
SECTION 4

TROUBLESHOOTING

LOCATING AND IDENTIFYING PROBLEMS

INTRODUCTION

The following information is intended as a guide to assist in identifying and correcting possible tractor malfunctions and fault conditions.

PROBLEM CODES - AREAS AFFECTED

The following information lists problems, which could arise, the reasons for them and appropriate corrective action. The areas affected are dealt with in the following order:

Engine

Hydraulic System

Brakes

Electrical

Hydraulic Lift

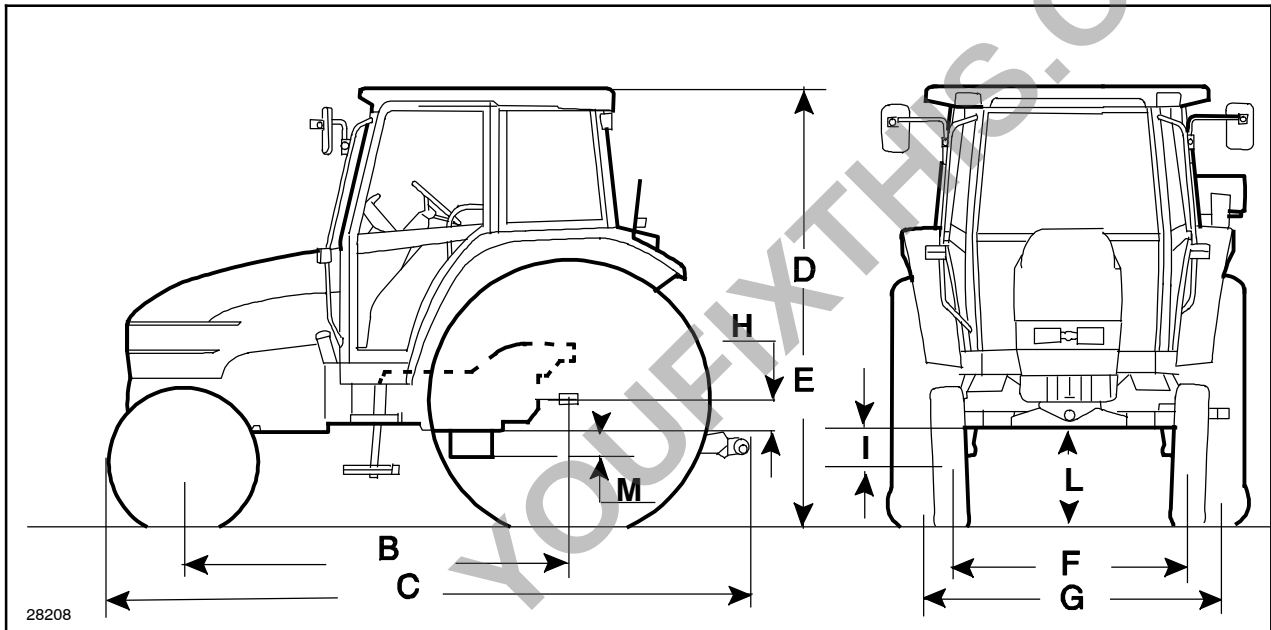
Cab

SECTION 5

SPECIFICATIONS AND DATA

The data on the following pages is provided for your information and guidance. For further details concerning your tractor, contact your dealer.

2WD MODEL DIMENSIONS WITH STANDARD TYRES



1

Dimensions mm (in.)	TL70	TL80	TL90	TL100
B	2342 (92.20)			
C	3910 (153.94)			
D (cab)	2773 (109.17)			
E (frame)	2729 (107.44)			
F	1401 ÷ 2170 (55.16 ÷ 85.43)			
G	1420 ÷ 2204 (55.91 ÷ 86.77)			
H	159 (6.26)			
I	107 (4.21)			
L	300 (11.81)			
M	87 (3.43)			

SECTION 3

LUBRICATION AND MAINTENANCE

INTRODUCTION

This section gives full details of the maintenance procedures required to keep the tractor in conditions of maximum efficiency. The lubrication and maintenance table on pages 5 and 6 can be used for rapid reference for this purpose. All operations are numbered to facilitate use.

In addition to the normal maintenance operations listed, the following parts must be checked during flexible maintenance or during the first 50 hours of operation:

- Tightness of wheel nuts;
- Oil levels in hub and front axle casing – 4WD models only.

WARNING: Park the tractor on level ground and, where possible, ensure all hydraulic cylinders are fully extended before checking oil levels

SAFETY PRECAUTIONS

Read and follow all the safety precautions listed under the “Tractor maintenance” heading in the General Information section.

NOTE: Dispose of all used fluids and filters in the correct manner.



CAUTION: Do not carry out any inspections, lubrication, maintenance or adjustments on the tractor with the engine running.

HOW TO PREVENT CONTAMINATION OF THE SYSTEM

To avoid contamination when changing oil, filters, etc, always clean the area around the fill points, inspection and drain plugs, dipsticks and filters. Before connecting external cylinders, make sure that the oil inside is

clean, that it has not deteriorated after prolonged storage and that it is of the type specified. To prevent dirt entering, clean the lubricating nipples before lubrication. Clean excess grease from the nipples after lubrication.

MAINTENANCE INTERVALS

The intervals suggested in the lubrication and maintenance table are to be followed under normal working conditions.

Intervals should be in line with working and environmental conditions. The intervals should be shortened in adverse working conditions (wet, mud, sand, high dust levels).

LUBRICATION AND MAINTENANCE TABLE - Pages 5 and 6

The table lists the intervals at which routine checks, lubrication, maintenance and/or adjustments should be carried out. Use the table as a quick reference when carrying out maintenance on the tractor. The operations follow the order on the table.

RUNNING-IN PERIOD

During the running-in period (approximately 50 hours of work), in addition to carrying out the operations indicated in this section every “10 service hours” and for the first 50 hours, we recommend the following:

- run the engine for a few minutes at low revs and let it idle after every cold start;
- do not let the engine run at minimum revs for a long time;
- do not use the tractor continually for heavy work;
- follow the recommendations mentioned above after replacement of major parts.

OPERATING INSTRUCTIONS



CAUTION: Before starting the engine and moving the tractor, follow the instructions noted below:

- Do not start or operate the tractor in an enclosed area.
- Before starting the engine, check that all controls are in neutral.
- All controls must be operated only from the driver's seat.
- Stop the engine before carrying out any service or maintenance operations on the tractor.
- Use the steps provided for entering and leaving the tractor.
- Keep the guards properly fitted.
- When moving on the roads, signal your intention to stop, turn or slow down.
- Use the appropriate warning devices to indicate a slow-moving vehicle.

STARTING THE ENGINE

- a. If the tractor has not been used for some time, or if started up for the first time at a low surrounding temperature, actuate the fuel pump starting lever around twenty times.
- b. Depress the clutch pedal to turn off the starting safety device switch.
- c. Move the throttle lever to approximately the half-way position.
- d. Turn the ignition key to position **C** (fig.1, page 2-3). Release the key as soon as the engine starts.

HOW TO START AND STOP

STARTING WITH LOW EXTERNAL TEMPERATURES

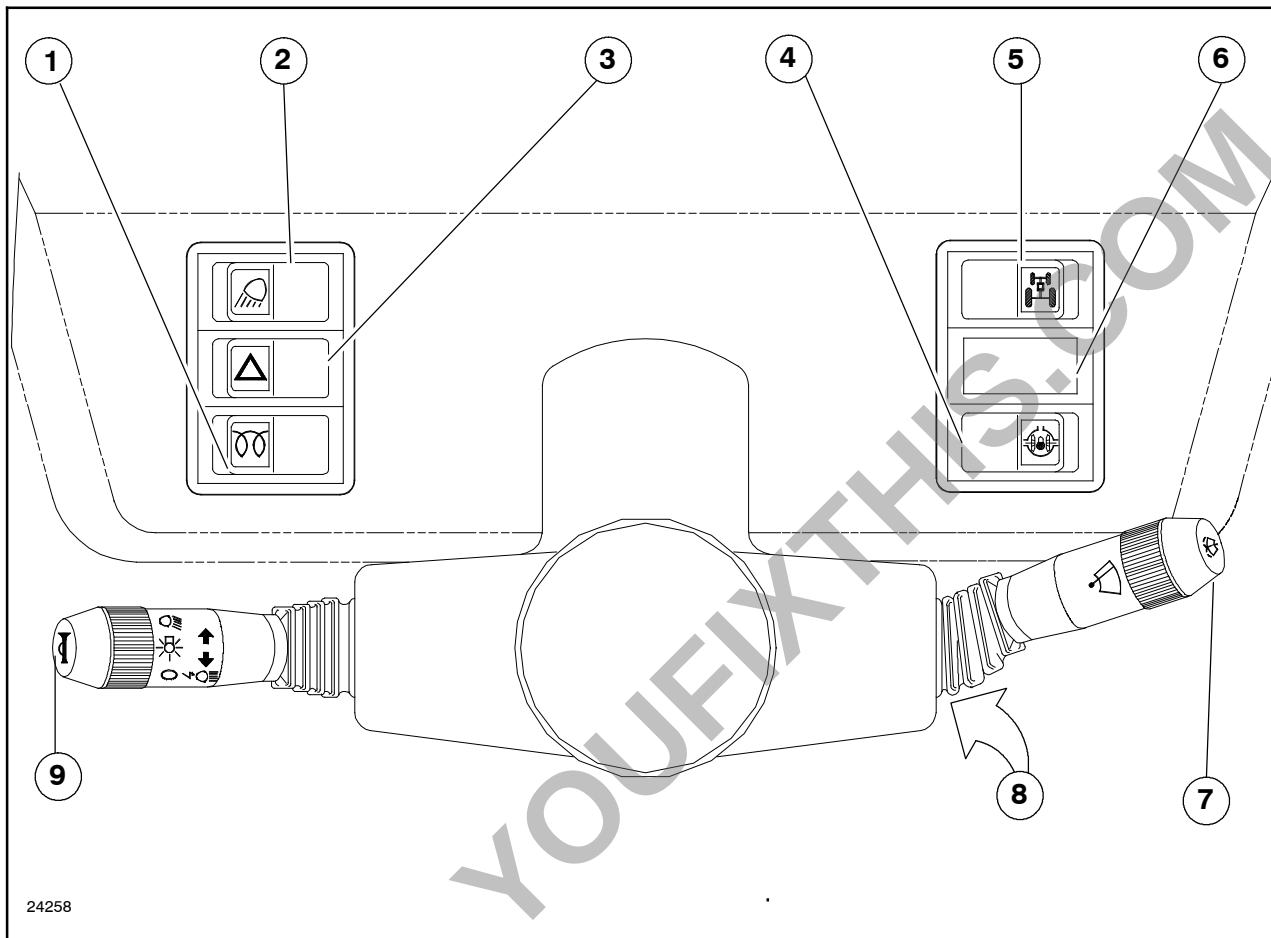
CAUTION: When the outside temperature is low and the engine is cold, cover the radiator before starting so that the engine coolant can quickly reach the correct temperature. Then remove the cover. Also note the following warnings:

- to avoid running down the battery, any single engine starting attempt should not last longer than

15 seconds; if, however, the engine fires but does not start, continue the attempt up to a maximum of 30 seconds.

- wait for at least one minute between each attempt to start the engine;
- to avoid excessively running down the battery, do not make more than six attempts to start the engine.

Dashboard controls



24258

6

Control Panel

- | | |
|--|--|
| 1. Thermostart or Start - Pilot. | 6. Not used. |
| 2. Work light switch (only for models with a cab). | 7. Windscreen wiper/washer control lever (only for models with De Luxe cab). |
| 3. Hazard warning light switch. | 8. Starter switch. |
| 4. Differential lock switch. | 9. Light control lever with direction indicators incorporated. |
| 5. Four-wheel drive switch. | |

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ALWAYS WORK SAFELY



This warning symbol points out important messages concerning your safety.

Read the following safety regulations carefully and follow the recommendations in order to avoid potential hazards and safeguard your health and safety.

In this manual the symbol is accompanied by the following key-words:

CAUTION - When the warning is to prevent potential damage to the machine, which could also put the operator's safety at risk.

DANGER - Specific warnings concerning potential hazards for operator safety or for other persons directly or indirectly involved.

Failure to observe the instructions preceded by the aforementioned key words (**CAUTION** and **DANGER**) may result in severe or fatal injury to the people involved.

Furthermore, this manual also contains instructions in italics preceded by the terms **NOTE** and **WARNING**, with the following relevance in relation to machine protection:

NOTE - Underlines the correct procedure or technique to be followed by the operator.

WARNING - Informs the operator of the danger of damaging the machine if the specified procedure is not followed.

IMPORTANT WARNINGS

The machine is designed and produced exclusively for agricultural use.

All other use will be considered to be contrary to the use specified by NEW HOLLAND, who cannot be held liable for damage to property or the machine, or for personal injuries which may result.

Persons who risk improper use will therefore assume the responsibility for any consequences arising from such use.

Compliance with the instructions for use, maintenance and repairs described in this manual, are the essential preconditions for the use specified by NEW HOLLAND.

The machine must only be used, serviced or repaired by personnel trained in the relevant working methods and safety regulations and who have been authorised to work on the machine.

The user must also observe the rules concerning general safety and accident prevention, including the Highway Code when driving on public highways.

Any arbitrary modifications made to this machine will release NEW HOLLAND from any liability resulting from damage or injury.

NEW HOLLAND and all distribution organisations, inclusive of, but not restricted to, national, regional or local distributors, cannot be held liable for damage resulting from the malfunction of parts and/or components not approved by NEW HOLLAND.

Under no circumstances will a guarantee be issued for products made or sold by NEW HOLLAND that are damaged as a result of the malfunction of parts and/or components not approved by NEW HOLLAND.

COMMUNICATIONS FOR THE USER

GENERAL GUIDELINES

This Use and Maintenance Manual provides a guide for the user with regard to running-in, use and maintenance of the tractor.

Read this manual carefully and keep in a convenient place for future reference. Do not hesitate to contact your local dealer for any queries concerning your tractor. The dealer can provide skilled personnel, trained by the manufacturer, original service parts and all tools and equipment necessary for your service requirements.

The tractor is designed as a power generator and drive-propulsion unit for use in normal and traditional agricultural conditions.

The tractor is also designed to provide maximum performance, economic running and easy use over a wide range of operations. Prior to delivery, all machines are carefully inspected (by both the Manufacturer and your local authorised dealer), to make sure that they reach the user in perfect condition. To maintain the tractor in this condition and ensure trouble-free operation, the routine maintenance described in Section 3 of this manual must be carried out at the specified intervals.

CLEANING THE TRACTOR

Your tractor is an advanced machine, fitted with an electrohydraulic control system. Care must be taken when cleaning the tractor, especially if a pressurized water cleaner is used.

■ Never stand too close to the tractor or direct the water jet on electrical components, seals or intake openings, etc.

■ Never direct jets of cold water at the hot engine or exhaust. See also page 42, Section 3 (RECOMMENDATIONS FOR BODYWORK MAINTENANCE).

SAFETY

Safety precautions for the operator and bystanders are shown on page vi to xii inclusive. Read the safety instructions and follow recommendations and hints **before** starting to use the tractor.

SERVICE AFTER FIRST 50 HOURS WORK

The operations required for the first service are shown at the end of the Manual, immediately prior to the index.

After the first 50 hours of use, return to the dealer with your tractor and this Manual in order to carry out the Manufacturer's checks and to fill in the certificates included on pages 1 and 3). The first sheet (page 1) must be compiled on completion of the service and held by the dealer. The second sheet (page 3) must be kept in the Manual for documentation and reference purposes. **Check that both copies are signed by both yourself and the dealer.**

SPARE PARTS

"Non-original" spare parts have not been tested or authorised by the Manufacturer. Installment and/or use of such products may adversely affect the tractor's design specifications, thereby compromising operational safety. The Manufacturer cannot be held responsible for any damage resulting from the use of "non-original" spare parts".

No modifications may be made to the tractor without written authorisation from the Manufacturer.

WARRANTY

The tractor is guaranteed in accordance with current legislation in your country and in line with contractual agreements reached with the dealer at the time of sale. However, the warranty is no longer valid if the rules and instructions for the use and maintenance of the tractor, described in this Manual, are not observed.

TRANSMISSION WITH RANGE GEAR AND SHUTTLE - 18.64 MPH (30 KM/H) (12 forward gears + 12 reverse gears - Syncro Shuttle)

CAUTION: With the engine running and only one gear lever in neutral, the tractor could be engaged and start moving if the lever is accidentally operated, which may lead to possible accidents. To avoid this hazard, move both levers to neutral, lower any implements and apply the handbrake before leaving the tractor.

The transmission, range gear and shuttle are independently controlled by three levers.

The gear lever (1) fig. 24 selects four gear ratios (1, 2, 3, 4).

The range lever (1) fig. 25 provides three forward ranges:

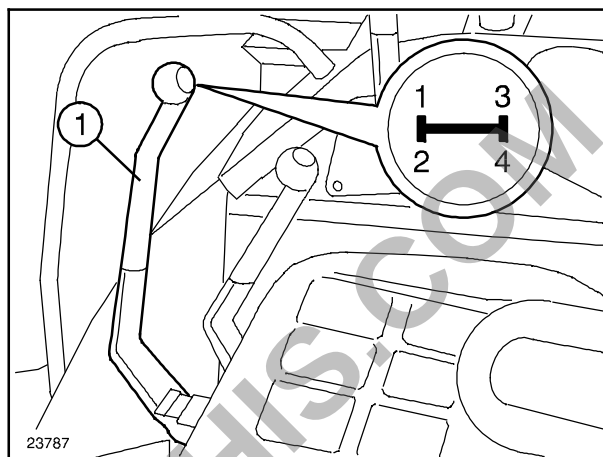
- I = low;
- II = medium;
- III = high.

There are **twelve** forward and **twelve** reverse gears.

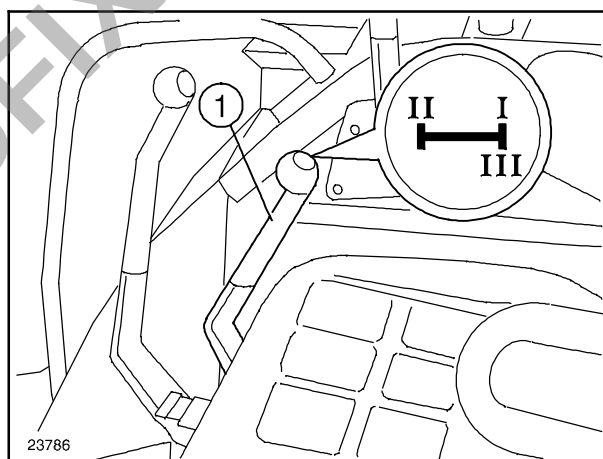
To change from a medium gear to a lower or higher one, stop the tractor, move the range lever to the right and shift it forwards for lower gears or backwards for higher gears.

To change from one speed to another in the same range (including reverse), shift the main shift lever after disengaging the clutch (the tractor does not have to be halted as the gears are syncro-engaged).

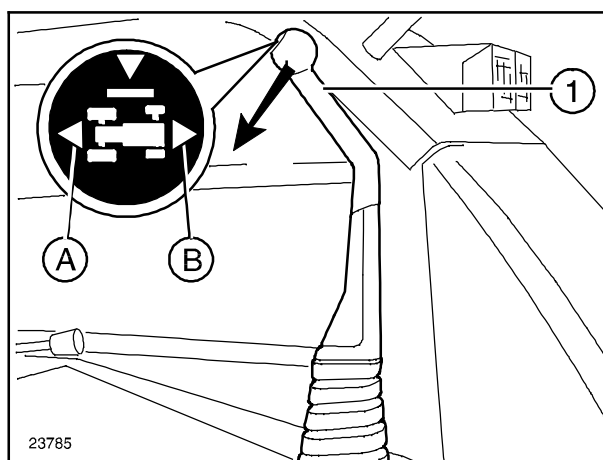
To reverse the direction of travel, slow the tractor almost to a halt, shift the shuttle lever (1) fig. 26 first to the right, in the direction of the arrow, then backwards (A) to obtain reverse gears or forwards (B) to disengage the shuttle and obtain forward gears (the tractor does not have to be halted as the gears are syncro-engaged).



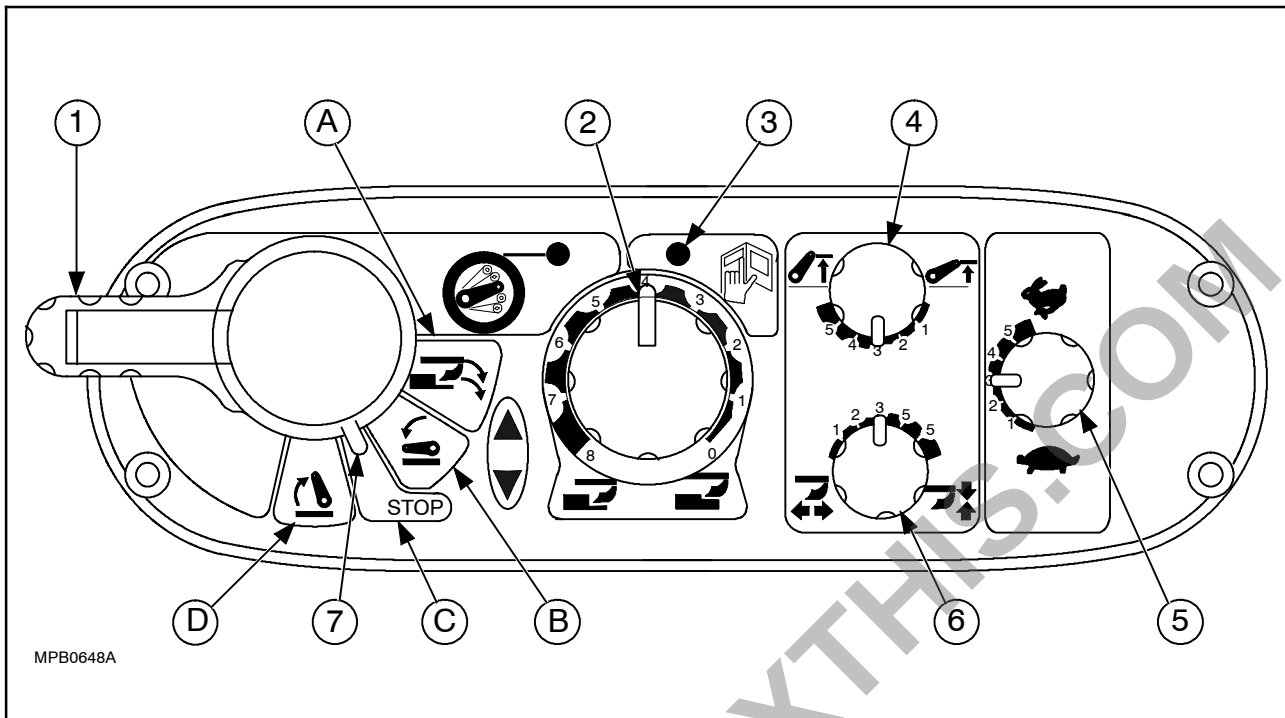
24



25



26



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INTERNAL CONTROLS FUNCTION

(1) Raise and lower control lever.

The lever has four positions:

- A** rapid ground entry. When released in this position, the lever automatically returns to position **(B)**.
- B** Lift arms lowered.
- C** STOP.
- D** Lift arms raised (the transit lock is engaged in this position).

(2) Working depth knob.

- Turn clockwise, towards the **0** for minimum working depth.
- Turn counter-clockwise, towards the **9** for maximum working depth.

(3) Faults codes indicator.

See page 2-72.

(4) Lift arms upper limit adjustment lever.

- Turn to the right, towards **1** for lift arms minimum upward travel.
- Turn to the left, towards **5** for lift arms maximum upward travel.

(5) Lift arms descent speed adjustment lever.

- Turn upwards, towards the hare symbol **5** for maximum lift arms descent speed.
- Turn downwards, towards the snail symbol **1** for minimum lift arms descent speed.

(6) Mixed position/draft lever.

- Turn counter-clockwise, towards **1**, to work in controlled position.
- Turn clockwise, towards **5**, to work in controlled draft.

FILLING 4WD FRONT TYRES WITH ANTIFREEZE SOLUTION

The figures given in the table below are indicative, as they may vary according to the make of tyres being used. It is advised to contact skilled personnel.

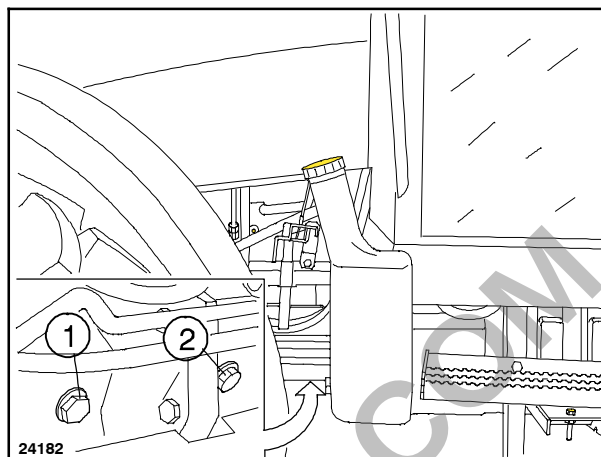
TYRE DIMEN- SIONS	Minimum temperatures above °C									
	-5°		-10°		-15°		-20°		-25°	
	Water kg (litres)	Calcium chloride kg	Water kg (litres)	Calcium chloride kg	Water kg (litres)	Calcium chloride kg	Water kg (litres)	Calcium chloride kg	Water kg (litres)	Calcium chloride kg
14.9-30	197 (434)	23 (51)	189 (417)	39 (86)	185 (408)	52 (115)	180 (397)	62 (137)	176 (388)	70 (154)
12.4-36	144 (318)	16 (35)	138 (304)	28 (62)	135 (298)	37 (82)	132 (291)	45 (99)	129 (284)	51 (112)
13.6-36	173 (381)	20 (44)	166 (366)	34 (75)	162 (357)	45 (99)	158 (348)	54 (119)	155 (342)	61 (135)
16.9-30	240 (529)	28 (62)	230 (507)	48 (106)	225 (496)	63 (139)	220 (485)	75 (165)	215 (474)	85 (187)
420/70R-30	192 (432)	22 (49)	184 (406)	38 (84)	180 (397)	50 (110)	176 (388)	60 (132)	172 (379)	68 (150)
480/70R-30	245 (540)	28 (62)	235 (518)	48 (106)	162 (357)	48 (230)	230 (507)	77 (170)	224 (494)	87 (192)
18.4-30	307 (677)	35 (77)	294 (648)	61 (135)	288 (635)	80 (176)	282 (622)	96 (212)	275 (606)	109 (240)
520/70R-30	307 (677)	35 (77)	294 (648)	61 (135)	288 (635)	80 (176)	282 (622)	96 (212)	275 (606)	109 (240)
13.6-38	182 (401)	21 (46)	175 (386)	36 (79)	171 (377)	48 (106)	167 (368)	57 (126)	163 (359)	65 (143)
16.9-34	269 (593)	31 (68)	258 (569)	53 (117)	252 (556)	70 (154)	246 (542)	84 (185)	241 (531)	95 (209)
480/70R-34	274 (604)	31 (68)	262 (578)	54 (119)	257 (567)	71 (157)	251 (553)	86 (190)	245 (540)	97 (214)
540/65R-34	298 (657)	34 (75)	285 (628)	59 (130)	279 (615)	78 (172)	273 (602)	93 (205)	267 (589)	105 (232)
520/70R-34	336 (741)	38 (84)	322 (710)	66 (146)	315 (695)	87 (192)	308 (679)	105 (232)	301 (664)	119 (262)
600/65R-34	384 (847)	44 (97)	368 (811)	76 (168)	360 (794)	100 (221)	352 (776)	120 (265)	344 (759)	136 (300)
18.4-34	345 (761)	39 (86)	331 (730)	68 (150)	324 (714)	90 (198)	316 (697)	108 (238)	309 (681)	122 (269)

OPERATION 52

DRAINING TRANSMISSION AND HYDRAULIC LIFT OIL - Figs. 65, 66 and 67

Transmission housing

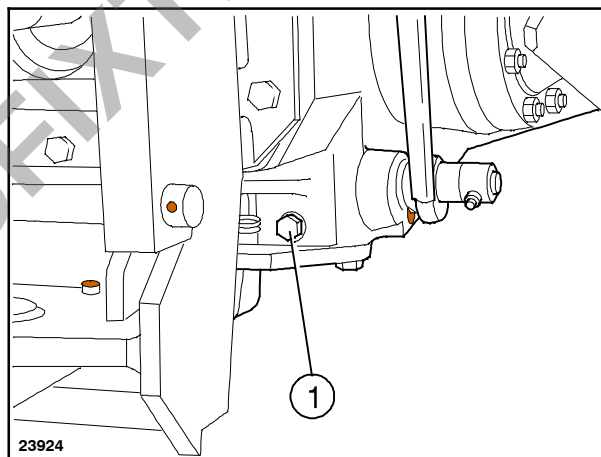
Place a container under the left side of the housing, close to the fuel tank, and drain the oil via plug holes (1 and 2) fig. 65.



65

Lift torsion bar

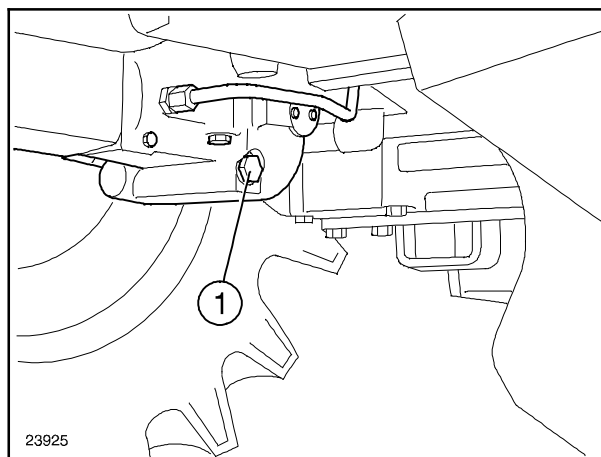
Place a container under the final drive housing and drain oil via plug hole (1) fig. 66.



66

Drive gear, 4-wheel drive

Place a container under the final drive housing and drain oil via plug hole (1) fig. 67.



67

Oil filters

Replace the lift oil filter cartridge (Op. 31) and, where fitted, cartridge (1) on the hydrostatic steering and auxiliary systems filter (Op. 32).

When you have drained the oil, replace and tighten the plugs and fill with new oil via fill point (1), Op. 6.

NOTE: For oil grades, see the topping-up table on page 3-47.

PREVIEW ONLY

You're viewing 12 of 258 pages

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