
TT55, TT75 REPAIR MANUAL

COMPLETE CONTENTS

SECTION 00 - GENERAL	2
SECTION 10 - ENGINE	2
SECTION 18 - CLUTCHES	4
SECTION 21 - FRONT TRANSMISSION	4
SECTION 23 - FOUR WHEEL DRIVE (FWD) TRANSFER BOX	4
SECTION 25 - FOUR WHEEL DRIVE (FWD) FRONT AXLE	5
SECTION 27 - REAR AXLE AND TRANSMISSION	5
SECTION 31 - POWER TAKE-OFF (PTO)	6
SECTION 33 - BRAKE SYSTEM	6
SECTION 35 - HYDRAULIC SYSTEM	7
SECTION 41 - STEERING SYSTEM	8
SECTION 44 - 2WD FRONT AXLE	8
SECTION 55 - ELECTRICAL SYSTEM	9
SECTION 90 - BODYWORK	11

The following pages are the collation of the contents pages from each section and chapter of the TT55, TT75 Repair manual. Complete Repair part # 87042097.

The sections used through out all New Holland product Repair manuals may not be used for each product. Each Repair manual will be made up of one or several books. Each book will be labeled as to which sections are in the overall Repair manual and which sections are in each book.

The sections listed above are the sections utilized for the TT55, TT75 Tractors.

SECTION 00 - GENERAL

Chapter 1 - General

CONTENTS

Section	Description	Page
	General Instructions	3
	Health and Safety	5
	Precautionary Statements	15
	Safety	16
	Ecology and the Environment	19
	General Specifications	20
	Minimum Hardware Tightening Torques	24
	Tractor System Components	26
	Speed Chart	29
	Federal Emissions Warranty	31

⚠ WARNING ⚠

All maintenance and repair work described in this manual must be performed exclusively by NEW HOLLAND service technicians in strict accordance with the instructions given and using any specific tools necessary.

⚠ WARNING ⚠

Anyone who performs the operations described herein without strictly following the instructions is personally responsible for resulting injury or damage to property.

⚠ WARNING ⚠

The Manufacturer and all organizations belonging to the Manufacturer's distribution network, including but not restricted to national, regional or local distributors, will accept no responsibility for personal injury or damage to property caused by abnormal function of parts and/or components not approved by the Manufacturer, including those used for maintenance and/or repair of the product manufactured or marketed by the Manufacturer. In any case, the product manufactured or marketed by the Manufacturer is covered by no guarantee of any kind against personal injury or damage to property caused by abnormal function of parts and/or components not approved by the Manufacturer.

<https://www.ebooklibonline.com>

Hello dear friend!

Thank you very much for reading.

Enter the link into your browser.

The full manual is available for immediate download.

<https://www.ebooklibonline.com>

GENERAL INSTRUCTIONS

IMPORTANT NOTICE

All maintenance and repair operations described in this manual should be carried out exclusively by the authorised workshops. All instructions detailed should be carefully observed and special equipment indicated should be used if necessary.

Everyone who carries out service operations described without carefully observing these prescriptions will be directly responsible of deriving damages.

SHIMMING

At each adjustment, select adjusting shims, measure them individually using a micrometer and then sum up recorded values. Do not rely on measuring the whole shimming set, which may be incorrect, or on the rated value indicated for each shim.

ROTATING SHAFT SEALS

To correctly install rotating shaft seals, observe the following instructions:

- Let the seal soak into the same oil as it will seal for at least half an hour before mounting;
- Thoroughly clean the shaft and ensure that the shaft working surface is not damaged;
- Place the sealing lip towards the fluid. In case of a hydrodynamic lip, consider the shaft rotation direction and orient grooves in order that they deviate the fluid towards the inner side of the seal;
- Coat the sealing lip with a thin layer of lubricant (oil rather than grease) and fill the gap between the sealing lip and the dust lip of double lip seals with grease;
- Insert the seal into its seat and press it down using a flat punch. Do not tap the seal with a hammer or a drift;

- Take care to insert the seal perpendicularly to its seat while you are pressing it. Once the seal is settled, ensure that it contacts the thrust element, if required;
- To prevent damaging the sealing lip against the shaft, place a suitable protection during installation.

O RINGS

Lubricate the O rings before inserting them into their seats. This will prevent the O rings from roll over and twisting during mounting, which will jeopardize sealing.

SEALERS

Apply silicone/gasket eliminator over the mating surfaces marked with an X.

Before applying the sealer, prepare the surface as follows:

- remove possible scales using a metal brush;
- thoroughly degrease the surfaces using one of the following cleaning agents: trichlorethylene, diesel fuel or a water and soda solution.

BEARINGS

It is advisable to heat the bearings to 80° to 90°C (176° to 194°F) before mounting them on their shafts and cool them down before inserting them into their seats with external tapping.

SPRING PINS

When mounting split socket spring pins, ensure that the pin notch is oriented in the direction of the effort to stress the pin.

Spiral spring pins should not be oriented during installation.

GENERAL INSTRUCTIONS

PRECAUTIONARY NOTICE

Only authorized workshops should carry out maintenance and repair operations on the tractor, or tractor components. Carefully observe all instructions, safety precautions, and the use of equipment such as special tools, as detailed in this manual. Damage to the tractor, or injury to personnel is the direct responsibility of anyone who fails to observe these precautions.

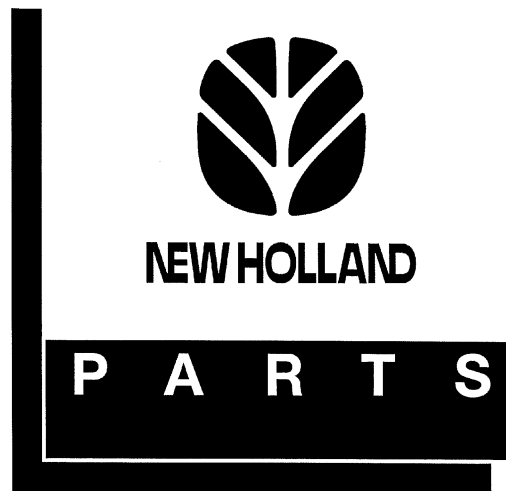
EQUIPMENT NOTICE

The equipment proposed in this manual is:

- Designed and studied expressly for use on New Holland tractors
- Necessary for adequate and reliable repair of the tractor
- Strictly tested for the efficient and long lasting life cycle of the tractor

SPARE PARTS NOTICE

Genuine NEW HOLLAND spare parts guarantee the same quality, safety and life cycle as original components. These parts bear the logo:



GENERAL NOTICES

In this manual, the description 'FRONT', 'REAR', 'RIGHT-HAND' and 'LEFT-HAND' refer to the view seen by the operator while in the operator's seat, looking in the direction in which the tractor normally moves.

Wear limits detailed in this manual, although advised, are not binding.

SECTION 10 - ENGINE

Chapter 1 - Engine Overhaul

CONTENTS

Section	Description	Page
	General Specifications	2
	Tightening Torque Data	13
	Engine Special Tools	14
	Engine Sectional Views	16
	Engine Removal	23
	Splitting the tractor	24
	Engine Reinstallation	25
	Engine Disassembly	27
	Engine Assembly	45
	Checks, Dimensions and Repairs	58
	Cylinder Block and Cylinder Liners	58
	Crankshaft, Main Bearings and Flywheel	60
	Connecting Rod	65
	Pistons	66
	Camshaft, Tappets and Valves	69
	Cylinder Head	72
	Valve Guide Replacement	73
	Valve Seat In Cylinder Head Refacing	77
	Injector Sleeve Replacement	78
	Rotating Counterweight Dynamic Balancer	80
	Engine Lubrication System Overhaul	81
	Crankshaft Front Oil Seal Removal/Installation	83
	Coolant System Overhaul	87
	Fuel System Overhaul	93
	Valve Clearance Adjustment	104
	Engine Testing	108

GENERAL SPECIFICATIONS

ENGINE SPECIFICATIONS	TT55	TT75
Engine	55 hp; naturally aspirated; 8035 - 06 - 507 (w/BOSCH pump emiss)	70 hp; naturally aspirated; 8045 - 06 - 506 (w/BOSCH pump emiss)
Cycle	4-stroke diesel	
Fuel Injection	Direct	
Number of Cylinders	3 cylinders	4 cylinders
Cylinder Liners	Dry, force-fitted on engine block	
Bore (Piston Diameter)	100 mm (3.9370 in.)	100 mm (3.9370 in.)
Stroke	115 mm (4.5276 in.)	115 mm (4.5276 in.)
Total Displacement	2710 cm ³ (165 in. ³)	3613 cm ³ (220 in. ³)
Compression Ratio	17 to 1 ratio	
Maximum Power	40.5 kW (55 hp)	55.5 kW (70 hp)
Maximum Output Speed	2500 RPM	
Maximum Torque Speed	1500 RPM	1400 RPM
Idle Speed	650 – 700 RPM	
Main Bearings	4	5
Sump	Structural, in cast iron	
Balancer	—	Flyweight, engine sump

ENGINE REMOVAL

————— **⚠ DANGER ⚠** —————

Lift and handle all heavy parts using suitable lifting equipment.

Ensure to support load by means of suitable slings and hooks.

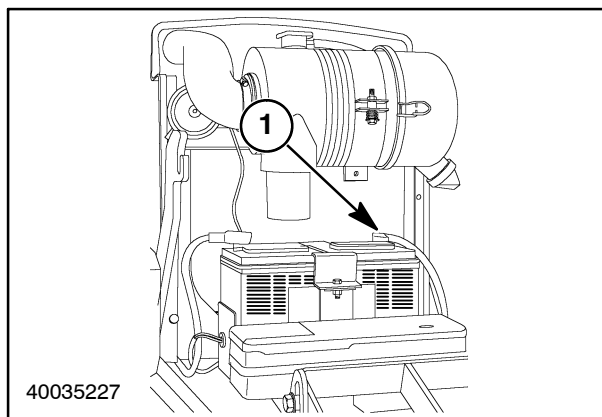
Ensure no-one is standing in the vicinity of the load to when lifting.

————— **⚠ CAUTION ⚠** —————

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

Before removing engine:

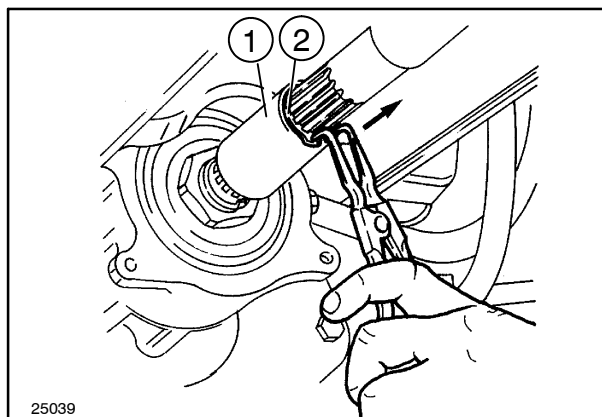
- Disconnect the negative lead (1), from the battery.
- Drain oil from the transmission/gearbox.
- Drain liquid from cooling system.



11

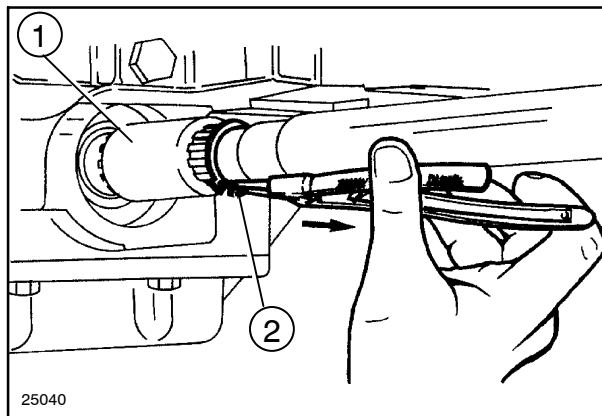
On FWD Models:

1. Remove the circlip (2), and slide the sleeve (1) in the direction shown by the arrow until free of the splines on the front axle.



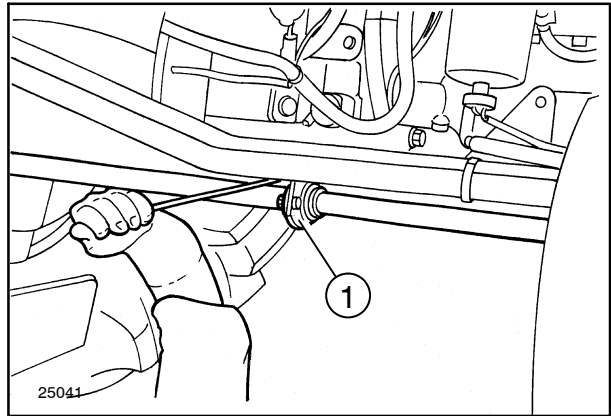
12

2. Remove the circlip (2) and slide the sleeve (1) in the direction shown by the arrow until it is free of the spines on the drive shaft.



13

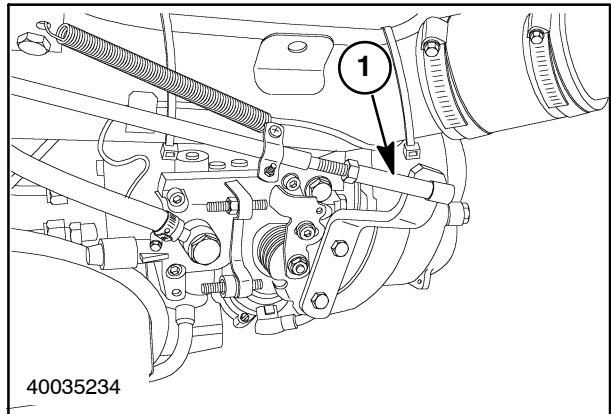
3. Remove the retaining bolts from the central drive shaft support (1) and remove the shaft complete with support.



14

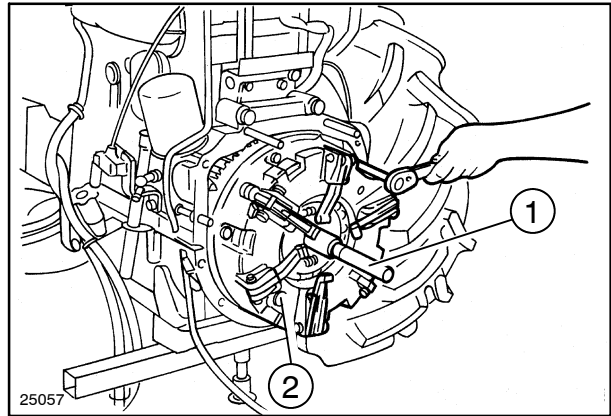
Splitting the tractor

1. Disconnect the negative battery lead if not previously done.
2. Place wedges between the front axle and the front axle carries to prevent the assembly from tilting.
3. Disconnect the tractor electrical harnesses.
4. Remove the exhaust pipe and right and left middle hood sections.
5. Remove the steering lines tubes.
6. Remove the suction line from the hydraulic reservoir and cap the reservoir port.
7. Remove the throttle linkage (1) from the injection pump and from the mounting point under rear hood.
8. Disconnect the fuel delivery line from the primer pump and the return line from the tee.
9. Remove bolts holding "Fire Wall" to engine.
10. Remove the hydraulic lift suction and delivery lines from the hydraulic pump.
11. If there is a horizontal exhaust, disconnect or remove exhaust line and muffler.
12. On four-wheel drive tractors, disconnect and drop the front axle driveshaft.
13. Place a hydraulic stand under the clutch transmission case and attach lifting tackle to the engine.
14. Unbolt the engine from the transmission case.
15. Using a crane, separate the engine from the rest of the tractor.



15

16. Insert centralizer tool (1) **380000612** in the clutch center hole. Unscrew the six bolts securing the clutch to the flywheel and remove complete clutch assembly.



16

ENGINE REINSTALLATION

To re-install the engine, proceed as follows:

- Attach the three hooks of an adjustable lifting chain to three eye bolts on the engine. Raise the engine from the platform and position it in front of the front axle support. Join the two units using the four securing bolts.
- Move a rolling jack under the engine sump.
- Drive wedge blocks between front axle carrier casting and front axle housing.
- Attach the top radiator hose to the thermostat housing and secure with adjustable hose clamps.
- Connect the bottom radiator hose to the coolant pump and secure at both ends with adjustable hose clamps.
- Install the hydraulic pumps.
- Detach the lifting chain from the engine.
- Connect the rigid pipe from the air cleaner to the inlet manifold and secure with the relative clamp.
- Reconnect all electrical leads: thermostarter glow plug, coolant temperature sensor, air filter clogging sensor, horn, front axle support ground, engine stop on injection pump, leads to the alternator and relay, oil pressure sensor, and starter motor. Secure all leads with plastic ties.
- Install the clutch using tool **380000612**. Fix clutch to the engine flywheel using the six retaining bolts.
- Attach the adjustable lifting chain to the eyebolts on the engine.
- Place wooden wedges under the rear wheels, check that the handbrake is fully on and that the fixed and moving stands are firmly in place.
- The next operation will require 2 or 3 operatives. Position the engine/front axle unit up to the clutch housing, pushing the front wheels and accompanying the unit with the hoist. Be careful at this stage not to damage the rigid hydraulic oil pipes. Make sure that no electrical leads are trapped between the two units.
- Next, turn the cooling fan to rotate the clutch disc so it engages with the two shafts of the PTO and transmission.
- Replace and tighten all the bolts securing the engine to the clutch housing.
- Lower the stands under the engine sump and the clutch housing.
- Connect the injector leak-off pipe. Connect the pipes to the glowplug and to the fuel water separator filter.
- Install the fuel filter mounting to the engine. Connect the two semi-rigid pipes to the mounting.
- Connect the power steering at control valve oil supply and return pipes.
- Connect the hydraulic oil suction pipe to the pump.

SECTION 10 - ENGINE - CHAPTER 1

- Connect the rigid lift control valve supply pipe to the hydraulic pump, remembering to first fit the O-ring.
- Secure the two pipes with the adjustable hose clamp.
- Connect up all the electrical leads to the connectors.
- Connect the two flexible power steering pipes to the union on the right-hand side of the front axle. Secure the two pipes with a special clamp and fix the clamp to the tractor with a screw.
- Install the tachometer cable and secure the sleeve with the retaining ring.
- Reinstall the 4WD transmission shaft and the guard.
- Re-connect the throttle rod to the accelerator mechanism.
- Replace the fan guards.
- Reinstall the front ballast and secure with the lock pin.
- Fill the transmission/gearbox/power steering bottle with oil.
- Fill the radiator with coolant mixture.
- Connect the positive and negative battery leads.

ENGINE - Disassembly

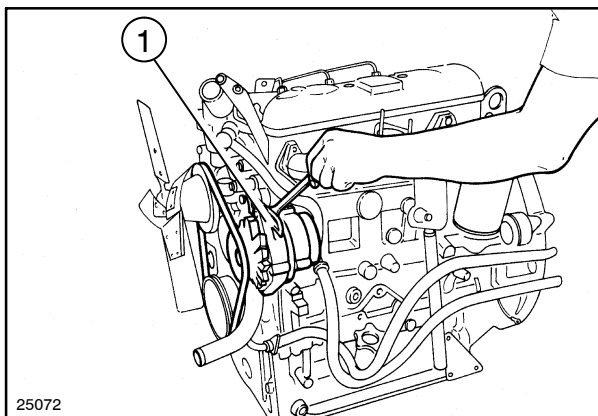


Handle all parts carefully. Do not put your hands or fingers between parts.

Wear suitable safety clothing - safety goggles, gloves and shoes.

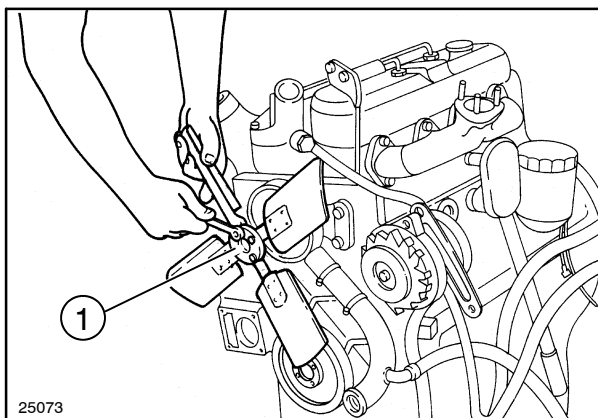
After removing all relative guards, shields and parts mounted to the engine in the tractor and the engine is "free" proceed as follows:

1. Loosen the alternator pivot bolt.
2. Loosen the belt tension adjustment bolt (1).
3. Release the belt tension adjustment arm by undoing the retaining nut.
4. Remove the alternator and coolant pump drive belt.



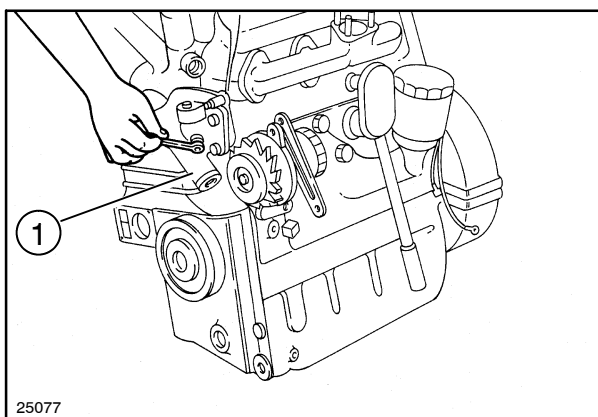
17

5. Unscrew the bolts securing the fan (1) and pulley to the coolant pump and remove the fan and pulley.



18

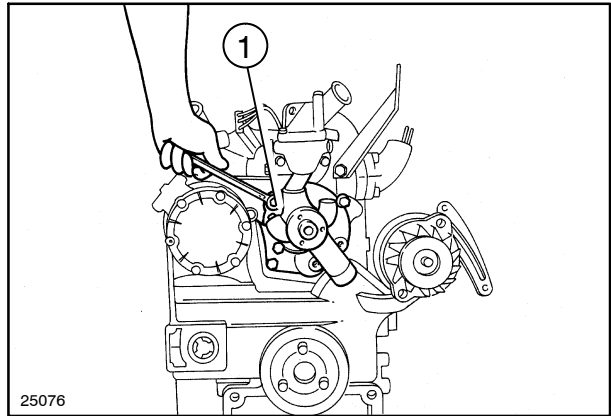
6. Remove the union in order to gain access to the pump retaining bolt.



19

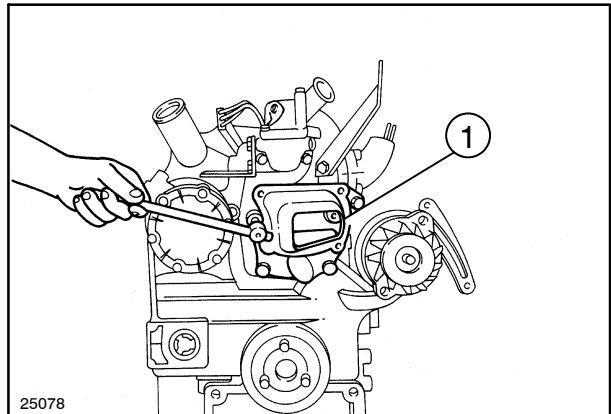
SECTION 10 - ENGINE - CHAPTER 1

7. Unscrew the coolant pump retaining bolts (1) and remove the pump.



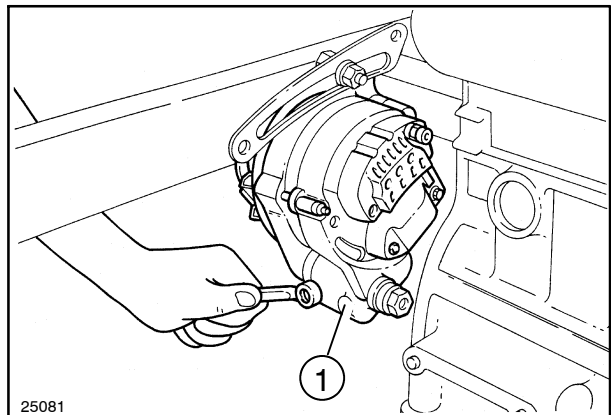
20

8. Unscrew the pump support bolts (1), the internal support bolt and remove the support.



21

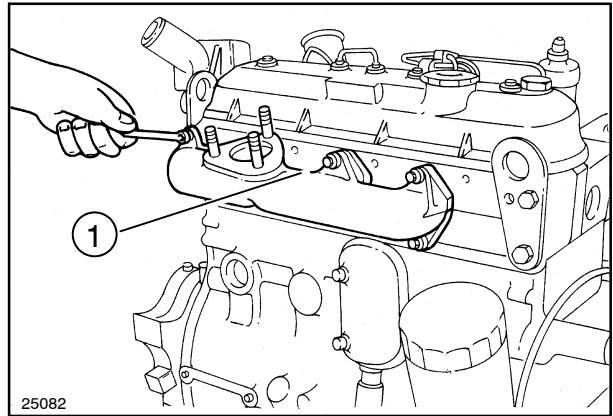
9. Loosen the alternator support retaining bolts (1) and remove the complete alternator assembly.



22

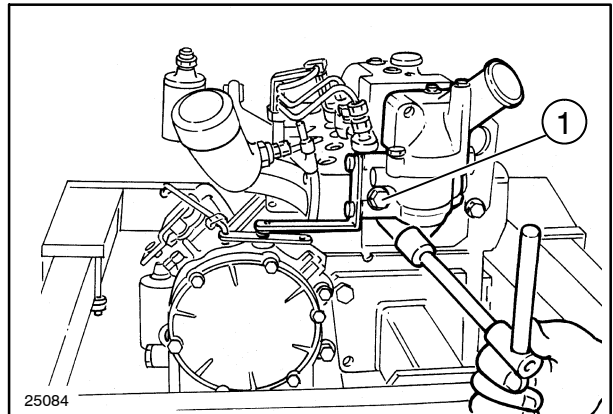
SECTION 10 - ENGINE - CHAPTER 1

10. Unscrew the bolts (1) securing the exhaust manifold to the cylinder head and remove the manifold.



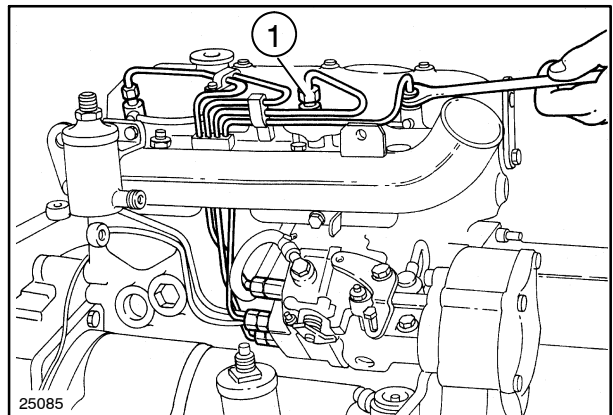
23

11. Remove the thermostat housing retaining bolts (1) and remove the thermostat housing.



24

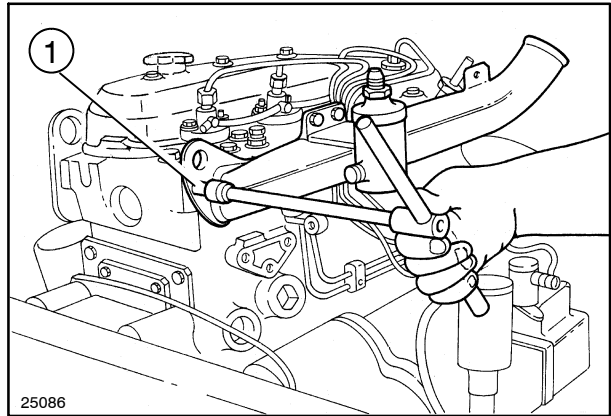
12. Unscrew the high pressure fuel line unions (1) on the injection pump and remove the fuel lines.



25

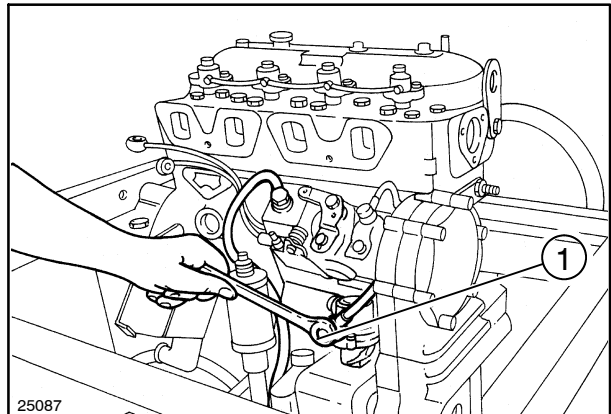
SECTION 10 - ENGINE - CHAPTER 1

13. Unscrew the bolts (1) securing the inlet manifold to the cylinder head and remove the manifold.



26

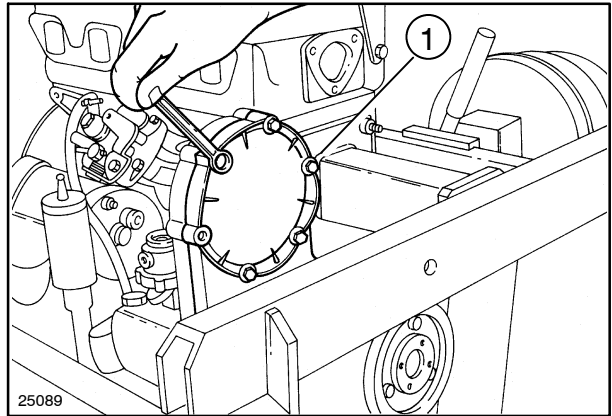
14. Unscrew the unions (1) on the fuel supply pump and detach the fuel lines.



27

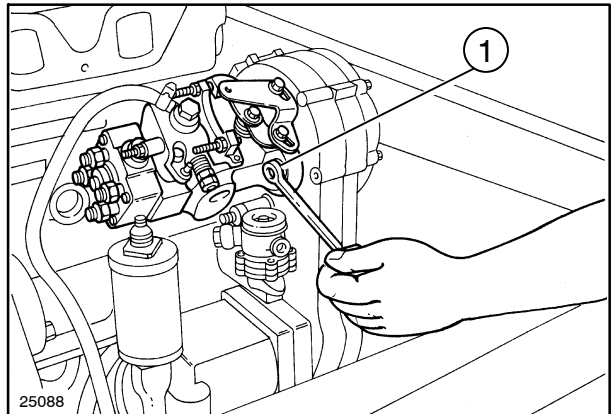
SECTION 10 - ENGINE - CHAPTER 1

15. Loosen screws (1) and remove the injection pump drive gear cover.



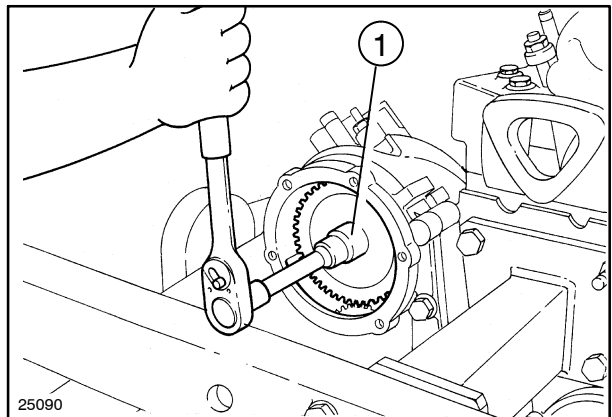
28

16. Unscrew the nuts (1) securing the injection pump to the timing gear case.



29

17. Unscrew the nut (1) securing the injection pump shaft to the drive gear.



30



Suggest:

If the above button click is invalid.

Please download this document

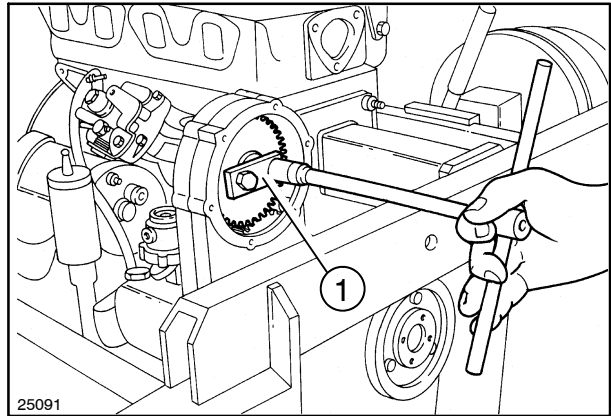
first, and then click the above link

to download the complete manual.

Thank you so much for reading

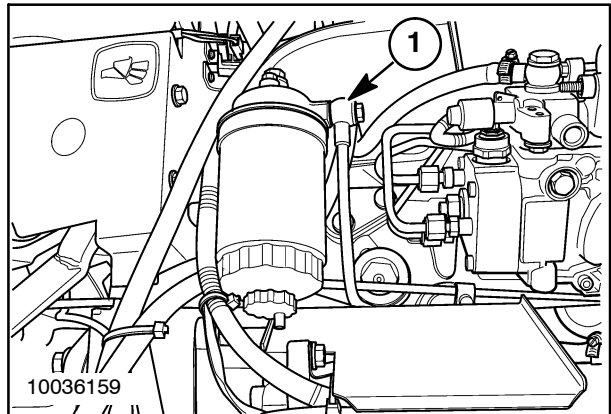
SECTION 10 - ENGINE - CHAPTER 1

18. Remove the injection pump drive gear using tool **380000835** (1) and recover the injection pump and the woodruff key.



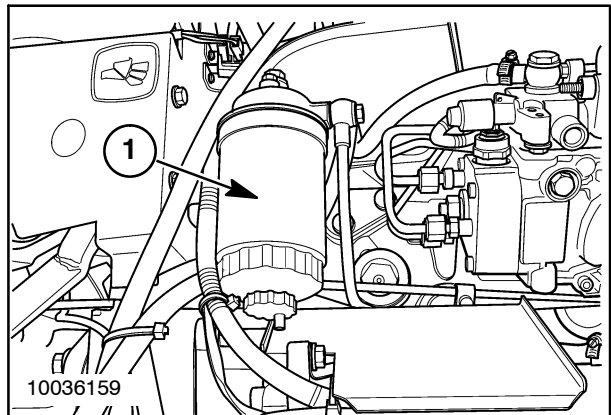
31

19. Disconnect the fuel line unions (1) on the fuel filter.



32

20. Remove the bolts securing the fuel filter support to the engine block and remove the complete filter assembly (1).



33

<https://www.ebooklibonline.com>

Hello dear friend!

Thank you very much for reading.

Enter the link into your browser.

The full manual is available for immediate download.

<https://www.ebooklibonline.com>