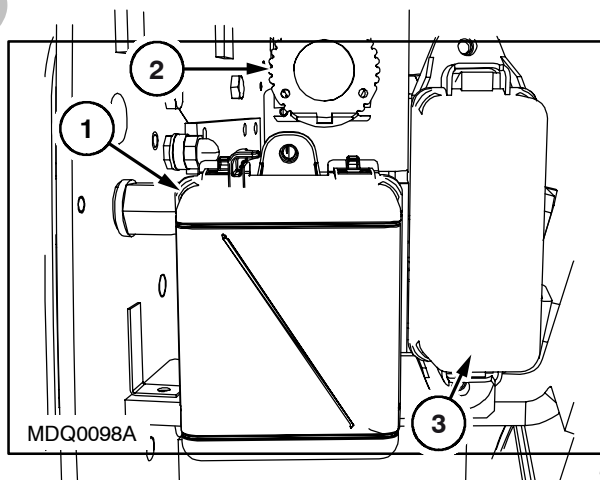


1

Version with central clutch servo-control

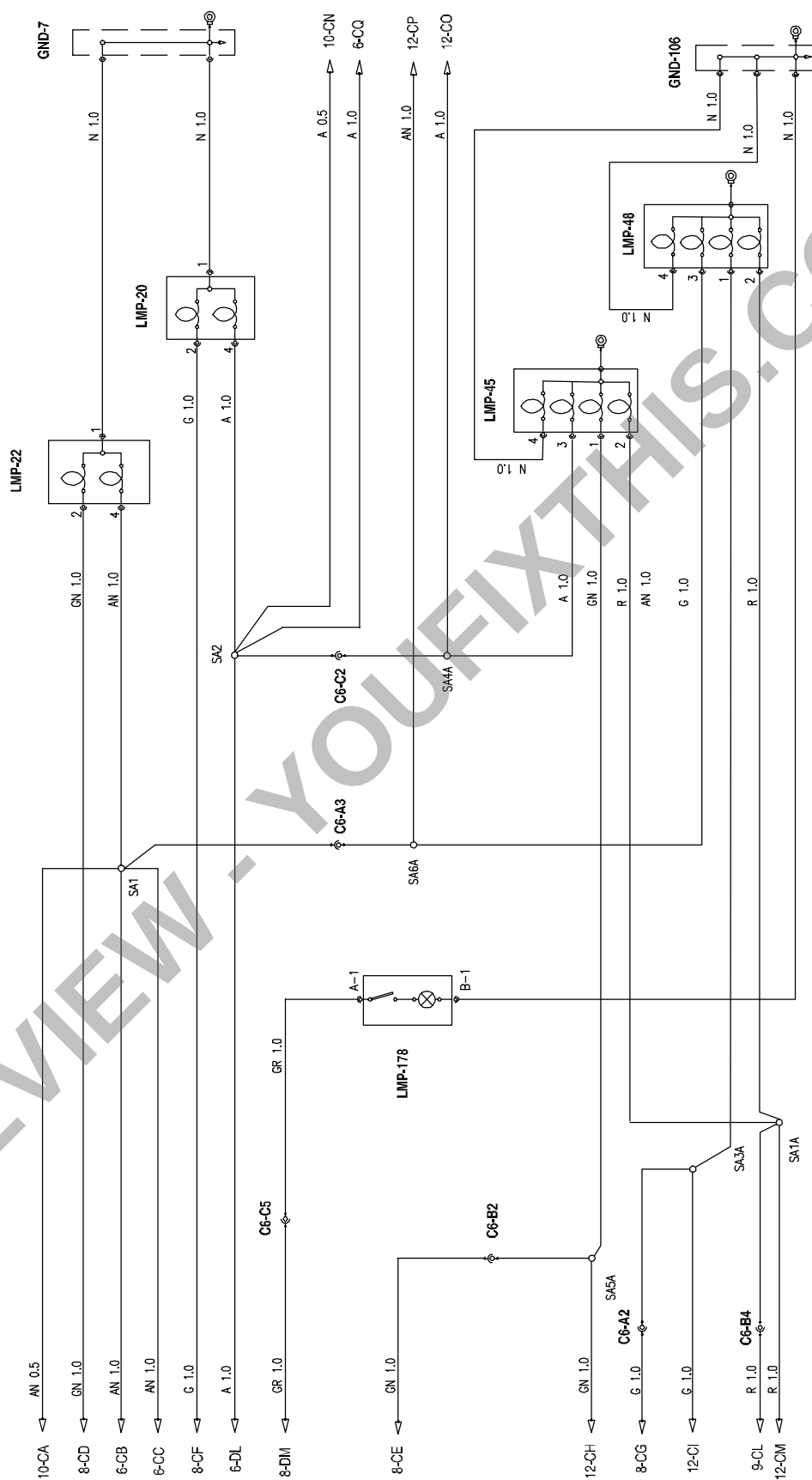
On the left-hand side of the drive console, under the removable panel, there are two fuse boxes:

1. - system fuse box
3. - servo-control fuse box
on the top there is the fault diagnosis jack (2) where, if updating the software, you can download it to the control unit.



2

EXTERNAL LIGHTS, WORK LIGHT CIRCUIT (ISO VERSION) - DIAGRAM 3



MPN0954A

List of fuses (ISO version)

Fuse	Amps.			PROTECTED CIRCUITS
F1-4	(10 A)	+12 Volts from	MF1 (50 A)	8A power socket, horn
F2-5	(15 A)			Hazard lights and full beam flasher
F3-6	(5 A)	+12 Volts from	57/58 Lights switch	Left-hand side lights and side lights indicator
F7-10	(5 A)			Right-hand side lights, lighting for controls and instruments
F8-11	(15 A)	+12 Volts from	56A Lights switch	Full beam headlights
F9-12	(15 A)	+12 Volts from	56B Lights switch	Dipped beam headlights
F21	(5 A)			Sediment filter and instrument power supply
F22	(10 A)			Brake lights (STOP)
F23	(5A)	+12 Volts from	15/54 key	Engine cut-out electromagnet
F24	(10 A)			Direction indicators
F25	(5 A)			Operator alarm circuit, PTO indicator light
F26	(5 A)	+12 Volts from	50 key	Starter safety circuit
F27	(15 A)	+12 Volts from	15/54 key	Thermostart starting aid
F29	(5 A)	+12 Volts from	MF1 (50 A)	Instrument and operator alarm buzzer
F30	(15 A)	+12 Volts from	58 key	Cab supply (energizing cab RLY II)

List of 50A maxi-fuses (ISO version)

MF1 (50 A) (F-169)	⇒	F29 (5 A) F1-4 (10 A) F2-5 (15 A)				
	⇒	30 Lights switch	⇒	57/58	⇒	F3-6 (5 A) F7-10 (5 A) F28 (5 A) F9-12 (15 A) F8-11 (15 A) pin 2 direction indicators for hazard lights
	⇒	30 Starter switch	⇒	15/54	⇒	F21 (5 A) F22 (10 A) F23 (5 A) F24 (10 A) F25 (5 A) F26 (5 A) F27 (15 A) F30 (15 A)
	⇒	30 RVI Engine starting.				
	⇒	F-1 (15 A) F-2 (15 A) F-3 (7.5 A) Cab 30 RLY II				

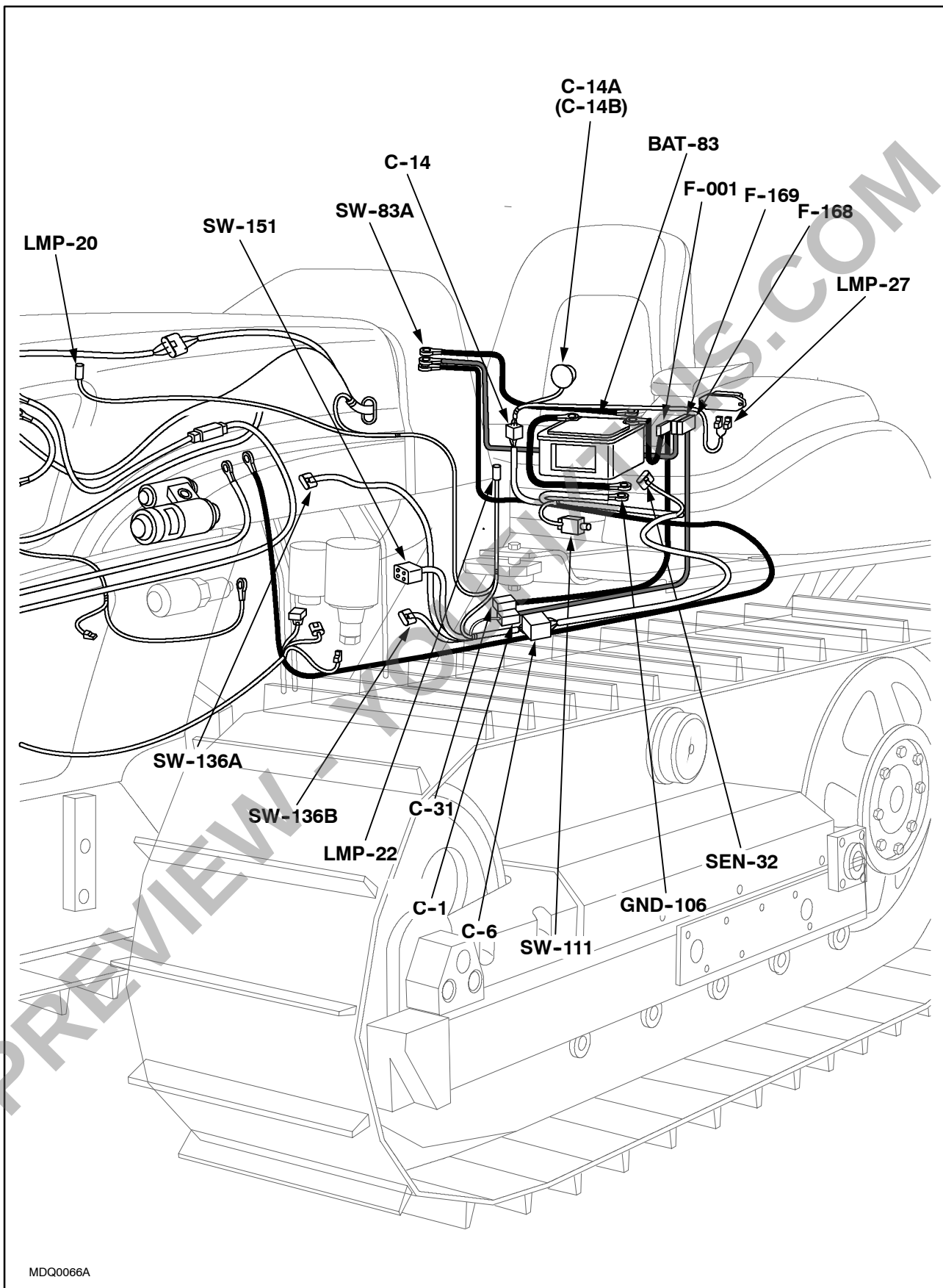
**STARTING, RECHARGING AND GRID HEATER CIRCUIT
(Diagram 1)**

C-1B	Front power connection (2 PIN)
GND-7	Control panel ground
C-16	Grid heater connection (6 PIN)
BAT-83	Battery
SW-83A	Battery cut-out switch
ALT-84	Alternator
M-85	Starter motor
SOL-94	Engine cutout electromagnet
SOL-95	Solenoid valve to cut out starting advance, depending on temperature
SEN-96	Starting advance thermometric cut-out switch
MOD-156	Grid Heater module
RLY-157	Grid heater relay (coil)
RLY-158	Grid heater relay (power)
RES-159	Inlet Grid Heater
F-160	125 A Maxi-fuse
F-168	50 A Maxi-fuse (cab version)
F-169	50 A Maxi-fuse
F-001	10 A fuse for power supply of memories and safety systems

* In **NASO** markets there is no battery cut-off switch; the lines:
to the starter motor **M-35** (N 50)
to the mega fuse **F-169** 50A (L10)
to the mega fuse **F-168** 50A (R10)
leave straight from the positive pole of the battery.

** In **NASO** markets there is no battery cut-off switch, so there is no memory cable with fuse **F-001** 5A directed to the connector **C-31** (see table 2).

REAR WIRING



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