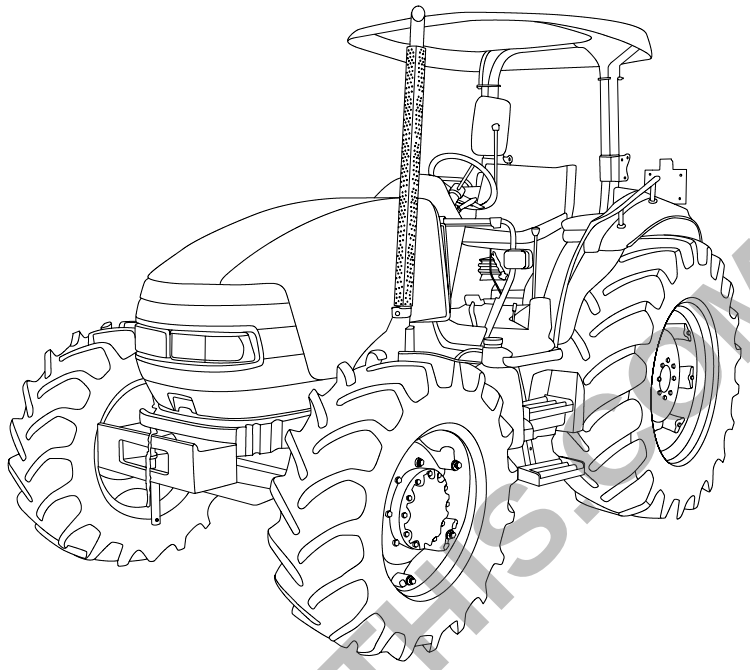
CASE



JX60 – JX70 – JX80 – JX90 – JX95 MODEL TRACTORS SERVICE MANUAL

SECTIONS

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S E R V I C E

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Repair Manual – JX Series Tractors

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General Instructions and Health and Safety — **Chapter 1**

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ENGINE — **SECTION 10**

Engine System — **Chapter 1**

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SAFETY RULES

PAY ATTENTION TO THIS SYMBOL



This warning symbol points out important messages involving personal safety. Carefully read the safety rules contained herein and follow advised precautions to avoid potential hazards and safeguard your safety and personal integrity. In this manual you will find this symbol together with the following key–words:



***WARNING** – it gives warning about improper repair operations and deriving potential consequences affecting the service technician's personal safety.*

***DANGER** – it gives specific warning about potential dangers for personal safety of the operator or other persons directly or indirectly involved.*

TO PREVENT ACCIDENTS

Most accidents and personal injuries taking place in workshops are due from non–observance of some simple and essential prudential rule and safety precautions. For this reason, IN MOST CASES THEY CAN BE AVOIDED. It suffices to foresee possible causes and act consequently with necessary caution and care.

The possibility that an accident might occur with any type of machines should not be disregarded, no matter how well the machine in question was designed and built.

A wise and careful service technician is the best precautions against accidents.

Careful observance of this only basic precaution would be enough to avoid many severe accidents.

DANGER: Never carry out any cleaning, lubrication or maintenance operations when the engine is running.

SAFETY RULES

GENERALITIES

◊ Carefully follow specified repair and maintenance procedures.

◊ Do not wear rings, wristwatches, jewels, unbuttoned or flapping clothing such as ties, torn clothes, scarves, open jackets or shirts with open zips which could get hold into moving parts. We advise to use approved safety clothing such as anti–slipping footwear, gloves, safety goggles, helmets, etc.

◊ Never carry out any repair on the machine if someone is sitting on the operator's seat, except if they are certified operators to assist in the operation to be carried out.

◊ Never operate the machine or use attachments from a place other than sitting at the operator's seat.

◊ Never carry out any operation on the machine when the engine is running, except when specifically indicated.

◊ Stop the engine and ensure that all pressure is relieved from hydraulic circuits before removing caps, covers, valves, etc.

◊ All repair and maintenance operations should be carried out with the greatest care and attention.

◊ Service stairs and platforms used in a workshop or in the field should be built in compliance with the safety rules in force.

◊ Disconnect the batteries and label all controls to warn that the tractor is being serviced. Block the machine and all equipment which should be raised.

◊ Never check or fill fuel tanks and accumulator batteries, nor use starting liquid if you are smoking or near open flames as such fluids are flammable.

◊ Brakes are inoperative when they are manually released for maintenance purposes. In such cases, the machine should be kept constantly under control using blocks or similar devices.

◊ The fuel filling gun should remain always in contact with the filler neck. Maintain this contact until the fuel stops flowing into the tank to avoid possible sparks due to static electricity buildup.

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GENERAL SPECIFICATIONS	3 cylinders	4 cylinders
Engine type:		
- mod. JX60 normally aspirated - type 8035.05D.939 (BOSCH pump)	see data pages 6-7	-
- mod. JX70 turbocharged - type 8035.25C.939 (BOSCH pump)	see data pages 8-9	-
- mod. JX80 normally aspirated - type 8045.05R.939 (BOSCH pump)	-	see data pages 10-11
- mod. JX90 turbocharged - type 8045.25.939 (BOSCH pump)	-	see data pages 12-13
- mod. JX95 turbocharged - type 8045.25L.939 (BOSCH pump)	-	see data pages 14-15
Cycle	Diesel, 4-stroke	
Fuel injection	Direct	
Number of cylinders in line	3	4
Cylinder liners		dry force-fitted in cylinder block
Piston diameter		
- mod. JX60	104 mm (4.0945 in.)	-
- mod. JX70	104 mm (4.0945 in.)	-
- mod. JX80	-	104 mm (4.0945 in.)
- mod. JX90	-	104 mm (4.0945 in.)
- mod. JX95	-	104 mm (4.0945 in.)
Piston stroke	115 mm (4.5276 in.)	
Total displacement:		
- mod. JX60-JX70	2931 cm^3 (178.8496 $in.^3$)	-
- mod. JX80-JX90-JX95	-	3908 cm^3 (238.4662 $in.^3$)
Compression ratio	17 to 1 normally aspirated 16.5 to 1 turbocharged	
Maximum power 2000/25 EC at 2500 rpm:		
- mod. JX60	43.4 kW (59 hp)	-
- mod. JX70	50.7 kW (69 hp)	-
- mod. JX80	-	58.8 kW (80 hp)
- mod. JX90	-	65.5 kW (89 hp)
- mod. JX95	-	69.1 kW (94 hp)
Maximum power ECE R 24 at 2500 rpm:		
- mod. JX60	41.2 kW (56 hp)	-
- mod. JX70	47.8 kW (65 hp)	-
- mod. JX80	-	55.9 kW (76 hp)
- mod. JX90	-	63.3 kW (86 hp)
- mod. JX95	-	66.9 kW (91 hp)
Fast idling speed	2500 rpm.	
Maximum torque (daNm) at 1500 rpm: JX60 model	20.7 (152.6753 ft lb)	-
Maximum torque (daNm) at 1500 rpm: JX70 model	25.0 (184.3905 ft lb)	-
Maximum torque (daNm) at 1500 rpm: JX80 model	-	27.9 (205.9778 ft lb
Maximum torque (daNm) at 1500 rpm: JX90 model	-	32.0 (236.0194 ft lb)
Maximum torque (daNm) at 1500 rpm: JX95 model	-	33.7 (248.5584 ft lb)
Number of main bearings	4	5
Sump	Structural, cast iron	

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ANGLE TIGHTENING TORQUE DATA

PART	Thread	Preliminary torque		Angle
		Nm	ft lb	
Cylinder head bolts (2) fig. 3 or 5	M 12 x 1.25	70	51.6293	90° + 90°
Main bearing cap bolts (4) fig. 3 or 5	M 14 x 1.5	80	59.0050	90°
Big-end cap bolts (5) fig. 3 or 5	M 11 x 1.5	40	29.5025	60°
Flywheel mounting bolts (3) fig. 3 or 5	M 12 x 1.25	40	29.5025	60°

TIGHTENING TORQUE DATA

PART	Thread	Tightening torque	
		Nm	ft lb
Rocker shaft pedestal bolts (1) fig. 3 or 5	M 8	25	18.4390
Crankshaft hub retaining nut (7) fig. 3 or 5	M 30 x 1.5	294	216.8432
Fan and alternator pulley bolts (6) fig. 3 or 5	M 10 x 1.25	55	40.5659
Additional counterweight retaining bolts (1) fig. 6 for JX80, JX90 and JX95 models	M 12 x 1.25	110	81.1318
Inlet manifold retaining bolts (1) fig. 68	M 8	25	18.4390
Alternator and belt tension adjustment nut (1) fig. 54	M 10 x 1.25	55	40.5659
Coolant pump retaining bolts (1) fig. 59	M 10 x 1.25	55	40.5659
Nuts for injector mounting studs (1) fig. 138	M 8	25 **(*)**	18.4390**(*)**
Rocker cover nuts (1) fig. 80	M 8	15	11.0634
Rocker shaft pedestal bolts (2) fig. 81	M 8	25	18.4390
Oil pump and pump cover retaining bolts (1) fig. 89	M 8	25	18.4390
Timing gear case and cover bolts (1) fig. 93	M 8	25	18.4390
Intermediate flanged journal bolts (1) fig. 96	M 10 x 1.25	55	40.5659
Camshaft thrust plate retaining bolts (4) fig. 97	M 8	35	25.8146
Rear crankcase cover bolts (2) fig. 117	M 8	25	18.4390
Tappet adjuster screw locknuts (1) fig. 137	M 8	22	16.2263
Exhaust manifold retaining bolts (1) fig. 64	M 8	25	18.4390
Injection pump mounting nuts (1) fig. 70	M 8	25	18.4390
Sump pan retaining bolts (4) fig. 86, to - inner rear timing cover and gear case - cylinder block and flywheel case • JX60, JX70, JX80 and JX90 models • JX95 models	 M 10 X 1.25 M 10 X 1.25 M 10 X 1.25	 39 to 49 49 to 59 49 to 69	 28.7692 to 36.1405 36.1405 to 43.5161 36.1405 to 50.8918

(*) Tighten the nuts in two stages: see the operation in figure 138.

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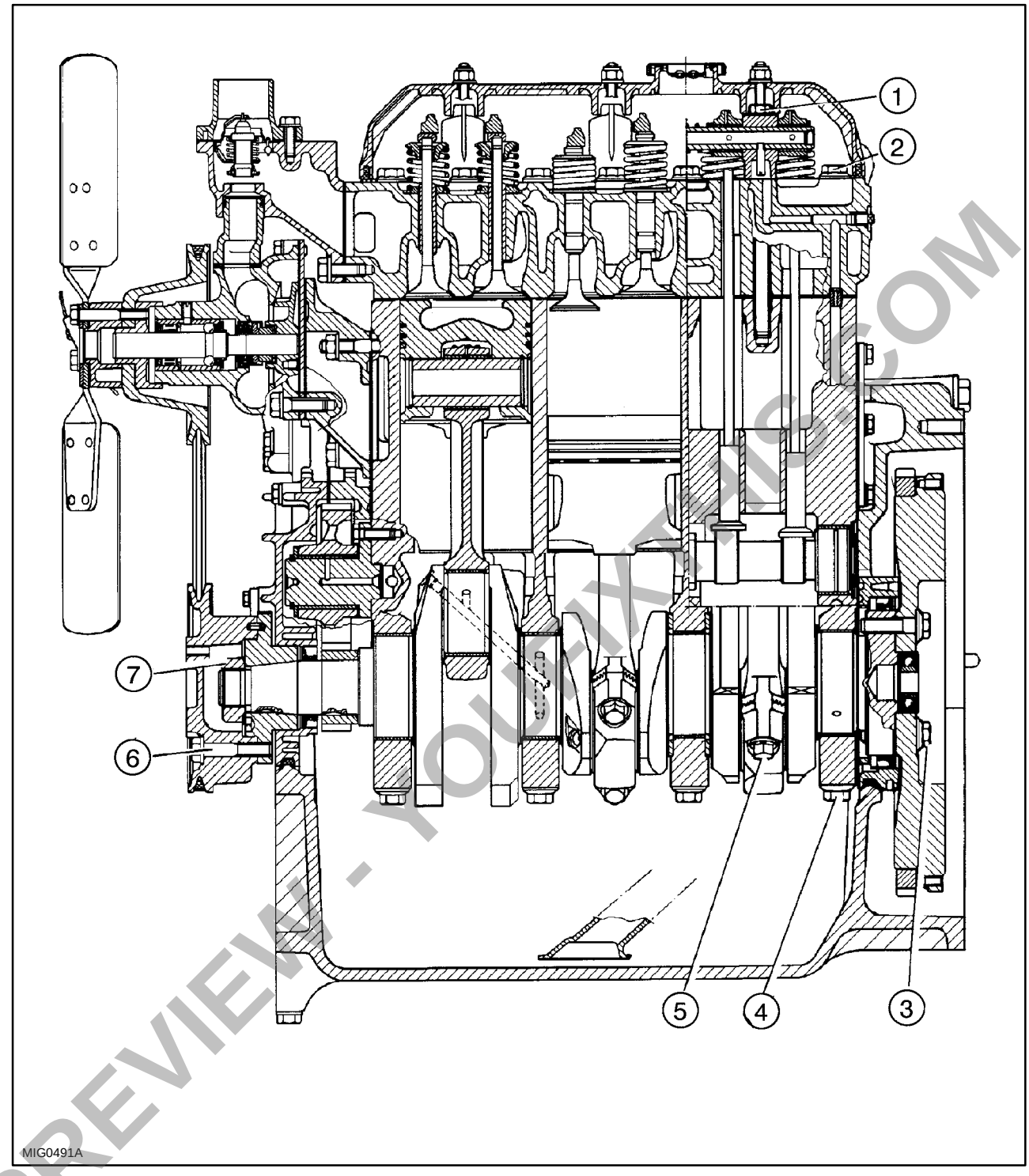
ENGINE TROUBLESHOOTING

Faults	Possible Cause	Correction
Engine does not start.	**1.** Batteries partially discharged.	Check and recharge battery. Replace if necessary.
	2. Battery terminal connections corroded or loose.	Clean, inspect and tighten terminal nuts. Replace terminals and nuts if excessively corroded.
	3. Incorrect injection pump timing.	Adjust injection pump timing.
	4. Impurities or water in fuel lines.	Disconnect fuel lines from injection pump and clean thoroughly. If necessary clean and dry the fuel tank.
	5. No fuel in tank.	Fill tank.
	6. Fuel supply pump malfunction.	Check and replace pump if necessary.
	7. Air in fuel system.	Check fuel lines, unions, supply pump, filters and injection pump for air, then bleed system.
	8. Starter motor faulty.	Repair or replace starter motor.
	9. Faulty thermostart.	Check and replace thermostart, if necessary.
Engine stalls.	**1.** Idle speed too low.	Adjust idle speed.
	2. Irregular delivery from injection pump.	Check injection pump delivery on test bench.
	3. Impurities or water in fuel lines.	Disconnect fuel lines from injection pump and clean thoroughly. If necessary clean and dry the fuel tank.
	4. Fuel filters clogged.	Renew filter cartridges.
	5. Incorrect valve clearances.	Adjust valve clearance.
	6. Burnt or cracked valves	Replace the valves.
	7. Air in fuel system.	Check fuel lines, unions, supply pump, filters and injection pump for air, then bleed system.
	8. Injection pump drive mechanism damaged.	Replace damaged parts.

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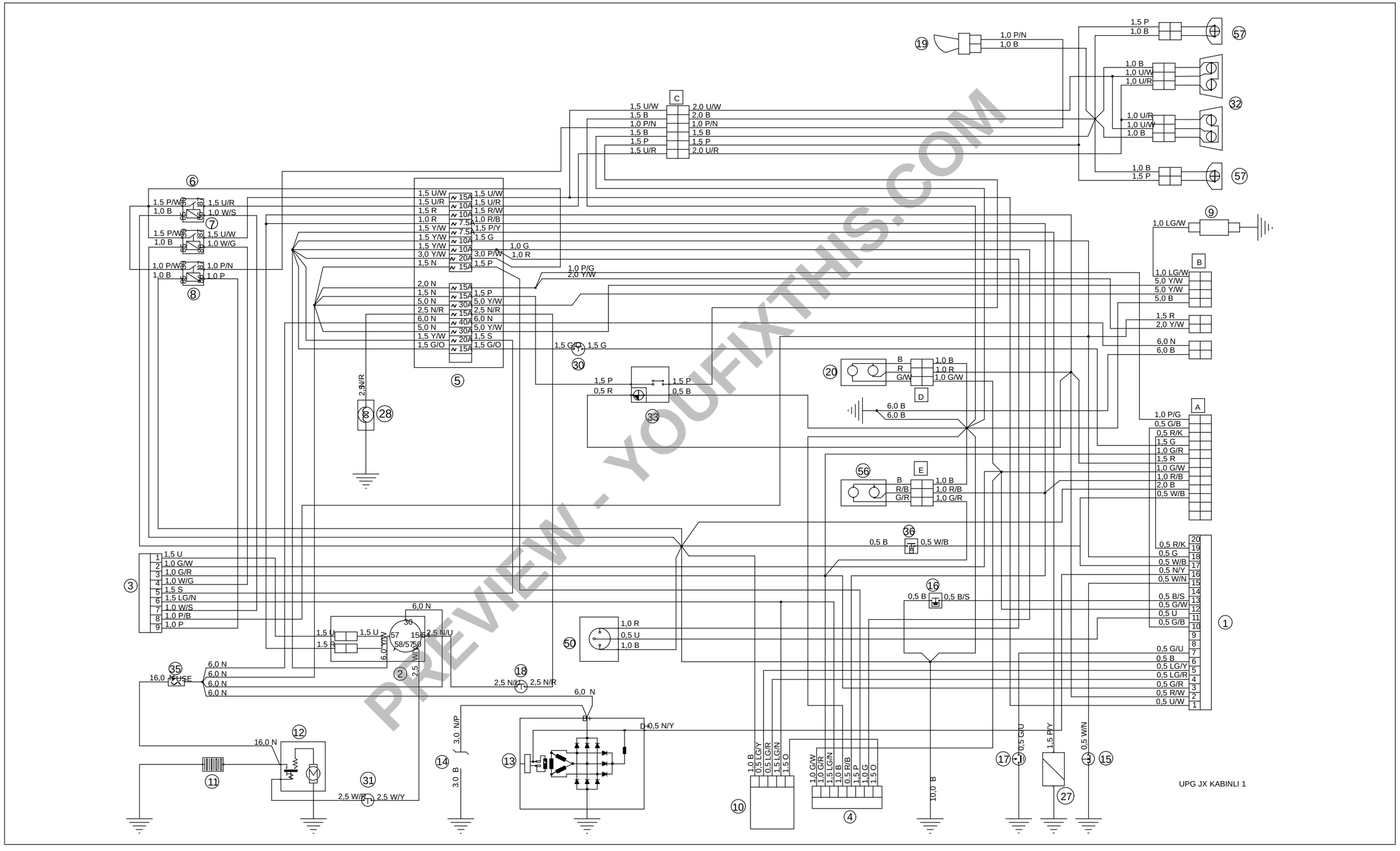
3

Longitudinal section of 3-cylinder JX60 and JX70 Models

1. Rocker shaft pedestal bolts
2. Cylinder head bolts
3. Flywheel bolts
4. Main bearing cap bolts
5. Big-end cap bolts
6. Fan and alternator pulley bolts
7. Crankshaft hub bolts

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GENERAL DIAGRAM –CENTRE(WITH CAB)



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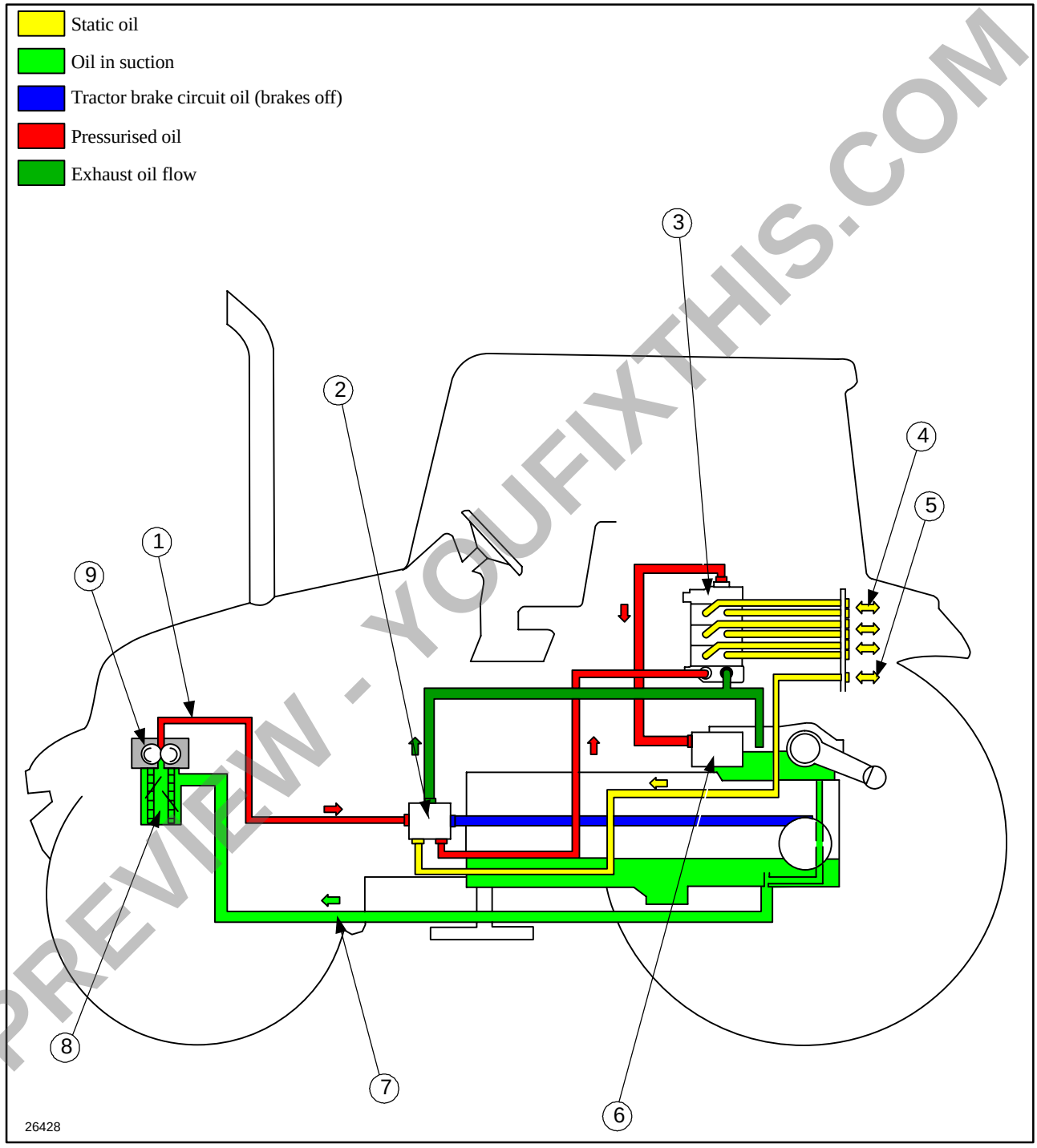
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DESCRIPTION AND OPERATION

The mechanical lift can operate with controlled position or draft control and with a combination of the two. The lift is controlled by two levers located on the operator's right. It also features the Lift–O–Matic device which raises and lowers the implement without the need to use the position and draft control levers.

Draft control is actuated by the flex bar positioned in the special box mounted under the rear transmission.

The lower lift arms and corresponding control rods are connected to the flex bar.



50

HYDRAULIC LIFT CIRCUIT

1. Delivery line to control valve (3).
2. Trailer brake control valve.
3. Auxiliary control valves.
4. Auxiliary control valve lines.
5. Trailer brake control valve line.
6. Lift control valve.
7. Suction line.
8. Oil filter.
9. Hydraulic pump.

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JX60 MODEL - CALIBRATION DATA FOR BOSCH INJECTION PUMP TYPE VE 3/12 F 1250 L 976 - 504054473

ASSEMBLY DATA

Pump timing on engine: delivery start 4° ± 0.5° before TDC of cylinder 1 compression stroke.
Plunger pre-lift for timing on engine: 1 mm from BDC (with tools **380000228 - 380001601**).
Cylinder no. 1 delivery line union on pump: marked with letter A.

ASSEMBLY DIMENSIONS

SYMBOL	K	KF	MS1	ya	yb
mm	3.6 to 3.8	3	0.85 to 1.15	36.9 to 40.9	41.5 to 46.5

CALIBRATION TEST CONDITIONS

Test bench conforming to ISO 4008/1.../2
Injectors conforming to ISO 7440-A61 - (1688901027 with pad ∅ 0.5 mm)
Injector setting pressure: 250 bar (3625.925 psi).
Fuel supply pressure: 0.35 ±0.05 bar (kg/cm^2). (5.0763 ± 0.7252 psi).
Delivery pipes (conforming to ISO 4093.2): 6 x 2 x 450 mm (0.2362 x 0.787 x 17.7165 in.).
Graduate drain time: 30 seconds
Test liquid: ISO 4113 at a temperature of 55° ± 1°C (131° ± 33.8°F).

1. START OF DELIVERY

Plunger pre-lift from BDC: mm -	Pump rotation (viewed from drive side): anticlockwise	Injection order:1-2-3

2. ADVANCE REGULATOR STROKE

rpm: 1150	Advance stroke: mm 1.6 to 2.0

3. FUEL SUPPLY PUMP PRESSURE

rpm: 1150	Internal pressure: bar 8.4 to 8.8

4. FULL LOAD DELIVERY

rpm: 800	Delivery per 1000 shots: cm^3 77.3 to 77.7	Spread: cm^3 -

5. SPREAD GOVERNOR AT IDLE SPEED

rpm: 325	Delivery per 1000 shots: cm^3 9.5 to 10.5	Spread: cm^3 ≤ 5.0

6. SPREAD GOVERNOR AT MAXIMUM SPEED

rpm: 1300	Delivery per 1000 shots: cm^3 49.5 to 50.5	Spread:-

7. DELIVERY AT STARTING SPEED

rpm: 100	Delivery per 1000 shots: cm^3 70 to 110

8. INJECTION ADVANCE PROGRESSION

Rev/min		1250	1150	1050
Advance stroke	mm	1.9 to 2.9	1.6 to 2.0	0.8 to 1.6

9. TRANSFER PRESSURE PROGRESSION

Rev/min		500	1150	-
Internal pressure	bar	4.8 to 5.8	8.4 to 8.8	-

10. BACKFLOW

Rev/min		500	1250
Backflow	cm^3/10 s	44.5 to 77.7	58.3 to 97.1

(continued)

Note: The values shown above in brackets must be used for checking purposes only.

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(continued)

11. DELIVERY PROGRESSION

Rev/min	Delivery per 1000 shots: cm^3
1390	0 to 3
1300	49.5 to 50.5
1250	63.5 to 68.5
800	77.3 to 77.7
450	68,0

12. ZERO DELIVERY (STOP)

Rev/min	Voltage (volts)	Delivery per 1000 shots: cm^3
325	0	0 to 3

13. DELIVERY CHECK AT IDLE SPEED

Rev/min	250	325	390
Delivery per 1000 shots: cm^3	35	9.5 to 10.5	0 to 3.0

14. AUTOMATIC START SUPPLEMENT

Rev/min	Delivery per 1000 shots: cm^3
100	70 to 110
250	67 to 77

Note: The values shown above in brackets must be used for checking purposes only.

BENCH TEST PERFORMANCE DATA

Test Conditions	
TDC fixed advance with cylinder No. 1 in compression stroke: (see previous page).	Relative humidity 70% ± 5.
Engine without fan, air filter and exhaust silencer.	Ambient temperature 25 °C.
Atmospheric pressure: 990 mbar	Specific gravity of diesel fuel 830 ± 10 g/litre.

Throttle lever position	Braking load applied	Engine rpm	Power output with engine run–in for a total of:		Fuel consumption
			2 hours kW (HP)	50 hours kW	kg/h
Maximum	For maximum torque	2500	–	39,5 – 42,0	9,1 – 9,7
Maximum	For maximum torque	1500	–	31,5 – 33,5	6,8 – 7,2
Maximum	None (no–load)	2770 ± 25	–	–	–
Minimum	None (no–load)	650 ± 25	–	–	–

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FUEL SUPPLY PUMP DATA	mm (in.)
Eccentricity of drive shaft	3 (0.1181)
Diameter of drive shaft at bushings	31.975 to 32.000 (1.1049 to 1.1050)
Internal diameter of installed and reamed bushings	32.050 to 32.075 (1.2589 to 1.2628)
Interference between bushings and seats	0.063 to 0.140 (0.0025 to 0.0055)
Assembly clearance between shaft and bushings	0.050 to 0.100 (0.0020 to 0.0039)
Thickness of internal washer	1.45 to 1.50 (0.0571 to 0.0591)
Thickness of external washer	2.93 to 3.00 (0.1154 to 0.1181)

CRANKCASE/CYLINDER BLOCK DATA	mm (in.)
Cylinder block (4–cylinder engines)	cast–iron monobloc with replaceable dry–fitted cylinder liners, incorporating seatings for crankshaft bearings, camshaft and pushrod/tappet assemblies
Internal diameter of cylinder liners (4–cylinder engines)	104.000 to 104.024 (4.0945 to 4.0954) (1)
External diameter of cylinder liners (4–cylinder engines)	107,020 to 107.050 (4.2134 to 4.2146)
Diameter of cylinder bores (4–cylinder engines)	106.850 to 106.900 (4.2067 to 4.2087)
Interference fit between cylinder liners and bores (4–cylinder engines)	0.120 to 0.200 (0.0047 to 0.0079)
Liner internal diameter oversizes (4–cylinder engines)	0.4 to 0.8 (0.0157 to 0.0315)
Liner external diameter oversizes (4–cylinder engines)	0.2 (0.0079)
Maximum permissible liner ovality or taper due to wear (2) (4–cylinder engines)	0.12 (0.0047)
Diameter of main shell bearing seats	84.200 to 84.230 (3.3150 to 3.3161)
Diameter of camshaft bearing seats:	
– front	54.780 to 54.805 (2.1567 to 2.1577)
– middle	54.280 to 54.305 (2.1370 to 2.1380)
– rear	53.780 to 53.805 (2.1173 to 2.1183)
Diameter of standard tappet bores in crankcase	15.000 to 15.018 (0.5906 to 0.5913)
Spare tappet oversizes	0.1–0.2–0.3 (0.0039–0.0079–0.0118)

(1) Measured after press–fitting and reaming.
(2) Measure in the area swept by piston rings, both parallel and perpendicular to the crankshaft axis.

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ENGINE
Removal – Installation (Operation 10 001 10)

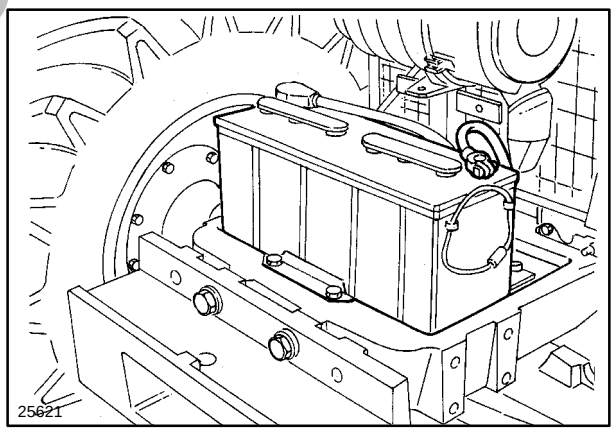
DANGER

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.
Check that no one is in the vicinity of the load to be lifted.

WARNING

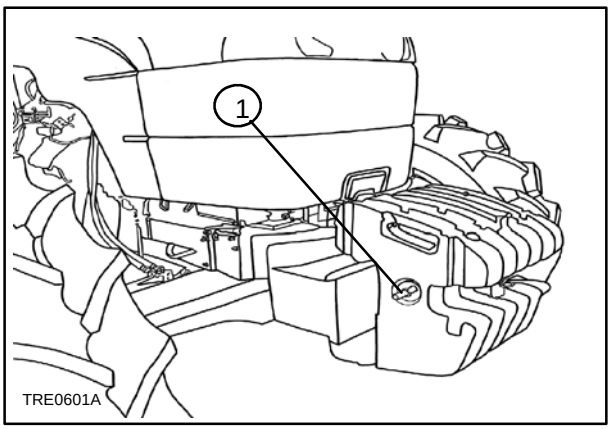
Always use suitable tools to align holes in parts.
NEVER USE FINGERS OR HANDS.

1. Disconnect the battery negative cable.
2. Drain oil from the transmission/gearbox.
3. Drain the cooling system.



10

4. Unscrew the nut (1) from the weight retaining pin.



11

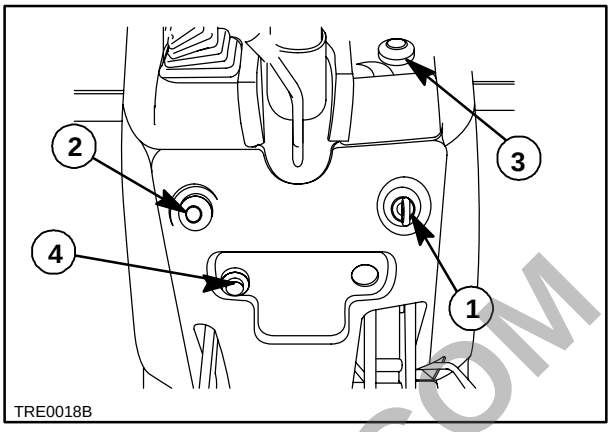
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1. Starter switch.

2. Thermostarter.

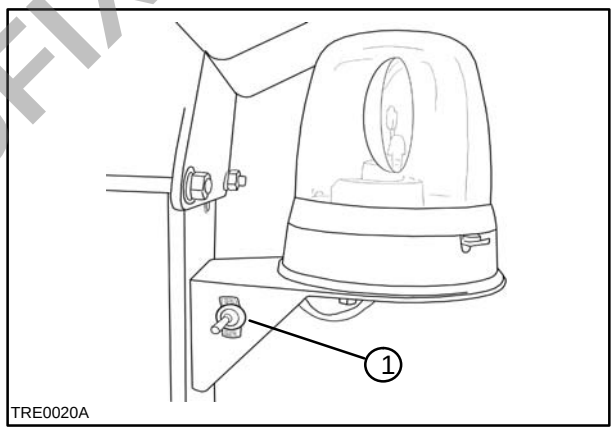
3. Hazard warning lights switch.

4. Cigar lighter



3

1. Beacon on/off switch (tractors without cab)

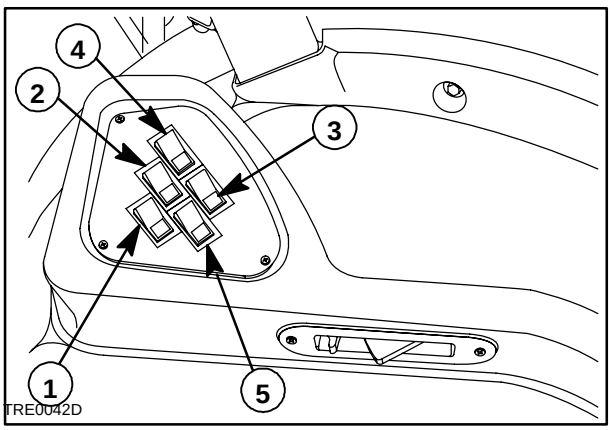


4

IN–CAB CONTROLS

1. Fender–mounted controls

1. Windscreen washer,
2. Windscreen wiper,
3. Rear working lights,
4. Front working lights and
5. Beacon controls (with cab)



5

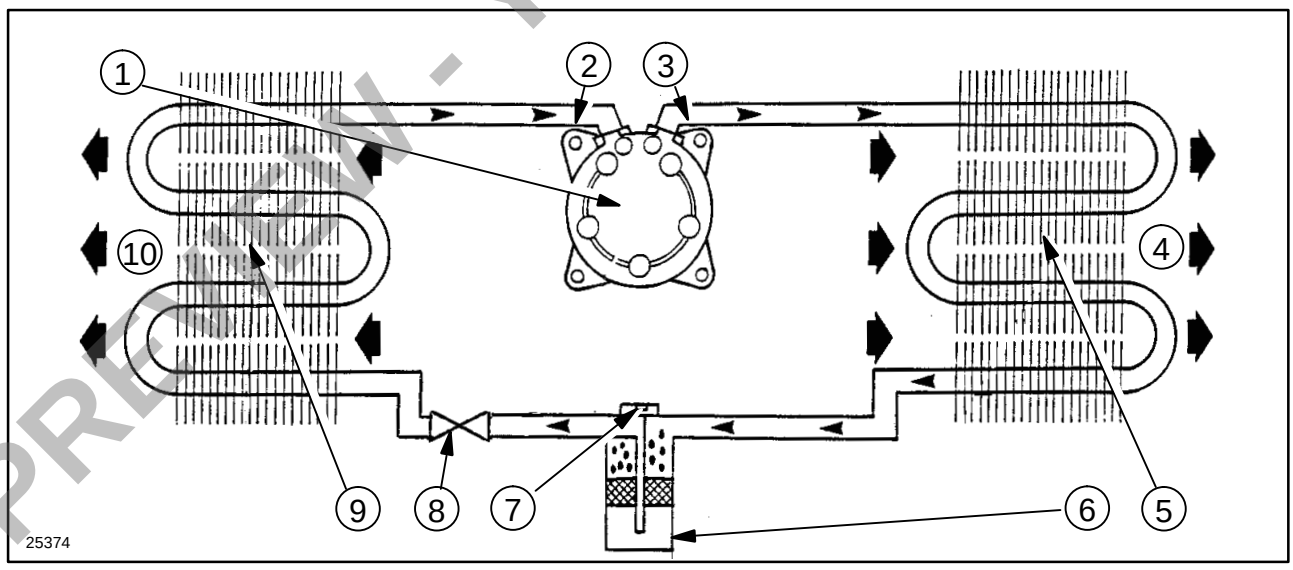
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AIR CONDITIONING SYSTEM FAULT DIAGNOSIS

THE SYSTEM DOES NOT WORK

1. Check fuses.
2. Check compressor drive belt tension.
3. Check if the clutch coil is receiving power.
4. Check that the earth contact is efficient.

5. Check the system control devices – the relays, wiring, thermostat, etc.
6. Visually check the condition of all fittings, unions and pipes.
7. Check the clearance between the front disc and pulley of the electromagnetic clutch..



3

Schematic of air conditioning system.

1. Compressor.
2. Compressor inlet pipe (low pressure).
3. Compressor outlet pipe (high pressure).
4. Hot air.
5. Condenser.
6. Receiver–drier.
7. Sight glass.
8. Expansion valve with thermostatic sensor.
9. Evaporator.
10. Cool, dehumidified air.

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10 402 28	Coolant pump overhaul	129
10 001 30	Compression test	130

CLUTCH — SECTION 18

Clutches — Chapter 1

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	Adjustments	19
18 100 40	Adjustment of the main and PTO clutch control linkage	21

GEARBOX — SECTION 21

Mechanical Transmission (12x4) — Chapter 1

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	Tightening torques	2
	Tools	3
	Section views	3&5
	Description and operation	8
	Fault diagnosis	8
21 110	Removal – Refitting	see sect 27

Reverser (12x12) — Chapter 2

Section	Description	Page
21 000	Main data	1
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	Tools	3
	Section views	3
	Description and operation	5
	Fault diagnosis	5
21 110	Removal–Refitting	6

Reverser and Creeper (20x12) — Chapter 3

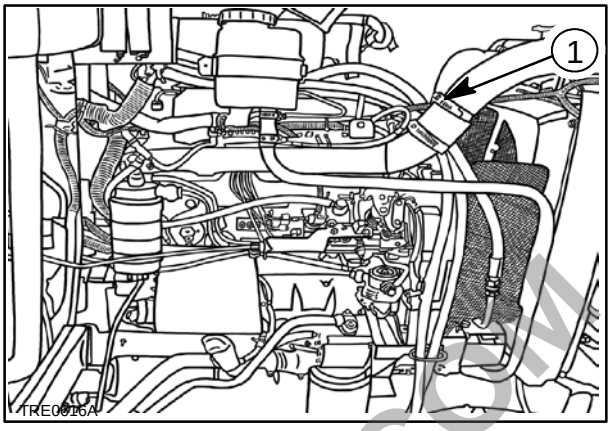
Section	Description	Page
21 000	Main data	1
	Tightening torques	2
	Tools	3
	Section views	4

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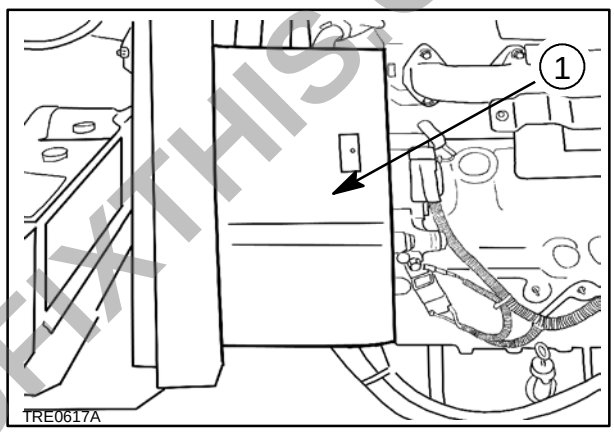
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41. Slacken of the hose clamp and detach hose (1) from the inlet manifold.



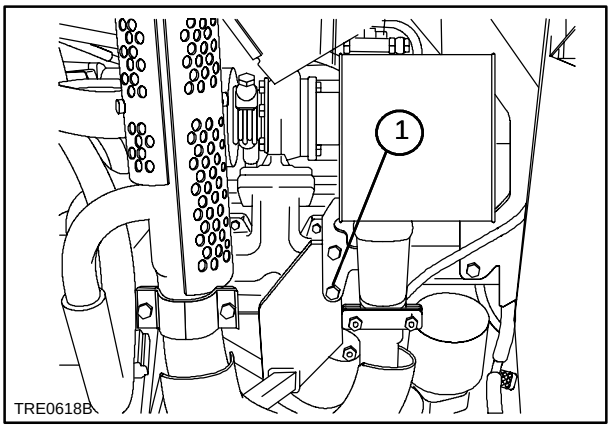
46

42. Remove the left–hand side fan guard (1).



47

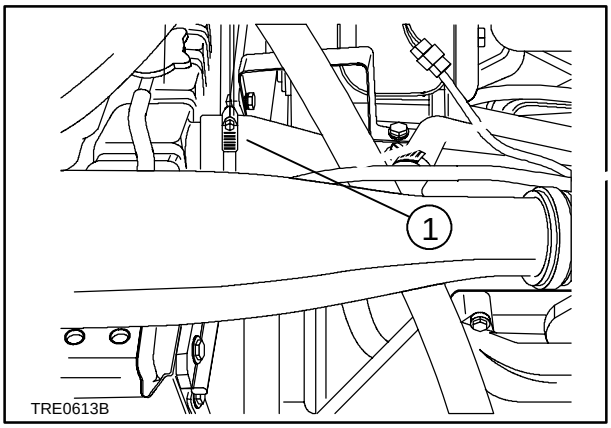
43. Unscrew the bolts (1) securing the silencer to its bracket.



48

44. Undo the hose clamp and disconnect the top radiator hose (1).

45. Unscrew the three nuts securing the silencer to the manifold and lift off the entire silencer assembly.

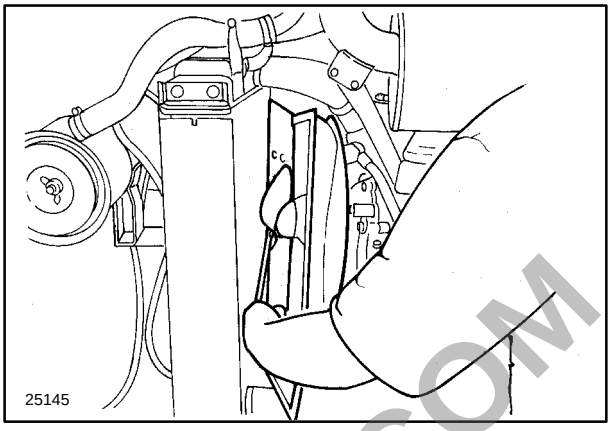


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7. Move the fan shroud towards the engine.

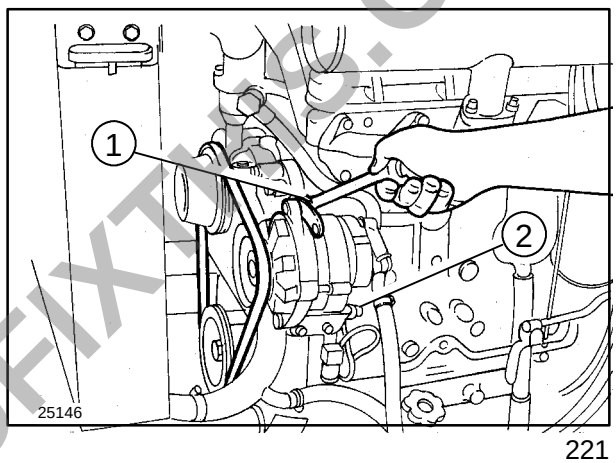
8. Unscrew the three bolts securing the fan to the coolant pump shaft. Remove the fan and the fan cowling.



220

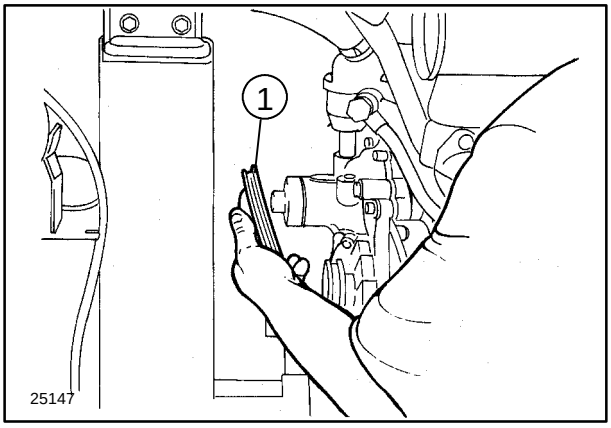
9. Loosen the alternator pivot bolt (2).

10. Loosen the belt tension adjustment bolt (1).



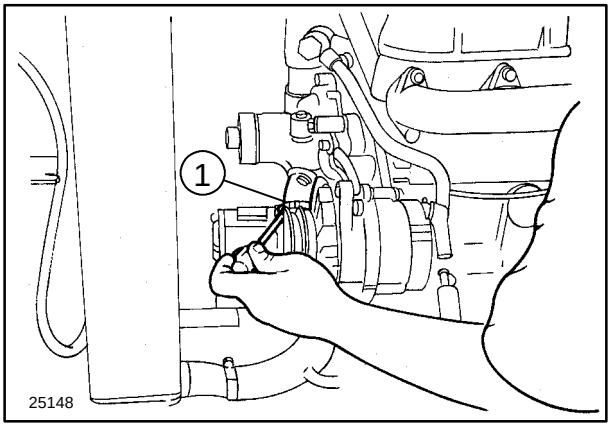
221

11. Remove the coolant pump pulley (1).



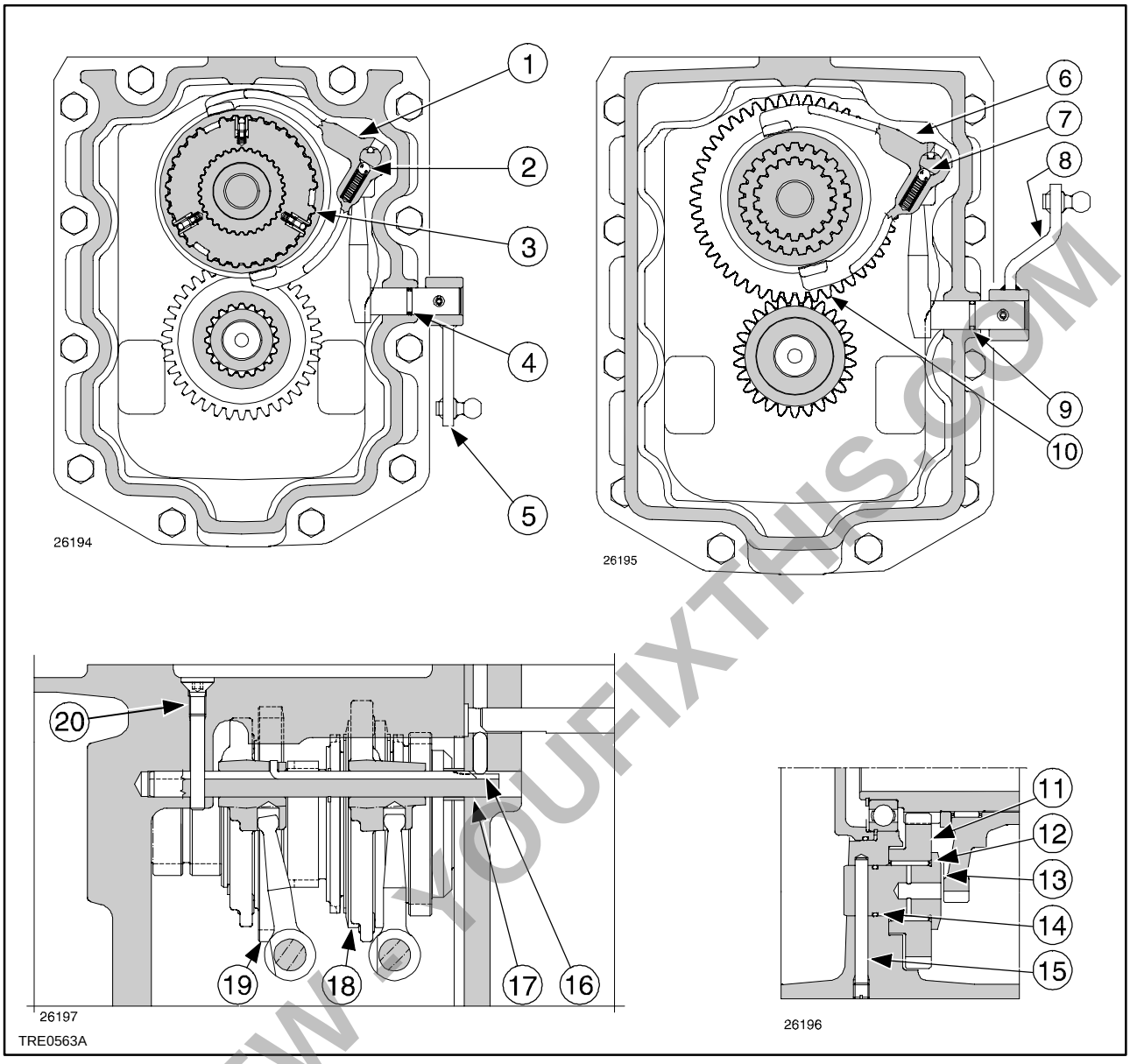
222

12. Loosen the hose clamp (1) and detach the hose from the coolant pump.



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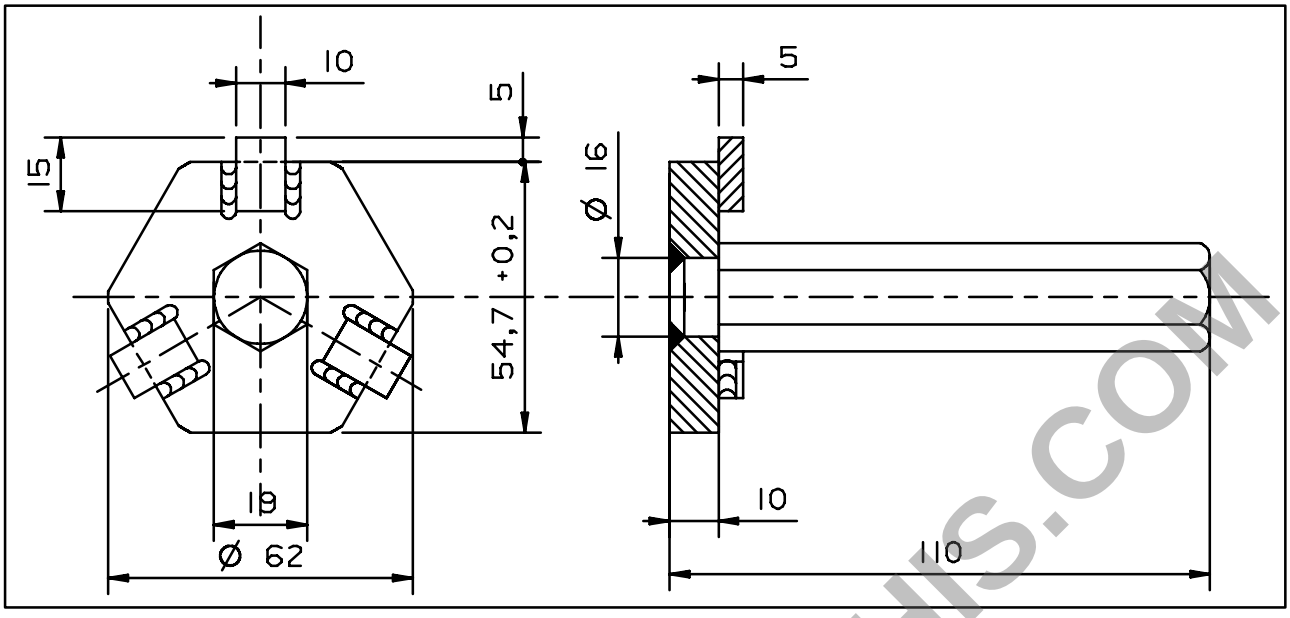


4

Cross sectional views of synchroniser reverser – creeper unit

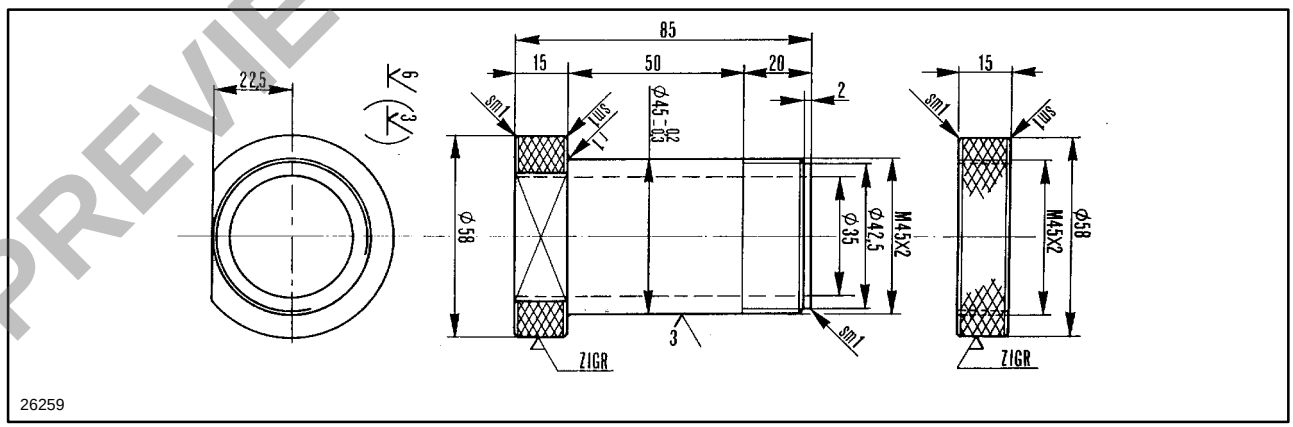
1. Reverser control fork.
2. Detent ball.
3. Reverser synchroniser.
4. Seal.
5. External reverser control lever.
6. Creeper unit control fork.
7. Detent ball.
8. External creeper control lever.
9. Seal.
10. Creeper unit control gear.
11. Intermediate gear for reverser.
12. Roller bearing.
13. Journal for gear (11).
14. Seal.
15. Reating screw for journal (13).
16. Fast speeds lock pawl.
17. Reverser and creeper unit control rod.
18. Reverser synchroniser.
19. Creeper unit control gear.
20. Retaining screw for rod (17) (apply one of the sealing compounds listed on page 1, Sect. 00 to the screw).

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3

Tool to make for adjusting the bevel drive
(engrave number **50027** on the tool – measurements in mm)
Make in Fe 42 C material.

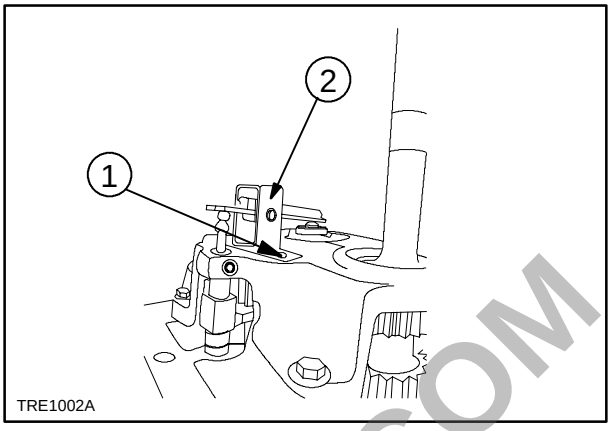


4

Tool to make for adjusting the assembly position of the bevel pinion shaft
(Mark tool with no. **50004** – Measurements in mm)
Make using Aq 45 material.

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4. Remove the two socket head screws (1) and take off the PTO engagement mechanism (2) completely.

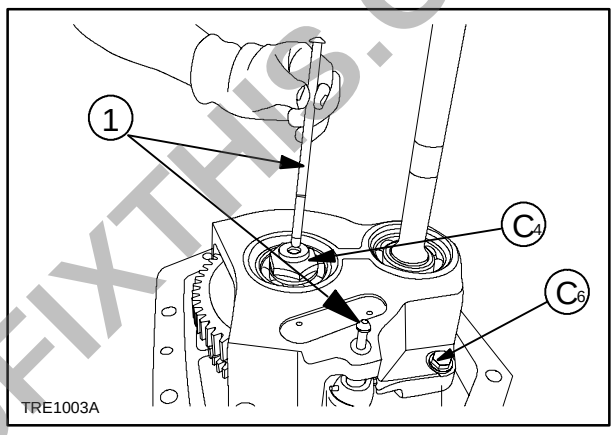


34

5. Withdraw two rods (1) from the cover.

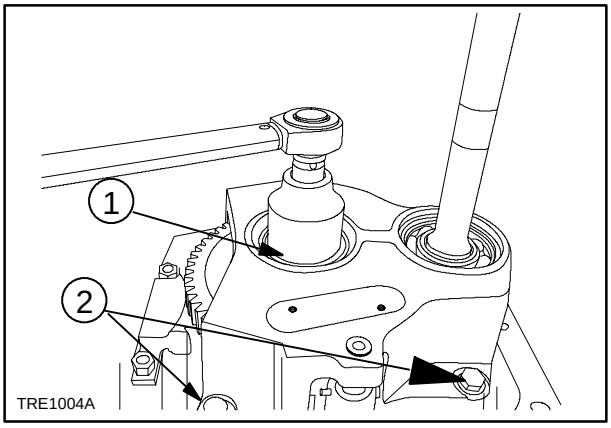
C_4: Shaft securing nut tightening torque: 255Nm (188.0783 ft lb)

C_6: Cover retaining bolts tightening torque: 98 Nm (72.2811 ft lb)



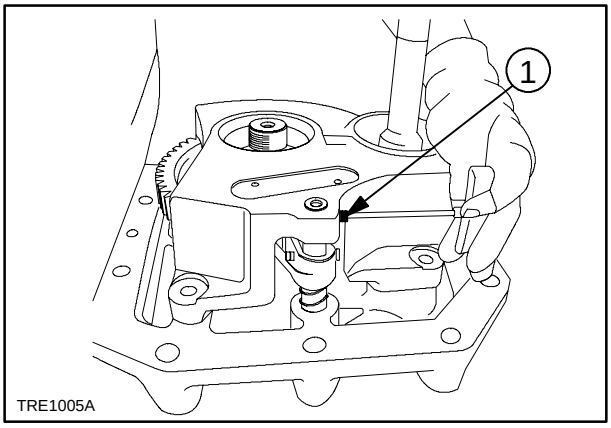
35

6. Remove the nut (1) securing the shaft and take off the 4 bolts (2).



36

7. Remove the socket head screw bolt (1) on the side of the cover.



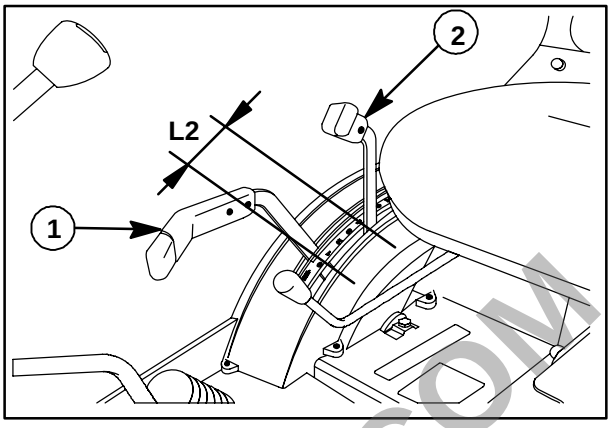
37

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8. Move the draft control lever (2) to a distance (L_2) of 95 – 105 mm (3.7402 – 4.1338 in.) from the beginning of the slot and check that at this position the arms start to rise.

9. If they do not, adjust the eccentric pin (1) fig. 105, to restore this distance.

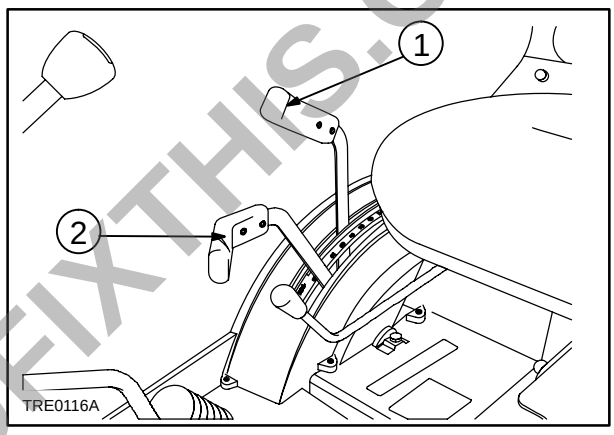
10. Fasten the eccentric pin using the securing bolt (1) fig. 106.



114

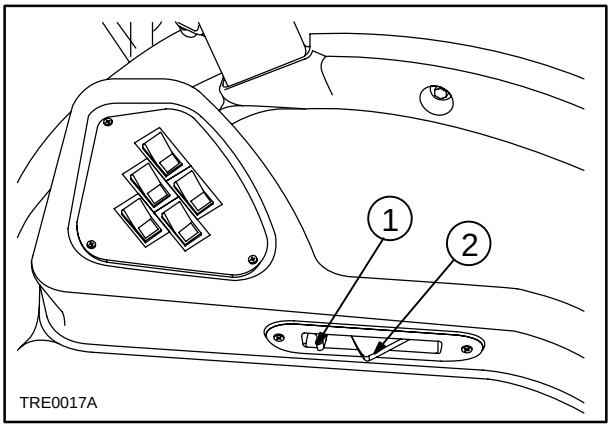
Adjusting LIFT–O–MATIC device
Proceed as follows:

11. Move the position control lever (1) and the draft control lever (2) fully forward in the sector.



115

12. Raise the lift arms by means of the lever (1).



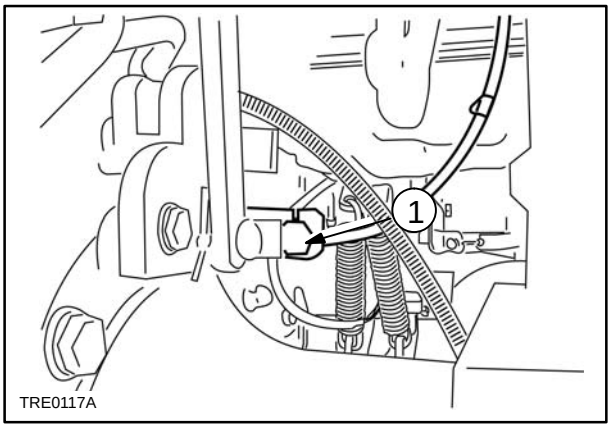
116

13. Tighten the nut (1) fig. 117, until the arms lower.

14. With the lever (1) fig. 116, still in the same position, unscrew the nut (1) fig. 117, until the arms begin to rise.

15. Unscrew the nut (1) by another 1.5 turns.

16. Using the levers (1) and (2) fig. 116, lower and raise the arms a few times to ensure that the system is operating correctly.



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B – CHECKING RETURN TO NEUTRAL POSITION

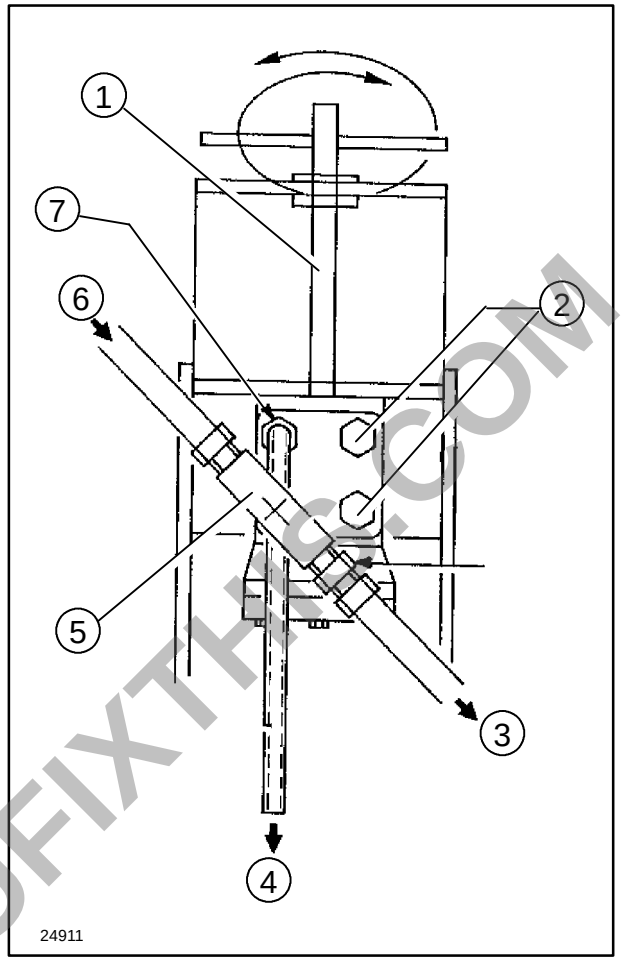
In the same test conditions as **A**, check that the valve automatically returns to neutral position when the control shaft (1) is released after each simulated steering movement.

C – CHECKING SEAL EFFICIENCY

In the same test conditions as **A**, hold the valve in steering position with the control shaft (1) for about three minutes and check the seals for leaks.

D – SETTING THE PRESSURE RELIEF VALVE

1. Make the connections as shown in figure (68) and complete the circuit as in figure (69).
2. Using the control shaft (1), simulate a steering cycle (to right or left) so as to interrupt the oil flow to the outlet.
3. Gradually increase the pressure in the circuit by turning the handwheel (5) fig. 68, and check on the pressure gauge that the pressure relief valve (22, fig. 2) cuts in at the pressure shown on page 1. If not, increase or reduce the pressure relief valve setting by tightening or slackening the adjuster screw.



69

1. Splined control shaft
2. Plug G 1/2”
3. To throttle
4. Outlet
5. Three-way coupling G 1/2”
6. From delivery line
7. Outlet coupling G 1/2”

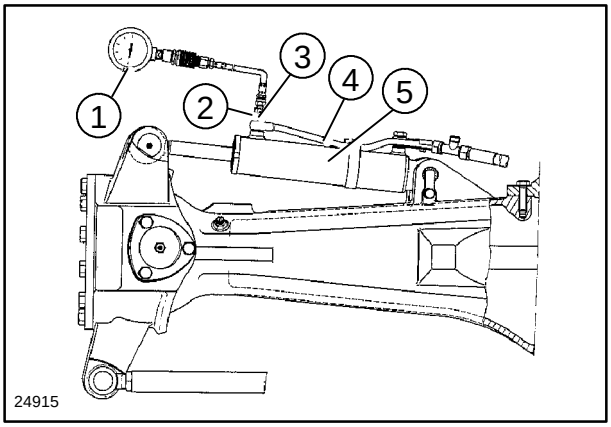
CHECKING THE HYDROSTATIC STEERING PRESSURE RELIEF VALVE WITH STEERING CONTROL VALVE INSTALLED ON TRACTOR.

Proceed as follows:

1. Start the engine and run until the oil temperature reaches approx. 50°C (122°F).
2. Switch off the engine and unscrew the oil delivery pipe union (4) on the hydraulic cylinder (5).
3. Fit union (2) in place of union (4), and connect the pressure gauge (1) with a 0 – 21.3350 psi scale by way of union (3).
4. Start the engine again, bring the speed up to medium rpm, and apply full-steering lock to bring the hydraulic cylinder to the stroke-end position.

In this condition, the pressure relief valve (22, fig. 2) should open and the pressure gauge should indicate the value given on page 1.

5. If the pressure gauge reading deviates significantly from the prescribed value, adjust the valve opening pressure by way of the adjuster screw.



70

1. Pressure gauge (supplied in kit **380000240**)
2. Union **380000618** (supplied in kit **380000240**) to be fitted in place of original union
3. Union **380000613** (supplied in kit **380000240**)
4. Hydraulic cylinder oil feed pipe
5. Hydraulic cylinder.

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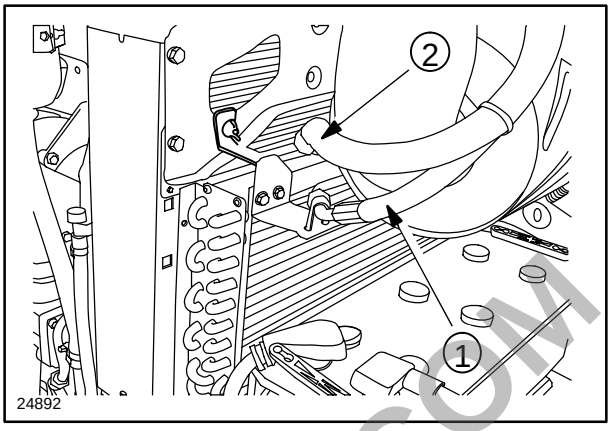
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CONDENSER
Replacement (Op. 50 200 04 – 50 200 72)

DANGER

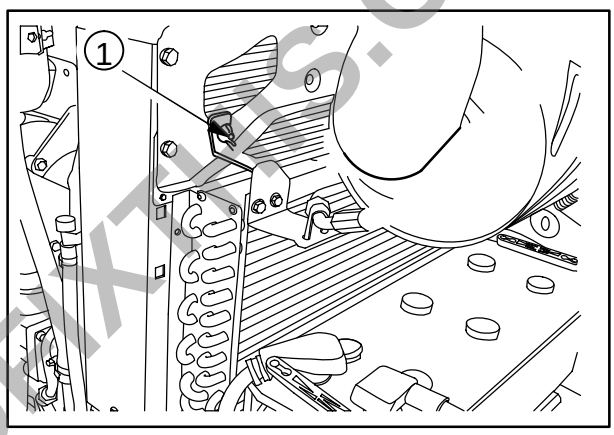
Recover the refrigerant from the system adhering to the safety instructions on page 2.

1. Disconnect the negative battery lead.
2. Recover the refrigerant from the system using the station **294048** as described on page 22.
3. Detach the flexible refrigerant delivery (1) and return pipes (2) from the condenser.



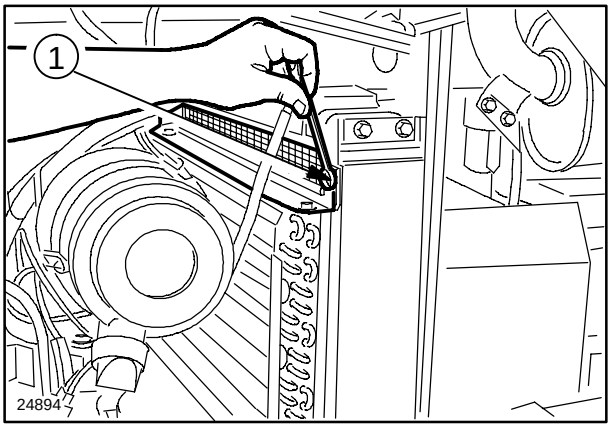
42

4. Unscrew the wingnut (1) securing the condenser.



43

5. For tractors equipped with front mudguards, remove the two screws (1) securing the top bracket of the condenser (for tractors without front mudguards turn the steering wheel to full right–hand lock and withdraw the condenser from the right–hand side of the tractor).

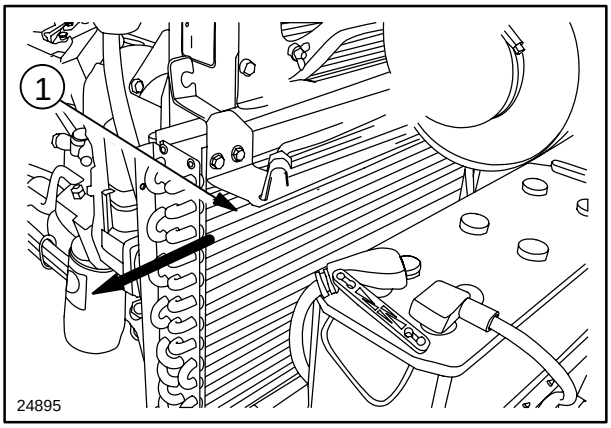


44

6. For tractors with front mudguards, remove the condenser group (1) with the top bracket.

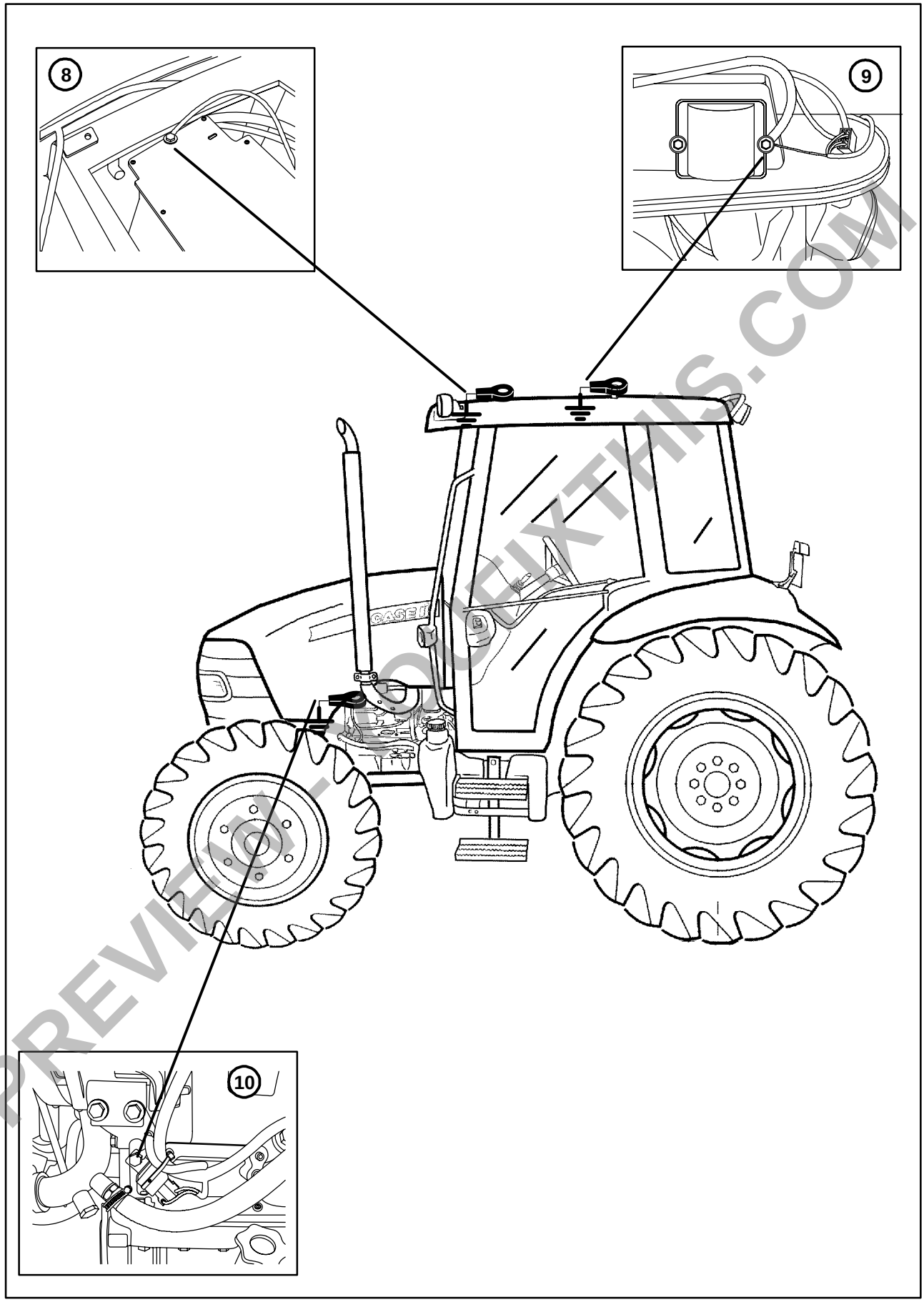
To refit proceed as follows:

— Refit the condenser and the relative bracket, and secure the condenser with the wingnut and the bracket with the two retaining screws.
— Reconnect the two flexible pipes to the condenser.
— Connect the negative battery lead.
— Evacuate the air conditioning system and charge with HFC 134 a refrigerant, using the evacuation/ charging station **294030** as described on page 24.
— Close the hood.



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