

OPERATOR INSTRUCTION BOOK

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OPERATOR INSTRUCTION BOOK

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2. INTRODUCTION - SAFETY PRECAUTIONS AND WARRANTY

Handle starting fluid safely. Starting fluid must only be used when an ether-start aid is fitted as original equipment by the manufacturer or when installed by a Dealer as an accessory. In cases of tractors being fitted with glow plugs or thermostart, these must be removed prior to the installation of an ether-start aid (Fig. 9).

If aerosol cans of starting fluid are to be used the thermostart must be disconnected. Remove the wire from the thermostart unit which will be found on the induction manifold. Tape the end of the wire to prevent an electrical short circuit.



2.12 - SAFETY - AFTER OPERATION



WARNING: An unbalanced tractor could overturn and cause injury or death. Make sure front frame counterweights, wheel weights and wheel ballast are used as recommended by the manufacturer. **DO NOT** add extra counterweights to compensate for an overload tractor, it is recommended to reduce the load. Keep all parts of your body inside the operator's compartment while operating the tractor.

2.12.1 - Make the right moves

Make sure your tractor is ready for the job it must do. Know the rated load capacities of your tractor and never exceed them. Be certain that any equipment or implements you intend to use **DO NOT EXCEED** the load rating of your tractor. Be sure the tractor and implement PTO speed match.

Keep in mind that tractors normally operate on uneven, unpaved, and often bumpy or sloping surfaces. Operating conditions can reduce the amount of weight you should carry or pull.

2.12.2 - Follow safe operating practices

- Operate the controls smoothly - don't jerk the steering wheel or other controls.
- **DO NOT GET** on or off a moving tractor. Keep a firm grip on the steering wheel at all times, with the thumbs clear of the spokes when driving the tractor.
- Make sure you have adequate clearance in all directions for tractor, and implement.
- **DO NOT** play games with a tractor or equipment. Use only for intended purpose.
- **DO NOT** attempt to work the controls except from the operator's seat.
- Before dismounting, always disengage the PTO, lower all attachments and implements to the ground, place the tractor in neutral, engage parking brake, shut off the engine and remove the key.

DO NOT touch, lean on, or reach through any implement mechanism or permit others to do so.

Stay alert. Should something break, come loose, or fail to operate in your equipment, stop work, shut off the engine, lower attachments to ground inspect the machine and have repairs or adjustments made before resuming operation.

2.12.3 - Watch out for others

Be aware of what is going on. **DO NOT** allow an untrained or unqualified person to operate your tractor. They could injure themselves or someone else.







WARNING: Your tractor is a one-person machine. DO NOT permit others to ride on the tractor or the implement (Fig. 10). DO NOT allow anyone to ride on the implements or other equipment including trailers, except on certain harvesting equipment, specifically designed for riders during the actual harvest operation only (not during transport). Such equipment must have provision for a safe riding area. DO NOT allow children on the tractor.

2. INTRODUCTION - SAFETY PRECAUTIONS AND WARRANTY



SAFETY DECAL DESCRIPTION FOR NORTH AMERICA




Located on top of each battery

DANGER	 Shield eyes	 Explosive gas	 Avoid sparks and flame	 Sulphuric acid
	EXPLOSIVE GASES Always shield eyes and face from battery. Cigarettes, flames or sparks could cause battery to explode. Do not charge or use booster cables or adjust post connections without proper instruction or training.		POISON causes severe burns Contains sulphuric acid. Avoid contact with skin, eyes or clothing. In event of accident flush with water and call a physician immediately. Keep out of reach of children	
3810054 M1				


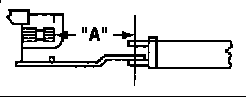
Located on LH rear surface of fuel tank LH side

Located on starter (except Powershift version)

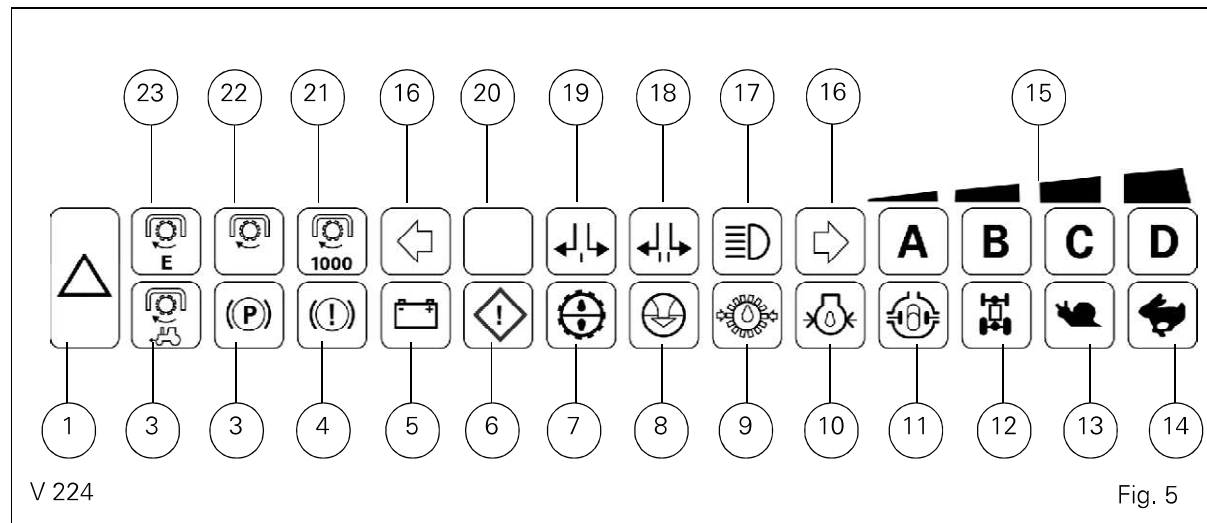
	DANGER Start only from seat with transmission and PTO in neutral. Starting in gear kills.
	WARNING Remove negative cables from batteries before removing solenoid cover and before servicing the electrical system.
3808564 M2	

 WARNING			
Personal injury could result from PTO driveline separation			
1. Drawbar supplied provides standard distance "A". Do not change.			
PTO RPM	SHAFT SIZE	DISTANCE "A"	
540	35 mm (1.38 in)	356 mm (14.0 in)	
1000	35 mm (1.38 in)	406 mm (16.0 in)	
2. Three-point link distance "C" and mounted implement distance "D" may not be standard.			
Measure distance "B" over complete lift range for tractor and implement combination. Select driveline length to ensure that driveline will not bottom out at minimum distance "B" and will have sufficient overlap at maximum distance			
3808479 M2			

Located on inside of RH rear fender (except Powershift version)

 WARNING			
TO PREVENT PERSONAL INJURY			
1. Position and lock drawbar directly in line with tractor PTO as follows:			
PTO RPM	SHAFT SIZE	DISTANCE "A"	
540	35 mm (1.38 in)	356 mm (14.0 in)	
1000	35 mm (1.38 in)	406 mm (16.0 in)	
1000	45 mm (1.75 in)	508 mm (20.0 in)	
2. Do not operate the PTO at speeds faster than the speed recommended by the implement manufacturer.			
3. Operate the tractor at the proper PTO speed as indicated on the monitor to prevent over speeding of the PTO. Limit maximum PTO speeds to 830 RPM (540 RPM shaft) and 1167 RPM (1000 RPM shaft).			
72503125			

3. INSTRUMENTS AND CONTROLS



V 224

Fig. 5

3.2 - WARNING LIGHTS PANEL

- **Dynashift version** (Fig. 5)

1. Failure warning light (red).

This light comes on at the same time as the (red) warning lights. If it comes on, stop the tractor immediately and look for the causes of the failure

2. Not used.

3. Handbrake warning light (red).

4. Not used.

5. Alternator charge warning light (red).

This charge warning light illuminates when the starter switch key is in the "On" position but with the engine not started. The light should extinguish when the engine starts and the starter switch key is returned to the "On" position. If the warning light illuminates when the engine is running, stop the engine and identify the cause of the problem, or consult your Dealer.

6. Not used.

7. Transmission 15 micron oil filter and 5 bar boost pressure warning light (red).

If this light remains on after starting the engine, **immediately stop** the engine, check the lubricating filter and circuit. If the problem persists after changing the filter, consult your dealer.

8. Air cleaner warning light (red).

9. Transmission 17 bar low pressure warning light (red).

If this warning light illuminates during operation, consult your Distributor or Dealer.

10. Engine oil pressure warning light (red).

This warning light illuminates when the key is in the "On" position, but it should extinguish when the engine starts. If the warning light stays on when the

engine is running, stop the engine and investigate the reason for the loss of pressure, or consult your Dealer.

11. Differential lock indicator light (yellow).

12. Four-Wheel-Drive engaged indicator light (green).

13. Creeper indicator light (green) (if fitted).

14. Hi range indicator light.

15. Ratio speed indicator light.

- **Dynashift version** : A to D (green)

16. Turn direction indicator light (green).

17. High beam light (blue).

18. Direction indicator light for the second trailer (green).

19. Direction indicator light for the first trailer (green).

20. Not used.

21. 1000 rev/min PTO indicator light (yellow) (if fitted).

22. 540 or 750 rev/min PTO indicator light (yellow) (if fitted).

23. Economy PTO engagement indicator light (yellow) (if fitted).

3. INSTRUMENTS AND CONTROLS

3.10 - STEERING WHEEL

(Fig. 15)

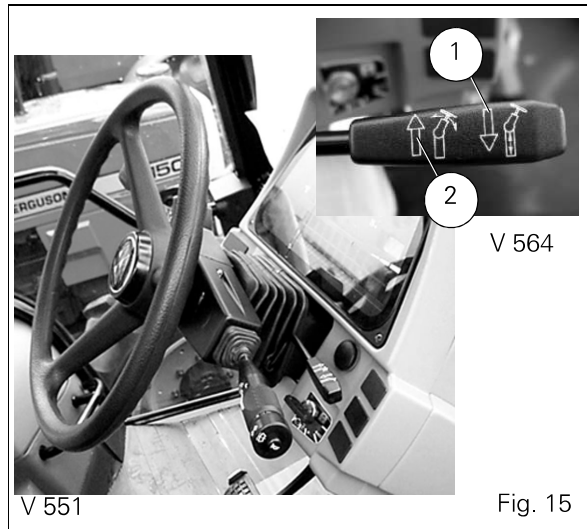
On certain models the steering wheel can be adjusted for angle of tilt and for height. This two adjustments are carried out with only a lever.

- First time. Height adjustments..
- Second time. Angle adjustments.

When the desired adjustment is achieved, release the lever to lock the steering column.



DANGER: Adjustments of the steering wheel must be done with the tractor stopped.



3.11 - UPPER CONSOLE

(Fig. 16)

1. Interior light with switch (see details Fig. 17).

By rotating lens, three positions:

- 0 - permanently on.
- 1 - light comes on when opening the left hand door.
- 2 - off position.

2. Drink storage compartment, which is cooled when the tractor is equipped with air conditioning.

3. Adjustable air circulation vents.

4. Air conditioning control knob (if fitted).

NOTE: When the air conditioning system is in use the cab doors and windows must be closed.

IMPORTANT: Stop the system before starting the engine.

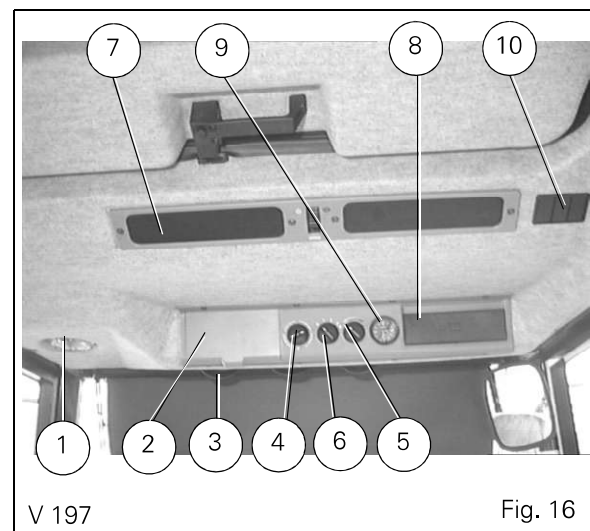
3.11.1 - Air conditioning operation

Ensure the cab air filter is clean (see section 4).

1. When the engine is running, turn knob 4 towards cold (fully clockwise).
2. Move the switch for the fan (6) to the fast position.
3. When the desired cab temperature has been reached, adjust the temperature regulating knob to maintain a comfortable temperature.
4. Reduce the fan speed to obtain a comfortable temperature.

NOTE: If a low fan speed and a low temperature are used for long periods, the evaporator may start to iceng periods, the evaporator may start to ice up. If icing occurs, adjust the temperature control knob to raise the temperature, and if the icing continues, increase the fan speed.

IMPORTANT : If the air conditioning has not been used for some time, unlock the compressor before starting the engine, by rotating the pulley nut with a wrench.



4. OPERATION

This is to prevent overheating of the starting motor. If, after three attempts, the engine fails to start, determine cause and correct failure.

NOTE: If the clutch pedal is not fully depressed long enough after the engine starts, the diagnostic indicator on the shift display will display an "DISP" followed by the computer program identification number.

Example: DISP1.06 - tran 1.06.

The transmission will not engage when this is displayed.

To clear display and reactivate the transmission, fully depress and hold the clutch pedal until the DISP disappears from the shift display.

4.3 - STOPPING THE ENGINE

Reduce the engine speed to idling for about one minute, to allow engine temperature to stabilize. Turn the starter switch key to the "Stop" position.



ATTENTION: The tractor must be stopped before the engine is shut off, except in case of emergency.

IMPORTANT: Do not stop the engine suddenly when this engine is running at high speeds; the turbocharger will continue to turn by inertia but will no longer be lubricated.

Dynashift version: (Fig. 2)



DANGER: After turning off the engine, the wet clutch is in disengaged position, it is imperative that the handbrake is engaged before leaving seat.

When stopping the tractor with engine running :

- Place the gear lever (1-2-3-4) and the forward/reverse lever in neutral position.
- Apply the parking brake.

Powershift version: (Fig. 3)



DANGER: Always place transmission control lever in neutral and engage park lock before leaving operator's seat. remove "START" key if unit is to be left unattended.

Do not engage or disengage the Park lock with the tractor moving as damage can be caused to internal components.

Always ensure that the tractor is stationary before engaging or disengaging Park lock.

4.4 - DRIVING THE TRACTOR

IMPORTANT: Before starting the tractor, refer to the maintenance guide on section 5.

4.4.1 - Foot throttle

The use of the foot throttle makes it possible to exceed the engine speed set by the hand throttle. When the foot throttle pedal is released, the engine speed returns to that set by the hand throttle.



CAUTION: If you are using the foot throttle, the hand throttle should be placed in the idle position.

4.4.2 - Choosing the right gear ratio

Select the ratio which gives the optimum fuel consumption without overloading the engine and the transmission. Bear in mind at the same time that soil conditions can vary within a matter of a few yards in the same field. Select a ratio which allows the engine to operate comfortably at about 75 % of its maximum power.



V 978

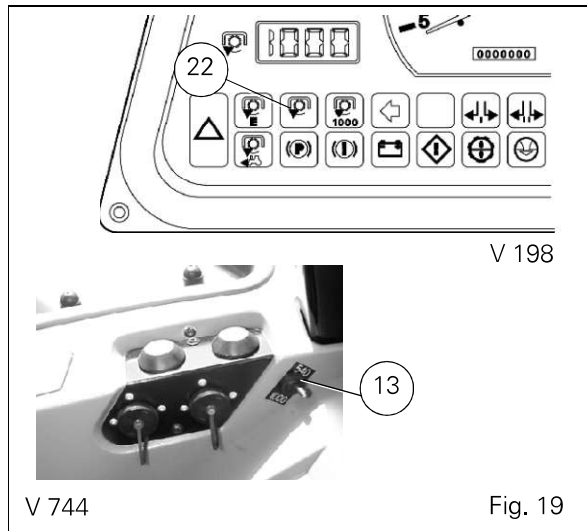
Fig. 2



CAUTION:

1. Do not keep your foot on the clutch pedal or maintain it on the half of its travel.
2. Always descend slopes with the tractor in gear and the clutch engaged. Do not engage reverse until you have stopped the tractor.
3. When turning on headlands with heavy implements decrease engine speed.
4. If the engine is not running, steering is not power-assisted.

4. OPERATION



V 198

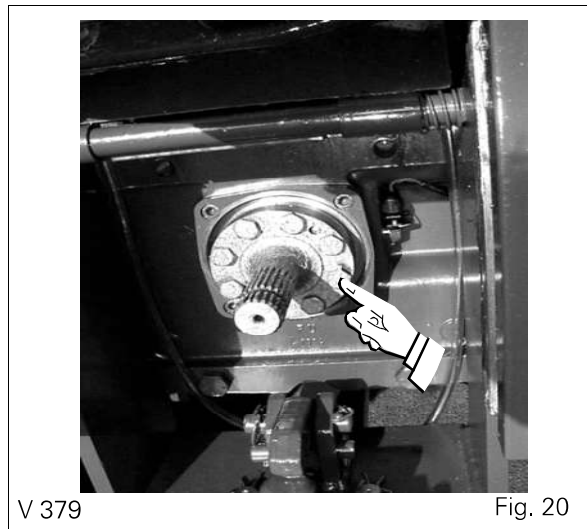
V 744

Fig. 19

4.9.2 - P.T.O - 540 and 1000 RPM with interchangeable end fitting

- Shaft diameter 35 mm (1" 3/8) - 6 splines - 540 RPM of the shaft at 1440 RPM engine speed.
- Shaft diameter 35 mm (1" 3/8) - 21 splines 1000 RPM of the shaft at 2090 RPM engine speed.
- Shaft diameter 44.5 mm (1" 3/4 - 20 splines 1000 RPM of the shaft at 2090 RPM engine speed.

To change shaft remove the 8 screws (Fig. 20), install the new shaft. Tighten to torque (see chapter 6).



V 379

Fig. 20

4.9.2.1 - PTO one speed 1000 tr/mn

4.9.2.2 - PTO two speeds

Either of the P.T.O. speeds is selected by the lever on the rear left-hand side of the centre housing or by actuating the lever inside the cab (Fig. 21) :

- Rep.1: 540Tr/min.
- Rep.2: 1000Tr/min.



CAUTION: Never use the 750 rpm PTO over 1500 rpm; this could deteriorate the implements designed to work with a 540 rpm PTO..

Carefully watch the digital display on the dashboard.



DANGER : PTO

- Never accross any driveline.
- Don't use the tractor drawbar or the implement tongue as a step.
- Never use the driveline as a step.
- Never wear loose fitting clothes.
- Keep at least your height away from a rotative driveline.

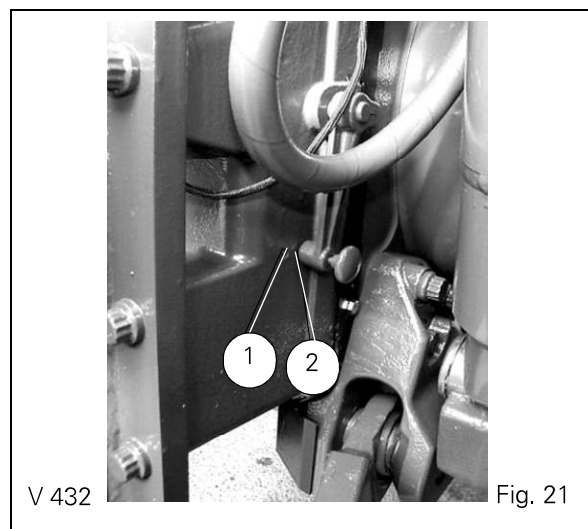
4.10 - STEERING



CAUTION: Steering is hydrostatic. If the engine is stopped, the pump no longer supplies the system and the hydrostatic steering then automatically goes over to manual operation which requires more effort to steer the tractor.

However no hydraulic system can operate correctly unless:

- it is correctly maintained and the approved oils used,
- the tightness of all connections, and the oil level, are regularly checked.



V 432

Fig. 21

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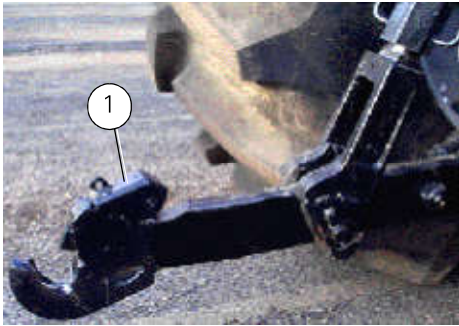
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4. OPERATION

4.14 - THREE-POINT LINKAGE

4.14.1 - Implement installation

- Telescopic bars (Fig. 38). To hook the implements, tilt the locking systems (1). Secure the telescopic bar to the implement. When the implement is secured, lower the locking systems.



V 326

Fig. 38



V 478

Fig. 40

4.14.2 - Lift rods

1. Floating position (Fig. 39).
2. Fixing position (Fig. 40).



V 479

Fig. 39

5. MAINTENANCE AND ADJUSTMENTS

5.2 - DEALER SERVICE OPERATION

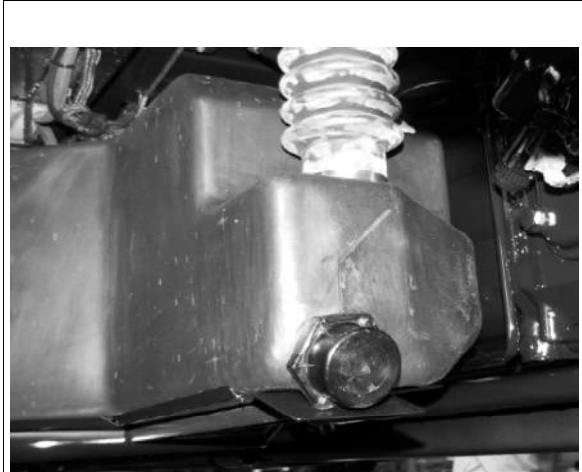
MAINTENANCE CHART	Routine maintenance			
	50h	300h	600h	1200h*
Engine, Fuel and Cooling System				
1. Change engine oil and filter(s).	●SISU	●	●	●
2. Change fuel filter element(s).	●		●	●
3. Change fuel pre filter element 150 Micron.	●		●	●
4. Check/Clean dry air filter element(s).	●	●	●	
5. Change dry air filter main element (Outer).				●
6. Change dry air filter main element (Inner).				●
7. Check radiator coolant level.	●	●	●	
8. Drain, flush and refill radiator with coolant.				●
9. Clean main radiator and all other cooler element fins.		●	●	●
10. Clean air conditioning condenser.		●	●	●
11. Check tension and condition of alternator / fan belt(s).	●	●	●	●
12. Check tension and condition of air conditioning compressor belt.	●	●	●	●
13. Clean fuel lift pump strainer.			●	●
14. Check valve tip clearance, replace the cover gasket.				●
15. Observe level of smoke emission from exhaust.			●	●
16. Check idle speed and fuel cut off mechanism.			●	●
17. Lubricate throttle linkage / cable.				●
18. Grease engine water pump			●	●
Electrical System and Instruments				
19. Check battery condition and electrolyte level.	●	●	●	●
20. Check tightness of battery connections and security of battery itself.	●	●	●	●
21. Check function of safety start switches.	●	●	●	●
22. Check function of all warning lights and instruments.	●	●	●	●
23. Check function and adjustment of all lights.				
24. Check function of all other electrically powered devices e.g. cab heater / blower, radio, wipers, etc...	●	●	●	●
25. Check function of all electronically controlled systems.	●	●	●	●
26. Re-set the Service Indicator on the Datatronic system.	●	●	●	●
27. Check all multi-pin "Deutsch" connectors for moisture ingress and repack with SGB grease.		●	●	●
Front Axle and Steering				
28. Check oil level in front axle and epicyclic hubs (4WD).		●		
29. Change oil in front axle and epicyclic hubs (4WD).	●		●	●
30. Check front wheel hub / swivel housing bearings/suspension free-play.			●	●
31. Grease drive shaft/front axle universal joints (4 WD).	●	●	●	●
32. Grease all steering pivots.	●	●	●	●
33. Check correct function of steering, with and without engine.		●	●	●
34. Check steering system for signs of wear and wheel alignment (including tyre wear and damage).				●
35. Suspended front axle calibrate.				●

5. MAINTENANCE AND ADJUSTMENTS

5.9.4 - Fuel tank

Drain the fuel tank every 1200 hours.

Drain plug is located at the rear left hand side of the tank (Fig. 17).



V 282

Fig. 17

NOTE: Torque 15 to 18 Nm (11 to 13 lbf/ft).

5.9.5 - Fuel injection pump, governor and injectors

Adjustment and inspection of the fuel injection pump, governor and injectors should be carried out by your Distributor or Dealer.

5. MAINTENANCE AND ADJUSTMENTS

- Tyres with tubes

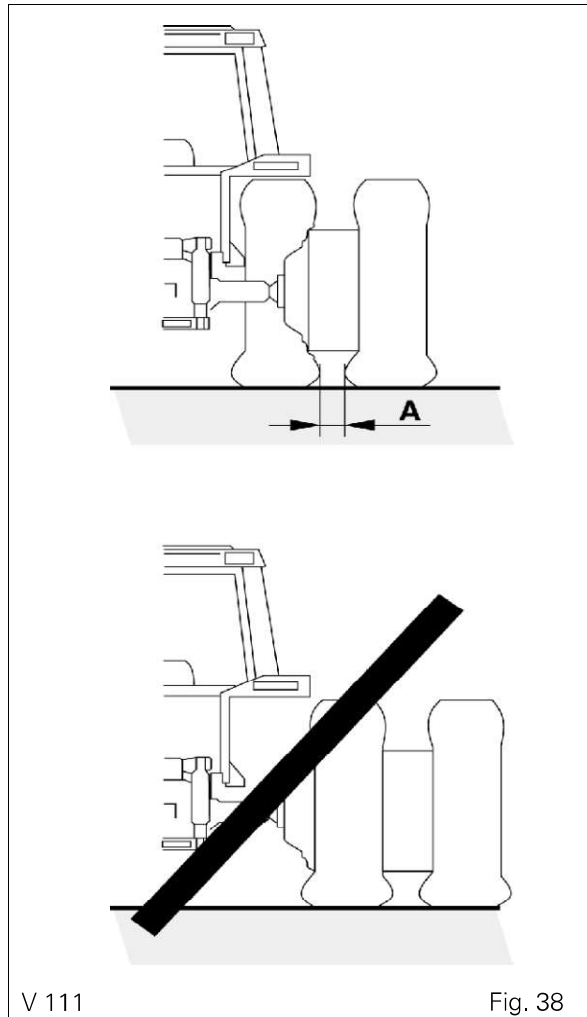


WARNING: When preparing a calcium chloride solution for liquid ballasting the tractor tyres, **NEVER** pour water on to the calcium chloride. Chloride gas is generated which is poisonous and explosive. This can be avoided by slowly adding calcium chloride flakes to water and stirring until they are dissolved.



CAUTION: Calcium chloride and water solution as used in tractor tyres is not dangerous, but because it may attack clothing or cause skin irritations on some persons, especially if it comes in contact with open cuts or sores, we urge everyone to avoid coming in direct contact with it.

IMPORTANT: If you come in contact with this solution, wash thoroughly with plenty of clean water.



V 111

Fig. 38

- Tubeless tyres

Use a glycol based liquid containing corrosion inhibiting agents other than nitrites Na NO_2 .

5.17.4 - Tyre pressure

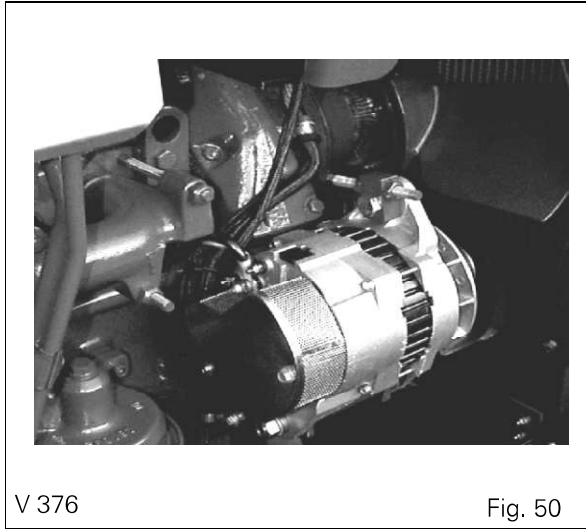
0,2 bar (2.9 lbf/in²) less on the outer tyres.

5.17.5 - Tyres pressures

Check the tyre pressures every 100 hours. Tyre pressures vary according to make type, load and speed.

Refer to the inflation tables for individual tyre manufacturers' recommendations.

5. MAINTENANCE AND ADJUSTMENTS



V 376

Fig. 50

5.21.5 - Trailer socket

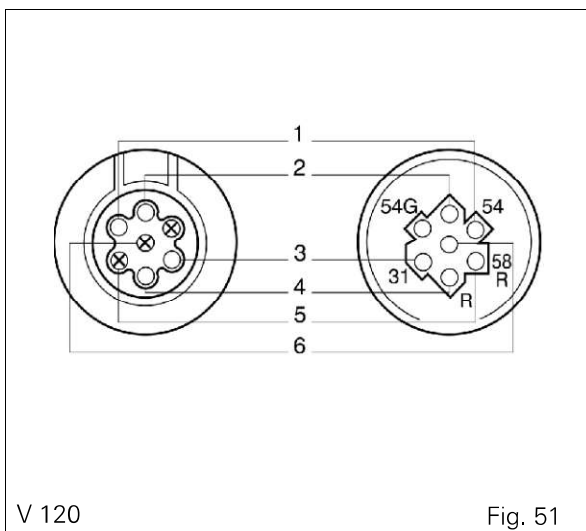
Connection (Fig. 51)

1. Brake light (white wire)
2. LH turn signal (pink wire)
3. Ground (black wire)
4. RH turn signal (brown wire)
5. RH side light (red wire - red terminal)
6. LH side light (red wire)

5.21.6 - Headlights adjustment

The headlights are adjusted by screwing the three screws in or out as required.

NOTE: Do not let your fingers come into direct contact with the iodine bulbs (work lamps).



V 120

Fig. 51

6.SPECIFICATIONS

6.18 - NOISE LEVELS 6-14

6.19 - DIMENSIONS AND WEIGHTS 6-15

6. SPECIFICATIONS

6.16 - TIGHTENING TORQUE

6.16.1 - Wheel to rear axle

- Standard final drive
 - Rim to disc: 250 - 350 Nm (184 - 590 lbf-ft)
 - Disc to axle hub: 400 - 450 Nm (295 - 332 lbf-ft)
- Straight shaft
 - Disc to single conical hub (dry nuts) (shaft Ø95): 350 - 460 Nm (258 - 339 lbf-ft)
 - Half conical hub to hub (dry nuts) (shaft Ø95): 350 - 460 Nm (258 - 339 lbf-ft)
 - Half conical hub to hub (dry nuts) (shaft Ø110): 500 - 600 Nm (369 - 443 lbf-ft)
 - Disc to Half conical hub: 640 - 680 Nm (472 - 502 lbf-ft)
 - Rim to disc: 250 - 350 Nm (184 - 268 lbf-ft)

6.16.2 - Wheel to front axle

- 4WD Wheel to hub (dry nuts): 640 - 680 Nm (472 - 502 lbf-ft)

6.17 - MISCELLANEOUS

- Axle outer arm: 400 - 600 Nm 295 to 443 lbf-ft
- P.T.O shaft: 100 - 130 Nm 74 to 96 lbf-ft
- Steering rams: 75 - 80 Nm 55 to 59 lbf-ft
- Engine oil drain plug: 80 Nm 59 lbf-ft
- Fuel tank drain plug: 15 Nm - 18 Nm 11 to 13 lbf-ft

6.18 - NOISE LEVELS

The noise level recorded inside the cab in accordance with directive 77/311/EEC annex II.

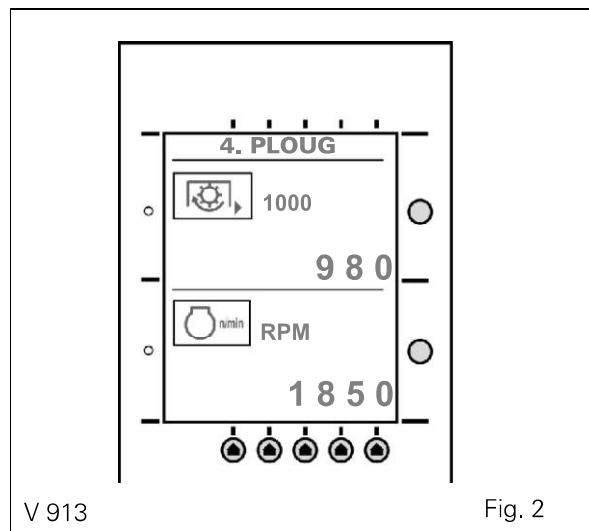
Type	CEE 77/311 Annex II	
	Closed windows	Open windows
MF 8280	77	82
MF 8260	76	82
MF 8250	77	84
MF 8240	74	80
MF 8220	77	83
MF 8210	78	80

7.ACCESSORIES AND OPTIONS

7.2.4 - Use

Active mode

When the starter switch key is in ON position, the last data stored appears (Fig. 2)



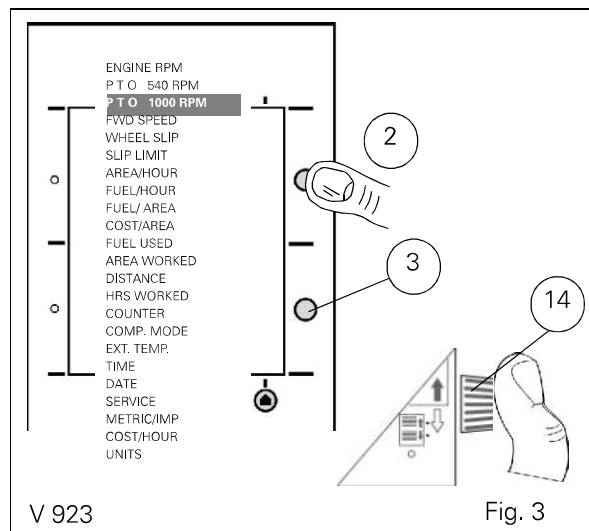
V 913

Fig. 2

1. Press the key 2 or 3 to access the available functions (Fig. 3).
2. Turn the knob 14 to select the function wanted.
3. Press key 2 or 3 again to display the selection on the lower or upper part of the screen: e.g.:

Upper display: PTO speed.

Lower display: Engine speed, 2 different functions can be displayed at the same time.



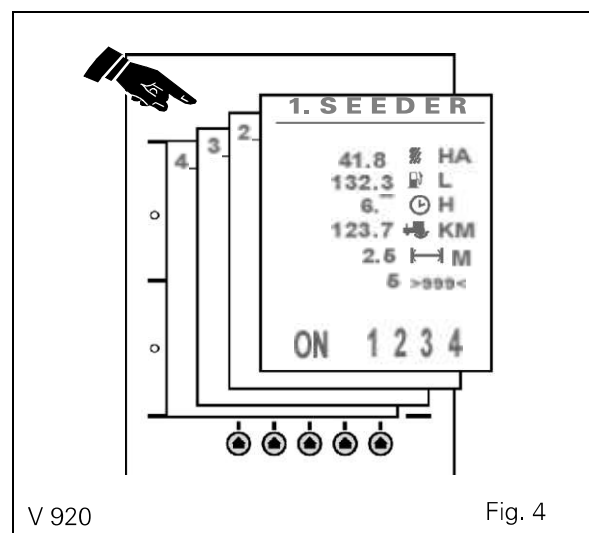
V 923

Fig. 3

US dollar, pound) do not correspond, return to the menu, select **UNITS** and press key 2 or 3.

Memory mode (Fig. 4)

The Datatronic features 4 independent memories identified by a number (1 to 4) and a name which can be introduced by the operator. It is possible to record the total work done with 4 different implements or to record the work done by four different drivers "1 SEEDER".



V 920

Fig. 4

NOTE: If the units of data displayed (french franc,

7.ACCESSORIES AND OPTIONS

O. DISPLAY of the furrow end PARTIAL LIFTING value (after setting and storage of P).

P. SETTING of the furrow end PARTIAL LIFTING value (set and store).

NOTE: Setting steps I to P are very important and determine the performance of the system.

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