Operating Instructions

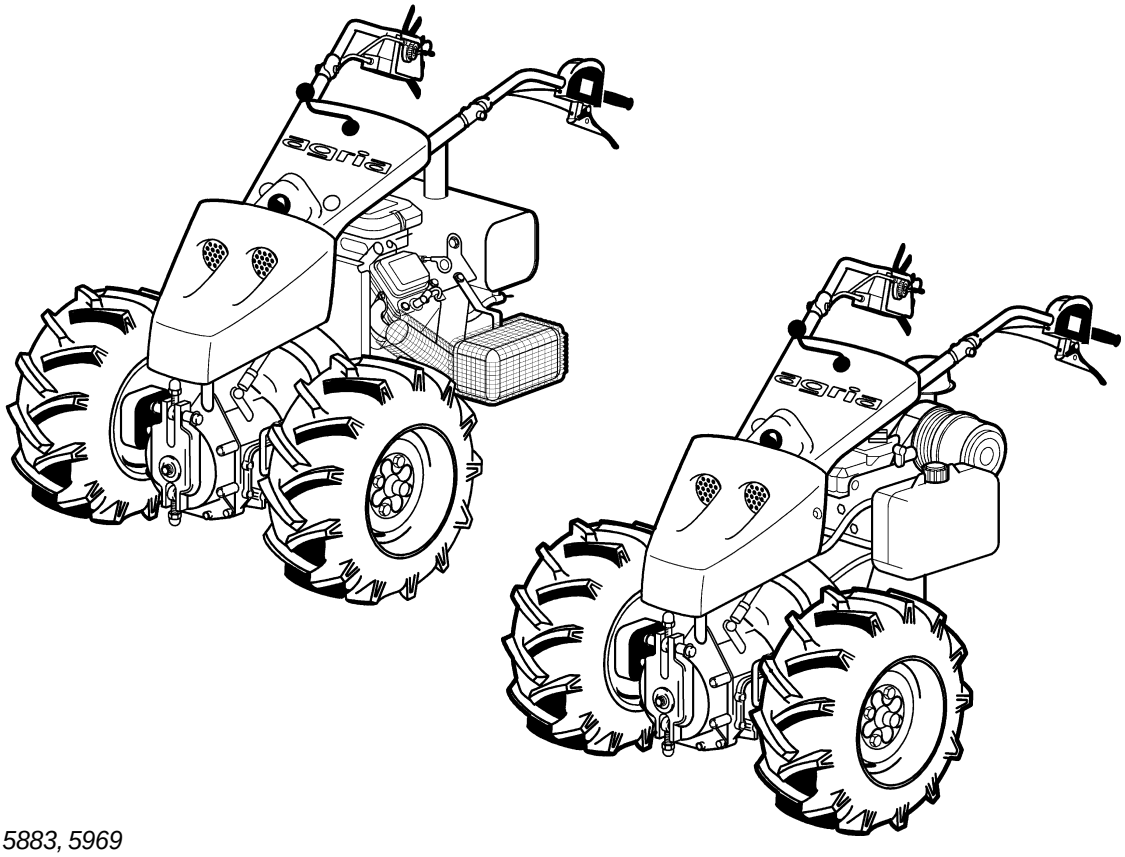
Translation of the original operating instructions

Hydrostatic Tool Carrier 5900 Taifun

5900 241, -251, -253, -521

- *2 cylinder B&S Vanguard 18 HP, 22 HP*
- *2-cylinder Diesel 25LD425*

- Electric Starter Version



5883, 5969

Before commissioning the machine, read operating instructions and observe warnings and safety instructions.

Operating Instructions No. 998 781-C 08.10

GB

Please complete:

Machine Type No.:.....
Identificaion No.:
.....
Engine Type:.....
Engine No.:.....
Date of Purchase:.....

For name plate, refer to page 3/fig. A/4.

For engine type and number, refer to page 72/fig. C/4 (petrol engine), to page 76/fig. D/15 (diesel engine).

Please state these data when ordering spare parts to avoid wrong deliveries.

Only use original agria spare parts!

Specifications, figures and dimensions stated in these instructions are not binding. No claims can be derived from them. We reserve the right for improvements without changing these instructions.

This delivery comprises:

- *Operating instructions*
- *Tool carrier*
- *Tool kit*

→agria - Service←
= contact Your agria-workshop

see separate engine operating instructions!

Symbols


Warning – danger


Important information


Fuel


Choke


Engine Start

Engine Stop


Battery charge indicator


Clutch


Forward


Reverse


Fast


Slow


Hydraulic system


PTO


Brake


Parking brake


Closed (locked)

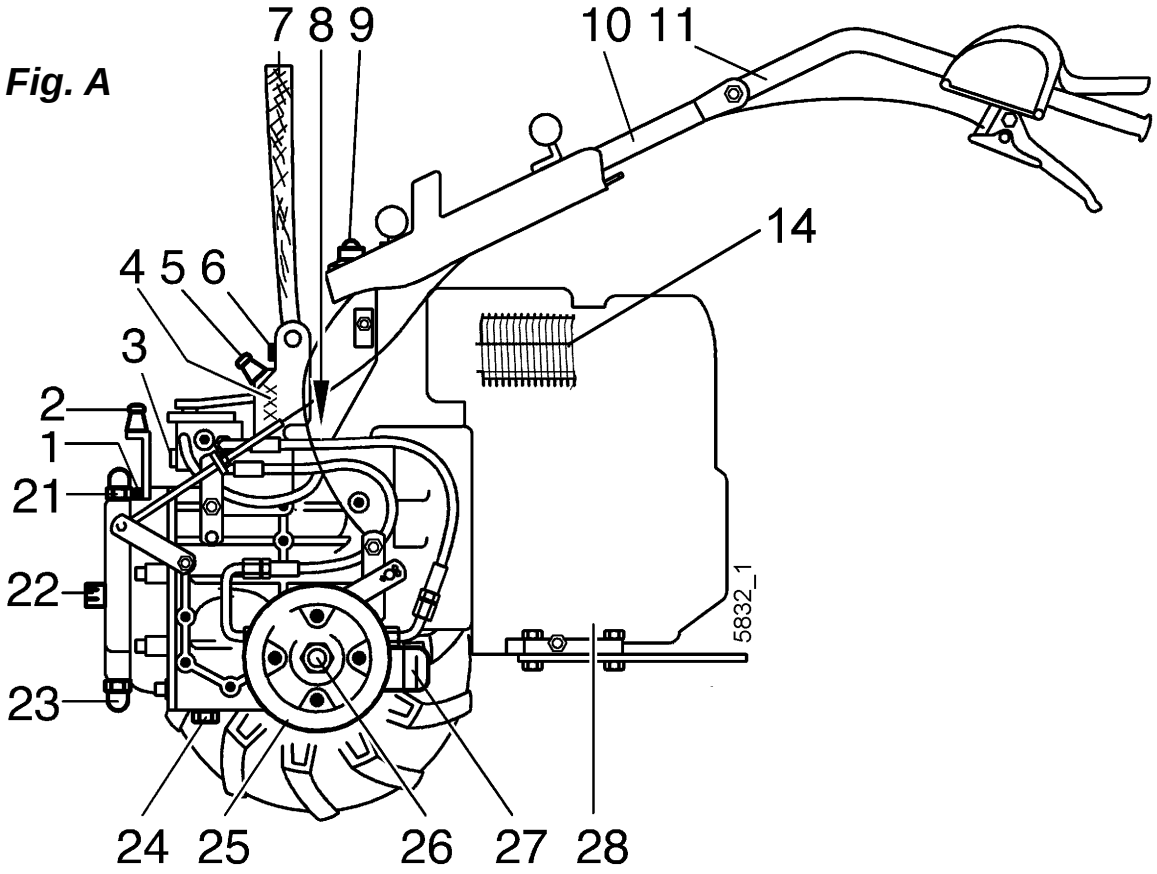

Open (unlocked)


Clockwise


Anti clockwise


Lifting point, fixing point for recovery, tieing up, towing away

Fig. A


7 8 9
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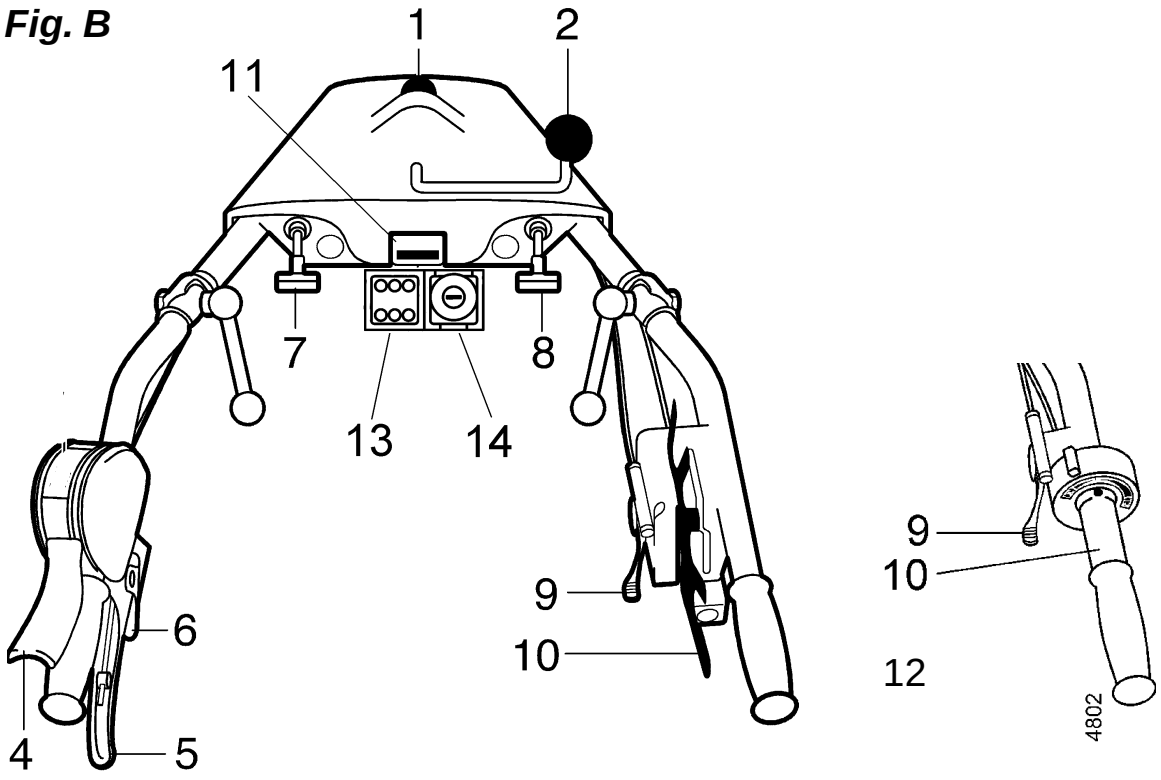
5832_1

Fig. B


1
2
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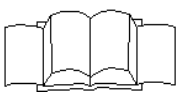
12
4802

Fig. A:

1 Transmission / hydraulic oil dipstick and filling opening
2 Ball head for hood carrier front
3 Idle speed shifting mechanism (bypass)
4 Nameplate (machine identification no.)
5 Ball head for hood carrier rear
6 Transmission venting plug
7 Loading belt
8 Steering handle locking bolt rollers
9 Steering handle, central screw
10 Lower steering handle
11 Steering bar
14 Oil cooler (only vers. diesel engine)
21 Eye bolt with cap nut, top
22 PTO-shaft
23 Eye bolt with cap nut, bottom
24 Transmission oil drain screw
25 Brake drum
26 Wheel hub
27 Oil filter cartridge
28 Engine

Fig. B:

1 Ball handle for lateral steering bar adjustment
2 Eccentric lever for central brake
3 Engine-off switch
4 Safety circuit lever
5 Engine clutch engagement lever
6 Pawl for engine clutch lever
7 Connection mechanism for PTO-shaft
8 Operating mechanism for steering handle lock
9 Speed adjusting lever
10 Lever for stepless adjustment of driving speed and forward-reverse driving
11 Operating hour counter
12 Twist grip for stepless adjustment of driving speed and forward-reverse driving (special equipment)
13 Control lamps (only vers. diesel engine)
14 Ignition lock (only vers. diesel engine)
14.1 Flat plug fuse (at the rear of the ignition lock housing) (only vers. diesel engine)



Note fold-out pages!

Lubricants and Anti-Corrosive Agents

Use the specified lubricants for engine and transmission (see "Specifications").

*We recommend using **bio-lubricating oil** or **bio-lubricating grease** for "open" lubricating points or nipples (as specified in the operating instructions).*

We recommend using bio anti-corrosive oil for preservation of machines and implements (do not apply on painted external covers). Oil can be brushed or sprayed on.

Anti-corrosive agents are kind to the environment and degrade fast.

Using ecologically safe bio-lubricants and bio-anti-corrosives, you contribute to environmental protection and to the wellbeing of humans, animals and plants.

Maintenance and Repair

The trained mechanics of your agria workshop carry out expert maintenance and repair.

You should only carry out major maintenance work and repairs on your own, if you have the proper tools and knowledge of machines and internal combustion engines.

Do not hammer against the flywheel with a hard object or metal tools as it might crack and shatter in operation causing injuries and damage. Only use suitable tools for pulling the flywheel.

Fuel

This engine runs smoothly on commercial ***unleaded regular and supergrade petrol,*** *on* ***leaded supergrade petrol*** *and* ***Aspen 4T petrol****.*

Do not add oil to petrol.

If, for environmental reasons, you use unleaded petrol, make sure the fuel is drained completely when shutting down the engine for more than 30 days. This is to prevent resin residues from depositing in the carburetor, fuel filter, and tank. Or add a fuel stabilizer.

For further instructions refer to „Engine Preservation“.

Diesel Engine

This Diesel engine runs on conventional Diesel fuel of a min. cetane rating of 45.

Do not use Diesel fuel oil substitutes, they may be harmful to the fuel system. Fuel should be free of water or dust.

Winter operation:

To ensure reliable winter operation use “winter diesel fuel”, to be purchased at filling stations.

***At outside temperatures of below -15°C** , take the following additional precautions:*

add commercial flow conditioners

or

add paraffine oil to depress diesel pour-point:

Paraffine oil:	***winter diesel fuel***	***summer diesel fuel***
	pour-point	
50%	*app. -31°C*	*app. -25°C*
30%	*app. -26°C*	*app. -15°C*
10%	*app. -20°C*	*app. - 9°C*

As a last resort*, you can add up to 30% of regular petrol to avoid paraffine deposits. However, this has negative effects on consumption rate and performance.*

see operating instructions Lombardini engine

The Lombardini diesel engine can be operated to a limited extent using biofuel ***RME - Rape methyl ester****.*

Care must be taken that:

- the oil change intervals given in the operating instructions must be halved

- a reduction in operating performance of approx. 10% should be expected.

Before starting the engine, read the operating instructions and note:

Warning 

This symbol marks all paragraphs in these operating instructions which affect your safety. Pass all safety instructions to other users and operators.

Due Use

The tool carrier is a hand-controlled automatic single-axle machine which can power and/or pull various implements approved by the manufacturer. Areas of application are for such as turning over the ground, mowing grass and meadowland, snow clearance and sweeping (due use).

Any other type of operation is considered undue. The manufacturer is not liable for any damage resulting from undue use, for which the risk lies with the user alone.

When the single-axle tractor/the tool carrier/the multi-purpose machine is used on public roads, the local national road traffic rules must be observed, e.g. reflectors, lights.

The single-axle tractor/the tool carrier/ The multi-purpose machine is not intended for use with a trailer on public roads or as as a tractor unit without implements.

Due use includes compliance with manufacturer's instructions on operation, maintenance and repair.

Any unauthorized changes to the tool carrier render manufacturer liability null and void.

General Instructions on Safety and Accident Prevention

Basic Rule:

The standard accident prevention regulations must be adhered to, as well as all other generally accepted rules governing operational safety, occupational health and road traffic regulations.

For drives on public roads, the latest traffic code applies.

Accordingly, check the tool carrier for road and operational safety each time you take up operation.

Only persons familiar with the tool carrier and instructed on the hazards of operation are allowed to use, maintain and repair the tool carrier.

Young persons of 16 years or younger may not operate the tool carrier!

Only work in good light and visibility.

Operator's clothes should fit tightly. Avoid wearing loosely fitting clothes. Wear solid shoes.

Note the warning and instruction signs on the tool carrier for safe operation. Compliance is for your own safety.

When transporting the tool carrier on vehicles or trailers outside the area to be cultivated, ensure that the engine is shut off.

Careful with rotating tools – keep at a safe distance!

Beware of coasting tools. Before you start any maintenance or repair on them, wait until tools have come to a complete stop.

Foreign powered parts shear and crush!

Riding on the attachment during operation is not permitted.

Implements and weights affect the driving, steering, braking, and tip-over characteristics of the tool carrier. Therefore, ensure steering and braking functions are sufficient. Match operating speed to conditions.

Do not change settings of governor. High engine speed increases risk of accidents.

Working Area and Danger Zone

The user is liable to third parties working within the tool carrier's working range.

Staying in the danger zone is not permitted.

Check the immediate surroundings of the tool carrier before you start it. Watch out for children and animals.

Before you start work, clear the area from any foreign object. During operation, always watch out for further objects and remove them in time.

For operation in enclosed areas, ensure that a safety distance is kept to enclosures to prevent damage to tools.

Operation and Safety Devices

Before you start the engine

Become familiar with the devices and operating elements and their functions. Above all, learn how to turn the engine off quickly and safely in an emergency situation.

Ensure that all protective devices are mounted and positioned to provide protection.

With no implement mounted, make sure PTO-shaft is covered with the protective cap.

Starting the engine

Do not start engine in closed rooms. The carbon monoxide contained in the exhaust fume is extremely toxic when inhaled.

Before you start the engine set all operating elements to neutral or idling position.

For starting the engine, do not step in front of the tool carrier and the implement.

Do not use assist-starting liquids when using electrical assist-starting devices (jumper cable). Danger of explosion.

Operation

Never leave the operator's position at the steering handle while tool carrier is at work.

Never adjust the operating handles during work – danger!

For all works with the tool carrier, in particular for turning, the machine operator must keep the distance to the machine given by the steering handles.

Riding on the implement during operation or in transport is not permitted.

If clogging occurs in the implement, shut off the engine and clean the implement with an appropriate tool.

In case of damage to the tool carrier or to the implement, immediately shut off the engine and have it repaired.

If steering causes problems, immediately bring the tool carrier to a halt and turn it off. Have the malfunction removed without delay.

To prevent the tool carrier from sliding on slopes make sure it is secured by another person using a bar or a rope. This person must stay at a higher position than the vehicle and at a safe distance from the attachment at work.

If possible, always work across the slope.

End of Operation

Never leave the tool carrier unattended with the engine running.

Before you leave the tool carrier, shut off the engine. Then close fuel taps.

Secure tool carrier against unauthorized use. If tool carrier is equipped with ignition key, remove the key. For all other versions, remove spark plug connector.

Implements

Only mount implements with the engine and PTO shut off.

Always use appropriate tools and wear gloves when changing implements and parts thereof.

For mounting and dismounting implements bring stand into proper position and ensure stability.

Secure tool carrier and implements against rolling off (parking brake, wheel chocks).

Beware of injuries while coupling implements. Work with particular care.

Hitch implements as specified and only couple at specified points.

Secure tool carrier and implement against unauthorized use and rolling off when you leave the machine. If necessary, install transport or security devices and secure.

Mowing Implement

Handle with care! Sharp blades of the cutter bar may cause injuries! Remove knife guards only for mowing and refit immediately after work has finished.

For transport and storage always mount the knife guards. Secure finger bars additionally with tension springs.

Do not transport the dismounted cutter bar without knife guards.

When mounting and dismounting the cutter bar, make sure all blades are protected by the knife guards.

To exchange the knife and to mount/ dismount the knife driver, make sure that you turn screws away from cutting blades.

For grinding the mowing knives, always wear safety goggles and gloves.

Weights

Fit weights properly and at specified points.

Maintenance

Never carry out any maintenance or cleaning with the engine running.

Before you work on the engine, always remove spark plug connector (petrol engine).

Check regularly and, if necessary, replace all protecting devices and tools subject to wear and tear.

Replace damaged cutting tools.

Always wear safety gloves and use proper tools when exchanging cutting tools.

Do not carry out repairs like welding, grinding, drilling, etc. on structural and safety-relevant parts (e.g. hitch)!

Keep tool carrier and implement clean to avoid risk of fire.

Check nuts and bolts regularly for tight fit and re-tighten, if necessary.

Ensure that you re-install all safety and protective devices and adjust them properly after maintenance and cleaning.

Only use original agria spare parts. All other commercial spare parts must correspond to quality and technical requirements specified by agria.

Storage

It is not allowed to store the tool carrier in rooms with open heating.

Never park the tool carrier in closed rooms with fuel left in tank. Fuel vapours are hazardous.

Engine, Fuel, and Oil

Never let the engine run in closed rooms. Extreme danger of intoxication! For the same reason, also replace damaged exhaust pipe immediately.

Be careful when handling fuel. Great danger of fire! Never refill fuel close to open fire, inflammable sparks or hot engine parts. Do not refill fuel in closed rooms. Do not smoke when refilling!

Refill only with the engine shut off and cooled down.

Do not spill any fuel, use a proper filling device (e.g. funnel).

In case of fuel-spillage, pull the tool carrier away from the spillage before you start the engine.

Make sure fuel is of specified quality.

Store fuel in approved cans only.

Liquids leaking under high pressure, e.g. fuel, can penetrate the skin and cause severe injuries. Immediately see a doctor.

Store anti-corrosive agents and stabilizing liquids out of reach of children. If sickness and vomiting occur, see a doctor. If fuel has contacted eyes, rinse them thoroughly, avoid inhaling of vapours.

Read and observe enclosed instructions.

Before you dispose of opened and seemingly empty pressurised tins (e.g. of assist-starting liquids) make sure they are completely empty. Empty them in ventilated places safe from spark formation or flames. If necessary, dispose of tins in hazardous waste deposits.

Be careful when draining hot oil, danger of burns.

Make sure oil used is of specified quality. Storage is in approved cans only.

Dispose of oil, greases, and filters seperately and properly.

Hydraulic System

The hydraulic system is subjected to high pressure.

When connecting hydraulic motors, ensure the specified connection of the hydraulic hoses.

Hydraulic oil emerging under high pressure may penetrate the skin and cause serious injuries.

In case of injuries, immediately consult a physician – risk of infections.

Prior to works on the hydraulic system, render the latter pressureless and shut down engine (specialized workshop).

When searching leakages, use suitable aids considering the risk of injuries (specialized workshop).

Regularly check hydraulic hose lines for damage and ageing and replace them, if necessary.

Only use original agria hydraulic hoses.

Tyres and Tyre Air Pressure

When working on wheels, make sure tool carrier is parked properly and secured against rolling off.

Any repairs are to be carried out by trained mechanics only and with the appropriate tools.

Regularly check tyre air pressure. Excessive pressure may cause bursts.

Use appropriate tyre air pressure for operation with implements.

Re-tighten attachment bolts of drive-wheels or check tightness when doing maintenance work.

Electrical System and Battery

When working on the electrical system, make sure the battery is disconnected (negative pole) (for tool carriers equipped with battery).

Make sure to connect battery properly – first connect positive pole and then negative pole. Disconnect in reverse order.

Be careful with battery gases – explosive!

Avoid spark discharge and open flames near batteries.

Remove plastic cover (if included) to recharge battery to prevent highly explosive gases from building up.

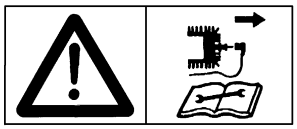
Be careful when handling battery acid!

Only use specified fuses. Stronger fuses will destroy the electrical system – danger of fire.

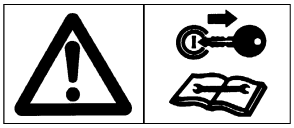
Always cover positive pole with specified cover or terminal cap.

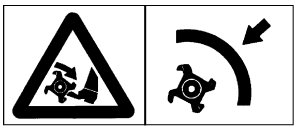
Persons having a pacemaker may not touch live parts of the ignition system when the engine is running.

Explanation of Warning Signs

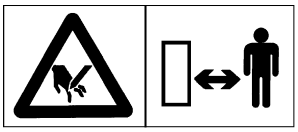


Before any cleaning, maintenance, and repair work shut off the engine and pull spark plug connector (petrol engine) resp. ignition key (diesel engine).

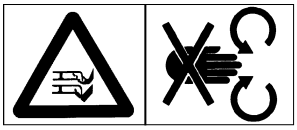


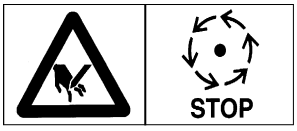


Do not work without protective covers mounted. Before starting the engine, bring covers in proper position.

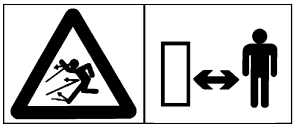


With engine running, keep at a safe distance from cutting knife.





Do not touch moving machinery parts. Wait until they have come to a complete stop.



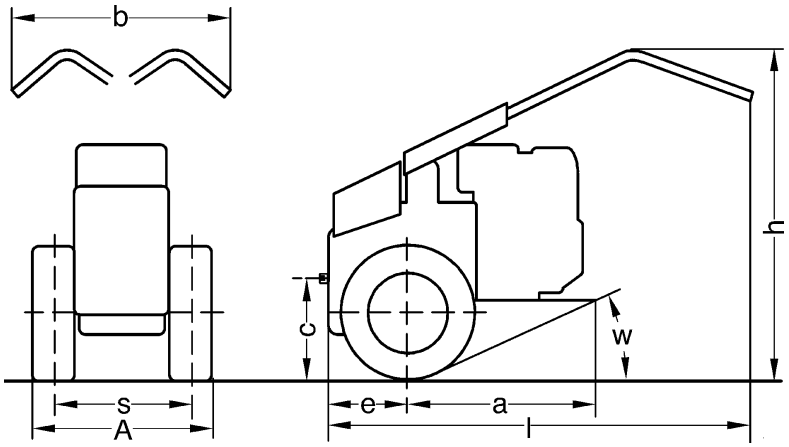
With engine running, keep at a safe distance.

Signs

When working with the machine, wear individual protective ear plugs.

Wear protective gloves.

Wear solid shoes.



Dimensions: a_1 ; e_1 = axle displaced forwards

Benzin-Motor

	(mm)							
	a	a_1	*b*	*c*	*e*	e_1	*h*	l
5.00-10 AS	*550*	*663*	*760*	*270*	*270*	*167*	*ca. 990*	1350
20x8.00-10								
21x11.00-8								
5.00-12 AS				*290*			*ca. 1010*	
23x8.50-12								
23x10.50-12								

Diesel-Motor

	(mm)							
	a	a_1	*b*	*c*	*e*	e_1	*h*	l
5.00-10 AS	*610*	*713*	*760*	*270*	*270*	*167*	*ca. 990*	1350
20x8.00-10								
21x11.00-8								
5.00-12 AS				*290*			*ca. 1010*	
23x8.50-12								
23x10.50-12								

(mm)

B								30			30			60			60			90			90		
		A	S	i	A	S	i	A	S	i	A	S	i	A	S	i	A	S	i				A	S	i
1	23x8.50-12 AS	830	615	400	1050	835	620	890	675	460	1110	895	680	950	735	520	1170	955	740	1010	795	580	1230	1015	800
2	23x10.50-12 AS	960	685	410	1040	765	490	1020	745	470	1100	825	550	1080	805	530	1160	885	610	1140	865	590	1220	945	670
3	5.00-12 AS	790	635	480	970	815	660	850	695	540	1030	875	720	910	755	600	1090	935	780	970	815	660	1150	995	840
4	5.00-10 AS	780	650	520	930	800	670	840	710	580	990	860	730	900	770	640	1050	920	790	960	830	700	1110	980	850
5	20x8.00-10 R	870	680	490	960	770	580	930	740	550	1020	830	640	990	800	610	1080	890	700	1050	860	670	1140	950	760
6	21x11.00-8 Terra																			1140	865	590	1210	935	660

Version with portal axle with axle adjustment and with Diesel engine always + 40 mm.

(mm)

B		60			220 220A			V +B1	V +B2	V +B3	V *B4	V +B4	V +B1	V +B2	V +B3	V +B4	V +B5	V +G		V +G	
		A	S	i	A		i	A	A	A	A	A	A	A	A	A	A	A	"	A	"
1	23x8.50-12 AS				1500		620	1260		1140			1480		1360			1314	12	1534	12
2	23x10.50-12 AS				1490		490		1510	1270				1590	1350			1444	12	1524	12
3	5.00-12 AS				1420		660			1100					1280			1274	12	1454	12
4	5.00-10 AS	860	730	520	1280		670				1040					1190		1264	10	1414	10
5	20x8.00-10 R				1410		660					1250					1340				
6	21x11.00-8 Terra																				

30 = Art. 2519 011
60 = Art. 2416 011
90 = Art. 5519 031
220 = Art. 5616 511
220A = Art. 5519 011
V = Art. 5916 211
G (10") = Art. 5917 011
G (12") = Art. 5917 021

Clutch: ..... *Single disc dry clutch*

Transmission: ..... *Hydrostat*
Driving speeds
Forward: ..... *0–7.0 km/h*
Reverse: ..... *0–3.6 km/h*

PTO: ..... *805 rpm*
gear independent
at 3600 engine rpm
direction of rotation:
clockwise, looking on PTO,
constant in forward and reverse

Steering:
Fully hydraulic steering handle
Steering handle fixable with disconnection of the hydraulic system for manual steering

Steering handle: .... *height adjustable, side adjustable without tools*

Oil for transmission and hydrostat:
optionally:
- *Multi-purpose oil:*

SAE 10W-40 API-SE/SF (or higher)
- *Bio hydraulic oil:*

Synthetic ester basis ..... HEES
Viscosity as per ISO ..... VG 46
Purity class ..... min. 16/13-ISO 4406
e.g.
ARAL: ..... Vitam EHF 46
BP: ..... Biohyd SE 46
ESSO: ..... HE 46
FUCHS: ..... Plantohyd S 46
PANOLIN: ..... HLP Synth 46
Filling volume at
First filling: ..... abt. 7.0 l
Oil change: ..... abt. 5.0 l
Oil filter: .. Screw-type cartridge AW 14

Weights vers. petrol engine:

Empty weight: (with fuel tank filled up):

	without drive wheels	*with 23x8.5-12*
	193,5 kg	*225,5 kg*
with portal axle 5939 011:		
	215,5 kg	*247,5 kg*

Weights vers. diesel engine:

Empty weight: (with fuel tank filled up):

	without drive wheels	*with 23x8.50-12*
without portal axle:	*224 kg*	*253 kg*
with portal axle:	*236 kg*	*275 kg*

Tyres: .. *23x8.5-12 wide track field tyre (series equipment)*

optionally:

0190 112 ..... 5.00-10 field tyre

3490 411 ..... 5.00-12 field tyre

3490 511 ..... 20x 8.00- 10 grass tyre

3490 611 ..... 21x11.00- 8 terra tyre
for this Terra-Grip design, track-width adjusters are required:
5519 031 ..... 2 x 9 cm

5990 711 23x10.5-12 wide-track field tyre

Tyre air pressure at:
5.00-10 ..... 1.5 bar
5.00-12 ..... 1.5 bar
21x11.00- 8 ..... 0.8 bar
20x8.00- 10 ..... 0.8 bar
23x8.5-12 ..... 1.3 bar
23x10.5-12 ..... 1.3 bar

5917 011 ..... Traction cage wheels10" for 5.00-10AS

5917 541 ..... Traction cage wheels 12" (5.00-12; 23x8.5-12; 23x10.5-12)

Drive-wheel attachment
and application ..... see page 27 - 28

Petrol Engine 18 HP

Manufacturer: ..... B&S
Type: .. Vanguard 18 HP 356447-0123
Version: ..... Fan-air-cooled
2 cylinder-4-stroke
OHV engine (petrol)
Bore: ..... 72 mm
Stroke: ..... 70 mm
Cubic capacity: ..... 570 ccm
Output: ..... 13.2 kW (18 hp)
at 3600 rpm
Max torque: ..... 33 Nm at 2600 rpm

Spark plug: ..... Bosch FR8DC
CHAMPION RC 12YC
Spark plug gap 1.0 mm

Ignition:
Electr. magnetic ignition, contactless
Air gap ..... 0.2–0.3 mm
Radio remote screened ..... as per
VDE 0879

Valve clearance *(engine cold):*
Intake and outlet ..... 0.1–0.16 mm

Starter: ..... Recoil starter
Electrical starter: 12V
Battery 12V 20Ah
Generator ..... 12V 192 W

Fuel: ..... Commercial petrol
min. octane number 85 RON
(refer to fuel recommendations)

Fuel tank capacity: ..... abt. 7.5 l

Fuel consumption: ..... 312 g/kWh

Fuel filter: ..... feul-online

Air filter: ..... Dry filter element with
foamed preliminary filter

Carburetor: ..... Horizontal
float carburetor

Rated speed: ..... 3600 rpm

Top no-load speed: ..... 4000 rpm

Idling speed: ..... 1750 rpm

Engine oil:
Filling quantity ..... approx. 1.7 l
Multi-grade oil
at ambient temperature -15° to +45°C:
SAE 10W-40 API-SE/SF (or higher)
at ambient temperature -25° to +15°C:
SAE 5W-20 API-SE/SF (or higher)

Lubrication system:
Oil circulation lubrication
Oil pressure:
in the idle run ..... min. 0.35 bar
Oil filter ..... Filter cartridge

Noise level:

- In accordance with EN 12733 appendix B:

Noise level at operator's ear: .....
-Double knife drive. ..... L_P= 90,5 dB(A)
-Rotary mower 80 ..... L_P= 91,2 dB(A)
-Safety Mulcher105 .... L_P= 91,1 dB(A)

- In accordance with 2000/14/EC, appendix III, part B, chapter 32 lawn mower:

Acoustic power level:
-Double knife drive. ... L_W= 103,8 dB(A)
-Rotary mower 80 ..... L_W= 106,3 dB(A)
-Safety Mulcher 105 . L_W= 106,4 dB(A)

Vibration acceleration value:
In accordance with 2002/44/EC and EN 12733
on handlebar grip with: .....
Rotary mower, Safety Mulcher .....
..... a_{hw} <2,5 m/s^2
Double knife drive. ..... a_{hw} 4,67 m/s^2

Operability on Slopes:
Engine is suited for use on slopes (with oil level at "max" = upper level mark)
possible up to ... 45° inclination (100%)

Petrol Engine 22 HP

Manufacturer: ..... B&S
Type: .. Vanguard 22 HP 356447-0175
Version: ..... Fan-air-cooled
2 cylinder-4-stroke
OHV engine (petrol)

2

Bore: ..... 75,5 mm
Stroke: ..... 70 mm
Cubic capacity: ..... 627 ccm
Output: ..... 16.4 kW (22 hp)
at 3600 rpm
Max torque: ..... 46,3 Nm at 2700 rpm

Spark plug: ..... Bosch FR8DC
CHAMPION RC 12YC
Spark plug gap 0.76 mm

Ignition:
Electr. magnetic ignition, contactless
Air gap ..... 0.2–0.3 mm
Radio remote screened ..... as per VDE 0879

Valve clearance (engine cold):
Intake and outlet ..... 0.1–0.15 mm

Starter: ..... Recoil starter
Electrical starter: 12V
Battery 12V 20Ah
Generator ..... 12V 192 W

Fuel: ..... Commercial petrol
min. octane number 85 RON
(refer to fuel recommendations)

Fuel tank capacity: ..... abt. 7.5 l

Fuel consumption: ..... 312 g/kWh

Fuel filter: ..... feul-online

Air filter: ..... Dry filter element with foamed preliminary filter
version 5900 251 = cyclone filter

Carburetor: ..... Horizontal float carburetor

Rated speed: ..... 3600 rpm

Top no-load speed: ..... 4000 rpm

Idling speed: ..... 1400 rpm

Engine oil:
Filling quantity ..... approx. 1.6 l
Multi-grade oil
at ambient temperature -15° to +45°C:
SAE 10W-40 API-SE/SF (or higher)
at ambient temperature -25° to +15°C:
SAE 5W-20 API-SE/SF (or higher)

Lubrication system:
Oil circulation lubrication
Oil pressure:
in the idle run ..... min. 0.35 bar
Oil filter ..... Filter cartridge

Noise level:

- In accordance with EN 12733 appendix B:

Noise level at operator's ear: .....
-Double knife drive. ..... L_P= 91,5 dB(A)
-Rotary mower 80 ..... L_P= 91,1 dB(A)
-Safety Mulcher105 .... L_P= 92,8 dB(A)

- In accordance with 2000/14/EC, appendix III, part B, chapter 32 lawn mower:

Acoustic power level:
-Double knife drive. ... L_W= 104,2 dB(A)
-Rotary mower 80 ..... L_W= 106,4 dB(A)
-Safety Mulcher 105 . L_W= 108,8 dB(A)

Vibration acceleration value:
In accordance with 2002/44/EC and EN 12733
on handlebar grip with: .....
Rotary mower, Safety Mulcher .....
..... a_{hw} <2,5 m/s^2
Double knife drive. ..... a_{hw} 7,60 m/s^2

Operability on Slopes:
Engine is suited for use on slopes (with oil level at "max" = upper level mark)
possible up to ... 45° inclination (100%)

Diesel Engine 25LD425

***Manufacturer**: ..... Lombardini*
***Type**: 25LD425/2*
***Version:** ..... Fan-air-cooled 2 cylinder-4-stroke engine (diesel) ..... direct fuel injection*
***Bore**: ..... 85 mm*
***Stroke**: ..... 75 mm*
***Cubic capacity:** ..... 851 ccm*
***Compression ratio: .....** 19:1*
***Output**: ..... 14kW (19 hp) at 3600 rpm*
***Max torque:** ..... 42 Nm at 2200 rpm*

***Starter .....** Electrical starter .. automatic supplementary fuel at the start*

***Battery**: ..... 12 V 45 Ah*

***Fuel**: ..... Commercial diesel fuel min. cetane rating of 45 (refer to fuel recommendations)*

Fuel filter .....
Coarse-mesh strainer.. ... .in filler neck
Fine-mesh strainer.....in fuel tank drain hole

***Fuel tank capacity:** .....abt. 4 l*

Fuel pump

***Air filter:** ..... Dry filter element with foamed preliminary filter and cyclone pre-separator*

***Rated speed:** ..... 3600 rpm*

***Top no-load speed:** ..... 3800 rpm*

***Idling speed:** ..... 1000 rpm*

Lubrication :
..... Forced-feed lubrication
.....Full flow oil filter externally

Engine oil:
Filling quantity .....
without oil filter .....approx. 1.8 l
with oil filter ..... approx. 1.95 l
Multi-grade oil
at ambient temperature -15° to +45°C:
SAE 10W-40 API-SC (or higher)
at ambient temperature -25° to +15°C:
SAE 5W-20 API-SC (or higher)

Noise level:

- *In accordance with EN 12733 appendix B:*

Noise level at operator's ear: .....
-Safety Mulcher ..... L_P= 85,7 dB(A)

- *In accordance with 2000/14/EC, appendix III, part B, chapter 32 lawn mower:*

Acoustic power level: .....
-Safety Mulcher ..... L_W= 105,7 dB(A)

Vibration acceleration value:
In accordance with 2002/44/EC and EN 12733 on handlebar grip with: .....
Safety Mulcher ..... a_{hw} 2,08 m/s²

Operability on Slopes:
Engine is suited for use on slopes (with oil level at "max" = upper level mark)
Continuous operation .....
..... up to 25° inclination
Alternating operation for a short period ...
..... up to 35° inclination

Specifications for engine = see separate operating instructions for Lombardini engine!

The tool carrier agria type 5900 Taifun is a base power machine and is always operated with an implement mounted. Therefore, the machine is suited for all common applications in farming and forestry, as well as for winter service.

Available implements:

- *Front implements for*
  - *– mowing*
  - *– sweeping*
  - *– snow clearing and tilling*
  - *– gravel and salt spreading*

For a choice of further attachments refer to our price-list.

Engine

● *The **four-stroke petrol engine** runs on commercial petrol (refer to fuel recommendations p7).*

Ignition System

The engine is equipped with a contactless ignition system. We recommend to have necessary check-ups done by an expert only.

During the first 20 operating hours (break-in period) do not use engine to maximum power.

***Even after break-in period** never use engine at higher speed than necessary for the work in hand.*

● *The **four-stroke diesel engine** runs on commrcial diesel fuel (refer to fuel recommendations p7). See to using proper fuel in winter.*

During the first 50 operating hours (break-in period) do not use engine to maximum power.

***Even after break-in period** never use engine at higher speed than necessary for the work in hand.*

ⓘ ***High engine speed is harmful to any engine and considerably affects its durability. This applies especially for no load operation. Any overspeed (have the engine roar) can result in immediate damage.***

Cooling System

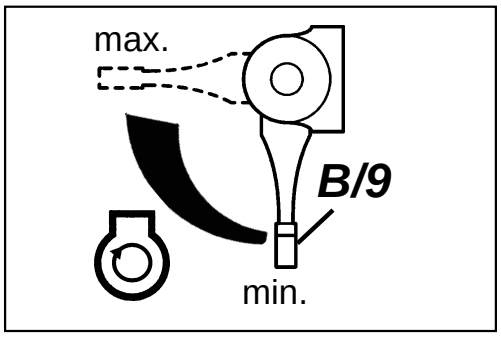
The cooling system is fan-cooled. Therefore keep screen at recoil starter and cooling fins of cylinder clean and free from sucked-in plant trash.

Idling-speed

Always ensure that idling-speed is adjusted correcty. At low speeds and with the speed control lever set to idle, the engine is supposed to run smoothly and without run-out.

Air Filter

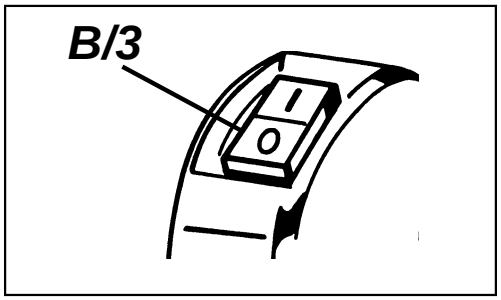
The air filter purifies the air intake. A clogged filter reduces engine output.



Speed Control Lever

The speed control lever (B/9) on the steering handle is for stepless setting of engine speed from min. = idle to max. = full throttle.

Engine Shut-off Switch



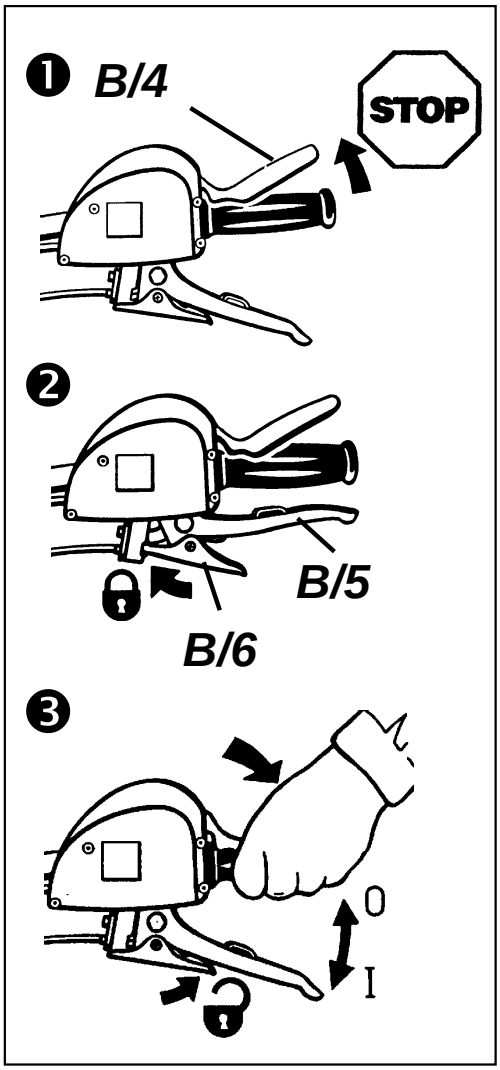
The tool carrier is equipped with an electric shut-off switch (B/3). On pressing the switch, the ignition is turned off (engine is shut off).

Position "I" = Operation

Position "0" = Engine off

ⓘ *The engine shut-off switch also serves* ***to shut off the engine in an emergency situation****. Set the switch to "0" for fast shut-off.*

Safety circuit



The tool carrier is equipped with a safety circuit lever (B/4). When releasing the lever, the ignition system is turned off (engine is shut off).

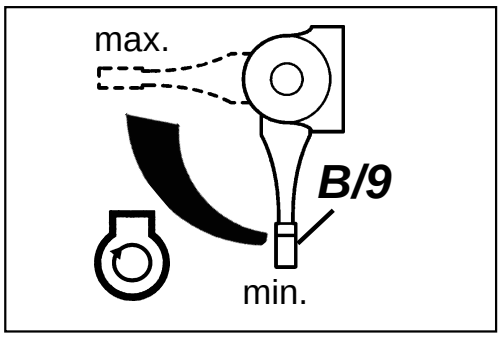
❶ ***Stop position:*** *When releasing the lever, the ignition system is turned off (engine is shut off). Beware – engine keeps running due to centrifugal mass.*

❷***Start position:*** *For starting the engine and for short breaks, pull the clutch lever (B/5) and lock with pawl (B/6).*

❸ ***Operating position:*** *To operate the machine press safety circuit lever (B/4).*

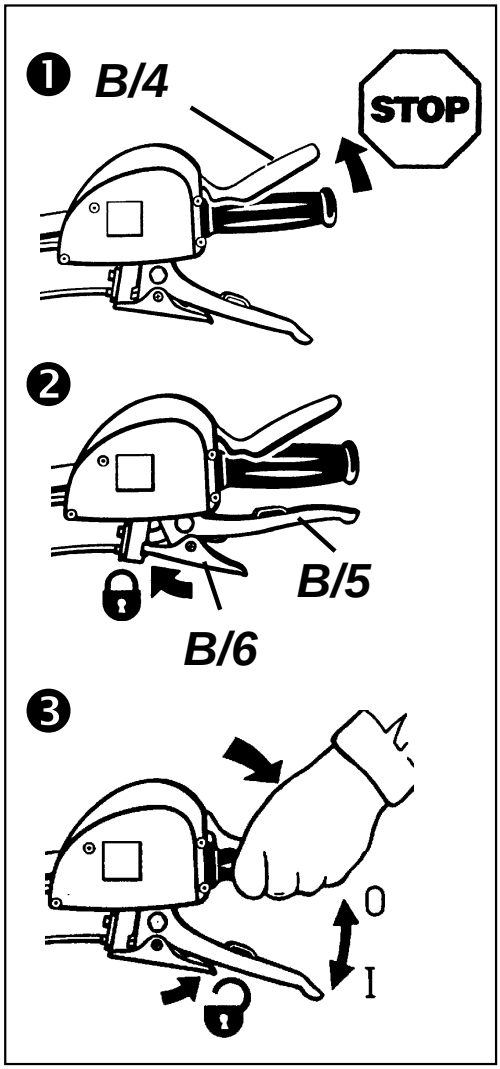
⚠ ***Do not fasten safety circuit lever.***

ⓘ *The safety circuit lever also serves* ***to shut off the engine in an emergency situation****. Release the safety circuit lever for fast engine shut-off. The lever automatically goes to STOP position.*



Speed Control Lever

The speed control lever (B/9) on the steering handle is for stepless setting of engine speed from min. = idle to max. = full throttle.



Safety circuit

The tool carrier is equipped with a safety circuit lever (B/4). When releasing the lever, the ignition system is turned off (engine is shut off).

❶ ***Stop position:*** *When releasing the lever, the ignition system is turned off (engine is shut off). Beware – engine keeps running due to centrifugal mass.*

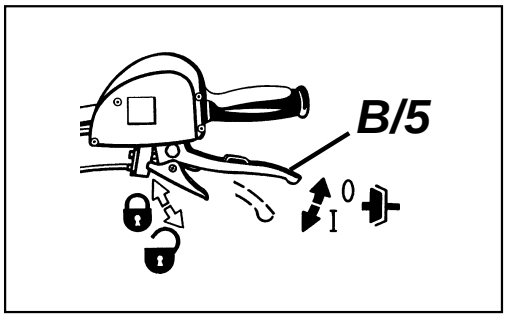
❷***Start position:*** *For starting the engine and for short breaks, pull the clutch lever (B/5) and lock with pawl (B/6).*

❸ ***Operating position:*** *To operate the machine press safety circuit lever (B/4).*

⚠ ***Do not fasten safety circuit lever.***

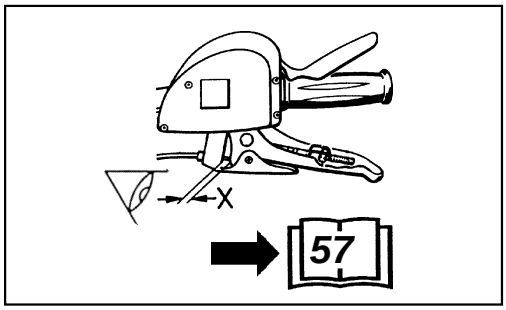
ⓘ *The safety circuit lever also serves* ***to shut off the engine in an emergency situation****. Release the safety circuit lever for fast engine shut-off. The lever automatically goes to STOP position.*

Clutch

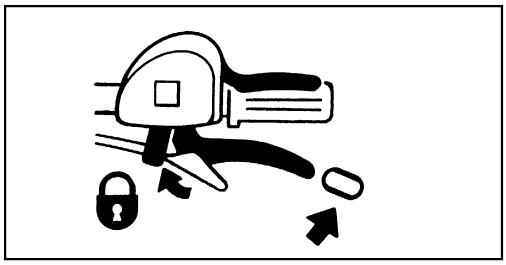


The tool carrier is equipped with a single disc dry clutch which is operated via the clutch lever (B/5).

With clutch lever pulled up to position "0",the clutch is decoupled, i.e. the engine stops driving the machine.



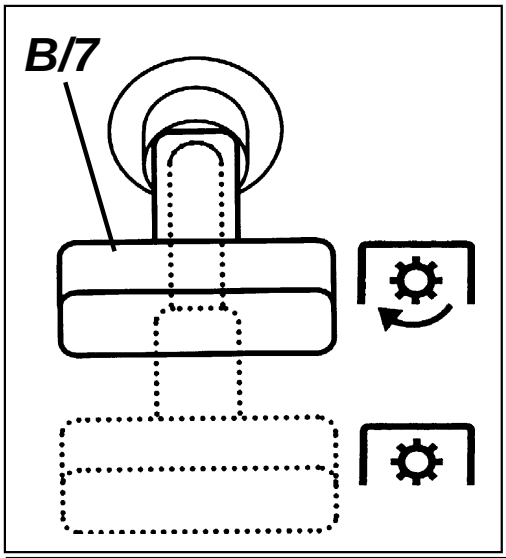
● *Watch for the correct clutch play to avoid clutch slipping away during operation.*



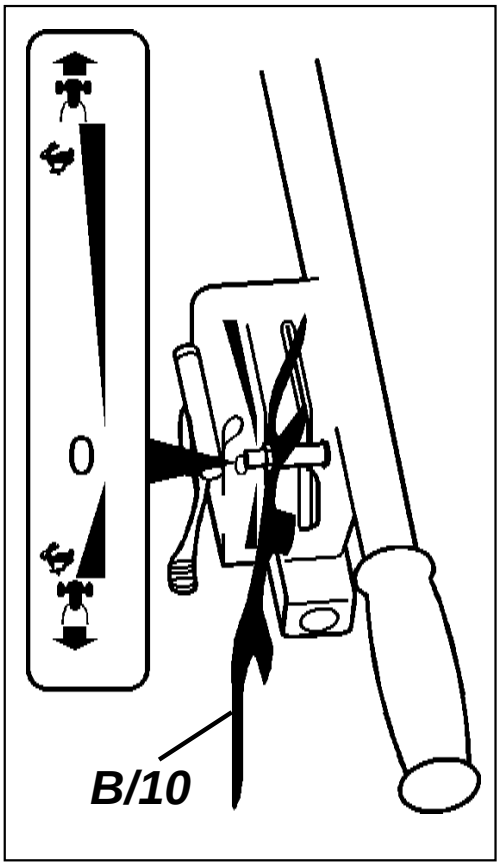
ⓘ *Do not park the machine with the clutch pulled and the **engine running**. This may damage the clutch release bearing.*

*Ensure the lever is pulled (pawl locked in place) when you park the machine with the **engine stopped**, otherwise clutch problems may result due to corrosion.*

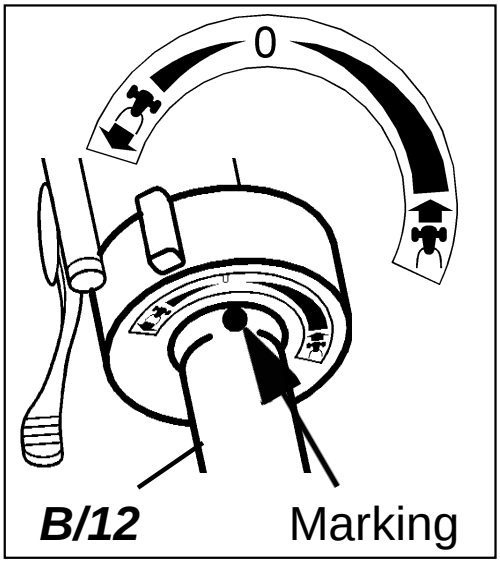
PTO-Shaft Connection



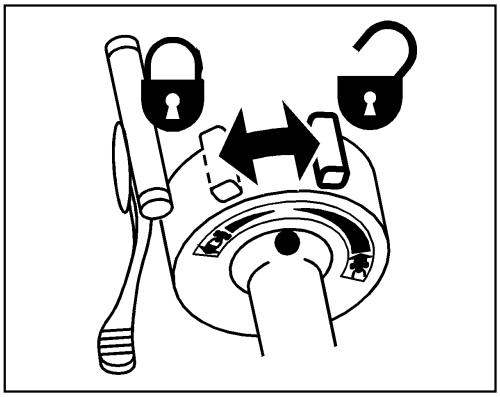
The speed-independent PTO (A/22) is connected with a connection mechanism (B/7). With the connection mechanism drawn backwards, the PTO-drive is connected, when slid forwards, the PTO-drive is disconnected.



B/10



B/12 Marking



Transmission

The agria tool carrier is equipped with a hydrostatic drive.

Setting the Driving Speed and Direction

Lever shift model

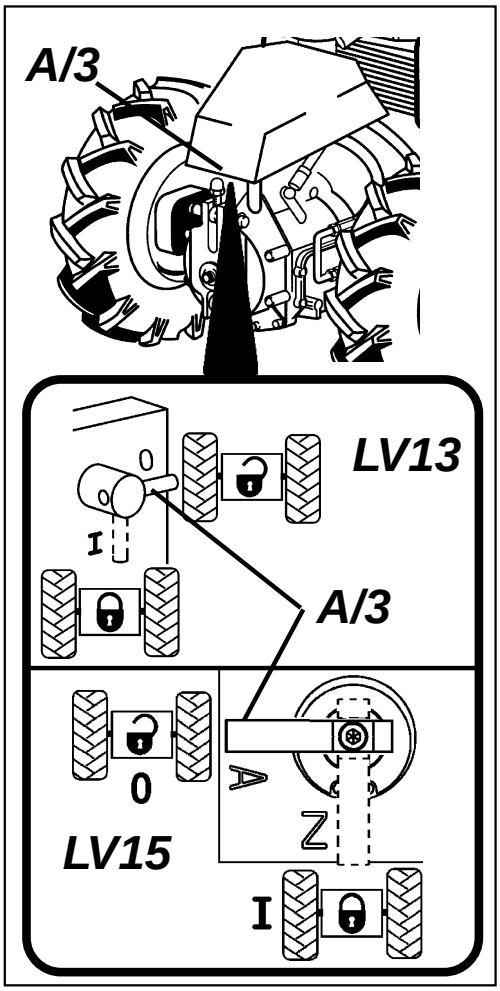
- *The driving speed forward or reverse is steplessly set or changed with the forefinger or the thumb at the lever (B/10).*
- *The zero-position is set, when the marking at the driving lever is congruent with the "0" at the pictogram and is in contact with the spring detent.*
- *When turning the driving lever forwards, the driving speed is steplessly increased forwards and accordingly backwards, if the driving lever is turned backwards and down.*

Twist-grip shift model (special equipment)

- *The driving speed forward or reverse is steplessly set or changed with the twist grip (B/12).*
- *The zero-position is set, when the marking at the twist grip is congruent with the "0" at the pictogram.*
- *When swiveling the twist grip clockwise, the driving speed is steplessly increased forwards.*
- *When swiveling the twist grip anti clockwise, the driving speed is steplessly increased backwards.*
- *The locking lever can be used to prevent the twist-grip from turning accidentally.*

Locking lever = locked

Locking lever = unlocked



Coasting Operation

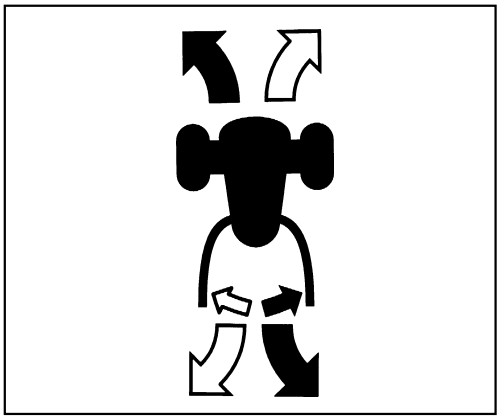
- *The machine can be coasted without engine, if the idle shift is opened (position "0").*
- *The idle shift (A/3) is arranged at the right front of the tool carrier underneath the hood and can be operated by turning the shifting knob (or shifting lever).*
- *The hydraulic drive is activated again, when the idle shift is closed (position "I").*
- *Prior to starting the works, check shifting position! - Pay attention to the version: Valve steering 13 (LV13) or valve steering 15 (LV15)*

ⓘ ***Coasting operation or towing up to max. 4 km/h.***

Trailing is not permitted!

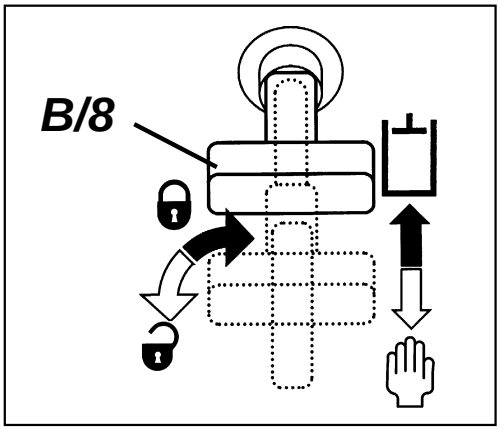
Hydraulic Steering

With the hydraulic steering, the inner wheel at the curve becomes slower up to the standstill, the outer wheel at the curve keeps it velocity.



Steering

- *By the steering movement at the steering handle, the hydraulic steering is activated with running engine.*
- *Steering only during driving, not upon a standstill.*
- *The stronger the steering movement, the quicker the hydraulic steering.*



Locking the Hydraulic Steering

By pulling and turning the shifting mechanism (B/8), the hydraulic steering is locked and steering is realized by muscular strength.

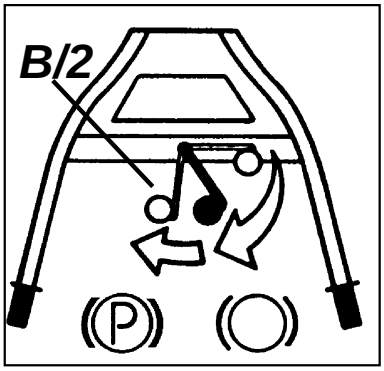
When the lock is opened, the hydraulic steering is connected again.

Use: *Operation at the slope!*
– similar to a differential lock!

or for lifting out an implement.

Central Brake

To slow down or park the machine on hilly ground, use the combined central parking brake.



- ***Central Brake***

Swivel the eccentric lever (B/2) backwards and up – both drive-wheels are braked.

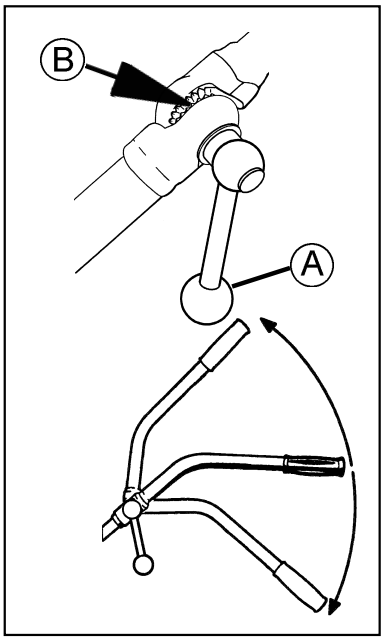
Release the eccentric lever and the lever swivels back to the original position – brake is released.

- ***Parking brake***

Swivel the eccentric lever (B/2) backwards and up beyond the dead centre. The eccentric lever automatically comes to a stop – both drive-wheels are blocked.

To release parking brake, swivel eccentric lever back to original position – brake is released.

ⓘ
- ***Do not drive and brake at the same time.***
- ***Prior to starting driving, absolutely disengage brake as otherwise risk of damage due to overpressure (failure of wheel motors).***

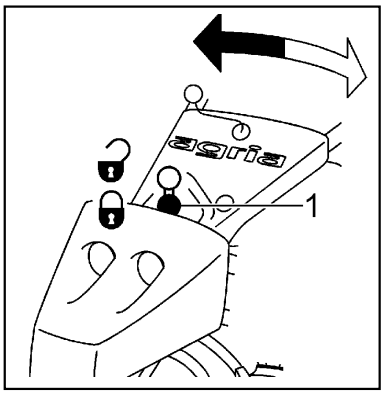


Steering Handle

⚠ ***Do never adjust operating handles during working – risk of accidents!***

Steering Handle – Height Adjustment

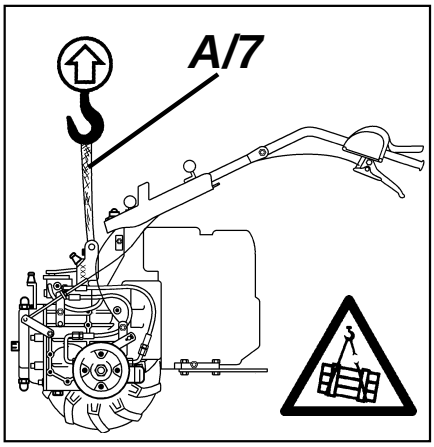
- *Unfix clamping levers (A) on either side until the detents (B) are free.*
- *Bring left and right steering handle to the desired height and introduce into the respective detent.*
- *Tighten clamping levers (A) again.*



Steering Handle – Lateral Adjustment

From its normal position (centre position), the steering handle can be turned by about 30° to the left or r ight.

- *Pull ball handle (B/1) upwards and keep it in position; then turn steering handle to the left or right into the desired position.*
- *Release ball handle and slightly move steering handle to the left and right until the fixing bolt is engaged.*



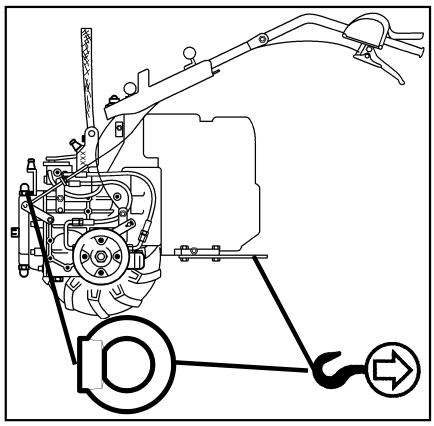
Loading Belt

For loading the machine and for suspending the retaining rope for works on slopes, the loading belt (A/7) is provided. To that end, remove hood.

Check loading belt for damage; replace it, if necessary.

Do not use any loading devices with sharp edges (e.g. sharp-edged hooks, lugs etc.) .

Never walk or remain under moving loads. Danger!

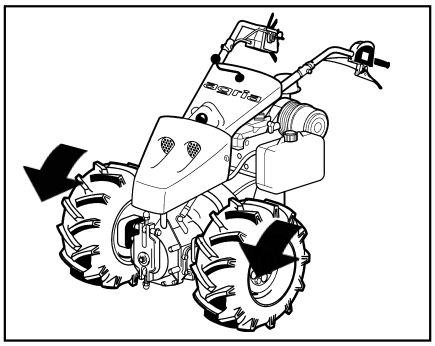


Fixing Points

For towing away, recovering and tying down and to ensure a safe transport, use the

fixing Points

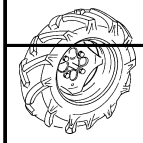
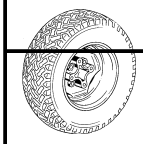
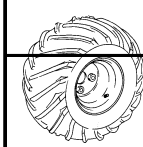
at the connection flange and engine food guard.

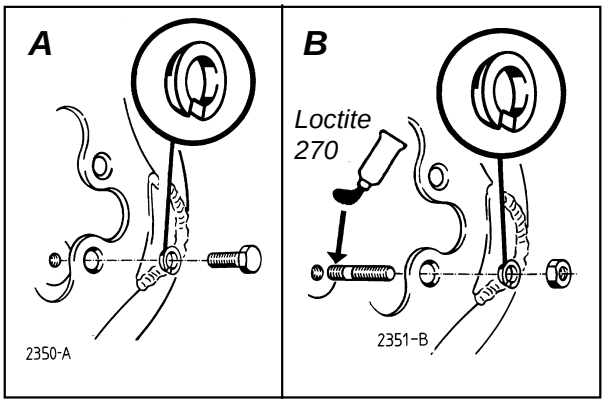


Drive-Wheels

For full tractive power, mount wheels with pointed parts of lugs showing in driving direction (wheels seen from above). Fit the countersunk side of spring-lock washer into countersink-type holes of disk wheel (see fig. “Wheel Attachment Bolts”), p28.

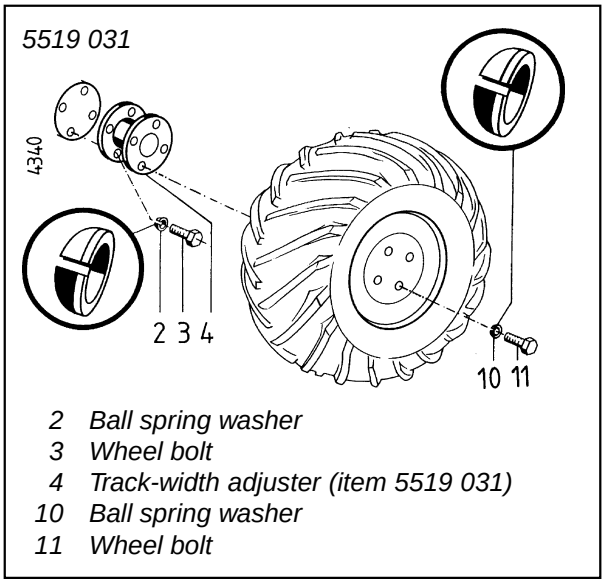
The wheels can also be mounted either on their inner or outer sides for variable track widths (narrow track / wide track – refer to track widths table, p15).

	Tyre	Tread Profile	Use	Item No.
	5.00-10	field tyre	general maintenace	0190 112
	5.00-12	field tyre	general maintenace	3490 411
	20x8.00-10	grass tyre	grass maintenance	3490 511
	21x11.00-8	terra tyre	general maintenace	3490 611
	23x8.50-12	wide-track field tyre	general maintenace	5990 611
	23x10.50-12	wide-track field tyre	general maintenace	5990 711



ⓘ ***To avoid damage to the brake system:***

- ***Spring washer with ball-shaped side absolutely required.***
- ***Only use screw of original length.***



2 Ball spring washer
3 Wheel bolt
4 Track-width adjuster (item 5519 031)
10 Ball spring washer
11 Wheel bolt

Wheel Attachment Bolts

*Version **A** wheel bolt with spring-lock washer.*

*Version **B** locking bolt with spring-lock washer and wheel nut.*

Screw short thread end of locking bolt tightly into hub, if possible, glue with LOCTITE 270 (or similar glue).

Fit countersunk side of spring-lock washer onto disk wheel.

*On a new machine or after wheel change, re-tighten wheel bolts and nuts after the first 2 operating hours with **100** Nm. Re-tighten bolts and nuts in each maintenance.*

Snow Chains

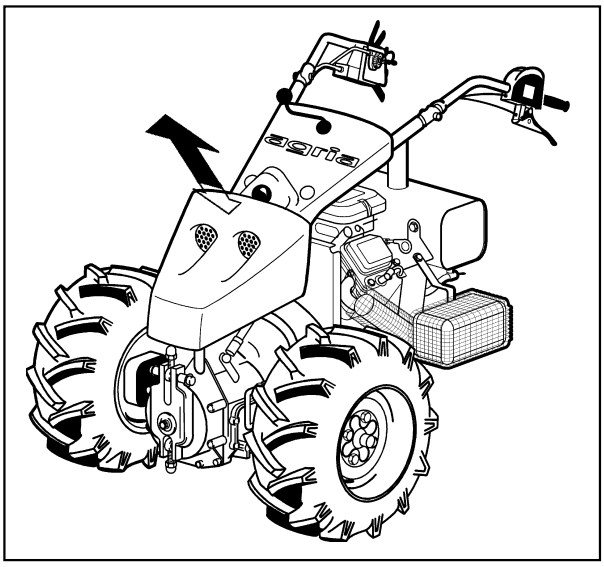
When working with snow chains fitted on wheels, observe manufacturer's instructions, make sure there is sufficient clearance between chains and machine parts.

Wheel-Track Adjustment System

- *Item 5519 031 used to fit terra tyre drive wheels 21 x 11.00-8 TG.*

Drive Wheels for slopes

ⓘ *It is recommended to use twin wheels, or traction cage wheels for mowing areas on **extremely steep slopes**.*



Hood

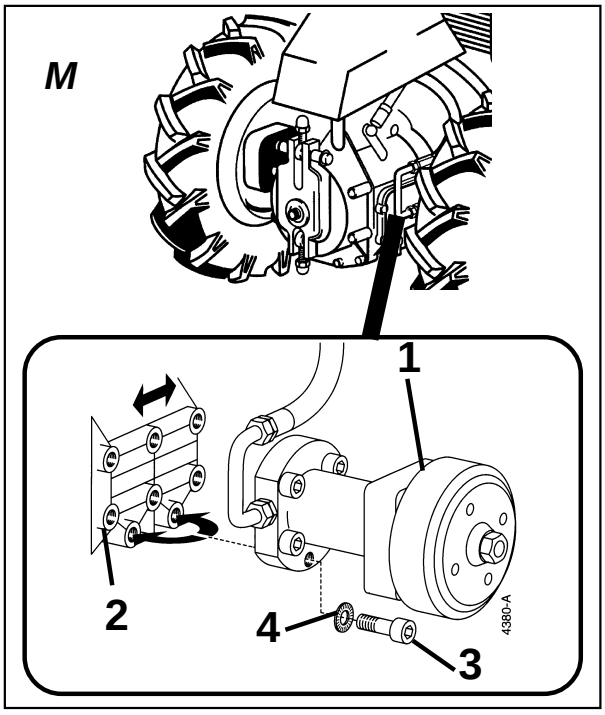
Remove Hood

- *Lift rear end of hood.*
- *Lift front end of hood and completely remove it.*

Placing Hood

- *Place front and rear of hood with the rubber cups onto the ball heads.*
- *By slightly applying pressure to the rear and front of the engine cowling, have the ball cups engage in the ball heads.*

Axle Adjustment

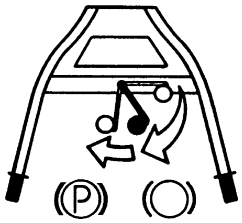


To improve the weight distribution with heavy implements, the axle can be displaced forwards.

- *For that purpose, install the complete wheel motors (M/1) to the front flange bolting template (M/2).*
- *Previously, clean flange bolting template.*
- *Do not unfix hydraulic lines and bowden cables!*
- *Tighten attachment bolts (M/3) with 45 Nm.*

Continuous portal axle adjustment (option for article 5939 011)

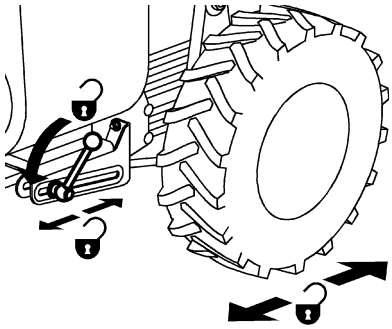
❶



Adjustment to front or rear

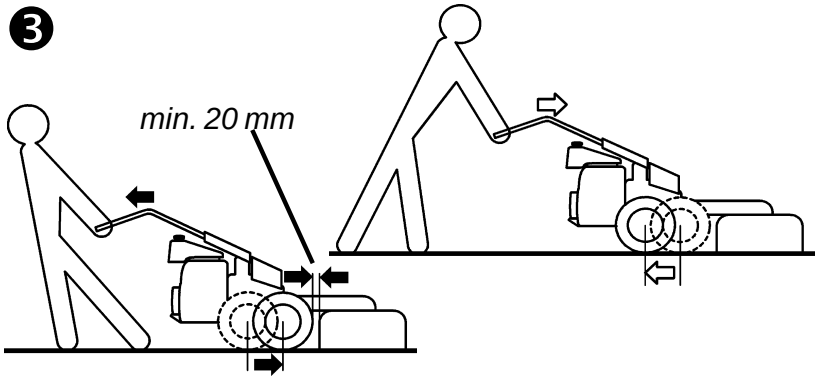
❶ *Pull parking brake* Ⓟ

❷



❷ *Release ball handle lever*

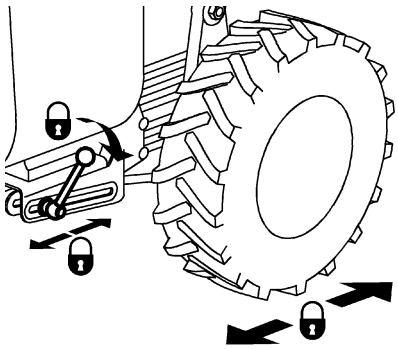
❸



❸ *Pull machine back or move machine forward on steering spar*

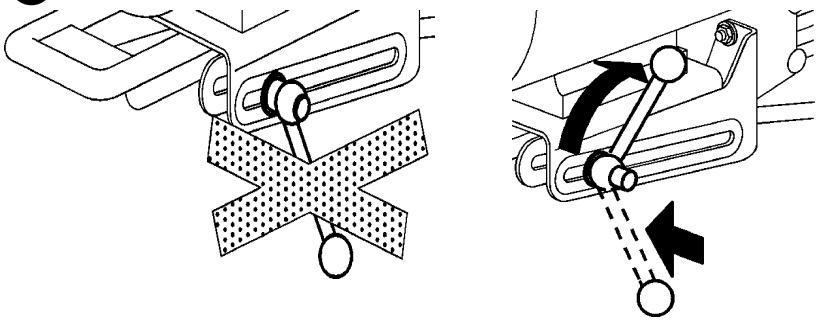
ⓘ *Min. clearance to attachment for drive wheels 20 mm!*

❹



❹ *Pull ball handle lever*

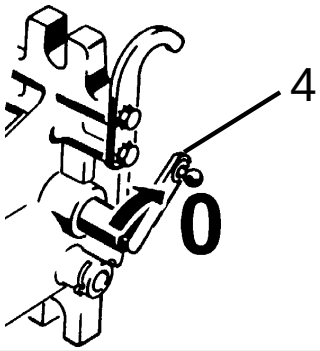
❺



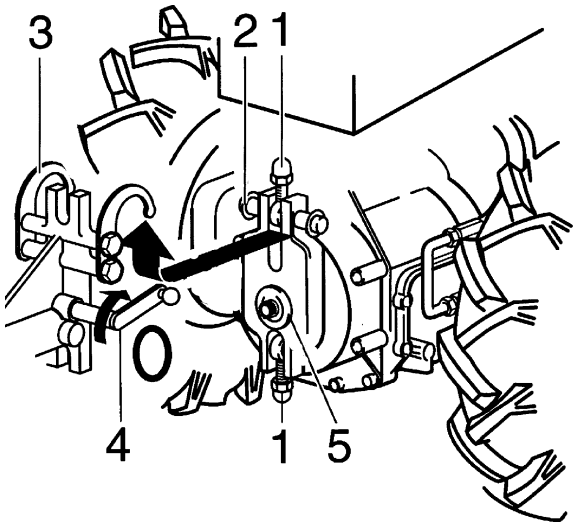
❺ *Ball handle lever must not point downward*

● *Press ball handle lever axially inward - until it unlocks - and turn upward*

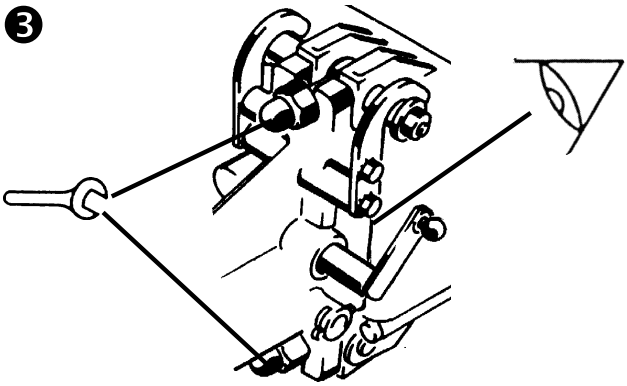
❶



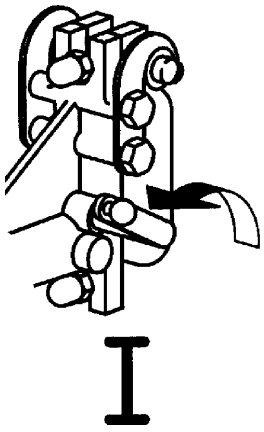
❷



❸



❹



Mounting and Dismounting Implements

⚠ ***Only mount and dismount implemens with engine off.***

Mounting Implements

- *Ensure that coupling surfaces on tool carrier and implement are clean.*

❶ *For PTO driven implements, set shift lever (4) on implement to position "**0**".*

❷ *Slide pegs (2) of base machine into hooks (3) of implement.*

❸ *Fold both eye bolts (1) over coupling flange.*

Note:

- *Make sure flanges (5) are properly centred and flat fitted.*
- *Tighten cap nuts evenly.*

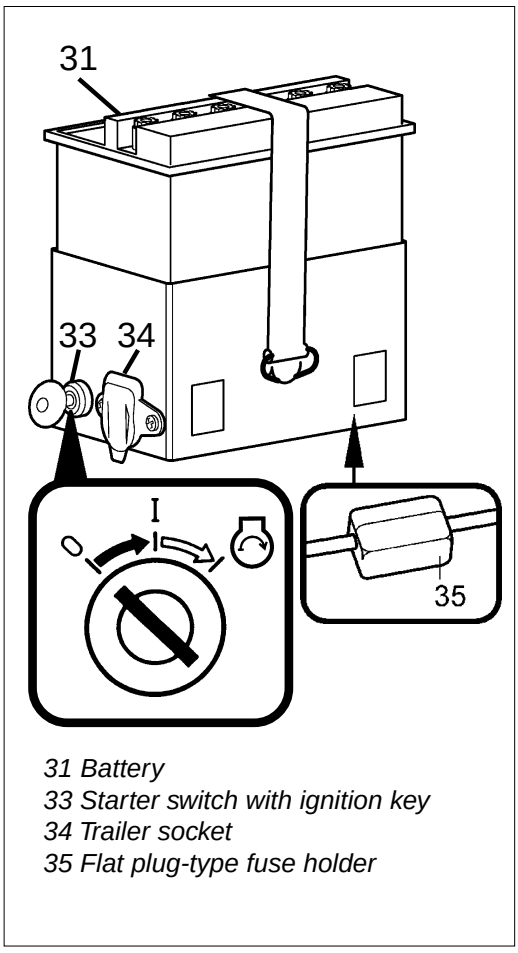
❹ *For PTO-driven implements: Set shift lever (4) at the implement to "**I**" – shifting takes place at the base machine.*

***For dismounting**, proceed in reverse order.*

Battery

There is no dry pre-charging of batteries on the new machines or trailers. Therefore the battery must be filled with accumulator acid and charged (charging current =1/10 of battery capacity).

see supplement of battery manufacturer!



31 Battery
33 Starter switch with ignition key
34 Trailer socket
35 Flat plug-type fuse holder

Starter Switch

The ignition start switch (33) for electric starter has 3 settings

0 = *Charging current off, key removable*

I = *Operation*

= *Start position, ignition key automatically goes into operating position „I“*

Warning Signal

The warning signal sounds when ignition key is in position “I” and the engine is at a standstill, and goes out as soon as the engine runs and the generator starts charging the battery.

It also goes out when the ignition key is in position “0” or is removed.

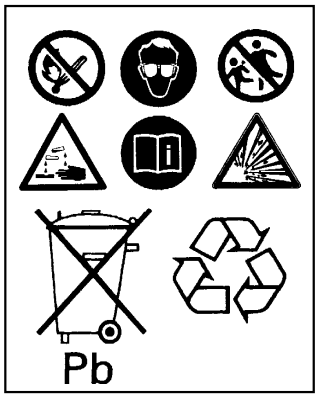
If the warning signal sounds while the engine is running, the engine lubrication is not in order
- immediately check engine oil level refill, if necessary,
- however, if engine lubrication is in order:
→agria - Service←

***Warning**: Do not set ignition start switch to “0” while the engine is running. This can damage the charging regulator.*

Fuse

A fuse (35) is located between the regulator and electric starter to protect the regulator and generator from a short circuit induced from outside.

Replace the fuse if it is defective. To do this, open the fuse holder (take out the battery beforehand) - ensure to provide another spare fuse in time.



Battery *(C/6)*

➔ *Note manufacturer's instructions!*

The battery is supplied filled with acid of a density of 1.28 g/ml and is loaded and ready to operate. If it gives insufficient power to start re-charge (recommended charging current: 1/10 A of the battery capacity Ah)

ⓘ ***The engine can only be started when the battery is connected and in full working order!***

Storing battery:

- load battery, store in a cool place or remove vehicle negative clamp.

- Check state of charge regularly and where necessary correct by re-charging

➡ 51

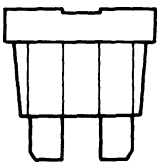
Disposal:

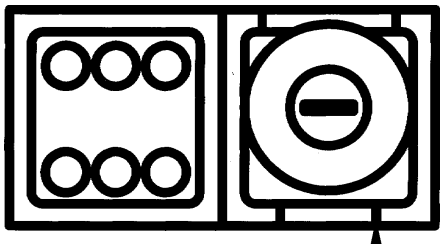
- Give up used batteries at the collection point (store and transport in an upright position, secure against tilting, so that no acid can leak).

- Never dispose of the battery in household waste!

⚠ *Never leave battery in un-charged state!*

Avoid sparking and open flames near batteries. Careful when handling battery acid – ***etching!*** *Only use specified fuses. If fuses are too strong, the electric system will be destroyed –* ***danger of fire!***





B/14.1

Fuse

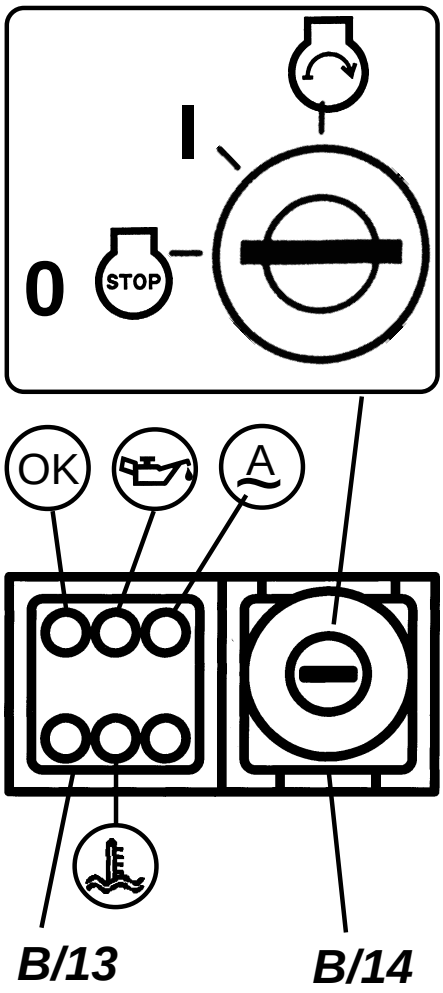
The connection behind the ignition lock and the socket are both secured by a 15 A plug-in fuse.

- ***Ignition lock***

This plug-in fuse (B/14.1) is located in the ignition lock housing. For access open the cover on the ignition lock housing at the rear with a screwdriver.

- ***Socket***

This plug-in fuse is located in the fuse box (C/7) in the cable connection from the battery to the socket.



Ignition lock (Starter switch) (B/14)

0 = *Engine off, Engine Stop*

I = Operation

= *Engine starting position, when the ignition key is let go it moves back on its own to the position "I".*

Indicator lamps (B/13)

OK *(green) = Engine operation in order*

Ensure that when the engine is running only the green indicator lamp continues to be lit up, none of the red lamps may be lit. ***If a red indicator lamp lights up, stop the engine immediately, look for the cause and clear it!***

Oil pressure indicator *(red) lights up if the engine poil pressure is not in order*

- possibly through a lack of oil
- dirty oil filter

A ***Charge indicator*** *(red) lights up if the battery charge is not in order*

- connection cable defective
- fuse defective
- generator defective

Engine temperature indicator *(red) lights up if the temperature limit for the oil or the cylinder head is exceeded (engine temperature too high)*

- possibly through a lack of oil
- engine cooling system not in order (blocked ventilation filter, blocked cooling fins)

Commissioning

Please note that durability and operational safety of the engine depend to a large extent on its breaking-in. Always allow a cold engine to warm up for some minutes and never run it at full throttle at the beginning.

*For the first **20** hours of operation (break-in period) do not use the petrol engine at full power respectively for the first **50** hours of operation regarding the diesel engine.*

Make sure you check and maintain air filters regularly and use clean fuel. Only use branded petrol respectively branded diesel, ensure timely provision of "winter diesel fuel" (see operating instructions for Lombardini engine).

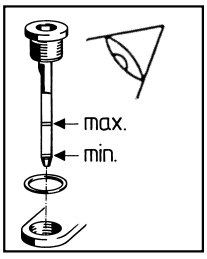
Only use fresh, clean petrol (not older than 3 months) and approved fuel cans to be purchased in special shops. Rusty sheet metal cans or fuel cans not suited for petrol are not permitted.

For the first commissioning or after longer periods of no operation, fill fuel tank to maximum to avoid starting problems.

Be careful when dealing with fuel. Fuel is easily inflammable and explosive in certain conditions!

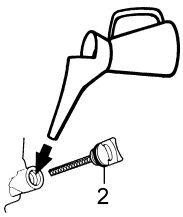
- ***Do not refill in closed rooms.***
- ***Before each fuel fill, shut off the engine and wait until it has cooled off.***
- ***Never refill close to open fire, inflammable sparks or hot engine parts.***
- ***Do not smoke during filling!***
- ***Do not spill any fuel, use a proper filling device.***

Do not cause fuel tank to overflow, but leave a 5 mm margin for the fuel to expand.



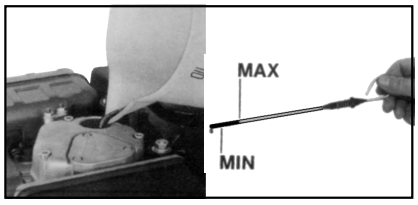
- ***Check transmission oil level*** ➡ 52

Note:** For reasons of transport, the engine is not filled completey with engine oil! **Before you operate the engine the first time, fill in engine oil!



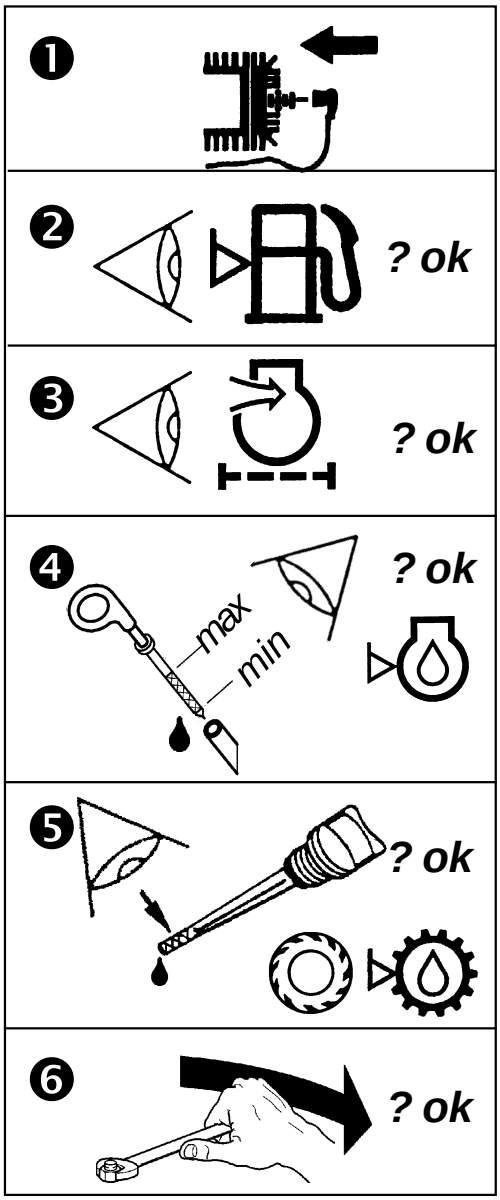
petrol

➡ 44



diesel

➡ 50



Before starting the engine

❶ *Mount both spark plug connectors.*

❷ *Sufficient fuel is filled into the tank?*

❸ *Air filter clean?*

→ 46 *or* → 47

❹ *Check the engine oil level.*

→ 44 *oder* →

❺ *Check transmission oil level.*

→ 52

❻ *Check all bolts and nuts for tight fit.*

→ 58

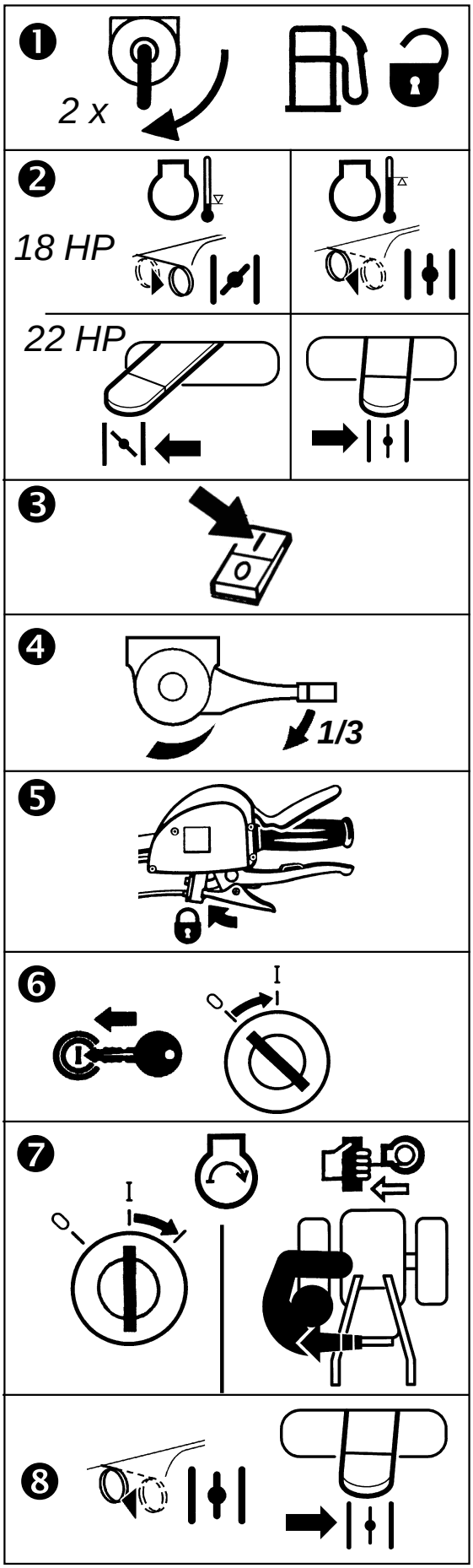
Only take machine into operation with all protective devices mounted and positioned to provide protection!

Careful when starting the engine in closed rooms!

Ensure good ventilation and fast escape of exhaust fumes. Exhaust fumes contain carbon monoxide which acts toxic when inhaled.

Do not touch the hot engine - danger of burns!

Do not touch or remove the ignition line and spark plug connector while the engine is running.



Starting Petrol Engine

❶ *Open both fuel taps (C/13).*

❷ ***Cold engine:*** *put CHOKE lever to "CHOKE" position (C/20).*

● ***Warm engine****: leave CHOKE lever in normal operating position.*

❸ *Set engine shut-off switch (B/3) to operating position ("I").*

❹ *Set speed control lever (B/9) to 1/3 throttle.*

❺ *Pull clutch lever (B/5) and lock pawl (B/6) – start position.*

❻ *Insert key into ignition-start-switch (C/33) and turn right to position "I".*

● *Warning signal sounds.*

❼ *Start engine from a position outside the danger zone:Turn ignition key further to the right to position "START".*

As soon as the engine starts, let go ignition key – it automatically moves back into position "I".

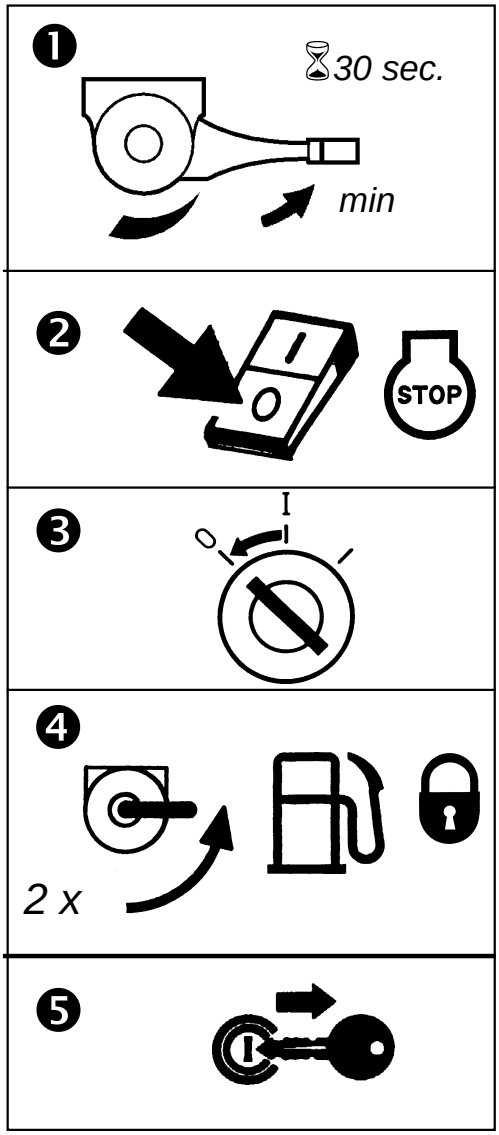
● *Or start manually with the reverse starter.*

If the engine does not start and re-start is necessary, turn key back to position "0" to repeat start (re-start lock).

ⓘ ***Trailing is not permitted!***

❽ *Once the engine has started, let it warm up for some time. Slowly push choke back into operating position, if necessary.*

Shutting off Petrol Engine



❶ *Set speed control lever to idle position and let engine run idle for approx. half a minute.*

❷ *Set engine shut-off switch to "0".*

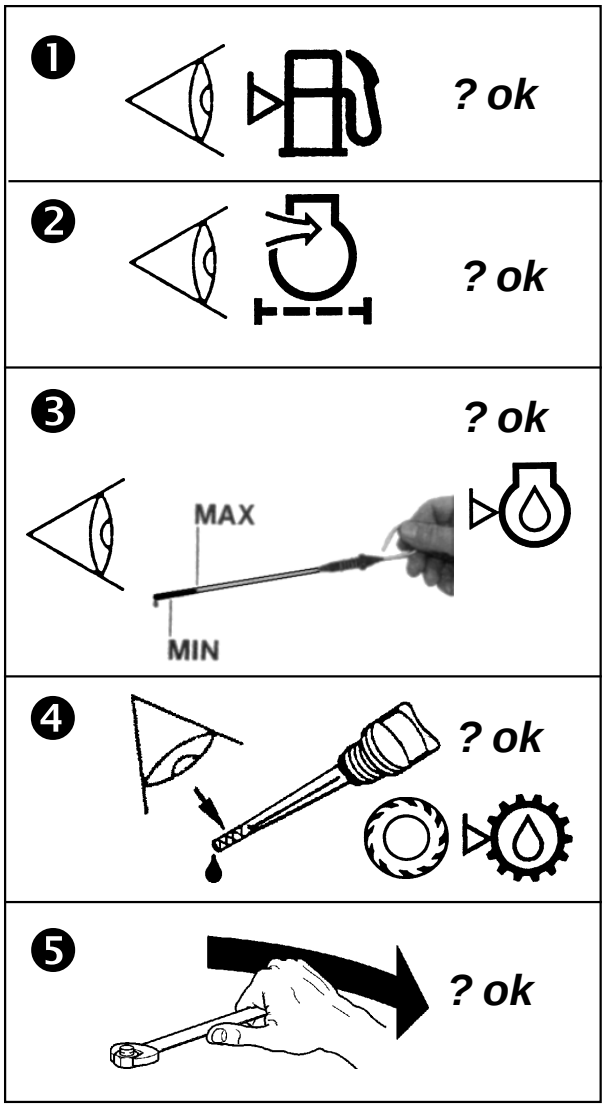
❸ *Turn key back to position "0" – battery charge indicator goes out.*

❹ *Close both fuel taps.*

❺ ***Secure tool carrier against unauthorized use – disconnect key.***

ⓘ *Engine shut-off switch (B/3) also serves as **emergency off-switch**. If necessary, set switch to "0" to turn engine off.*

ⓘ *For parking the machine for longer periods of no operation, do not use engine shut-off switch to shut off engine, but close fuel tap and let engine run until it slowly comes to a complete stop. This ensures carburetor to be empty and no resin residue to deposit.*



Before starting the Engine

❶ *Sufficient fuel is filled into the tank?*

❷ *Air filter clean?*

➡ 📖

❸ *Check the engine oil level.*

➡ 📖

❹ *Check transmission oil level.*

➡ 📖 52

❺ *Check all bolts and nuts for tight fit.*

➡ 📖 58

⚠ Only take machine into operation with all protective devices mounted and positioned to provide protection!

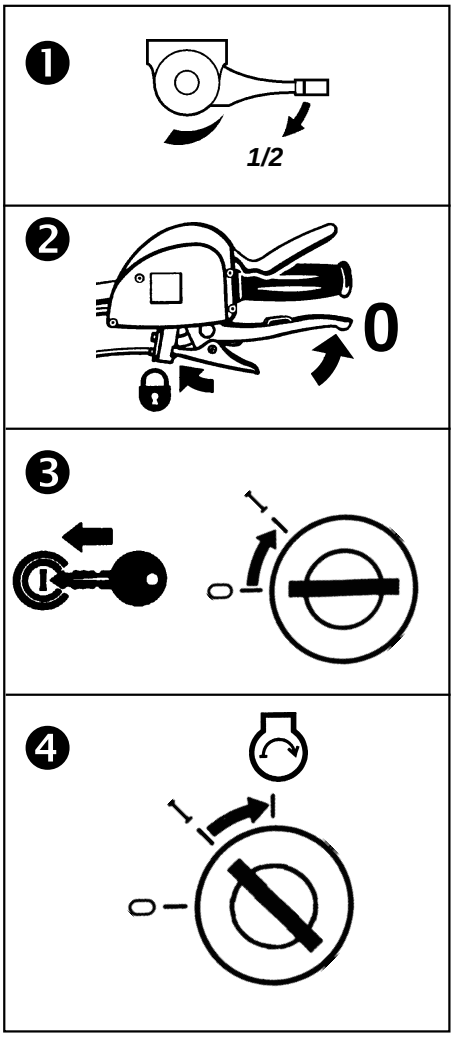
Careful when starting the engine in closed rooms!

Ensure good ventilation and fast escape of exhaust fumes. Exhaust fumes contain carbon monoxide which acts toxic when inhaled.

Do not touch the hot engine - danger of burns!

Starting Diesel Engine

also see operating instructions for Lombardini engine



❶ *Set speed control lever (B/9) to half speed (50%).*

❷ *Set safety circuit lever(B/4) and clutch lever (B/5) to start position.*

❸ *Insert key into ignition-start-switch and turn right to position* "I"

❹ *Turn ignition key further to the right to position "START" (max. 20 seconds).*

As soon as the engine starts, let go ignition key – it automatically moves back into position "I".

When the engine is running the red indicator lamps must be extinguished. Only the green OK indicator lamp may continue to be lit up!

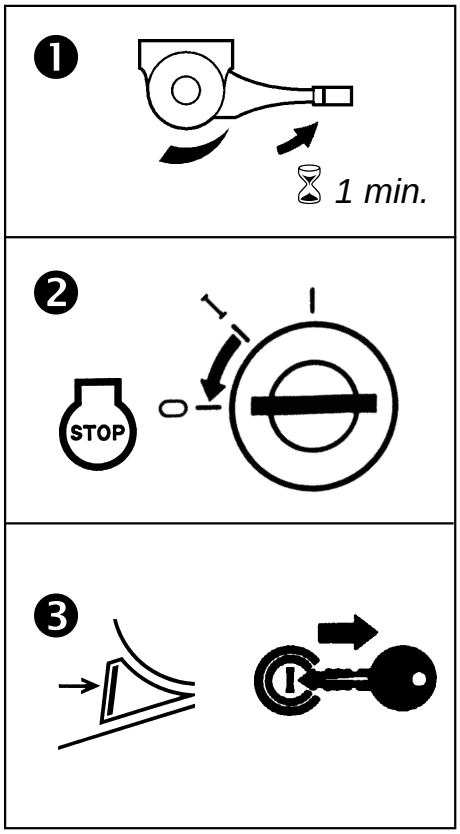
If the engine does not start and re-start is necessary, turn key back to position "0" to repeat start (re-start lock).

- *Let the engine warm up for some time.*

- *If the engine does not start repeat the starting procedure in the same order after a break of 1 minute. If the engine does not start after 2 attempts at starting look for the cause in the breakdown table*

Shutting off Diesel Engine

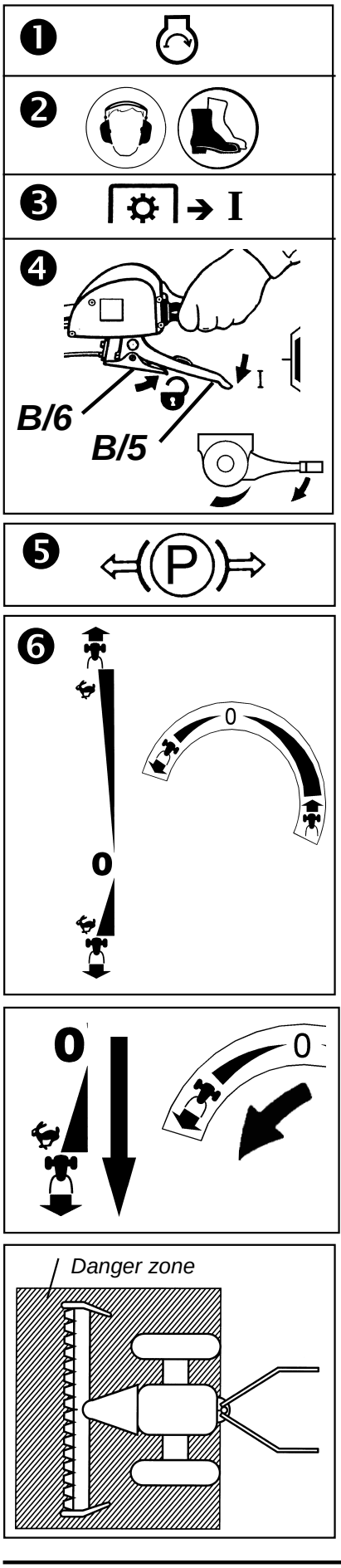
also see operating instructions for Lombardini engine



❶ *Before you shut off the engine let it run at increased idling speed for 1 minute to cool down and to avoid carbon to deposit on the injection valve. This ensures continued and reliable operation.*

❷ *Turn key back to position “0”.*

❸ ***Secure tool carrier against unauthorized use – remove ignition key.***



Operating the Machine

⚠ ***Check safety circuit function***
- only operate the machine if the safety circuit is working!

❶ *Start the engine as specified in chapter "Starting the Engine".*

❷ *Wear individual protective ear plugs and solid shoes.*

❸ *For operation with PTO-powered attachments: Switch on PTO using the PTO shifting mechanism (B/7).*

❹ *Pull slightly clutch lever (B/5), unlock pawl (B/6) and slowly let go while pressing the throttle.*

⚠ ***Carefully engage the clutch, the exact 0-position of the driving lever or the twist grip is not always reached – the implement will possibly start directly!***

❺ *Release the parking brake.*

❻ *Set driving speed with the driving lever (B/10) or the twist grip (B/12) or according to the conditions and requirements.*

Changing the driving direction from forward to reverse:

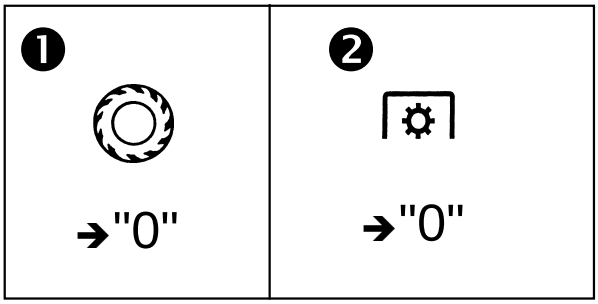
Slowly move driving lever (B/10) or twist grip (B/12) to the rear bottom.

Proceed vice versa for direction change from reverse to forward.

⚠ ***Never leave tool carrier unattended with the engine running.***

Danger Zone

⚠ ***Keep out of the machine's danger zone during starts and operation.***

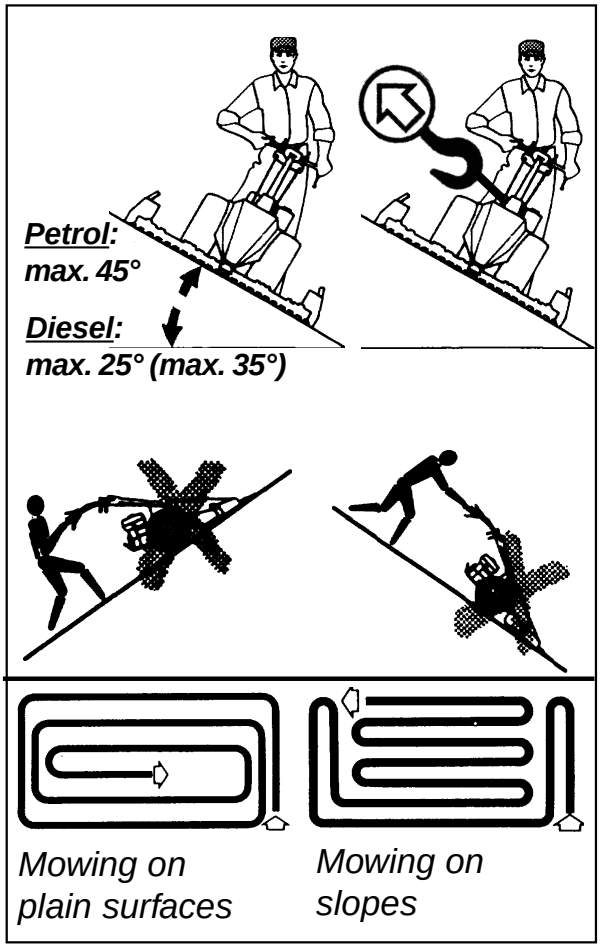


Note for Mowing

After mowing or in case of grass clogging

❶ *Set driving lever to idle-position. The mower comes to a stop but not the knives, thus freeing the cutter bar from grass.*

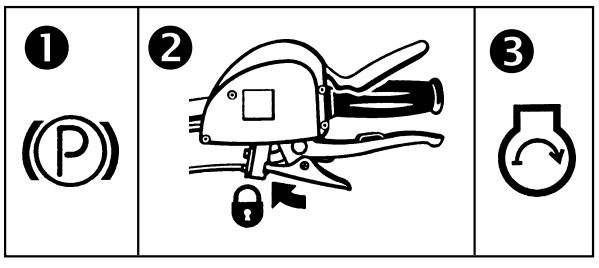
❷ *Set PTO shifting mechanism to position "0".*



Working on Slopes

To prevent the tool carrier from sliding on slopes make sure it is secured by another person using a bar or a rope. This person must stay at a higher position than the vehicle and at a safe distance from the attachment at work.

If possible, always work across the slope.



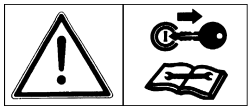
Starting the Engine on Slopes

If the engine comes to a halt while working and re-start becomes necessary, proceed as follows:

❶ *Engage parking brake.*

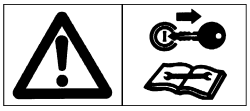
❷ *Move clutch lever and safety circuit lever to start position.*

❸ *Re-start engine.*



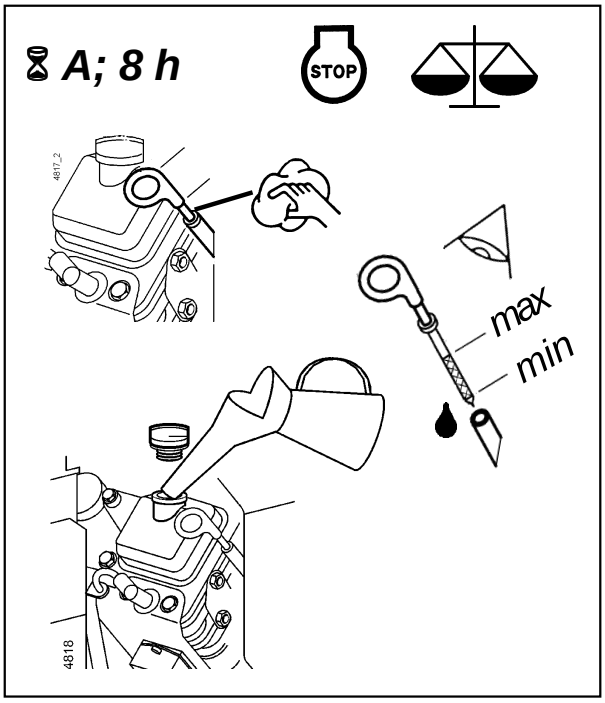
If cleaning becomes necessary during operation, the engine must be shut off and the ignition key removed for safety reasons.

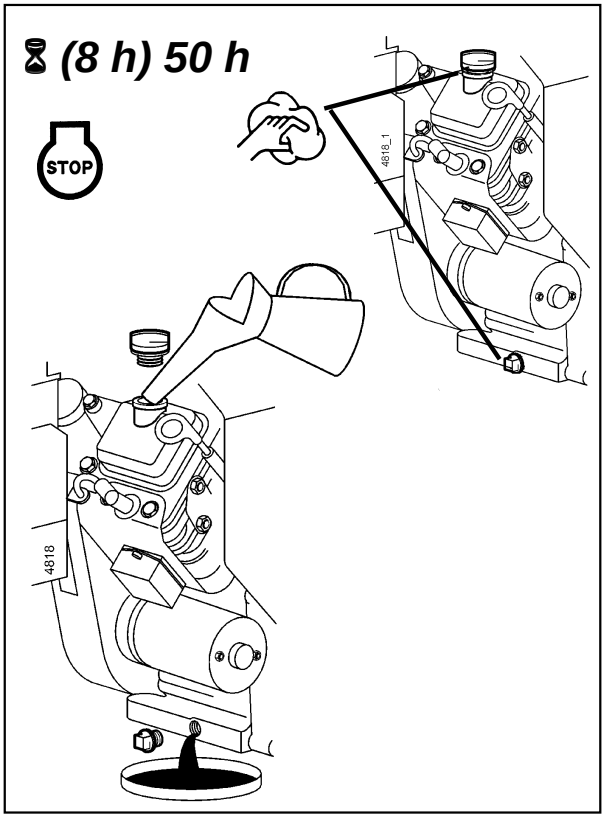
Apart from observing all operating instructions, it is also important to pay attention to the following maintenance instructions. Please note:



Only do all maintenance work with the engine shut off and ignition key disconnected.

When working on mowing knives, wear safety gloves!





Engine

Checking Oil Level

- ***each time you take up operation and after 8 operating hours,***
- *only with engine shut off and in horizontal position.*
- *Clean oil dip stick and surrounding parts.*
- *Unscrew oil dip-stick, clean it with a clean cloth and screw it in again. Screw out dip-stick and read oil level.*
- *In case oil level is below lower mark, refill engine oil (refer to "Specifications") until oil level reaches lower edge of oil filler tube (= max.).*

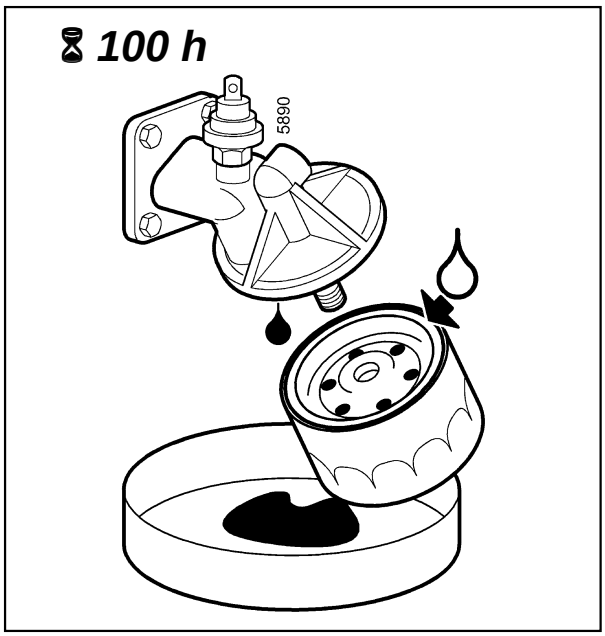
Changing Engine Oil

The first oil change is after 8 operating hours. *Following oil changes are every* ***50*** *operating hours. Change oil while engine is still warm, but not hot – danger of burns!*

- *Clean oil filler tube (C/2), drain plug and surrounding parts.*
- *Change the oil and dispose of properly.*

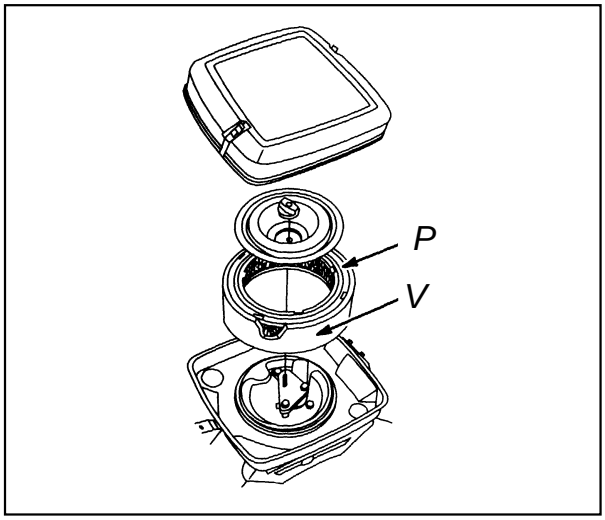
Tighten cap und drain plug!

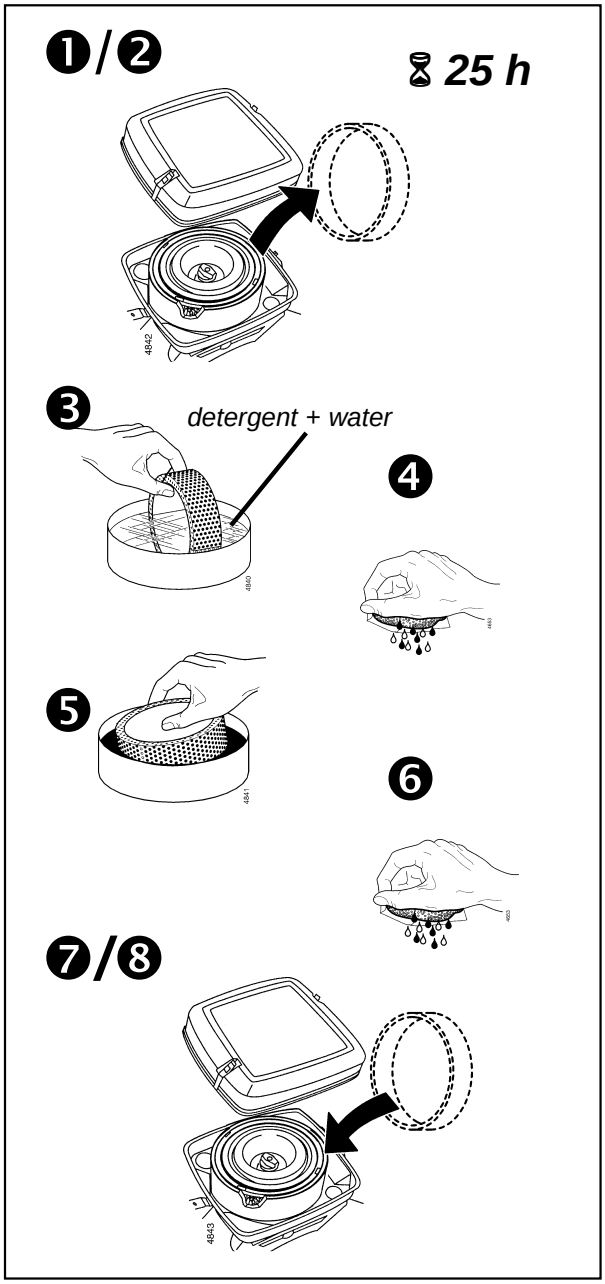
- For engine oil quality refer to "Specifications"



Changing Engine Oil Filter

*The oil filter (C/8) must be changed after **100** hours of operation or after each season, whichever comes first. Before a new filter is installed, the filter seal must receive a light coat of fresh, clean motor oil. Screw the filter on by hand until the seal touches the oil filter adapter. Then tighten further about 1/2 to 3/4 turn. Start the motor and allow to run at IDLE in order to check whether the seal is tight. Shut off the motor, check the oil level and add oil, if necessary.*





Standard Air Filter

- *Clean preliminary air filter (V) always after a maximum of **25** operating hours or in case of heavy dust occurence even after few hours.*
- *Clean air filter cartidge (P) always after a maximum of **100** operating hours or in case of heavy dust occurence even after few hours.*
- *Replace the preliminary filter and cartidge if they are very dirty or damaged.*

Cleaning preliminary air filter

❶ *Dispose cover.*

❷ *Carefully remove the preliminary filter from the cartridge.*

❸ *Wash preliminary filter in detergent and water.*

❹ *Squeeze the preliminary filter in a clean cloth.*

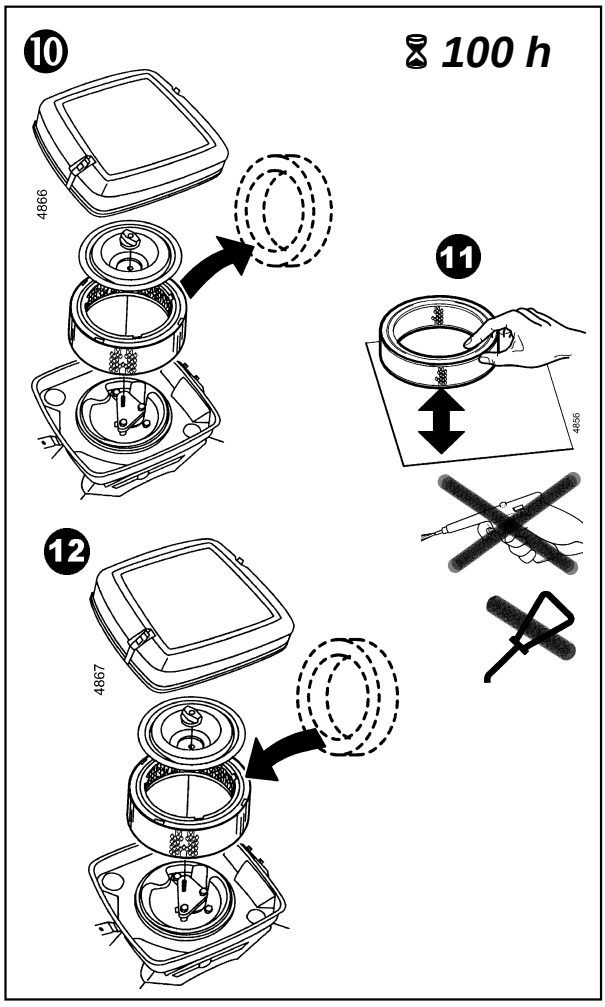
❺ *Soak preliminary filter in engine oil.*

❻ *Squeeze the preliminary filter in a clean, absorbing cloth to remove spare oil.*

❼ *Reinstall the preliminary filter on the cartridge.*

❽ *Reposition the cover.*

5



Cleaning air filter cartidge

⑨ *Clean preliminary air filter*

➔ *No.* ❶ - ❻.

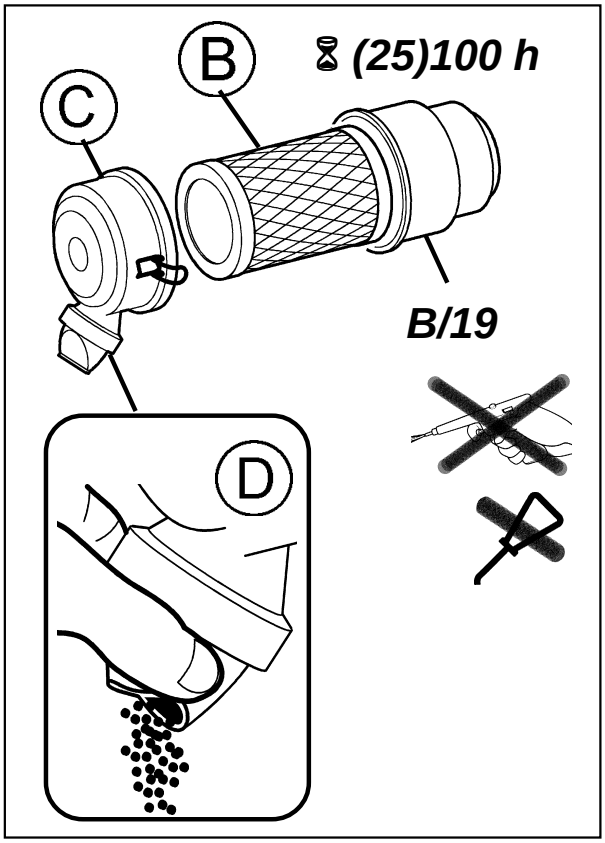
⑩ *Remove knurled nut and plate. Carefully remove the cartridge in order to keep foreign objects out of the carburetor.*

⑪ *To clean the cartridge, tap it carefully on a flat surface. Do not use petroleum-based sovlents, which can cause wear of the cartridge. Do not use compressed air, because this can damage the cartridge. Do not oil the cartridge.*

⑫ *Reassemble cartridge, plate and knurled nut.*

⑬ *Assemble pre-filter and cover*

➔ *No.* ❼ - ❽.



Cyclone Air filter

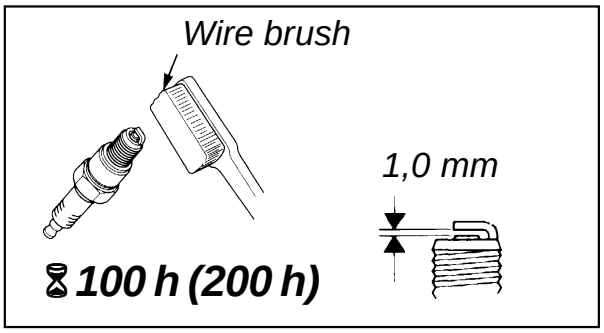
- *Clean air filter insert* Ⓑ *always after* ***25*** *operating hours through careful tapping at one end. Wash and dry the filter cover* Ⓒ.

Do not use compressed air to blow out dust of filter insert and do not treat with oil.

- *Change air filter insert* Ⓑ *after tapping out 3x and at the latest after every* ***100*** *operating hours or when damaged.*

- ***Every time you take up operation****, discharge the air preliminary filter by squeezing the dust extraction valve* Ⓓ.

5



Spark Plug

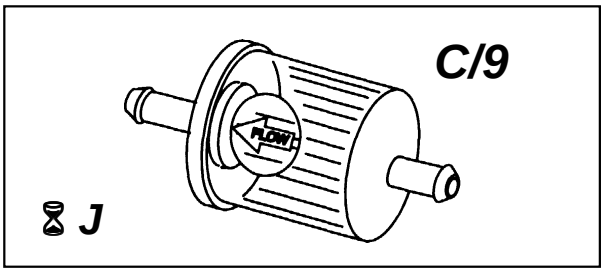
*After every **100** operating hours:*

- *remove soot from spark plug electrodes using a wire brush,*
- *check spark plug gap and set to 1.0 mm.*

*Exchange spark plugs after every **200** hours of operation.*

Fuel Hoses

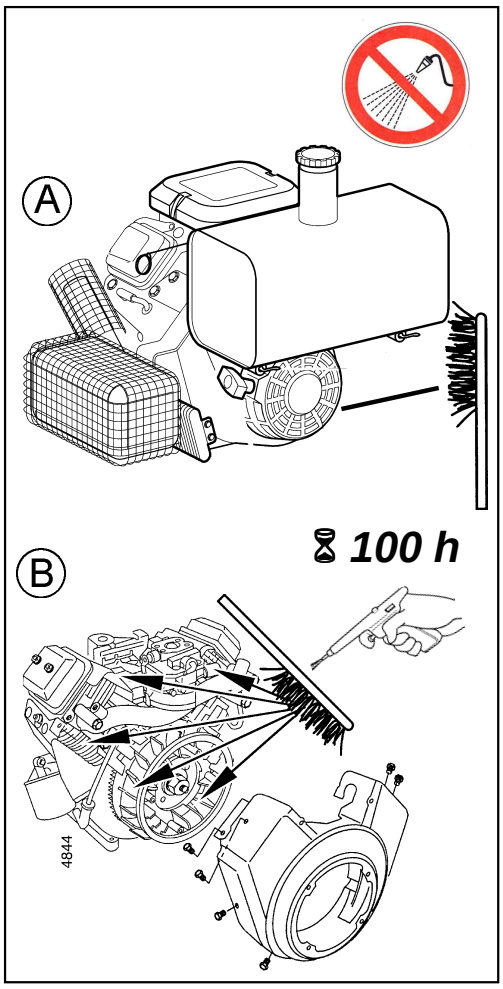
*Exchange fuel hoses every **2 years**. Leaking hoses must be exchanged immediately.*



Fuel Filter

Exchange fuel filter (C/9) every year. Note direction of flow!

5



Cleaning the Cooling System

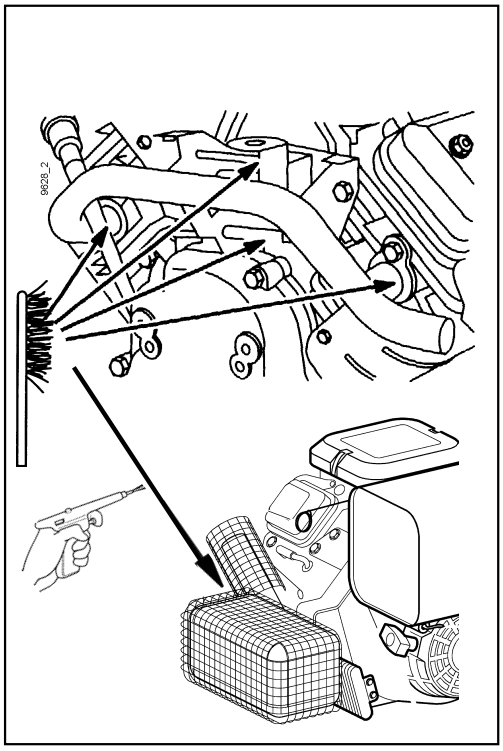
After mowing for longer periods of time, clogging of plants and dust may occur in the cooling system. Sustained operation with the cooling system clogged lets the engine heat up and causes damage.

Clean engine only with a brush or compressed air. Do not spray with water.

Ⓐ *Always check cooling-air screen (C/5) and remove dirt and plants sucked in.*

Ⓑ *Clean fan system after every **100** hours of operation or at least **once per year**, preferably before the season starts. Take off fan case and clean cooling fins on both, cylinder and cylinder head, in addition to the fins, cooling-air screen and oil cooler.*

→agria -Service←



Exhaust System and Governor

Check exhaust system (C/18), governor link, governor rod and governor springs on a regular basis for plant trash and clean, clean with a brush or compressed air if necessary.

Danger of fire results when exhaust system is dirty.

Check each time before you take up operation.

Carburetor Adjustment

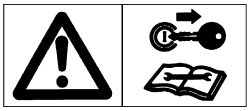
→agria - Service←

Re-adjusting Valve Clearance

→agria - Service←

5

Apart from observing all operating instructions, it is also important to pay attention to the following maintenance instructions.



Only do all maintenance work with the engine shut off and ignition key disconnected!

When working on mowing knives, wear safety gloves!

Engine

Please note that only the special care and maintenance of the engine required for the tool carrier is described here,

*all **other maintenance of the engine***

see operating instructions Lombardini engine.

Cleaning the Cooling System

After a long period of operation the cooling system may become clogged by dirt and plant trash. Uninterrupted operation with a clogged cooling system causes the engine to heat up and become damaged.

- *Always check cooling-air screen (C/8) and free from dirt and plant trash taken in.*
- *After every **100** operating hours or at least **once a year** before season starts remove fan case to clean cooling fins on cylinder and cylinder head as well as guiding plates serving for smooth air circulation, cooling-air screen and oil cooler.*

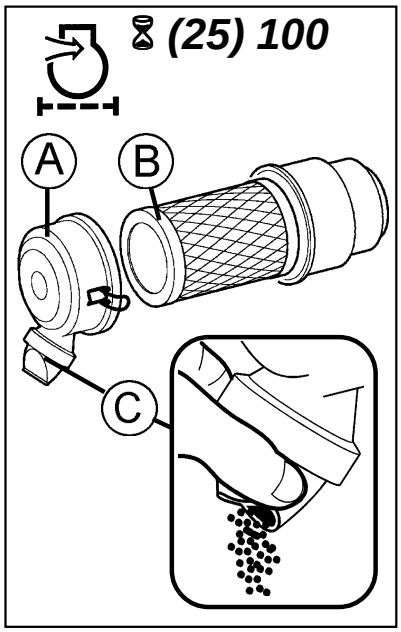
see operating instructions for Lombardini engine

→agria - Service←

Exhaust System

*Constantly check exhaust system (C/5) for plant trash and clean, if necessary. Otherwise **danger of fire!***

Check each time before you take up operation.



Air filter (Cyclone Air filter) (D/9)

- ***Every time you take up operation**, discharge the air preliminary filter by squeezing the dust extraction valve Ⓒ.*
- *Clean air filter insert Ⓑ always after **25** operating hours through careful tapping at one end. Wash and dry the filter cover Ⓐ.*

Do not use compressed air to blow out dust of filter insert and do not treat with oil.

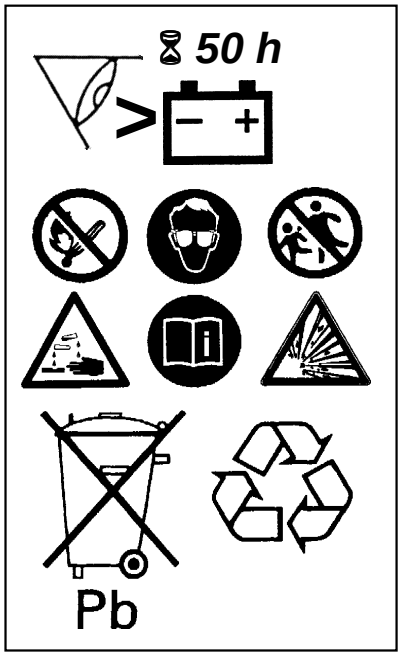
- *Change air filter insert Ⓑ after tapping out 3x and at the latest after every **100** operating hours or when damaged.*

Never run the engine without the air filter, as this leads to increased engine wear!

Battery

Petrol and diesel engine

Note manufacturer's instructions!



Charging:

- Remove the battery from the vehicle, beginning by disconnecting from the negative terminal.
- Ensure that there is good ventilation in the room.
- Only use suitable DC charging units.
- Connect the positive terminal of the battery to the positive output of the charging unit. The negative output is dealt with in the same way.
- Only switch the charging unit on after the battery is connected.
- Recommended charging current: 1/10 ampere of the battery capacity Ah.
- For re-charging use a charging unit with a constant charging voltage of 14.4 V.
- If the acid temperature exceeds 45°C stop the charging.
- The battery is fully charged if the charging voltage no longer increases within a period of 2 hours.

Maintenance:

- Keep the battery clean and dry.
- Only wipe the battery with a moist cloth, otherwise there is a danger of explosion.
- Do not open the battery

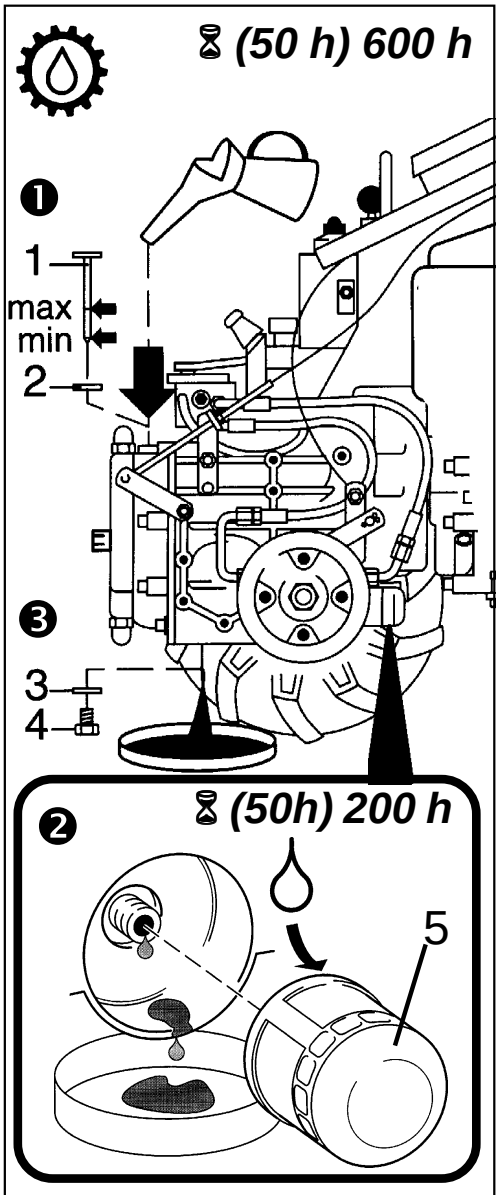
*Never leave battery in uncharged state. Avoid sparking and open flames near batteries. Careful when handling battery acid – **etching!** Only use specified fuses. If fuses are too strong, the electric system will be destroyed – **danger of fire!***

Machine

Transmission

Transmission oil is also hydraulic oil.

When changing to Bio hydraulic oil HEES, drain oil filling and twice rinse the system (– see after-sales service information).



1 Oil dipstick (A/1)
2 Sealing ring for oil dipstick
3 Sealing ring for drain screw
4 Drain screw (A/24)
5 Oil filter cartridge (A/27)

❶ ***Check oil level*** *in transmission each time before you take the machine into operation and after every* ***25*** *operating hours (oil dip-stick and filling opening (A/1). With the tool carrier parked in horizontal position, the oil level must be between the "****max****" and "****min****" marks.*

- *Screw out oil dip-stick, clean with clean cloth and screw back in.*
- *Take dip-stick out again and read oil level, refill transmission oil, if necessary. (Refilling volume between "min." and "max." = 1 l).*

❷ ***Transmission oil filter change*** *after the first* ***50*** *operating hours and then always after* ***200*** *operating hours.*

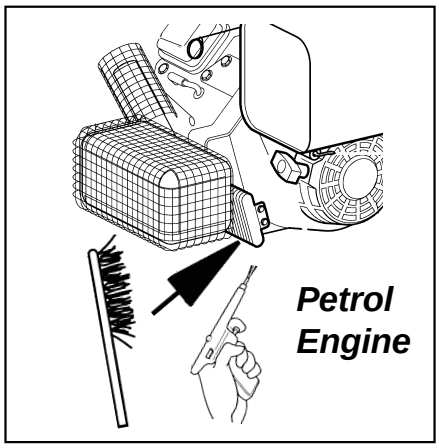
Tilt machine forwards onto the connection flange.

Screw out oil filter (A/27) and replace it – for new filter, wet the sealing ring with some oil.

Dispose of oil filter as directed.

❸ ***Transmission oil change*** *with simultaneous oil filter change after the first* ***50*** *operating hours and after every* ***600*** *operating hours while the engine is still warm.*

- *Keep oil filler plug (A/1) and drain plug (A/24) extremely clean as well as surrounding parts to prevent dirt from penetrating into the transmission.*
- *Open drain plug, collect old oil in proper container and dispose of properly.*
- *Clean drain plug; the drain plug has a magnetic core and therefore attracts metallic powder.*
- *Check sealing rings and exchange, if necessary.*
- *Screw in drain plug with o-ring and tighten.*
- *Fill in fresh transmission oil, up to level mark "max.".*
- *For proper oil quantity and quality, refer to chapter "Specifications".*
- *Close filling opening with plug/dip-stick.*



Oil cooler

After mowing for longer periods of time, clogging of plants and dust may occur in the cooling system. Sustained operation with the cooling system clogged lets the transmission heat up and causes damage.

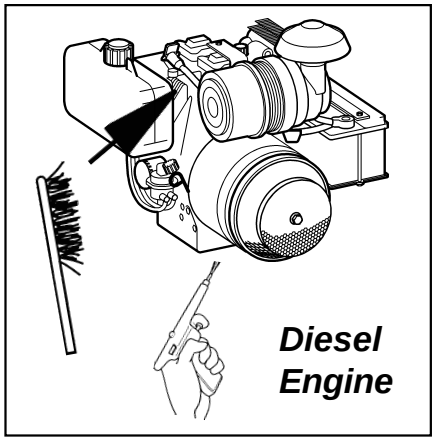
Petrol Engine

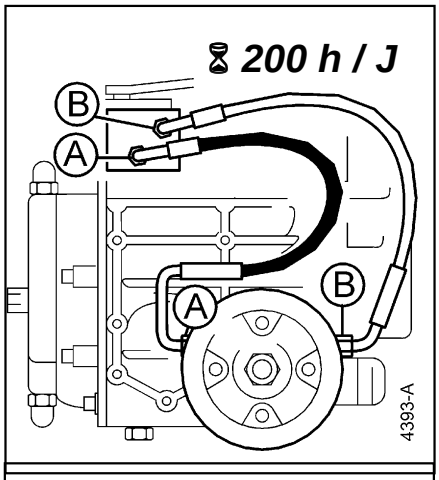
Always check oil cooler (C/21, -22) and remove dirt and plants sucked in, clean with a brush or compressed air.

Diesel Engine

*Clean fan system after every **100** hours of operation or at least **once per year**, preferably before the season starts, more often if heavily soiled.*

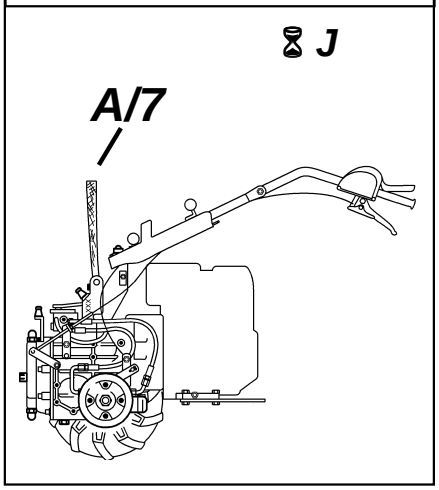
Where possible combine cleaning with a cleaning of the engine cooling system.





Hydraulic hoses

*Check hydraulic hoses always after **200** operating hours or at least **once per year** for closeness and damage.*



Brake

*Always after **200** operating hours or at least once per year, check brake jaws and brake operating system for unhindered movement and efficiency.*

→agria - Service←

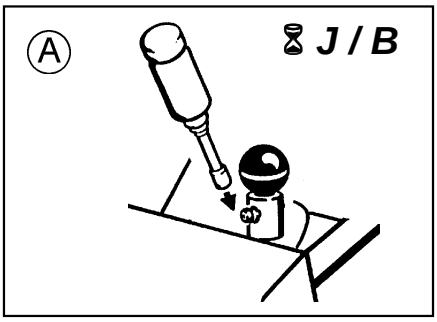
Wheel Motors

*Always after **200** operating hours, check for straight driving with the steering handle in neutral position.*

→agria - Service←

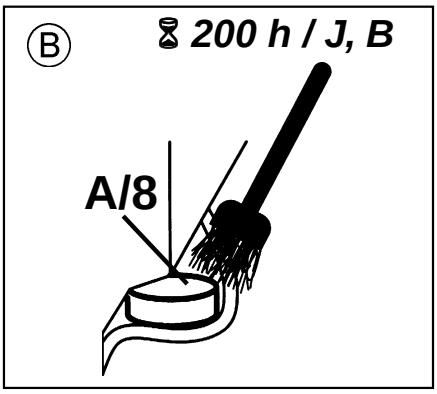
Loading Belt

*Check loading belt for damage before each use and each time You maintain the machine, replace it not later than **10 years**.*



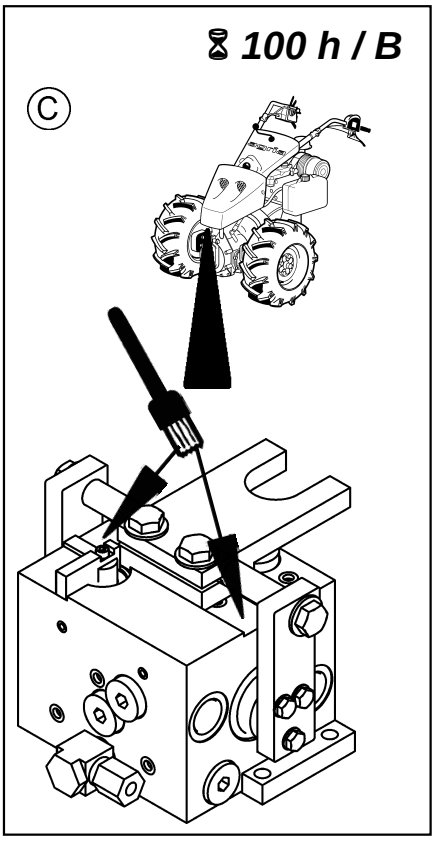
Steering Handle Locking Bolt (A)

*At certain intervals, lubricate at the grease nipple with Bio lubricating grease. At least **once per year** and after cleaning with a high-pressure cleaner.*



Steering Handle Lock (B)

*Always after **200** operating hours and always after cleaning with a high-pressure cleaner, apply some Bio lubricating grease to either side of the rollers (A/8) for the steering lock.*



Valve Steering (C)

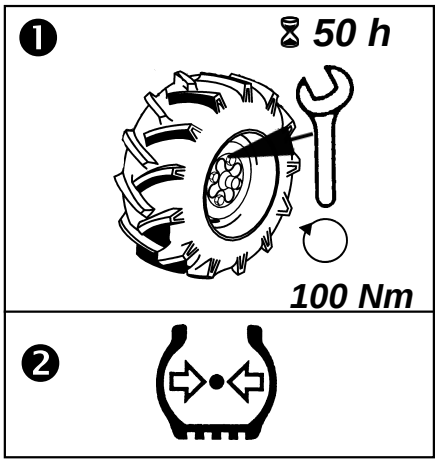
As from valve steering 15:
*Always after **100** operating hours and always after cleaning with a high-pressure cleaner, apply some Bio lubricating grease to either side of the sliding surfaces of the adjustment plate at the steering valve15.*

Steering Handle Ultra-Bushes

*Check condition always after **200** operating hours.*
→agria - Service←

Steering Handle Central Screw

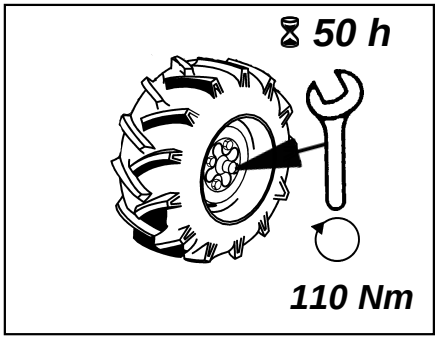
*Always after **200** operating hours, re-tighten central screw (A/9) with **140 Nm** and counter it again.*
→agria - Service←



Drive-Wheels

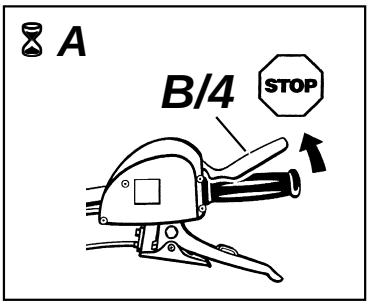
❶ ***When commissioning the tool carrier and each time you change wheels,*** *check and tighten wheel bolts and nuts after the first* ***2*** *operating hours with 100 Nm (10 kpm). Proceed likewise when doing maintenance work.*

❷ *Check tyre air pressure regularly. For smooth driving, make sure that there is the same pressure in front and rear tyres respectively.*



Wheel Hubs

● *Always after* ***50*** *operating hours, retighten the hex nuts (A/26) on the wheel hubs to 110 Nm.*



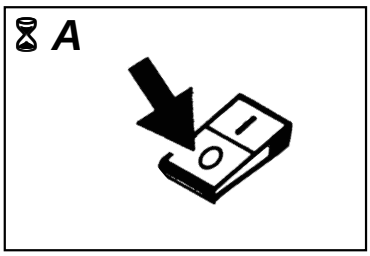
Safety circuit

Check safety circuit function each time you take up operation and each time you maintain the machine.

- *With clutch engaged and upon release of safety lever (B/4), the engine must automatically come to a stop.*
- *Check electric lines and connections and exchange, if necessary.*→agria - Service←

Engine Shut-off Switch

Petrol Engine

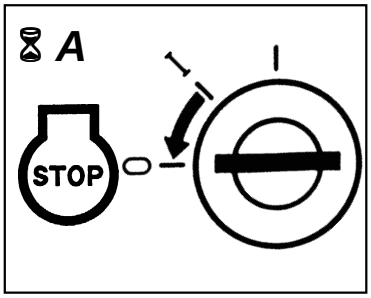


Check function of engine shut-off switch each time you take up operation and each tim you do maintenance work.

- *With shut-off switch in position “0” the engine must come to a stop.*
- *Check electric lines and connections.*

→agria - Service←

Diesel Engine



Check function of engine shut-off switch each time you take up operation and each tim you do maintenance work.

- *With shut-off switch in position “0” the engine must come to a stop.*
- *Check electric lines and connections.*

→agria - Service←

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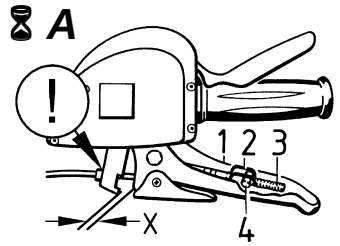
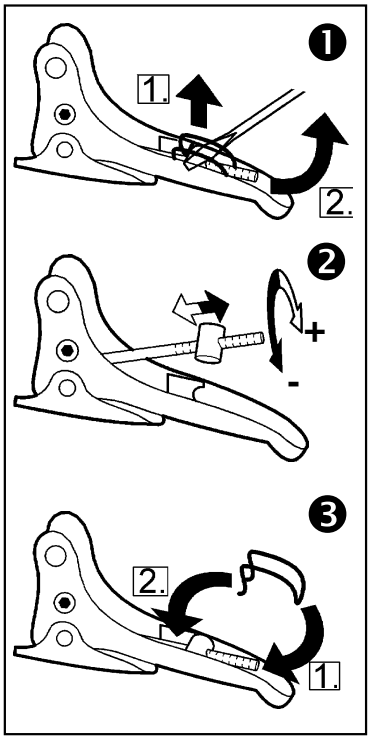


1 Hand lever
2 Retaining spring
3 Threaded end of cable
4 Adjusting pin



Adjustments on Levers

Check clutch play or clutch adjustment each time you operate the machine. If necessary, re-adjust (especially after commissioning the machine, during break-in period, and after exchanging clutch linings and brake pads).

Clutch:

X = 3 - 5 mm (Clutch play)

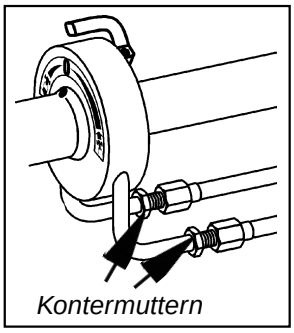
*= The Bowden cable must be placed in the hand lever support on **bottom** position!*

Adjustment:

❶*Remove retaining spring (2) and remove cable end (3) and adjusting pin (4) out of bracket in hand lever.*

❷*Adjust the adjusting pin (4) to a play of X or idle is present in position 0. Screw adjusting pin in to reduce play, screw out to increase play.*

❸*Place cable end and adjusting pin back into bracket and fit retaining spring (2).*

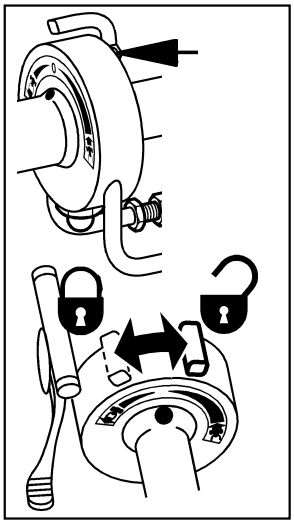

Kontermuttern

Twist-grip shift

Check for proper operation and adjustment when performing maintenance and adjust, if necessary

Setting

Set the twist-grip shift on the Bowden cable adjustment screw so there is no play, so that the marking point on the twist-grip matches the 0 position of the pump and the pictograph.



Twist-grip locking lever

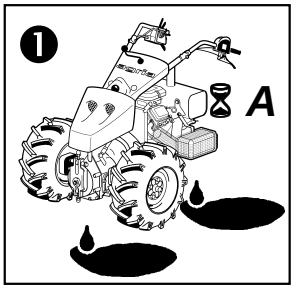
Setting the clamp

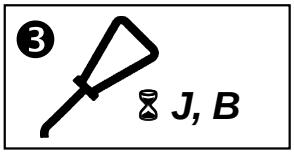
Loosen threaded rod about 1 revolution with hex key

Set locking lever so that:

= twist-grip can turn

= twist-grip is clamped, cannot turn





General Maintenance

❶ *Every time You take up operation watch out for fuel and oil leakage, repair if necessary.*

❷ *Regularly check bolts and nuts for tight fit and tighten them as necessary.*

❸ *At least once a year and after cleaning: Slightly grease all sliding and moving parts (e.g. speed control lever, lever bearing, etc.) with bio-lubricating grease and bio-lubrication oil.*

Cleaning

After each cleaning (spraying with water, especially with air-compressed water jets) lubricate all lubrication points, oil and let tool carrier run for a short time to press water out.

Apply grease generously to leave a grease ring around bearings to prevent water, plant sap, and dirt from penetrating.

Clean engine only with a cloth. Avoid spraying with air-compressed water jets, as water might leak into ignition and fuel system causing malfunctions.

Storage

For longer periods of no operation

a) Clean thoroughly

Repair paint coat

b) Engine preservation

Petrol Engine

● *Drain fuel completely or fill fuel tank and add fuel stabilizer (agria no. 799 09).*

- Observe enclosed instructions.
Let engine run for approx. 1 minute.

● *Change the engine oil.*

● *Fill a tea-spoon (approx. 0.03l) of engine oil into the spark plug opening. Slowly crank the engine.*

● *Reinstall the spark plug and set the piston to compression via the recoil starter (pull the starter grip until resistance is felt) – valves are closed.*

● *Slowly crank the engine after every 2–3 weeks (spark-plug connector is removed). Then set the piston to compression again.*

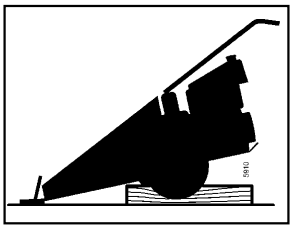
Diesel Engine

- Change the engine oil.

- For longer storage, close exhaust pipe and air filter opening with crape or similar tape.

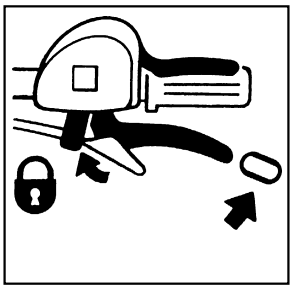
c) Drive-wheels

Support drive-wheels in such a way that tyres have no ground contact. Pneumatic tyres are quickly destroyed, if left standing under load and unsupported.



d) Pull clutch

Always park tool carrier with clutch lever pulled (pawl locked in place). Otherwise clutch problems may result due to corrosion.



e) Parking

To avoid severe corrosion:

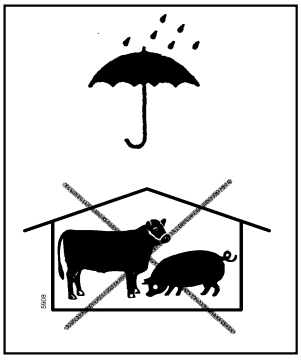
- to preserve the machine from atmosperic influences

do not park the machine:

- in humid rooms

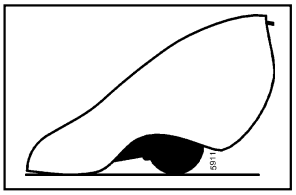
- in rooms where fertilizer is stored

- in stables or adjacent rooms.



f) Covering the machine

Protect the machine with cloth or a similar cover.



5

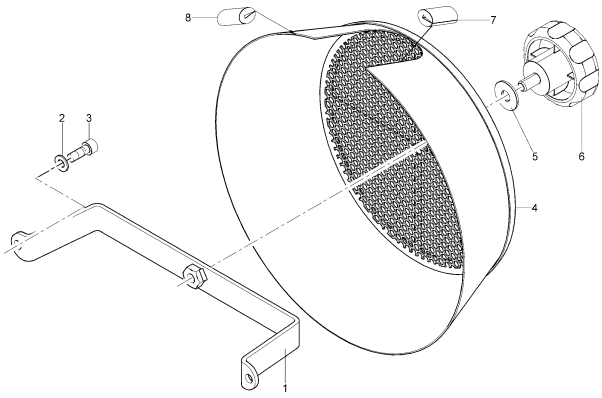
Observe safety instructions! *Have all serious malfunctions on the machine or engine repaired by your agria workshop. They have the proper tools. Improper repairs can only add to the damage.*

Problem	Possible cause	Remedy	Page
Petrol engine:			
Petrol engine does not start	*- Spark plug connector not connected*	*Connect spark plug connector*	
	- Choke is not operated	*Set choke lever to position CHOKE*	*37*
	- Engine shut-off switch is set to "0"	*Set engine shut-off switch to "I"*	*37*
	- Safety circuit is not set to start position	*Set safety circuit to start position*	*37*
	- Fuel tank empty or poor fuel	*Fill fresh fuel*	*35*
	- Fuel line clogged	*Clean fuel line*	*48*
	- Defective spark plug	*Clean, adjust or exchange spark plug*	*48*
	- Engine too much fuel ("flooded engine")	*Dry and clean spark plug and start at full throttle*	*48*
	- Engine-off-line defective	*Check line and connections*	✶
	- Inleaked air due to loose caburetor and suction line	*Tighten attachment bolts*	
Misfirings in petrol engine	*- Engine running in CHOKE range*	*Set CHOKE lever to operating position*	*37*
	- Loose ignition cable	*Fit connector tightly on ignition cable, fix ignition cable retaining device, fit connector tightly on spark plug*	
	- Clogged fuel line or poor fuel	*Exchange fuel filter,fill fresh fuel*	*48*
	- Vent opening in fuel tank cap clogged	*Exchange fuel tank cap*	
	- Water or dirt in fuel system	*Drain fuel and fill fresh fuel*	
	- Air filter clogged	*Clean air filter or exchange*	*46 - 47*
	- Carburetor misadjusted	*Re-adjust carburetor*	✶ *BM*
Excessive temperature in petrol engine	*- Low engine oil level*	*Refill oil immediately*	*44*
	- Impaired cooling	*Clean cooling fan screen, clean internal cooling fins*	*49*
	- Air filter clogged	*Clean air filter*	*46 - 47*
	- Carburetor misadjusted	*Re-adjust carburetor*	✶ *BM*
Misfirings in petrol engine at high speeds	*- Short firing intervals*	*Adjust spark plug*	*48*
	- Incorrect idle mixture	*Adjust carburetor*	✶ *BM*
Petrol engine frequently stalls in idle	*- Firing interval too long, defective spark plug*	*Adjust or replace spark plug*	*48*
	- Carburetor misadjusted	*Re-adjust carburetor*	✶ *BM*
	- Air filter clogged	*Clean air filter*	*46 - 47*

Problem	Possible cause	Remedy	Page
Petrol engine does not run smoothly	- Speed control linkages clogged or jammed	Clean speed control linkages	49
Petrol engine does not stop when set to stop	- Defective engine-stop-line, earth missing	Check line and connection, check ground contact	✶ ✶
Petrol engine output too low	- Air filter clogged - Loose cylinder head or damaged gasket - Poor compression	Clean air filter Tighten cylinder head, exchange gasket Have engine checked	46 - 47 ✶ ✶
Diesel Engine:			
Diesel engine does not start	- Speed control lever set to “min” - Safety circuit is not set to start position - Fuel tank empty or poor fuel - Fuel line or fuel filter clogged - Electrical cable not connected to solenoid valve - Clogged fuel line or fuel filter - Injector nozzle or injection line clogged - Wrong injection pressure	Move speed control lever to “Half speed” Set safety circuit to start position Fill fresh fuel Clean fuel line or filter Check electric line Clean fuel line or fuel filter Clean injector nozzle or injection line Check pressure	40 21 35 71 ✶ BM ✶
Misfirings in diesel engine	- Clogged fuel line or poor fuel - Vent opening in fuel tank cap clogged - Water or dirt in fuel system - Air filter clogged - Injector nozzle or injection line clogged	Clean fuel line,fill fresh fuel Exchange fuel tank cap Drain fuel and fill fresh fuel Clean air filter Clean injector nozzle or injection line	 BM BM ✶ BM
Excessive temperature in diesel engine	- Lack of engine oil - Impaired cooling	Refill engine oil immediately Clean fan grid, clean internal cooling fins	BM 50
Misfirings at high speeds	- Injector nozzle clogged - Wrong injection pressure	Clean injector nozzle Re-adjust injection pressure	✶ BM
Engine frequently stalls in idle	- Air filter clogged	Clean air-filter	51

Problem	Possible cause	Remedy	Page
Diesel engine does not stop when set to "STOP"	- Ignition lock damaged of engine-off-cable	Check Ignition lock	✶ BM
	- Solenoid valve not working	Check electrical cable to solenoid valve, Check solenoid valve	71
Diesel engine output too low	- Air filter clogged	Clean air filter	51
	- Loose cylinder head or damaged gasket	Tighten cylinder head, exchange gasket	✶
	- Poor compression	Have engine checked	✶
E-starter does not start	- Battery is empty	Charge or replace the battery	51
	- Fuse is defective	Replace fuse	33
	- Harness, E-starter damaged	Check harness and E-starter	✶
E-Start Version Petrol Engine:			
E-starter does not start	- Battery is empty	Charge or replace the battery	51
	- Fuse is defective	Replace fuse	33
	- Harness, E-starter damaged	Check harness and E-starter	✶
No warning signal sounds when engine stops	- Start switch not activated	Move start switch to "I"	37
	- Beeper is defective	Replace beeper	✶
	- Fuse is defective	Replace fuse	33
	- Oil pressure switch damaged	Replace oil pressure switch	✶
	- Harness is damaged	Check harness	✶
	- Regulator is defective	Check regulator	✶
Warning signal sounds during operation	- Fuse is defective	Replace fuse	33
	- Oil pressure too low	Check engine oil level, refell if necessary	44, BM
	- Harness is damaged	Check harness	✶
	- Regulator is defective	Check regulator	✶
	- Generator is defective	Check generator	✶
Machine in General:			
Clutch does not decouple	- Clutch lever misadjusted	Adjust clutch free play	57
Clutch slips	- Clutch lever misadjusted	Adjust clutch free play	57
	- Worn out clutch	Exchange clutch disc	✶
No wheel drive	- Clutch is not engaged	Engage clutch using the clutch lever	23
	- Idle shift is operated	Activate hydraulic drive	25
Excessive vibration	- Loosened attachment bolts	Tighten attachment bolts	58

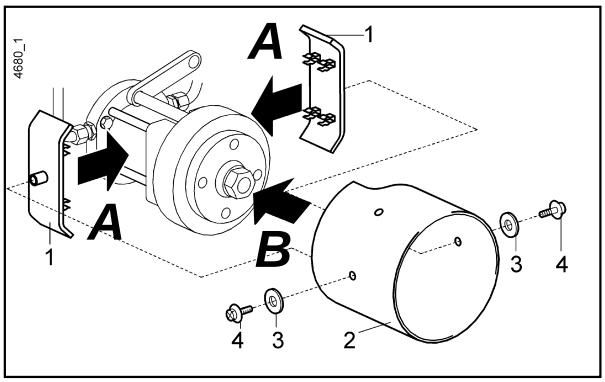
✶ = For this purpose contact your agria workshop.
BM = see separate engie operating instructions



Kit Sreen fan

Option: Parts set 799 60

Recommendable for mowing use



Roller guard

Option: Parts set 760 58

Assembly:

A *Clip roller guard support (1) to draw spindle of wheel motors*
B *Push roller guard (2) over wheel motors*
- Note notch for brake lever.
Fasten with screws (4) and washers (3)

agria Order No.

Fuel Stabilizer for Petrol Engine

799 09	*Fuel stabilizer*	*pouch*	*5 g*

Varnishes

181 03	*Spray varnish birch-green*	*spray tin*	*400 ml*
712 98	*Spray varnish red, RAL 2002*	*spray tin*	*400 ml*
509 68	*Spray varnish black*	*spray tin*	*400 ml*

Glues *(for screw fastening)*

559 94	*Glue (medium) LOCTITE 242*	*bottle*	*50 ml*
559 95	*Glue (strong) LOCTITE 270*	*bottle*	*50 ml*
559 96	*Glue (ultra strong) LOCTITE 638*	*bottle*	*50 ml*

Surface Sealing

509 68	*Surface sealing (liquid) LOCTITE 573*	*tube*	*250 ml*

Wear Parts

Petrol Engine:

716 22	*Air filter element 18 HP*		
640 88	*Foamed preliminary filter 18 HP*		
101 445	*Air filter element, cyklone*	*P82-1575*	
789 91	*Fuel filter*		
100 102	*Air filter element 22 HP*		
716 23	*Engine oil filter cartridge*		
685 60	*Spark plug, Bosch FR8 DC; CHAMPION RC12YC*		
759 28	*Flat plug fuse 15A*		







Diesel-Motor

101 445	*Air filter element, cyklone*	*P82-1575*
101 444	*Rain protection cap, air filter*	
597 54	*Engine oil filter*	
478 014	*Fuel Filter*	
759 28	*Flat plug fuse15 A*	

Transmission:

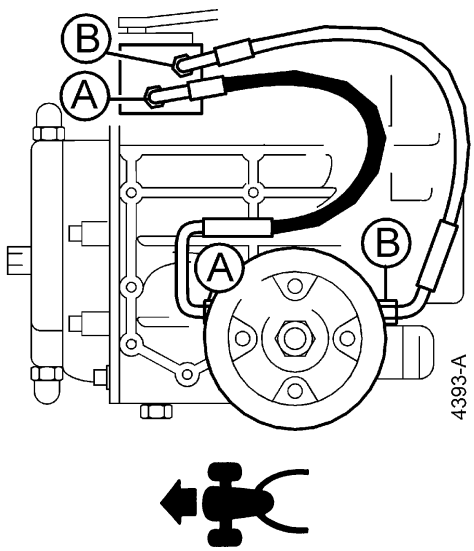
009 16	*O-ring 16x22x1.5, oil dip-stick and oil drain plug*		
527 06	*Oil filter cartridge*		

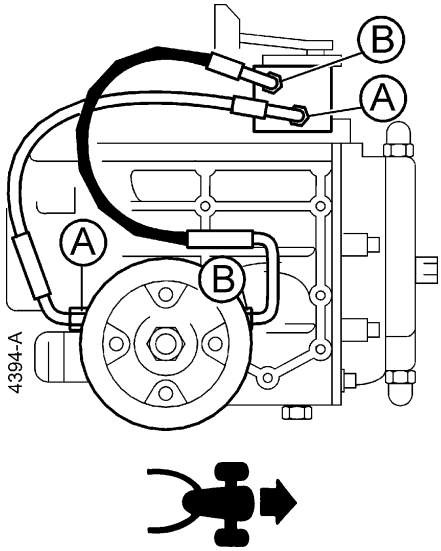
Emergency Tyre Repair:

713 13	*Tyre repair gel*	*Terra-S*	*bottle*	*1l*

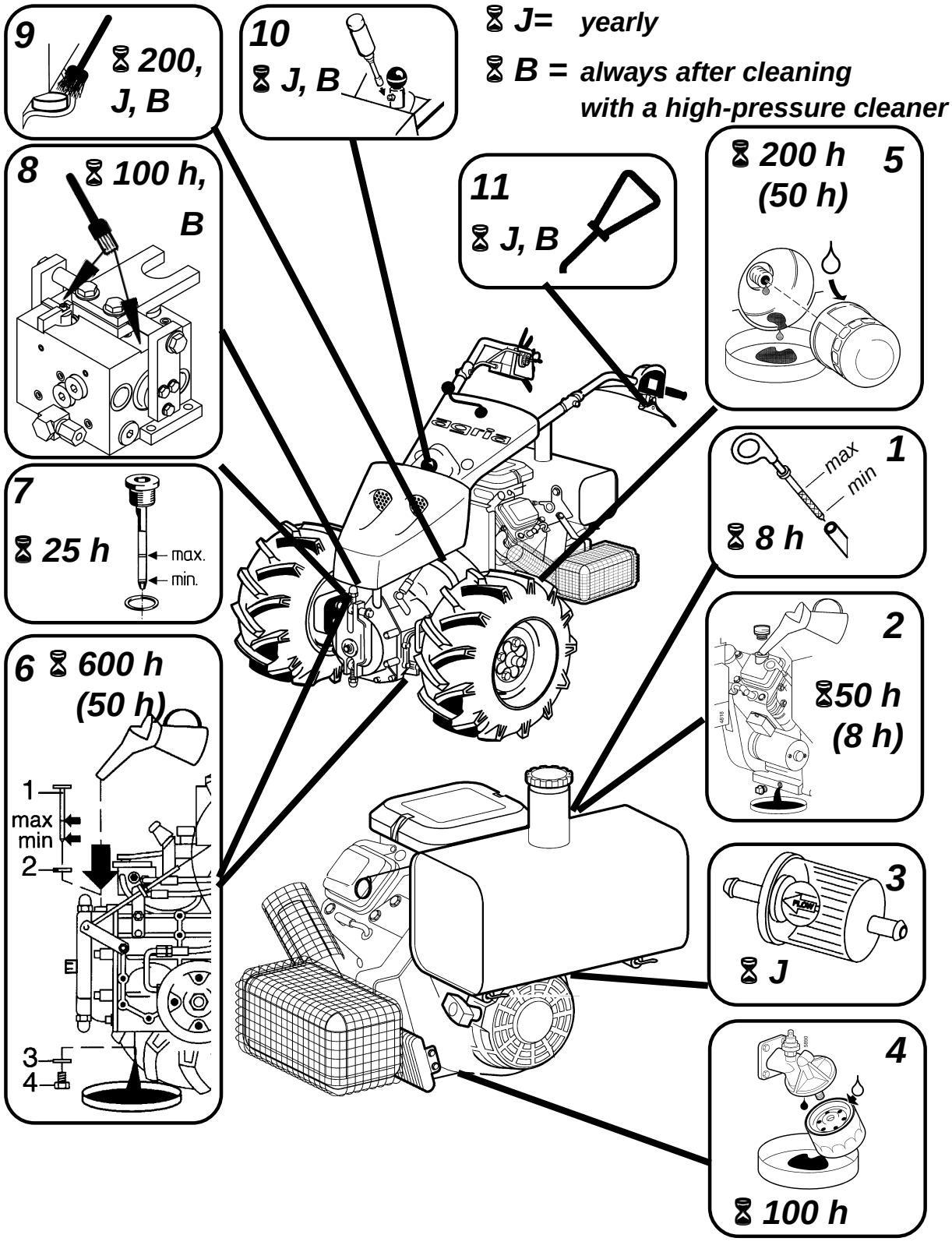
Lists of Spare Parts

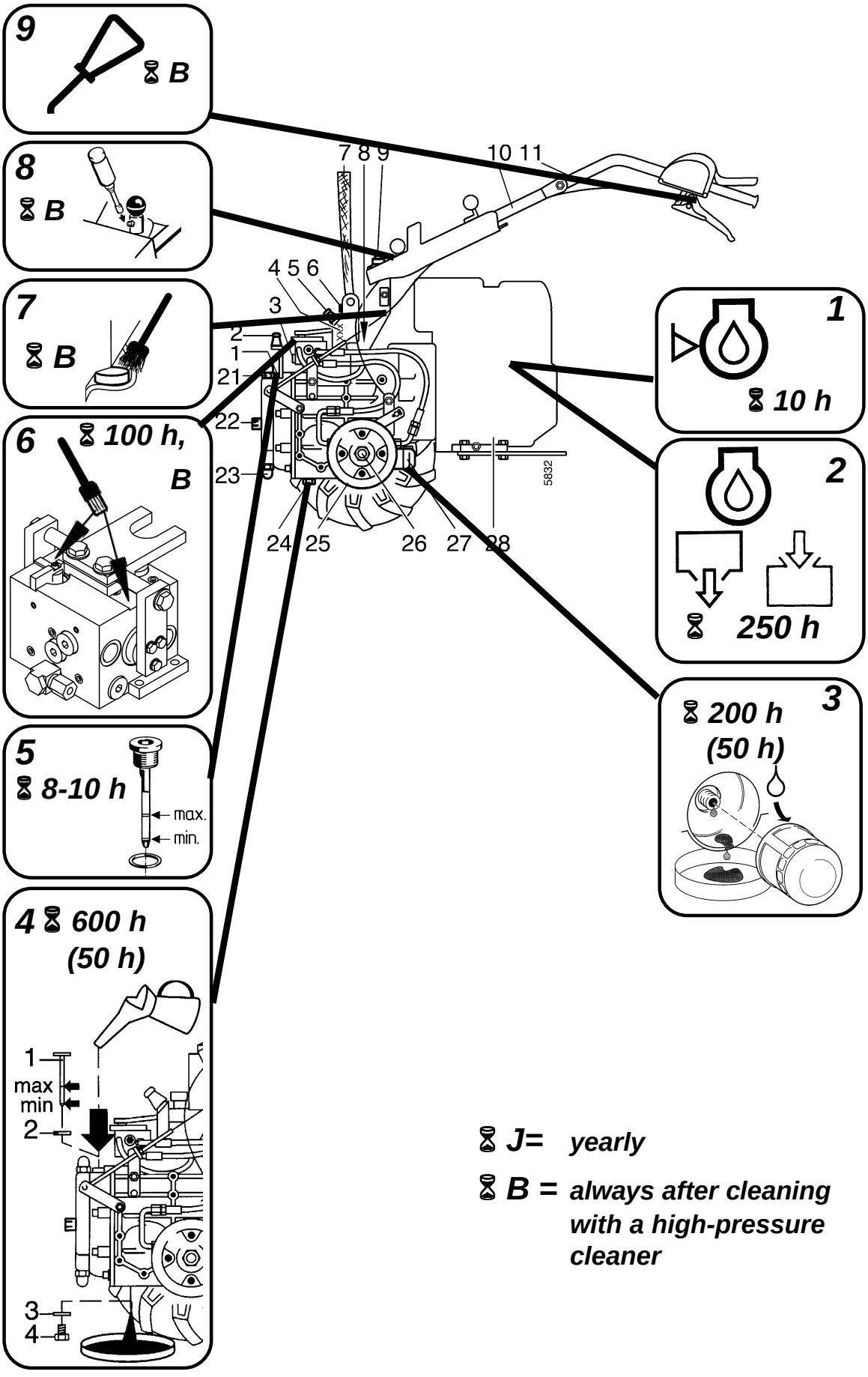
997 153	*Tool carrier 5900, Bison/Taifun*
997 083	*Implements for 3400, 5500, 5900*
997 137	*Briggs & Stratton Vanguard Engine*





	left	***right***
A = Hydraulic hose	*774 25*	*774 26*
B = Hydraulic hose	*768 43*	*768 44*


9
200, J, B
10
J, B
J= yearly
B = always after cleaning with a high-pressure cleaner
8
100 h, B
11
J, B
200 h (50 h)
5
7
25 h
max.
min.
1
max
min
8 h
6
600 h (50 h)
2
50 h (8 h)
1
max
min
2
3
4
3
J
4
100 h

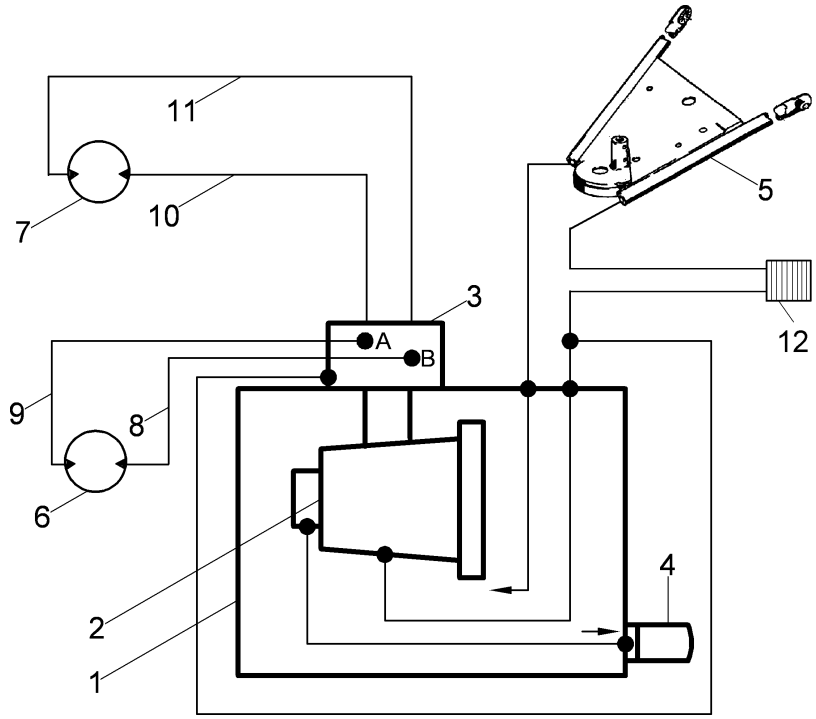


J= *yearly*

B = *always after cleaning with a high-pressure cleaner*

		P	A	Toutes les x h d'utilisation									J	B	Page
				2	4	8	25	50	100	200	400	600			
Vérifier le bon fonctionnement de l'interrupteur de			K												56
Vérifier le fonctionnement de l'interrupteur d'arrêt moteur			K												56
Vérifier le réglage du jeu du levier			K												56
Vérifier le filtre à air			K												46-47, 51
Vider le préfiltre du filtre à air cyclone			K												47, 51
Nettoyer la grille d'air frais			K												49, 50
Nettoyer autour du pot d'échappement			K		K										49, 50
Nettoyer le régulateur de régime			K		K										59
Vérifier le niveau d'huile moteur/compléter		1	K			K									44, BM
Vérifier les vis et les écrous			K				K								58
Resserrer les écrous ou goujons de roues				K											55
Première vidange d'huile moteur, *puis toutes les*	●	2				W		W							44
Première vidange d'huile moteur, *puis toutes les*	◆	2													BM BM
Premier nettoyage du filtre à l'huile, *puis toutes les*	◆														BM BM
Nettoyer le filtre à air cyclone							W								47, 51
Vérifier le niveau d'huile b.v./hydraulique		7					K								52
Nettoyage							K								58
Nettoyer le préfiltre à air	●						W								46
Resserrer les écrous de moyeux de roues								W							55
Remplacer le filtre à huile b.v. 1ère fois *puis toutes les*		5						W		W					52
Première vidange d'huile b.v. *puis toutes les*		6						W				W			52
Vérifier la sangle								K					K		53
Graisser les glissières de la soupape		8							K					K	54
Nettoyer la bougie, *Régler l'écartement des électrodes*	●								K						48
Remplacer le filtre à huile moteur	●	4							W						45
Nettoyer la cartouche de filtre à air									W						46-47
Remplacer le filtre à air cyclone															47, 51
Nettoyer les déflecteurs, les ailettes de refroidissement, *le refroidisseur à huile* *plus tôt si nécessaire!*									F				F		49, 50
Nettoyer refroidisseur à huile	◆								F				F		53
Remplacer la bougie	●									K					48
Graisser rouleaux de blocage mancherons		9								K			K	K	54
Remplacer la cartouche de filtre à air, *plus tôt si nécessaire!*										W					46-47, 51
Contrôler les douilles ultra de mancheron										F					54
Resserrer la vis centrale de mancheron										F					54
Vérifier le frein										F					53
Vérifier déplcmt rectil. des moteurs de roues										F					53
Vérifier les flexibles hydrauliques										W			W		53
Régler le carburateur	●														BM
Régler le jeu des soupapes	●										F				BM
Nettoyer la culasse											F				BM
Graisser le boulon d'arrêt de mancheron		10											K	K	54
Nettoyer l'injecteur et le vérifier	◆														BM
Remplacer les durites de carburant	●												W*		48
Remplacer les durites de carburant	◆														BM
Remplacer le filtre carburant	●	3											W		48
Remplacer le filtre carburant	◆														BM
Graisser toutes les pièces mobiles		11											K	K	58

● = *Only petrol engine*
◆ = *Only diesel engine*
P = *Item in lubrication chart (page 66 resp. 67)*
A = *Each time before you take up operation*
B = *After each cleaning, especially with a high-pressure cleaner*
J = *At least once per year*
K = *Checks and maintenance to be executed by operator*
W = *Maintenance to be executed by professional workshop*
F = *Maintenance should be carried out by your agria workshop*
BM = *See separate engine operating instructions*
* = *After 2 years*



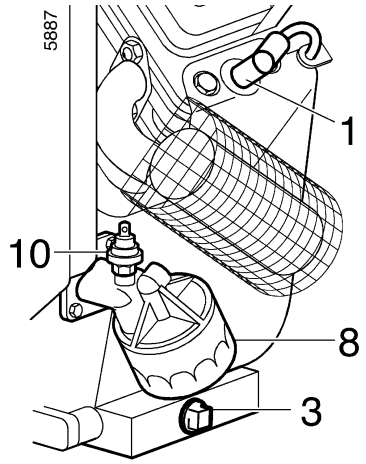
1 *Transmission incl. oil reservoir*
2 *Hydraulic pump*
3 *Valve steering*
4 *Filter cartridge*
5 *Lower handlebar with oil cooler*
6 *Wheel motor left*
7 *Wheel motorright*
8 *Hydraulic hose left B*
9 *Hydraulic hose left A*
10 *Hydraulic hose right A*
11 *Hydraulic hose right B*
12 *Oilcooler*

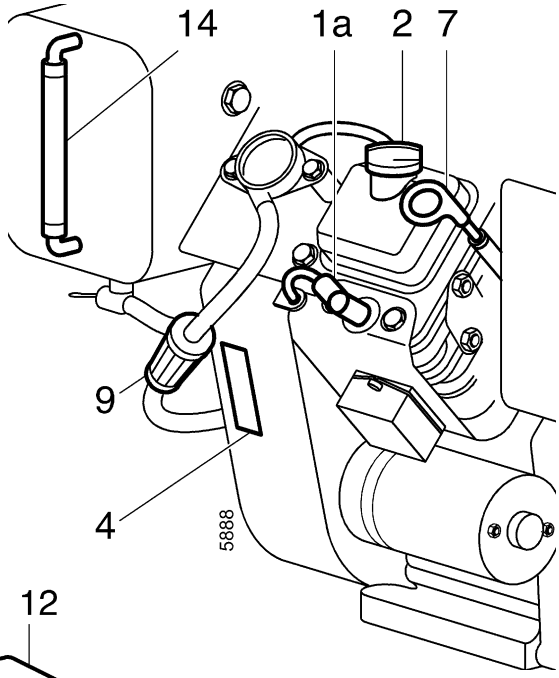
Fig. C

Engine B&S Vanguard 18 HP / 22 HP

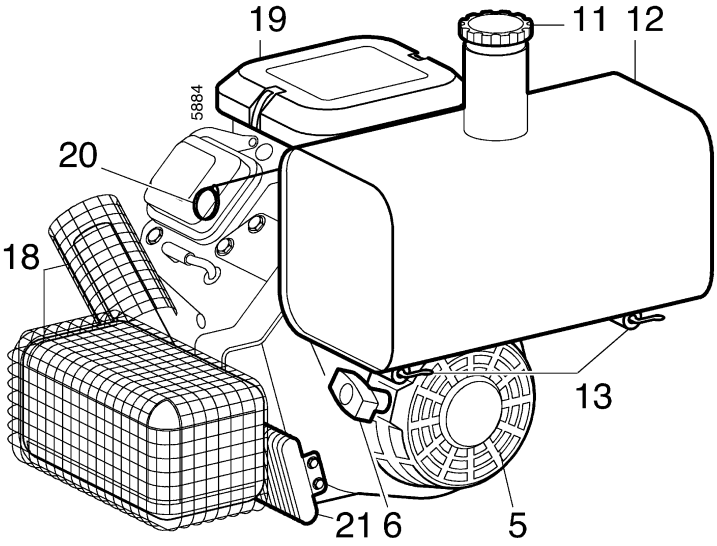
1 Spark plug/spark plug connector left
1 a Spark plug/spark plug connector right
2 Oil filler tube
3 Oil drain plug
4 Engine number
5 Recoil starter/cooling air screen
6 Starter handle
7 Oil dip-stick
8 Oil filter
9 Fuel filter
10 Oil pressure switch
11 Fuel tank cap
12 Fuel tank
13 Fuel tap
18 Muffler
19 Air filter
20 Choke lever
21 Oil cooler hydraulic
22 Oil cooler engine (only 22 HP)
31 Battery
33 Starter switch
34 Socket
35 Fuse holder (with flat plug fuse)

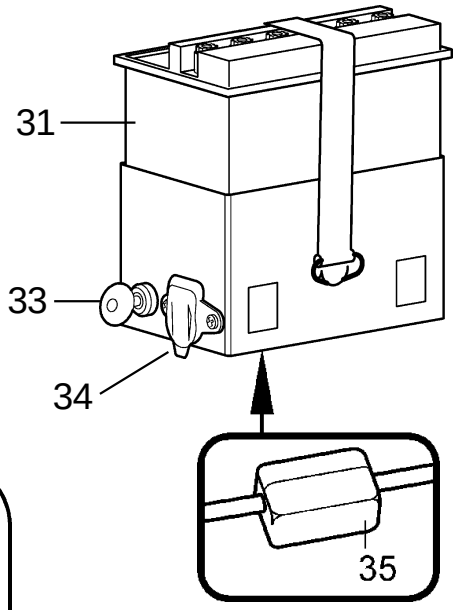
Fig. C B&S Vanguard



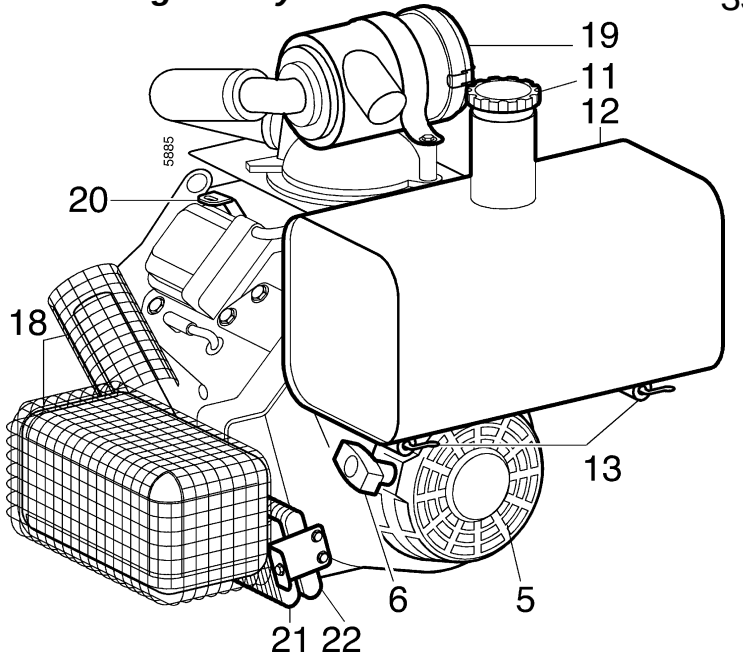


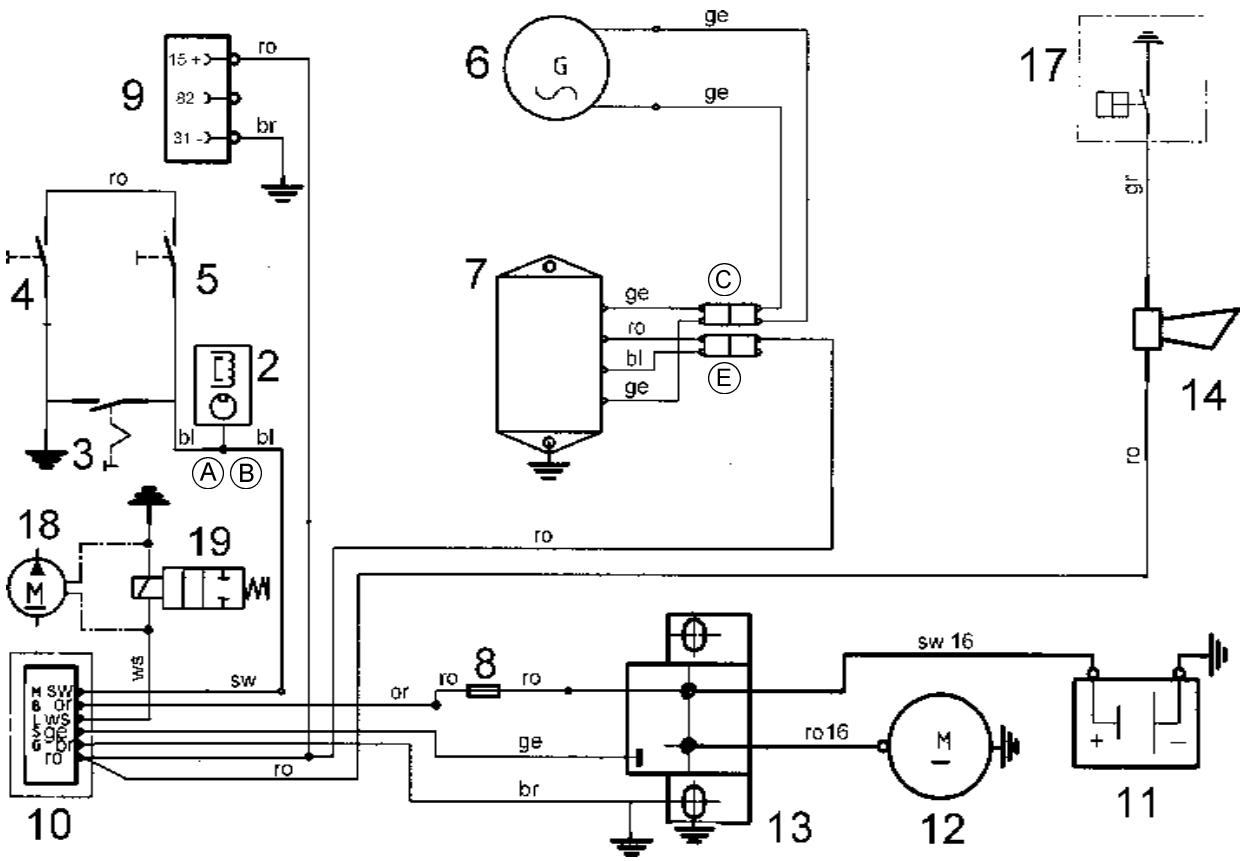
B&S Vanguard standard air filter



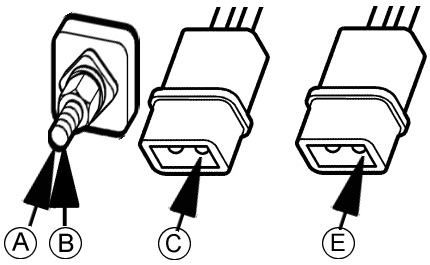


B&S Vanguard cyclone air filter





bl = blue
br = brown
ge = yellow
gr = grey
or = orange
ro = red
sw = black
ws = white



Connection at the engine:

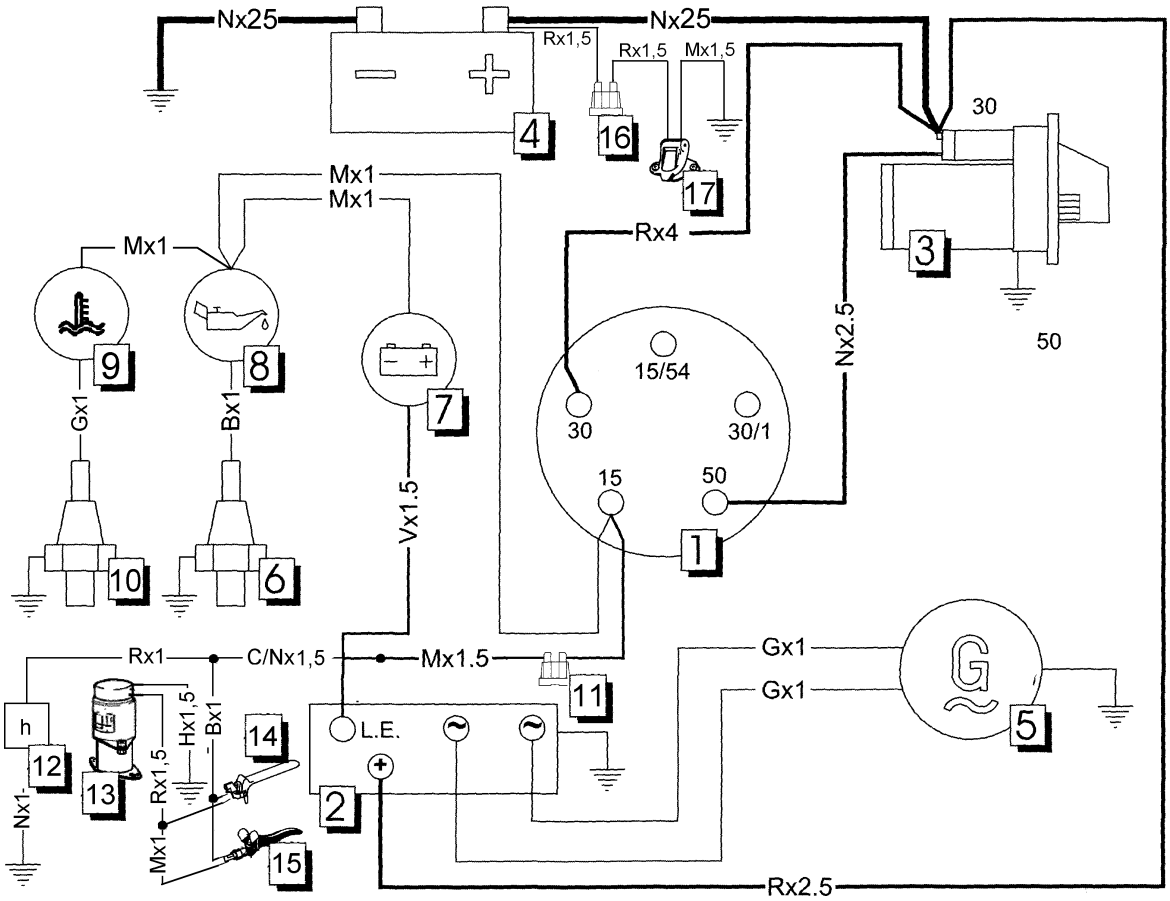
Ⓐ Ignition system
➔ Safety circuit steering

Ⓑ Ignition system
➔ Start switch

Ⓒ (2x ge) Generator
➔ Regulator

Ⓔ (ro) Regulator➔ Start switch

2 Magnet ignition system
3 Engine shut-off switch
4 Switch in clutch lever
5 Switch in safety circuit lever
6 Generator 12 V 16 A
7 Regulator 12 V-
8 Fuse 25 A
9 Socket 12 V - DIN 9680-A
10 Start switch
11 Battery
12 E-Starter 12 V
13 Start relay
14 Beeper
17 Switch, engine oil pressure
18 Fuel pomp electrical (optional)
19 Stop valve in the carburetor (only version 22 HP)



1 Ignition lock / Start switch
2 Regulator
3 E-Starter
4 Battery
5 Alternator
6 Switch, engine oil pressure
7 Charge indicator
8 Oil pressure indicator
9 Engine temperature indicator
10 Temperature switch
11 Fuse
12 Working hours counter
13 Solenoid valve
14 Switch, safety circuit lever
15 Switch, clutch lever
16 Fuse for Socket
17 Socket

colour x cross-section

colour:
A = white
B = blue
C/N= pink/black
G = yellow
H = grey
M = brown
N = black
R = red
V = green

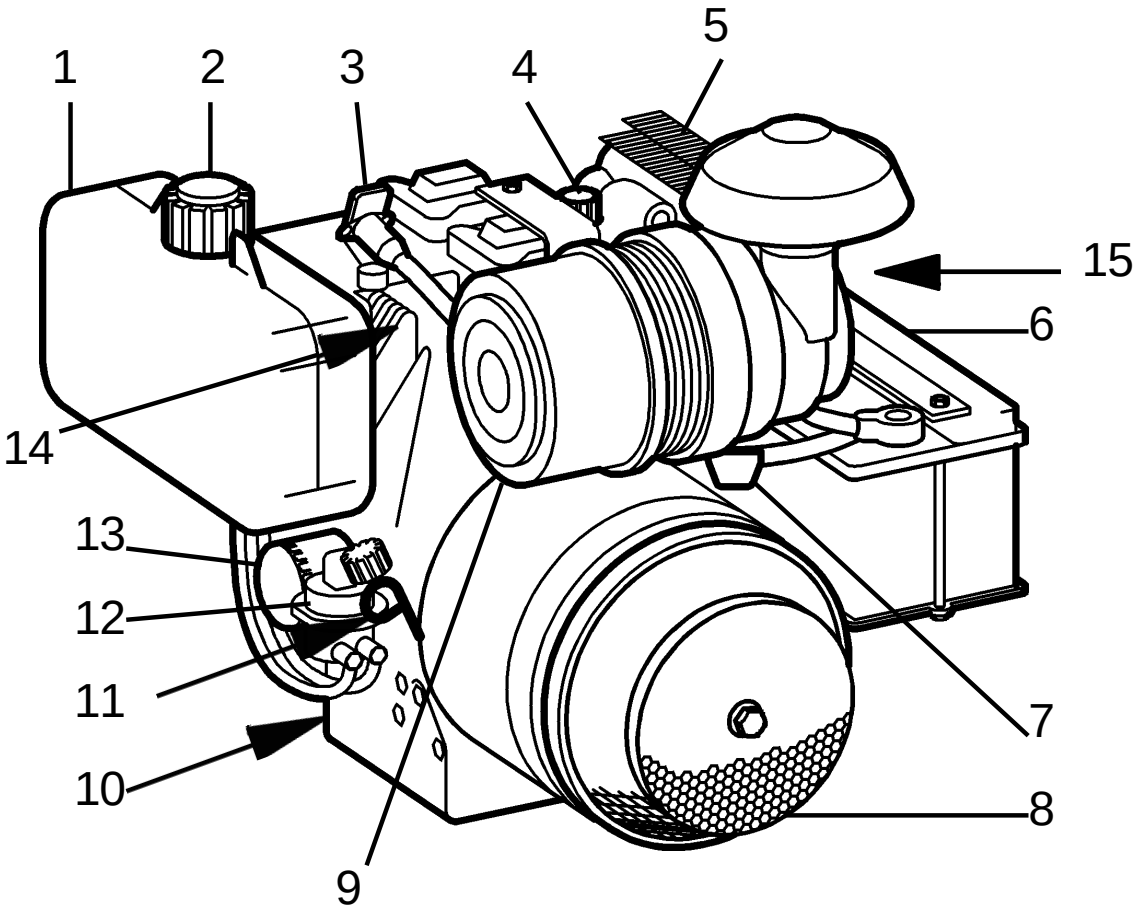
Fig. D

Engine Lombardini 25LD425:

1 *Fuel tank*
2 *Fuel tank cap*
3 *Elektrical socket12 V DIN 9680-A*
4 *Oil filler tube*
5 *Muffler*
6 *Battery*
7 *Fuse for socket*
8 *Cooling air screen*
9 *Air filter*
10 *Oil drain plug*
11 *Oil dip-stick*
12 *Fuel pomp*
13 *Oil filter*
14 *Hydraulic oil cooler*
15 *Engine no. (underneath E-Starter)*

Fig. D

Engine Lombardini 25LD425:



Conformity Declaration

agria

EG-Konformitätserklärung
EC Declaration of Conformity
CE Déclaration de conformité
EG conformiteitsverklaring

(D)	(F)	(GB)	(NL)
Wir	*Nous*	*We*	*Wij*

agria-Werke GmbH
Bittelbronner Str. 42
D-74219 Möckmühl/Württ.

erklären, dass das Produkt	*déclarons que le produit*	*herewith declare that the product*	*verklaren dat het produkt*
Geräteträger	***Porte-Outils***	***Tool Carrier***	***Werktuigdrager***

Taifun 5900 241, -251, -253, -521

mit allen einschlägigen Bestimmungen der EG-Maschinenrichtlinie ***2006/42/EG*** *in Übereinstimmung ist.*	*est conforme à toutes les exigences respectives selon la directive relative aux machines* ***2006/42/CE.***	*conforms to all relevant specifications of the Directive on Machinery* ***2006/42/EC.***	*voldoet aan de desbetreffende bepalingen van de EG-machinerichtlijn* ***2006/42/EG.***
Die Maschine ist auch in Übereinstimmung mit allen einschlägigen Bestimmungen der folgenden EG-Richtlinien: ***2004/108/EG, 2000/14/EG***	*La machine est aussi conforme à toutes les exigences respectives selon les directives CE suivantes:* ***2004/108/CE, 2000/14/CE***	*It is also conform to all relevant specifications of following EC directives:* ***2004/108/EC, 2000/14/EC***	*De machine voldoet ook aan de desbetreffende bepalingen van het volgende EG-richtlijnen:* ***2004/108/EG, 2000/14/EG***
Folgende harmonisierte Normen (oder Teile davon) oder techn. Spezifikationen wurden angewendet:	*Les normes harmonisées (ou extraits de celles ci) ou les spécifications techniques suivantes ont été appliquées:*	*Following harmonized standards (or parts of it) or technical specifications have been applied:*	*De volgende geharmoniseerde normen (of delen ervan) of technische specificaties werden toegepast:*

EN 12733: 2001 + A1: 2009

Möckmühl, den 15.02.2010

Siegfried Arndt
Geschäftsführer
Directeur
Managing Director
Bedrijfsleider

Rudolf Tigges
Leiter Entwicklung & Konstruktion
Responsable développement et études
Head, Research and Development
Hoofd ontwikkeling en constructie

Herr Tigges ist bevollmächtigt die technischen Unterlagen zusammenzustellen.
Monsieur Tigges est habilité à agencer la documentation technique.
Mr. Tigges is authorized to assort the technical documents.
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