

Challenger MT 565

Series Agricultural Tractors

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2.INTRODUCTION - SAFETY PRECAUTIONS AND WARRANTY

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.

NOTE: 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.

2.13.3 - 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.

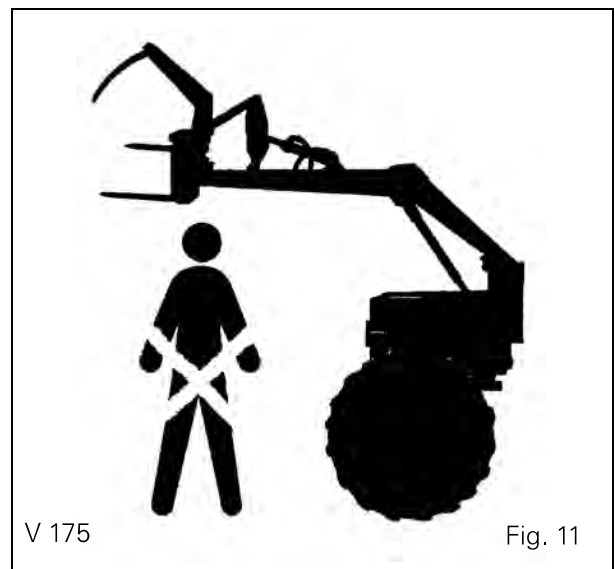


WARNING: DO NOT permit others to ride on the tractor or the implement (Fig. 10). DO NOT allow anyone to ride on the implements or other equipment including trailers, except on certain harvesting equipment, specifically designed for riders during the actual operation only (not during transport). DO NOT allow children on the tractor or equipment.



- Your tractor may be equipped with an instructor seat. This seat is for instructional use and/or tractor technical inspection use only. Children must NOT use this seat.

- The instructor seat (if equipped) must be used with seat belt provided. Do NOT use unapproved instructor seat.
- Be certain you can control both speed and direction before moving. Move slowly until you are sure that everything is operating properly. After starting, recheck the steering, right and left.
- Be certain you have full steering and brake control. If differential is locked, **DO NOT** operate at high speed or turn the tractor until the differential lock is disengaged.
- Keep others away from your operation. **DO NOT** allow anyone to stand or pass under a raised implement (Fig. 11).
- **DO NOT** lift a load over anyone.
- **DO NOT** lift objects that can not be contained in the bucket, get the appropriate attachment.
- When using a loader, avoid sudden stops, starts, turns, or change of direction. Keep loads close to the ground when transporting.
- **DO NOT** stand (or allow anyone else to stand) in front of, under, or behind loaded or loading equipment. **DO NOT** drive a tractor up to someone standing in front of a fixed object.
- Keep others away from universal joints, hitches, drawbar, lift arms, PTO drives, cylinders, belts, pulleys, and other moving parts. Keep all shields and guards in place.



WARNING: DO NOT stand, or allow anyone else to stand, between the tractor and implement unless the engine is turned off and the parking brake is engaged, the transmission control lever is in neutral, and all attachments or implements are lowered to the ground.

CHAPTER 3 - INSTRUMENTS AND CONTROLS

3.4.1 - Ground Speed Calibration (with radar option)

The operator must first mark out a 100 m, or 400 ft course depending on the units selected.

1. Press and hold membrane switch A "SELECT", for 4 seconds to enter ground speed calibration, CAL will be displayed on the lower 3 digits of the upper display once the mode has been entered.
2. The operator should drive the tractor, at normal operating speed, over the course.
3. When the operator passes over the start point they must press switch B, "WIDTH".
4. When crossing the end point they must press switch C, "SET".

The system will calculate a new ground speed constant, and radar constant, if attached. The new ground speed constant will be displayed on the lower 4 sections of the LCD for seconds, as will radar constant if attached. Any time % wheel slip is selected on tractors without radar the read out will be 0. Tractors without radar will not indicate true ground speed, speed will be calculated from transmission output shaft revolutions.

IMPORTANT: Tractor **MUST** be in motion **BEFORE** entering the measured distance with the touch points or calibration will be incorrect. Screen will momentarily show values of the two ground speed sensing units and then revert back to normal operating mode.



WARNING: To avoid possible eye damage from microwave signals emitted by this radar sensor, **DO NOT** look directly into sensor face.

Consult your dealer for English to metric or metric to English conversion, or recalibration of monitor to compensate for change in tire size.

3.4.2 - Implement Width Setting

The Display Cab Controller (DCC) is capable of measuring and recording acres (hectares) covered. The width of the implement must be calibrated into the DCC to obtain an accurate measurement. To calibrate implement width the operator must:

1. Press and hold switch B, "WIDTH", for 4 seconds. Upon entering the calibration mode the lower four digits of the upper display will read "FEEt" or "SI", based on units selected. The lower display will show 4 digits, and the currently selected digit will flash.
2. Use switch A, "SELECT", to select the different digits, and switch C "SET" to increment the digit.

3. After selecting the desired implement width press B, "WIDTH" to leave the mode.

When in English units the constant will be stored to an accuracy of 0.1 ft. When in metric the constant will be stored with an accuracy of 0.1 meters.

To clear the acres covered display, the operator must press and hold switch C, "SET", for 4 seconds. When the acres covered has been cleared the lower display will read 0000 for 3 seconds.

3.4.3 - Calibration level

Level 1 calibration functions are designed for use by the operator during normal maintenance. This level 1 includes transmission calibration and turbo boost calibrations.

1. To enter calibration the operator must simultaneously press and hold switches D and E for five seconds within the first twenty seconds after power up, and the engine must be on (engine RPM above 500).
2. CAL1 shall be displayed on the lower section of the LCD once the calibration mode has been entered.
3. After entering the calibration mode the operator can press membrane switch D to cycle between turbo boost calibration (tb14) and (tb20) and transmission calibration (trnc).
4. To start the currently displayed Calibration Feature the operator must press switch E.
5. To leave the calibration mode the operator must press switch F.

3.4.4 - Turbo Boost Calibration (tbc)

To enter turbo boost calibration procedure level 1 calibration must be entered and the turbo boost calibration "tb14" must be selected (tb14 displayed on the LCD). Transmission oil must be at an operating temperature of 120°F (49°C), and engine rpm set at 1400 or 2000 rpm. With the above criteria met the operator can start the turbo boost calibration by pressing switch E. If the transmission oil temperature is below 120°F (49°C) the LCD will display "trAn COLd", and will exit the calibration mode. If engine rpm is outside of the specified range of 1400 or 2000, (\pm 50 rpm) the LCD will display "Spd FAIL" and will exit the calibration mode.

After tb14 is completed, reenter "cal 1" and when tb 14 is displayed press switch A once and tb20 will be displayed.

If the temperature and engine speed are within the

CHAPTER 4 - OPERATION

through 5R may be PRESET by the operator .

To change from the factory preset starting gears depress clutch pedal and move transmission control lever to forward or reverse position. Then move control lever into either upshift or downshift positions to select higher or lower starting gear. Selected gear will be engaged when clutch pedal is released.



CAUTION: Transmission will always engage the last STARTING gear selected in forward and reverse until ignition switch is turned off. Sudden and/or unexpected change of ground speed may result when shifting between gears that are not closely matched.

With DCC. 2.14 version, the preset forward starting gear can be quickly changed by the transmission control lever (Fig. 10).

The maxi gear permitted (basic mode) is 13th.

A. Choosing the lower gear to re-start:

1. Engine running , armrest shift lever in engaged position.
2. Transmission control lever in forward position.
3. Declutch with the pedal and select the gear you want to re-start with transmission control lever:

Hold the transmission control lever up for 10 seconds. until the buzzer rings (the selected gear will be memorised in the DCC).

B. Changing the Re-start gear memorized and Reset.

Two possibilities:

A. For a lower gear from Ex: F8 to F6, follow the same operations as A.

1. For a higher gear from,Ex: F8 to F10, it is necessary to reset the DCC to F13 as follow:
2. Engine running, move the armrest shift lever in engaged position.
3. Transmission control lever in reverse position.
4. Fully depress the clutch pedal and then pull the transmission control lever upwards until the buzzer rings (10 seconds), the basic gear 13th, is memorised in the DCC.

Operation A can then be executed again.

4.6.5 - Starting ground travel (Using clutch pedal)



CAUTION: When operating the tractor for the first time, start in one of the lower gears until you learn to handle and get the "feel" of tractor control.

To start tractor in motion, start engine and set throttle at 1/3 to 1/2 open. Depress clutch pedal. Release park lock. Place transmission control lever in forward

or reverse. Select alternate starting gear if required. Release clutch pedal gently but firmly to provide a smooth start without excess slippage. As soon as transmission clutches engage increase throttle setting to desired engine speed.



V 894



V 1000

Fig. 10

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

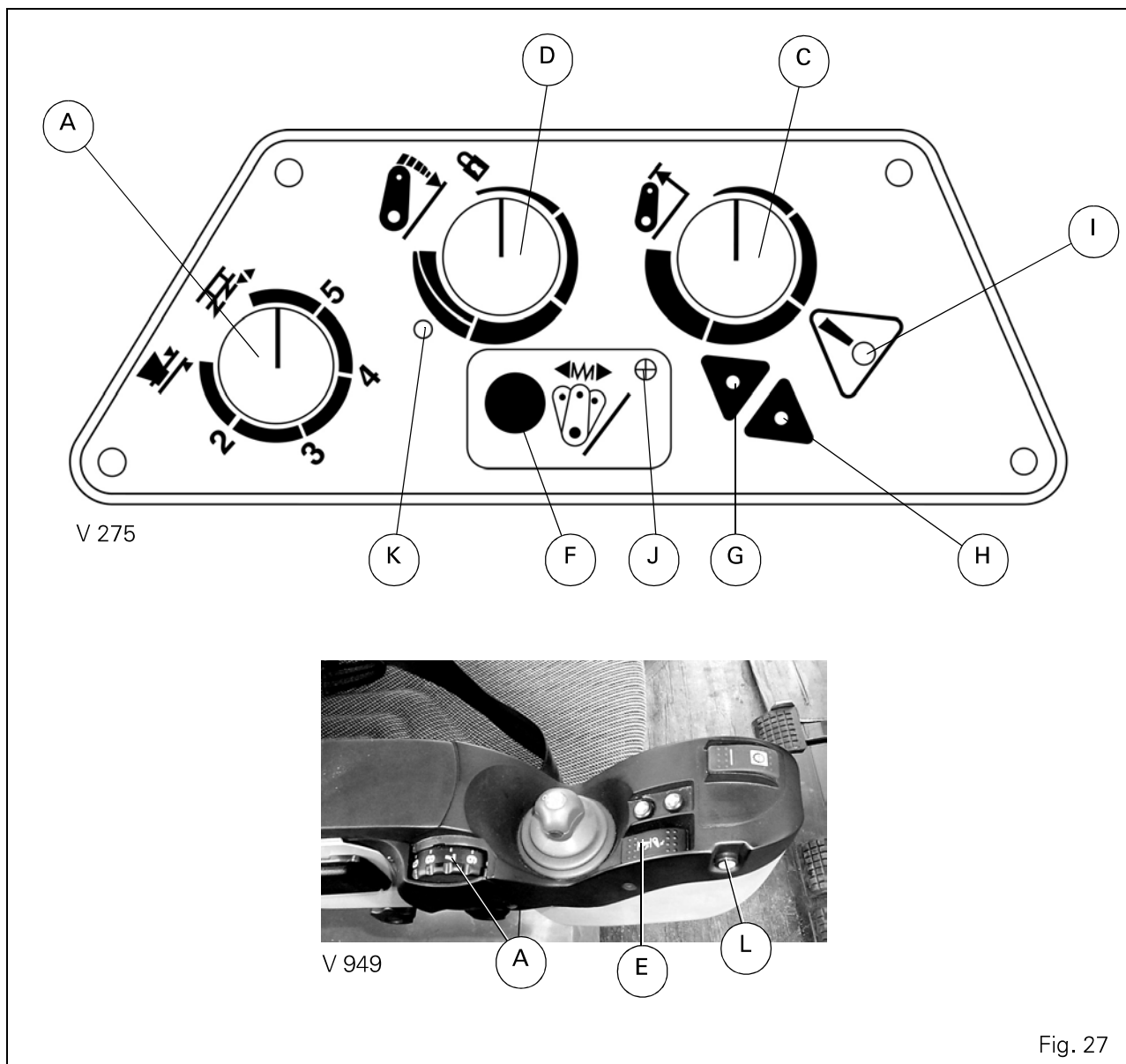
Example: DISP 1.06.Tran 1.06

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.

NOTE: If transmission is placed in forward or reverse before park brake is disengaged the shift display will indicate error code "E98" and the transmission will not function.

To remove the error code and reactivate the transmission proceed as follows:



4.12.3 - Transport

- Select Position control setting minimum with knob B, (Fig. 27).
- Adjust the maximum lift height to suit the implement being transported using the height adjustment C. Start from the min. position.
- **Move the lowering speed control knob D to the "locked" position.**

4.12.3.1 - Activate transport control system

- The system is automatically engaged when you press touch F, the indicator light J comes on.
- To deactivate this function, push-button F must be pressed.

NOTE: This position prevents any lowering of implement.

4.12.3.2 - Quick soil engagement

To engage, move selector E in down position, press and keep pressing button L to set quick soil engagement.

Release as soon as the plow is engaged into a soil.

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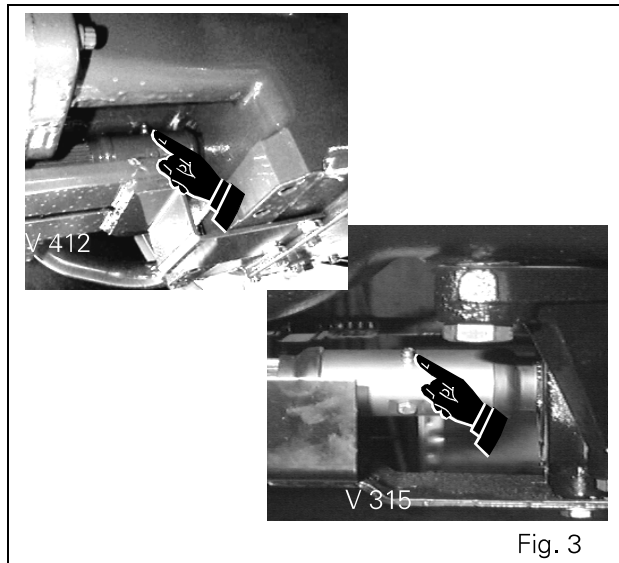
5.MAINTENANCE AND ADJUSTMENTS

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5. MAINTENANCE AND ADJUSTMENTS

- Steering ram swivel pins (Fig. 3) 4
- 4WD drive shaft (rear and front) (Fig. 3) 2
- U-joints (Fig. 3) 2
- Shift lever (Fig. 5) 2



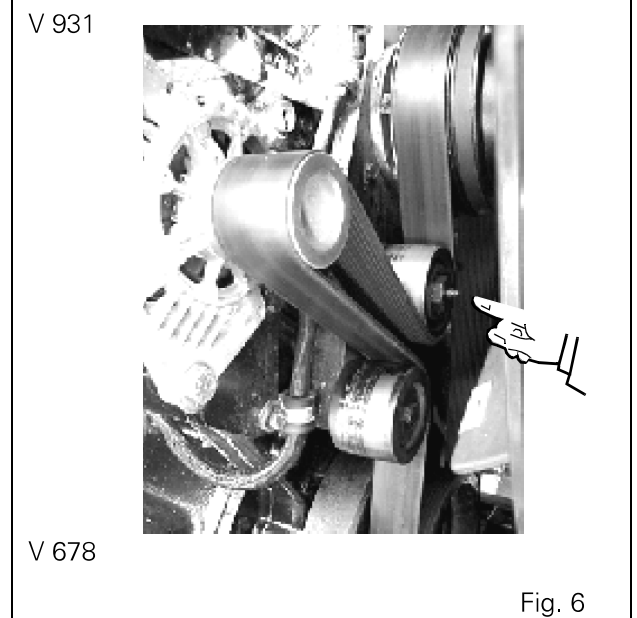
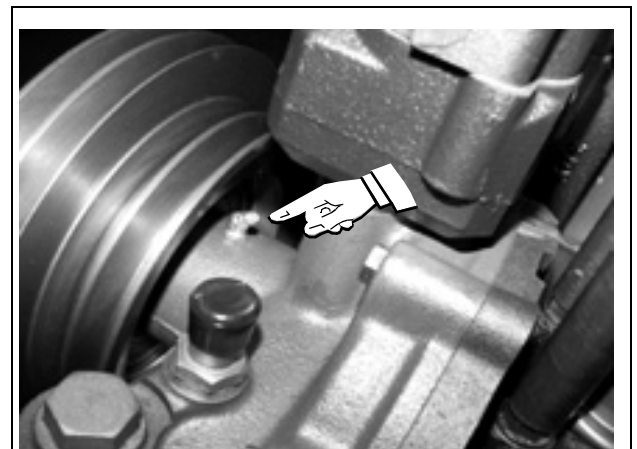
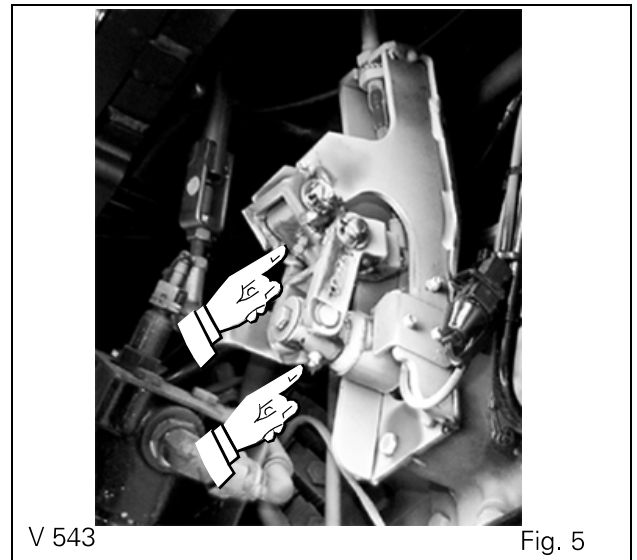
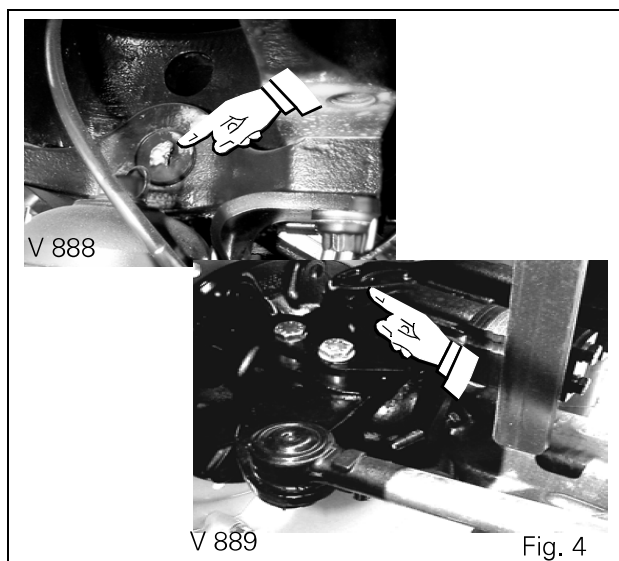
- Axle pivots (Fig. 4)

Every 300 hours:

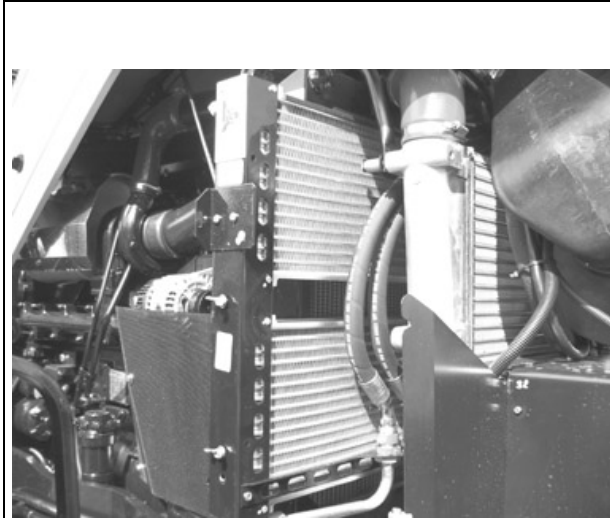
- Coat the door hinges, the door lock and the window catches with petroleum jelly.

Every 600 operating hours:

- Lubricate the tension roller (Fig. 6).
- Lubricate the water pump (Fig. 6).



5. MAINTENANCE AND ADJUSTMENTS



CMT 2032

Fig. 25

5.13.3 - Cab air filter

Clean the cab air filter every 300 hours, or more frequently if necessary.

1. To gain the access to the cab air filter, open the hatch at the front of the cab roof (Fig. 26).
2. Release the two wing nuts and lift out the element.
3. Clean the filter by blowing it with compressed air.
4. Before refitting the filter, wipe out the compartment with a damp cloth to remove dust.

Change the cab filter every 1200 hours, or once a year.



WARNING: Air filter element does not protect from chemical products.



V 331

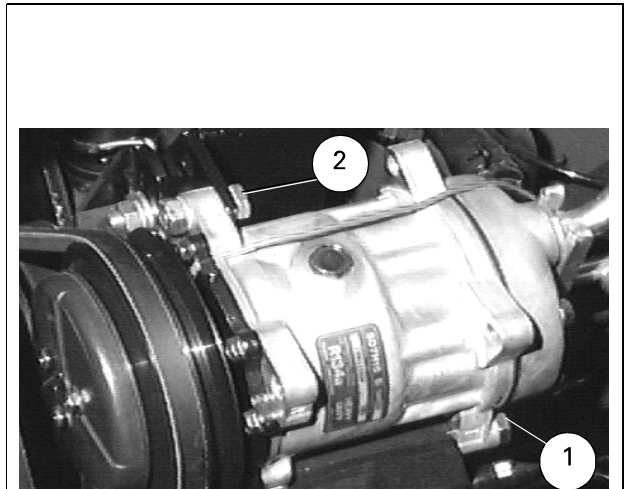
Fig. 26

5.13.4 - Compressor belt tension adjustment

(Fig. 27)

Check the compressor belt tension from time to time (deflection should be 13 to 16 mm (1/2 to 5/8 in) in the middle of the longest span). To adjust belt tension, loosen bolt 1, loosen the locknut on the tensioning rod 2 until the correct tension is obtained.

Tighten the locknut and bolts.



V 319

Fig. 27

Wheel with cast flange, single conical hub

Setting 1	Short wheel shaft				Long wheel shaft			
	MINI		MAXI		MINI		MAXI	
Heavy duty	1730	(68.1")	2100	(82.7")	1730	(68.1")	2694	(106.1")
Heavy duty sealed	1752	(69.0")	2114	(83.2")	1752	(69.0")	2758	(108.6")
Composite Ø95	1796	(70.7")	2218	(87.3")	1796	(70.7")	2718	(107.0")
Setting 2	MINI		MAXI		MINI		MAXI	
Heavy duty	2056	(80.9")	2426	(95.5")	2056	(80.9")	3020	(118.9")
Heavy duty sealed	2078	(81.8")	2440	(96.1")	2078	(81.8")	3084	(121.4")
Composite Ø95	2122	(83.5")	2544	(100.2")	2122	(83.5")	3044	(119.8")
Setting 3	MINI		MAXI		MINI		MAXI	
Heavy duty	1450	(57.1")	1820	(71.7")	1450	(57.1")	2414	(95.0")
Heavy duty sealed	1472	(58.0")	1834	(72.2")	1472	(58.0")	2478	(97.6")
Composite Ø95	1516	(59.7")	1938	(76.3")	1516	(59.7")	2438	(96.0")

Tightening torque: E. 250 to 350Nm (184 to 258 Ft.lb) F. 350 to 460 Nm (258 to 339 Ft.lb)

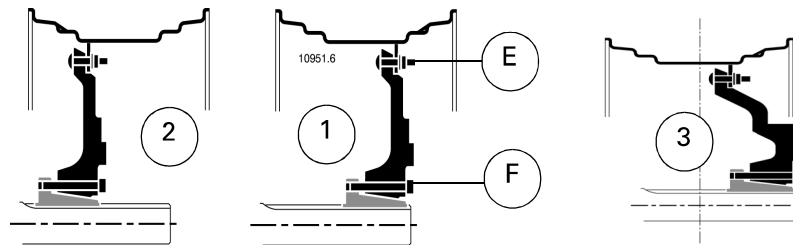


Fig. 40

5.21 - ELECTRICAL EQUIPMENT

The 12 volts circuit is a negative ground system.

5.21.1 - Battery

Wipe the battery top and coat the terminals with petroleum jelly every 300 hours.



WARNING: Batteries generate explosive gases. Keep sparks, open flames, burning cigarettes, and other ignition sources away from batteries at all times. Wear proper eye protection when working near batteries.

Tractor is equipped with two 12 volt batteries located beneath the step platform.

Batteries are low maintenance type. Top covers can be removed and electrolyte level checked every 300 hours or yearly.

CHAPTER 6 - SPECIFICATIONS

6.2 - ELECTRICAL SYSTEM

Voltage:	12 volts negative ground.
Batteries:	2 maintenance free batteries.
Alternator:	120 Amp.
Safety start:	operated by the clutch pedal
Bulbs:	40/45 W
Tail lights:	5 W
Direction indicators:	21 W
Number plate light:	10 W
Work lamps:	55 W - H3
Instrument panel lighting and warning lights:	3 W - 2 W - 1.2 W
Roof light:	10 W

6.3 - COOLING

Operation:	Centrifugal pump pressurized radiator. regulated by pressure cap.
Opening temperature:	82° C (179.2° F) controlled by thermostat.
Fan:	Viscostatic model.
Water pump:	Belt driven water pump
Belt deflection (on the longest span):	15 mm (0.6 in) to 20 mm (0.8 in)

6.4 - TRANSMISSION

Dynashift gearbox:	<ul style="list-style-type: none"> - 32 forward speeds. - 32 reverse speeds. - four selectable ratios without declutching. - reverse shuttle (synchronised).
• Clutch:	- Wet clutch.
Powershift gearbox:	<ul style="list-style-type: none"> - 18 forward speeds. - 6 reverse speeds.
• Creeper gearbox 4/1 ratio:	<ul style="list-style-type: none"> - 36 forward speeds. - 16 reverse speeds.
• Clutch:	9 clutch solenoid driving.
• Filtration:	1 strainer, 150 micron on suction, located to the left side the transmission housing. External high - pressure filter 15 micron filter head 3 ways ensure the anti pollution of the solenoids.

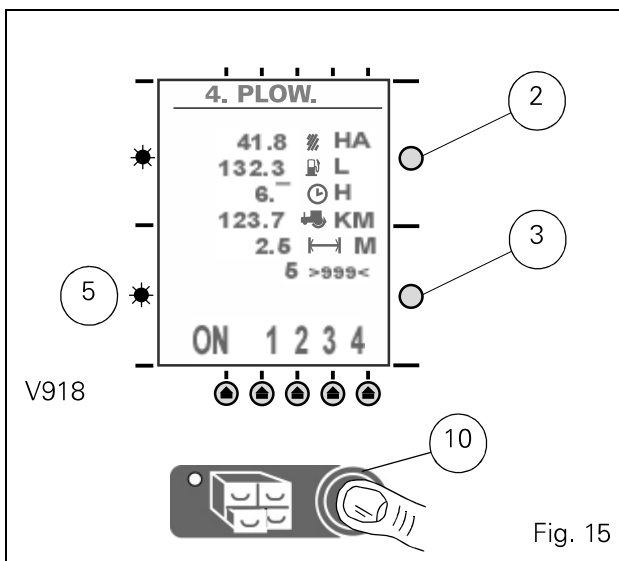
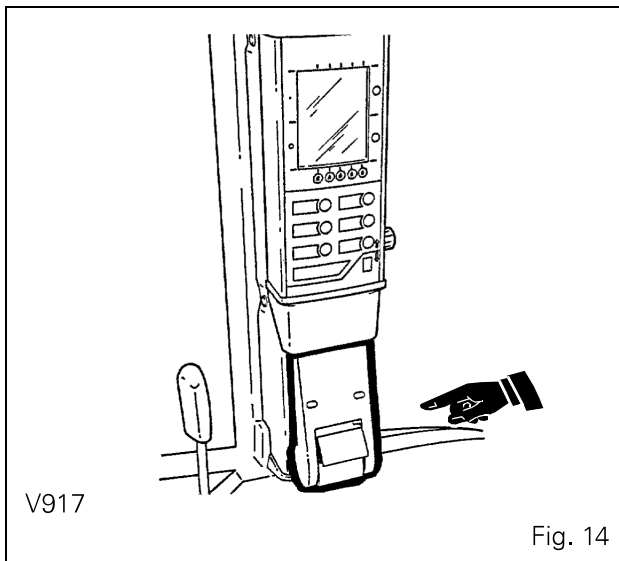
7.1 - AVAILABLE ACCESSORIES

NOTE: Full details of equipment available in your area can be obtained from your AGCO Dealer.

- Front mounted weights.
- Linkages (chapter 4).
- Creeper gear.
- Electrohydraulic Spool valves.
- Datatronic.
- Rear Dual Control (chapter 7.3).
- Front Dual Control (chapter 7.5).
- Transport Implement Control (chapter 7.6).

7.2.11 - Printing of the memory content (Fig. 14 and Fig. 15)

- Select a HEWLETT PACKARD 82240 B compatible printer.
- Fit the printer holder supplied as a kit (available from your dealer).
- Remove the plastic cover under the Datatronic and install the printer, so that the infra-red readers are facing each other. Select the stored data by pressing the memory key 10, then press twice the key 6 corresponding to the memory that you want to print.
- The screen gradually colors; the LEDs (5 and memory 10) flash during the operation.



CHAPTER 8 - TROUBLESHOOTING

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