Operator's Manual

Maintenance:

500 Vario S4

FENDT 512 Vario S4 Profi - ProfiPlus

FENDT 513 Vario S4 Profi - ProfiPlus

FENDT 514 Vario S4 Profi - ProfiPlus

FENDT 516 Vario S4 Profi - ProfiPlus

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Marktoberdorf
FENDT is a worldwide brand of AGCO

Original Operator's Manual

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1.1 Introduction

1.1.1 Safety instructions: Introduction

WARNING:
Before using the tractor, the operator must understand the instructions contained in this chapter. These regulations must always be adhered to when work is carried out.

NOTE:
This Operator's Manual is published and distributed across various markets. The availability of the components referred to - whether as part of the standard equipment or as an accessory - can vary depending on the country or region concerned. If you would like to know what equipment features are available in your region, you should contact your FENDT dealer.

Under normal conditions, this Operator's Manual should enable the owner and operator to operate the tractor safely. If these instructions are followed, the tractor, like all FENDT products, will provide faithful service for many years.

The FENDT dealer's commissioning at the operator's site ensures that you understand both the operating and service instructions. You should contact your FENDT dealer if you do not understand any parts of this Operator's Manual. It is essential that these instructions are understood and observed.

The instructions do not contain all of the safety and operating instructions for the implements and accessories that can be fitted at the time of and after delivery of the tractor. It is imperative that the operator understands and uses the operating instructions for these implements and the accessories.

IMPORTANT:
This manual must always be kept in the tractor. You can obtain a copy of this Operator's Manual from your FENDT dealer.

This chapter of the Operator's Manual contains a description of specific safety-related standard situations that can arise when operating the tractor and during normal maintenance. You are also given all of the information required on the correct behavior to adopt in these situations.

This chapter is supplementary to the safety instructions contained in other chapters of this Operator's Manual.

Depending on the implements used and the working conditions on site or in the operating area, additional precautionary measures may need to be taken. FENDT has no direct influence on the commissioning, operation, inspection, lubrication or maintenance of the tractor. YOU are therefore responsible for the adoption of appropriate safety measures in the areas concerned.

1.1.2 General safety instructions

Notes on disposal of material during tractor maintenance.

WARNING:

Contaminating effluent, watercourses or the ground is prohibited. Approved plants, waste dumps or repair workshops that have the proper facilities for the disposal of used oil must be used. If in doubt, seek advice from the relevant authority.

Decals.

WARNING:

Do not remove any warning decals. Removing warning decals could lead to you or other people not recognizing dangers. As a result, you or other people could be injured.

2.3 Engine

2.3.1 Check the engine oil level

IMPORTANT:
Change the engine oil prior to long periods of inactivity!

Preliminary conditions

- Place the tractor level on a flat surface.
- Front axle suspension in center position.
- Start the engine and allow it to idle until the warning message on the multiple display goes out.

Check the oil level

Procedure

1. Check the oil drain plug and oil filter for leaks.
2. Turn off the engine
3. After approx. 5 minutes, remove dipstick (A).

Fig. 2

4. Wipe dipstick with a clean lint-free rag.
5. Reinsert dipstick fully and twist into place.
6. Remove the dipstick.

   NOTE:
   Fill to at least the MIN mark.
   If the oil level is just above the MIN mark then the oil must be topped up.

7. If necessary, fill to the MAX mark.

   NOTE:
   Do not fill above the MAX mark. An excessive quantity of oil could damage the engine.

   NOTE:
   Difference in quantity of oil
   The difference in the quantity of oil between the MIN and MAX marks is approx. 4.0 l (1.1 gal (US)).

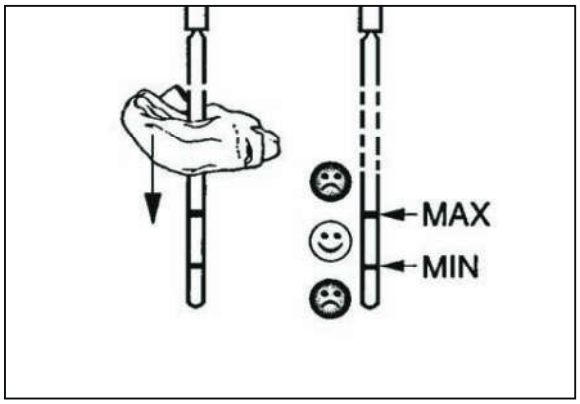


Fig. 3

2.3.2 Drain the engine oil

Preliminary conditions

- Engine oil temperature approx. 80°C.
- Place the tractor level on a flat surface.
- Front axle suspension in center position.

2.6.3 Check the coolant level

Procedure

1. Open the bonnet
2. Check the coolant level in the expansion tank

   NOTE:
   Coolant level must be between MIN and MAX.

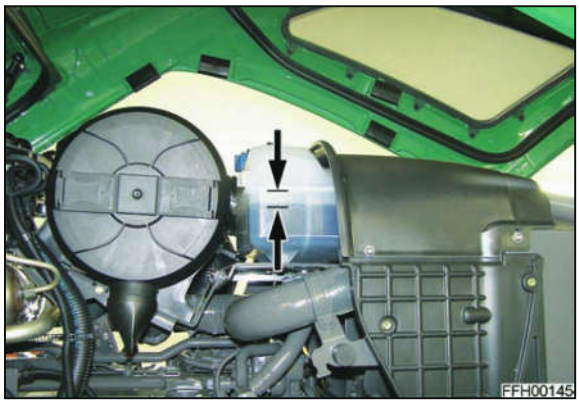


Fig. 25

2.6.4 Re-fill with coolant

DANGER:

Danger of scalding from hot coolant spraying out when opening the coolant expansion tank. The cooling system and coolant expansion tank are under pressure when the engine is at operating temperature. Wear protective clothing and protective goggles. Only open the coolant expansion tank when the coolant is at a temperature below 50°C.

DANGER:

The coolant contains glycol and is therefore toxic. Do not swallow coolant! If coolant is swallowed, consult a doctor immediately. Ensure that coolant does not come into contact with eyes, skin or clothing. If coolant comes into contact with the eyes, rinse immediately with plenty of clean water. Skin and clothing should be cleaned immediately with soap and water if they come into contact with the coolant; change affected clothing immediately.

NOTE:
Top up the coolant only when the engine is cold and the coolant temperature is lower than 50°C.

NOTE:
When coolant is lost, top up with both water and an approved corrosion inhibitor/antifreeze in the correct ratio.
The water in the coolant must meet certain requirements that are frequently met by drinking water. If the quality of the water is not adequate, then the water must be treated.

Re-fill with coolant

3. Clean the oil drain plugs (B), screw in and tighten.

2.10.5 Fill the final drives with oil

1. Fill the required oil through the filler hole (A) on the left and right axle housing up to approx. 88 mm (3.5 in) ± 2 mm (0.1 in) below the filler hole.

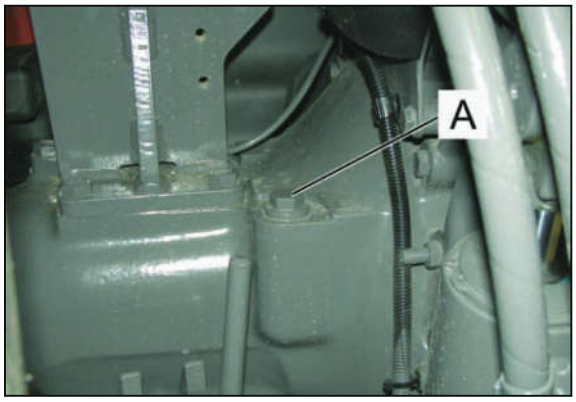


Fig. 39

2.10.6 To Change the pressure filter:

DANGER:

Risk of burns and scalding from hot oil in the filter. Wear protective gloves.

Procedure

1. Unscrew the filter canister (A).
2. Pull out the filter element from the canister.
3. Replace the filter element; do not wash out.

   NOTE:
   Used oil filters are hazardous waste!
4. Lightly oil the sealing rings.
5. Fit filter canister (A) and tighten with screw (tightening torque: 40 Nm (30 lbf ft)).

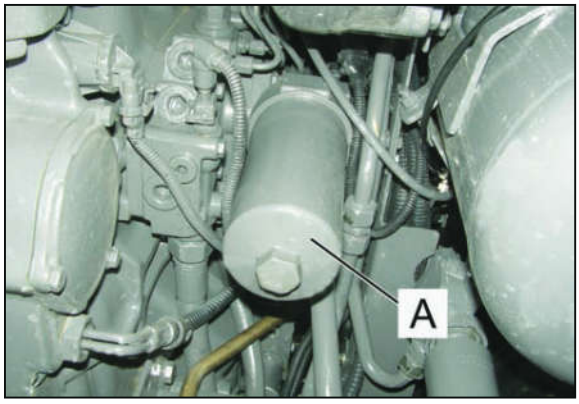


Fig. 40

2.14 Compressed air system

2.14.1 Leak-testing the compressed air system

Procedure

1. Engine OFF
2. Observe the compressed air gage (A) on the instrument panel.

   NOTE:
   The gage must remain constant for at least three minutes with the compressed air reservoir full.

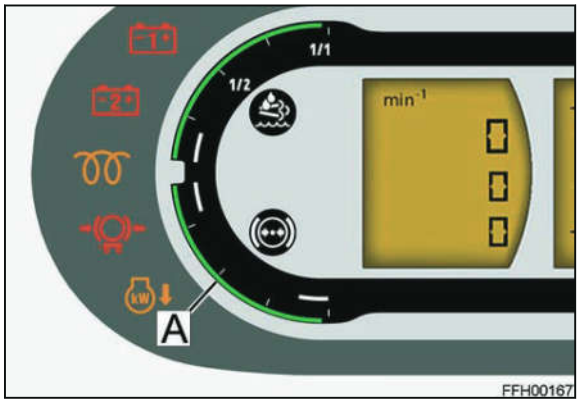


Fig. 55

2.14.2 Draining condensation water from the air receiver

Procedure

Actuate the drain valve as necessary by pulling the cable (A)

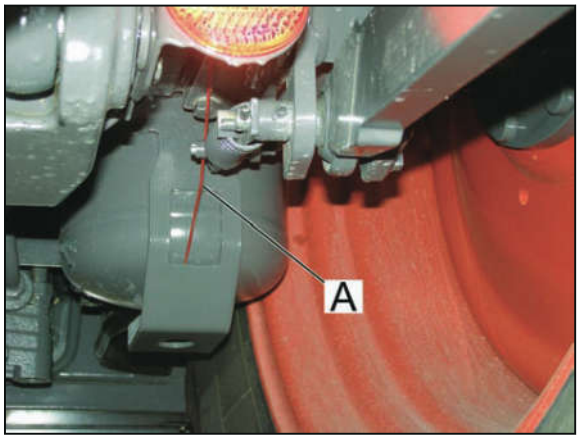


Fig. 56

Maintenance instructions

Electrolyte level approx. 15 mm (0.6 in) above the top of the plates.

- Top up with distilled or de-ionized water when necessary.

NOTE:
Tap water reduces the electrical power of the battery.

NOTE:
Do not use a metal funnel when topping up. A metal funnel can cause a short circuit and damage the battery.

Keep battery clean!

Keep battery well charged, especially in cold weather.

NOTE:
Dispose of batteries in an environmentally friendly manner. Hand in batteries either to a specialist Fendt workshop or a disposal point for old batteries.
Filled batteries should be transported and stored in an upright position. Batteries should be secured during transportation to prevent them from tipping over. Battery acid can escape from the breather holes in the plugs and be released into the environment.

Fig. 67

Remove/install batteries:

WARNING:

Batteries are heavy. A battery could fall and injure people when it is being removed or installed. For this reason, when removing the battery you should exercise care and seek the assistance of a second person.

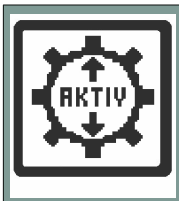
Battery maintenance

- Check the acid level regularly.
- Keep the battery terminals and surfaces clean and dry at all times.
- Lightly grease the undersides of the battery terminals with acid-proof grease.
- Only use commercially available cleaning agents when cleaning the battery housing.
- Do not use cleaning agents containing fuel. Cleaning agents that contain fuel attack the battery housing.
- Only clean batteries with plugs screwed-in. Otherwise, dirt can get into the battery cells. If dirt gets into a battery cell, the battery's self-discharging is increased and the battery can be damaged.
- Remove plugs with blocked ventilation holes. Clear the ventilation holes using a suitable tool, e.g. a piece of wire. If the ventilation holes are blocked gases cannot escape.

2.20.3 Electric welding

Disconnect both battery terminals. Keep earth terminal as close to the welding point as possible; be aware of components that are sensitive to temperature.

Relay	Consumer	Relay	Consumer
			Profi and Profi+ only
6	**K6 (ZE)** front inner roof work light relay	16	**K16 (ZE)** forward/reverse shuttle switch relay
7	**K7 (ZE)** ABS socket relay Profi and Profi+ only	17	**K17 (ZE)** front-loader suspension solenoid valve relay
8	**K8 (ZE)** front outer roof work light relay	18	**K18 (ZE)** front-loader implement-lock solenoid valve relay
9	**K9 (ZE)** rear inner roof work light relay	19	**K19 (ZE)** clutch/turbo-clutch relay
10	**K10 (ZE)** rear outer roof work light relay	20	**K20 (ZE)** air-conditioning clutch relay

	
Vehicle is ready for operation (neutral OFF)	
The vehicle can be driven away after the joystick is activated	

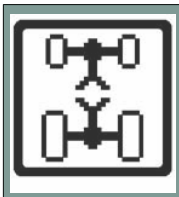
	
Seat switch	
Leave the operator's seat for more than 3 seconds.	Sit on the operator's seat. If the Tractor Management System (TMS) is active the engine speed is reduced. In throttle pedal mode, the direction of travel must be actuated again while the tractor is in active stationary mode. Playback of Variotronic Ti functions must be restarted. Vario-Guide is switched off and must be restarted.

	
Foot brake actuated or foot brake switch misaligned	
The foot brake is applied when actuating pedal mode in TMS mode, or the foot brake switch is adjusted incorrectly.	Release foot brake or adjust foot brake switch.

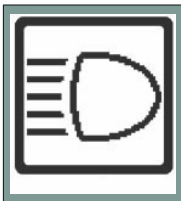
Valve prioritization	
Display with warning light.	
Prioritized valve requires more oil than the pump can supply.	Valve priority is temporarily deactivated until the pump is able to supply the required quantity again.

Control keys for multiple display	
Button pressed for more than 30 seconds.	Release control button
Break in wiring, electrical fault.	Have fault corrected at workshop.

Pressure relief valve in engine control unit	
Note: Engine is switched off after no more than 4 minutes.	
Pressure relief valve in engine control unit faulty Break in wiring, electrical fault.	Have fault corrected at workshop.

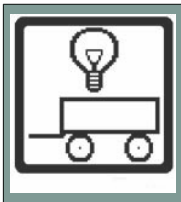


All-wheel drive	
Switching off may no longer be possible.	



High beam

e.g. lamp faulty: change.

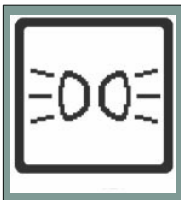


Trailer

e.g. lamp faulty: change.

Windscreen wipers and washer system

Windscreen wipers faulty, call workshop.



Parking light and licence plate lighting

e.g. lamp faulty: change.

Engine produces a lot of smoke	
	(see Maintenance Schedule, to be carried out at workshop).
Injection volume incorrect.	Correct settings (workshop task).
Incorrect fuel.	Fill up with correct fuel.
Engine oil level too high.	Correct the oil level.
Fuel filter, fuel pre-filter or water separator blocked.	Replace fuel filter element. Clean fuel pre-filter or water seperator. Bleed air from the fuel system.
Compression too low.	Workshop job.
Engine control defective.	Workshop job.
Turbocharger defective or leak in the turbocharger system.	Workshop job.

Engine temperature too high	
Fan belt loose or broken.	Replace fan belt.
Cooling system not completely filled.	Fill up coolant.
Cooling system blocked.	Clean the cooling system
Thermostat faulty.	Replace the thermostat (workshop task).
Radiator cap leaking.	Replace radiator cap.
Engine is overloaded.	Relieve engine load.

Engine tends to rev up or cannot maintain the set speed.	
Engine control or speed sensor faulty.	Workshop job.

Engine oil pressure too low	
Insufficient engine oil in the system.	Fill engine with oil.
Engine oil pressure regulating valve contaminated.	Clean engine oil pressure regulating valve.
Filled with wrong type of engine oil.	Change engine oil and fill up with correct type.
Engine oil too hot	Relieve engine load.
Excessive bearing play.	Workshop job.
Idling speed too low.	Increase engine idling speed.

Fault code	DIN brief description	Cause	Consequences and remedy
00.1.77	**A128** control panel for right/ left dashboard	Up button pressed for longer than 30 seconds	Button non-operable or button released
00.1.78	**A128** control panel for right/ left dashboard	Down button pressed for longer than 30 seconds	Button non-operable or button released
00.1.A8	**B060** compressed air supply sensor (circuit 1)	Compressed air supply circuit 1, vacuum	In the version with dual-circuit brake system, 4-wheel drive is permanently activated when the system is below 4.6 bar (67 psi).

3.3.2 Fault code 01.1.00 -

Fault code	DIN brief description	Cause	Consequences and remedy
01.1.01	**B055** foot throttle sensor	Signal too high, Signal to low, No signal for longer than 2000 ms	TMS is switched off
01.1.02	**A099** engine control ECU (EDC 17)	CAN connection to EDC interrupted, EDC is not sending messages	Transmission emergency mode, turbo clutch function no longer performed
01.1.03	**B055** foot throttle sensor	(red side) to A050 basic control ECU (yellow side) to A127 engine ECU No match	Throttle pedal mode no longer possible, TMS is switched off until the next cold start
01.1.04	**A050** basic control unit ECU	Checksum error TMS	TMS driving no longer possible, EOL programming
01.1.06	**A050** basic control unit ECU	Memory in EXT could not be reserved, EXT fault	TMS non-operable
01.1.07	**A099** engine control ECU (EDC 17)	Checksum Incorrect engine parameters	Travel in emergency mode possible, EOL programming
01.1.0E	The tractor is not parameterized as an ABS tractor. However, the EXT detected an ABS control unit	Transmission tracking will not be conducted, i.e. wheels can lock in spite of ABS control unit	EOL reprogramming required (with selection of ABS equipment)
01.1.13	**A099** engine control ECU (EDC 17)	Diesel particulate filter: Timeout of message AT1S	
01.1.14	**A099** engine control ECU (EDC 17)	Diesel particulate filter: Timeout of message DPFC1	

Fault code	DIN brief description	Cause	Consequences and remedy
	B016 travel range detection sensor		
04.1.83	**B014** collecting shaft sensor **B015** bevel pinion sensor	Plausibility error (=speeds do not match) Fault output as of 5 km/h (3 mph)	Continuation in emergency mode possible
04.1.84	**A100** MFA, multifunction armrest Joystick switch (V, R, VR, cruise control, default position)	Plausibility error (=signals do not match)	Continuation in emergency mode possible
04.1.85	**B010** engine speed sensor	Engine speed sensor does not supply plausible speed curves. Output speed increase or decrease is outside the preset limits.	Continuation in emergency mode possible
04.1.86	**B008** high-pressure sensor 1 **B039** high-pressure sensor 2	Plausibility error in both pressure sensors	TMS is switched off
04.1.87	**S079** forward-reverse shuttle switch	Plausibility error at F/R switch, quick reverse	F/R switch inoperable, quick reverse on steering wheel adjustment, S079 switch,
04.1.89	**B009** discharge temperature sensor	Plausibility error, transmission temperature	Contact workshop
04.1.8A	Plausibility error, electrical clutch pedal.	Turbo clutch connection not opened when clutch pedal depressed	If the transmission is not in restricted emergency mode (come home): No action, only report fault if the transmission is in restricted emergency operation mode: full emergency mode
04.1.8F	Incorrect tire circumference	Currently selected tire circumference is too small	- The speed display is no longer correct in certain circumstances - Transmission controls no longer working correctly in certain circumstances (e.g. TMS, final speed control, cruise control), enter larger tire circumference
04.1.94	**A050** basic control unit ECU **A100** MFA, multifunction armrest	Faulty CAN communication between e-box and CAN joystick	Contact workshop

Fault code	DIN brief description	Cause	Consequences and remedy
06.1.E1	**A050** basic control unit ECU	Checksum error, PTO parameterization	Use default values for EOL programming
06.1.E2	**A050** basic control unit ECU	Error in checksum PW rise of rear PTO	Use default values for EOL programming
06.1.E3	**A050** basic control unit ECU	Checksum error, for PW of PTO	Use default values for EOL programming
06.1.E4	**A050** basic control unit ECU	Checksum error, over/under step counter of PTO	Use default values for EOL programming
06.1.E5	**A050** basic control unit ECU	Checksum error: Speed limit sensor after rear PTO clutch	Use default values for EOL programming
06.1.E6	**A050** basic control unit ECU	Checksum error, pulses per revolution for shuttle stub shaft	Use default values for EOL programming
06.1.E7	**A050** basic control unit ECU	Checksum error, temperature limits and switching times of rear PTO	Use default values for EOL programming
06.1.E8	**A050** basic control unit ECU	Checksum error, screens for showing/hiding diagnostics on front and rear PTOs	Use default values for EOL programming

3.3.8 Fault code 07.1.00 -

Fault code	DIN brief description	Cause	Consequences and remedy
07.1.01	**A100** MFA, multifunction armrest Front PTO ON/OFF button	Faulty button Signal fault	Contact workshop
		Faulty BUS	
07.1.04	**Y011** front PTO (clutch) solenoid valve	Actuation fault	Contact workshop
07.1.05	**B002** front PTO speed sensor	Sensor faulty, Signal fault	Contact workshop
		12 V supply fault	A013, fuse 36
07.1.09	**A100** MFA, multifunction armrest Front PTO auto button	Faulty button, Signal fault	Contact workshop
07.1.10	**B002** front PTO speed sensor	Overspeed warning	
07.1.41	**A100** MFA, multifunction armrest Front PTO "ON" button	Plausibility error, button has been pressed for more than 30 seconds	Front PTO not working

Fault code	DIN brief description	Cause	Consequences
	Y178 position 3 spool valve (red) **Y179** position 4 spool valve (green) **Y180** position 5 spool valve (brown) **Y182** position 7 spool valve (olive) **Y183** position 8 spool valve (gray)		
0A.1.X4	**Y176** position 1 spool valve (yellow) **Y177** position 2 spool valve (blue) **Y178** position 3 spool valve (red) **Y179** position 4 spool valve (green) **Y180** position 5 spool valve (brown) **Y182** position 7 spool valve (olive) **Y183** position 8 spool valve (gray)	Valve spool stops short (frequent cause: control pressure dips briefly or oil too viscous at very low temperatures)	Valve moves to neutral and locks
0A.1.X5	**Y176** position 1 spool valve (yellow) **Y177** position 2 spool valve (blue) **Y178** position 3 spool valve (red) **Y179** position 4 spool valve (green) **Y180** position 5 spool valve (brown) **Y182** position 7 spool valve (olive) **Y183** position 8 spool valve (gray)	High overvoltage (> 45V)	Valve moves to neutral and locks
0A.1.X6	**Y176** position 1 spool valve (yellow) **Y177** position 2 spool valve (blue)	Final stage error (pilot control solenoid valve)	Valve moves to neutral and locks

Fault code	DIN brief description	Cause	Consequences and remedy
	A100 MFA, multifunction armrest TeachIn		
0B.1.52	**A050** basic control unit ECU	Communication error in input unit	Contact workshop
0B.1.53	**A050** basic control unit ECU	EEPROM sequence read-in error	Contact workshop
0B.1.54	**A050** basic control unit ECU	System error: memory	Contact workshop
0B.1.55	**A050** basic control unit ECU	Max. waiting time for slave target to actual comparison exceeded	Contact workshop
0B.1.56	**A050** basic control unit ECU	Maximum recording waiting time (between actions) exceeded	Contact workshop
0B.1.57	**A050** basic control unit ECU	Maximum distance to next action for playback exceeded	Contact workshop
0B.1.59	**A050** basic control unit ECU	No configuration saved for partial sequence recording	Contact workshop
0B.1.5A	**A050** basic control unit ECU **A100** MFA, multifunction armrest	No "Alive" message from control panel	Contact workshop
0B.1.5B	**A050** basic control unit ECU **A100** MFA, multifunction armrest	No "Alive" message from joystick or electrical fault in joystick	Contact workshop
0B.1.5D	**A050** basic control unit ECU	Slave group error	Contact workshop
0B.1.5E	**A100** MFA, multifunction armrest	A button is stuck on the crossgate lever	Contact workshop
0B.1.5F	**A103** NT01/02 terminal	A button is stuck on the terminal	Check controls
0B.1.60	**A050** basic control unit ECU	The requested rear PTO speed setting could not be engaged	Contact workshop
0B.1.63	**A050** basic control unit ECU	The actual direction of travel (reverse) does not match the direction recorded at the start of the sequence (forwards)	Contact workshop
0B.1.64	**A050** basic control unit ECU	The actual direction of travel (forwards) does not match the direction recorded at the start of the sequence (reverse)	Contact workshop

Fault code	DIN brief description	Cause	Consequences and remedy
10.1.F1	**A111** central electrical system ECU **A112** climate control ECU	Invalid GD routing table	Contact workshop
10.1.F2	**A111** central electrical system ECU **A112** climate control ECU	Fault when initialising the GD	Contact workshop
10.1.FE	**A111** central electrical system ECU **A112** climate control ECU	Faulty hardware (RAM or FLASH)	Contact workshop

3.3.17 Fault code 11.1.00 -

Fault code	DIN brief description	Cause	Consequences
11.1.00	**A128** control panel for right/ left dashboard	Unknown error from control panel	
11.1.10	**A128** control panel for right/ left dashboard	Fault at input for driving light button	
11.1.1C	**A128** control panel for right/ left dashboard	Fault at input for hazard warning light button	
11.1.B0	**A128** control panel for right/ left dashboard	Invalid parameters in EEPROM	
11.1.D0	**A128** control panel for right/ left dashboard	Faulty supply voltage (12 V)	
11.1.D1	**A128** control panel for right/ left dashboard	Faulty PCB voltage (5 V)	
11.1.D2	**A128** control panel for right/ left dashboard	Faulty PCB voltage (3.3 V)	
11.1.D4	**A128** control panel for right/ left dashboard	Faulty PCB voltage (NTC)	
11.1.F0	**A128** control panel for right/ left dashboard	Incorrect checksum in EEPROM	
11.1.F1	**A128** control panel for right/ left dashboard	Invalid GD routing table	
11.1.FE	**A128** control panel for right/ left dashboard	Faulty hardware (RAM or FLASH)	

Fault code	DIN brief description	Cause	Consequences and remedy
1D.2.43	AdBlue	Reduction in power due to AdBlue quality	Contact workshop
1D.0.44	**A099** engine control ECU (EDC 17)	Reduction in power due to incorrect AdBlue conversion rate	Contact workshop
1D.2.45	**A099** engine control ECU (EDC 17)	Reduction in power due to incorrect AdBlue conversion rate	Contact workshop
1D.0.46	**A099** engine control ECU (EDC 17)	Reduction in power as manipulation of the SCR system was detected	Contact workshop
1D.2.47	**A099** engine control ECU (EDC 17)	Reduction in power as manipulation of the SCR system was detected	Contact workshop
1D.1.4B	**B105** exhaust gas temperature upstream of SCR sensor	Measured value is illogical	Contact workshop
1D.1.52	**A133** air intake throttle ECU		Contact workshop
1D.1.54	**A099** engine control ECU (EDC 17)	Temperature outside target range	Contact workshop
1D.1.60	**B086** rail pressure sensor	Leak detected	Contact workshop
1D.1.61	**B086** rail pressure sensor	Leak detected	Contact workshop
1D.1.62	**B086** rail pressure sensor		Contact workshop
1D.1.65	**B092** boost pressure/charge air temperature sensor	Boost pressure outside target range	Contact workshop
1D.1.68	**B218** venturi differential pressure sensor	Short circuit to battery or broken wire	Contact workshop
1D.1.69	**A134** exhaust gas recirculation ECU	Actuator blocked or sluggish	Contact workshop
1D.1.76	**A099** engine control ECU (EDC 17) **Y095** injector 1 **Y096** injector 2 **Y097** injector 3 **Y098** injector 4 **Y100** injector 5 **Y101** injector 6	Fault in one or more injectors	Contact workshop
1D.1.77	**A099** engine control ECU (EDC 17)	Fault in one or more injectors	Contact workshop

4. Technical data

Air-conditioning system	
measured at the center point between pulleys, using an Optibelt tension gauge	(650 on initial setup)
Air conditioning compressor	Denso 10S 17

Air conditioning system — specifications apply to Vario 512 to Vario 516

Windscreen washer	
Capacity	approx. 9.9 l (2.6 gal (US))

Cab — specifications apply to Vario 512 to Vario 516

EPC control valve	
Operating pressure	200 bar (2901 psi)
Hydraulic pump flow at rated speed	110 l/min (29.1 gal/min (US)) or 160 l/min (42.3 gal/min (US))
Infinitely adjustable flow rates	0-100 l/min
Pressure relief valve	230 bar

EPC control valve — specifications apply to Vario 512 to Vario 516

Rear power lift	
Lift cylinder internal/external diameter	2x 40 mm (1.6 in) / 90 mm (3.5 in)
Lift cylinder stroke	247 mm (9.7 in)
Three-point hitch	2/3 cat.
Lower links inside widths in accordance with Cat. 2/3	825 mm (32.5 in)/965 mm (38 in)

Filling points	Quantity approx. 1 liter)	Type 3)	Change interval 2), 8)
Refilling	28 l (7.4 gal (US))		
Front PTO	3.5 l (0.9 gal (US))		
Rear axle drives			
Final drives each side	10 l (2.6 gal (US))		After 500 operating hours, then every 2 years or every 2000 operating hours
Rear bar axle (if requested) each side	10 l (2.6 gal (US))		
Front axle differential		Fendt Super Trans LS 85W-90 or hypoid transmission oil SAE 85W-90, SAE 80W-90, SAE 90 to API-GL5 with LS additives. Do not use STOU or other universal oils.	After 50 and 1000 operating hours, then every 2 years or 1000 operating hours.
Refilling	8.2 l (2.2 gal (US))		
Front axle hubs			
Filling each side	0.7 l (0.2 gal (US))		
Hydraulic system		Fendt Super Hyd, Fendt Extra Hyd 68 or STOU SAE 5W-30, 5W-40, 10W-30,10W-40, 15W-30,15W-40 Or engine oil HD-SAE 5W-30, 5W-40, 10W-30, 10W-40, 15W-30,15W-40 according to API-CD. HD-SAE 20W-20 to API-CD also allowed for temperatures above 10 °C	After 1000 running hours, then every 2 years or 1000 running hours
Capacity	69 l (18.2 gal (US))		
Useable volume	55 l (14.5 gal (US))		
Fuel tank			Refill after use

Hydraulic system

Unscrew filter cover (A). Fill with oil.

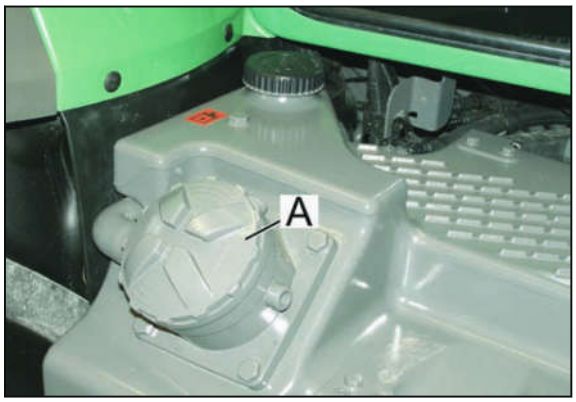


Fig. 7

Cooling system:

Fill container (A) with clean, demineralized water containing anti-freeze.

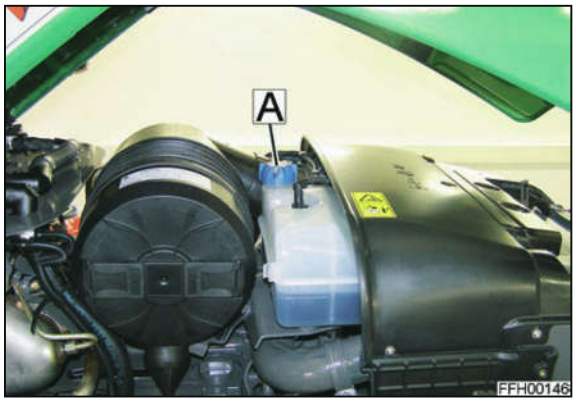


Fig. 8

Windscreen washer

Pour fluid into container (A).

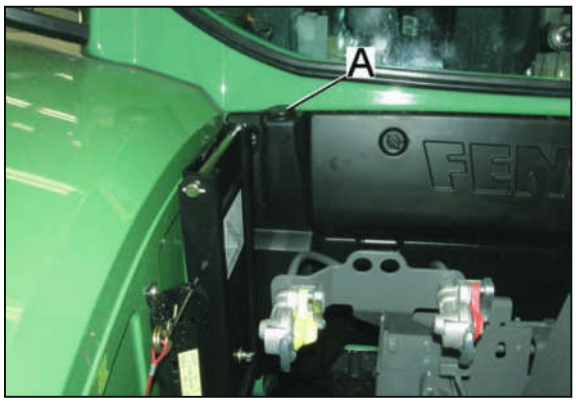


Fig. 9

Fuel tank

Fill with fuel through filler neck (A).

Fill with AdBlue® through fill neck (B).

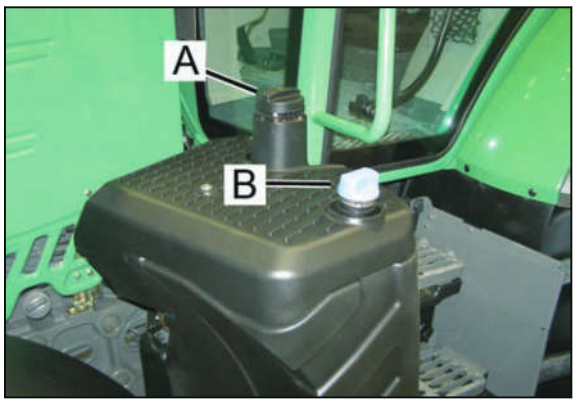


Fig. 10

Technical service 1)			Regular 1)		Daily	Work to be carried out	Information and technical data, materials 4)	
1.	2.	3.	Annually or every 500 hours	Every 2 years or every 2000 hours		See also: Operator's Manual Service and maintenance	Filling levels are determined with a dipstick or by overflow at level bungs etc.	
50 h	500 h	1000 h						
	X		X			Check the oil level in the differential and drive hubs.	Oil level up to overflow at level bung, top up if necessary.	
X		X		1000 h		Oil change for differential and drive hubs.	**Oil quantity:**	Differential 8.2 l (2.2 gal (US))
							Oil quantity:	Drive hubs each side 0.7 l (0.2 gal (US))
							Oil grades:	Fendt Super Trans LS 85W-90 or hypoid transmission oil SAE 85W-90, SAE 80W-90, SAE 90 to API-GL5 with LS additives. Do not use STOU or other universal oils.
X	X	X	X			Check toe-in and adjust if necessary.	**Toe-in:**	0 +2 mm (0.1 in).
						Hydraulic system		
		X		1000 h		Change the oil along with the return filter, breather filter and control pressure fine filter.	**Oil quantity:**	Approx. 69 l (18.2 gal (US)) (extractable volume: 55 l (14.5 gal (US)))
							Oil grades:	Fendt Super Hyd, Fendt Extra Hyd 68 or STOU SAE5W-30, 5W-40, 10W-30, 10W-40, 15W-30,15W-40 or engine oil HD-SAE 5W-30, 5W-40, 10W-30, 10W-40,15W-30,15W-40 acc. to API-CD.
							Also permissible:	For temperatures over 10°C HD-SAE 20W-20 per API-CD