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STIGA PARK

RANGER

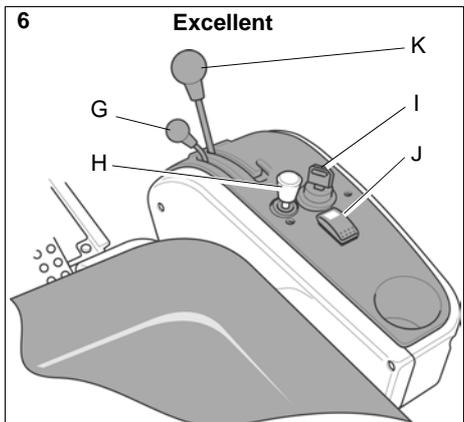
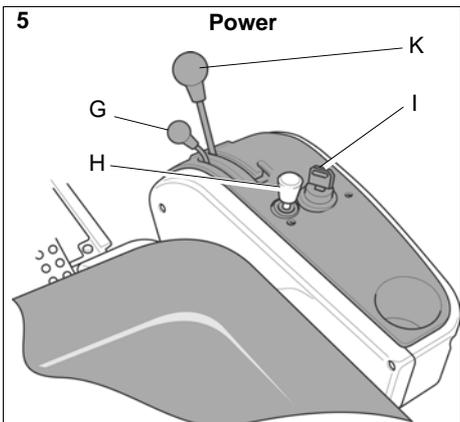
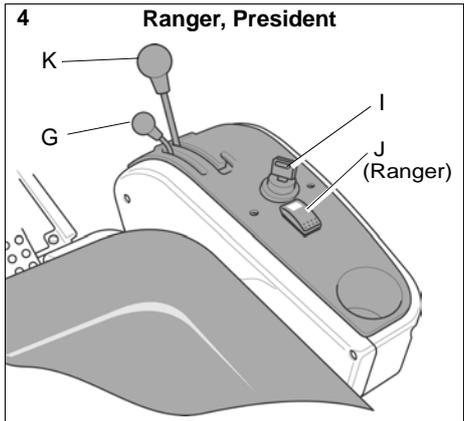
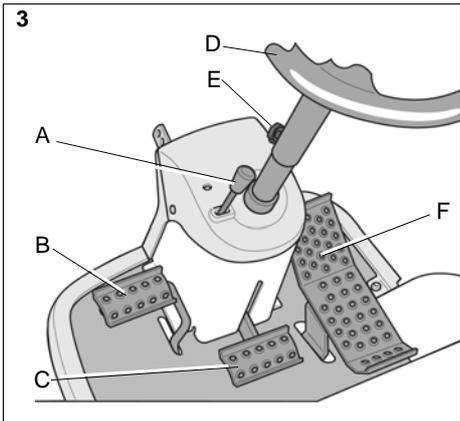
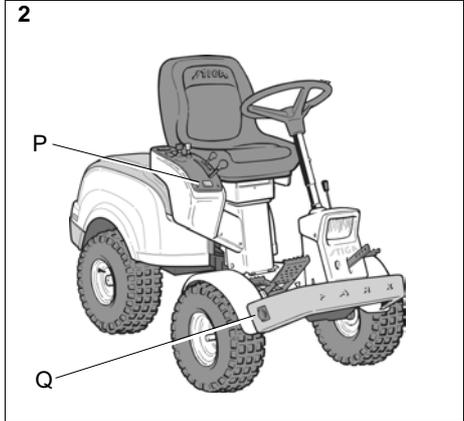
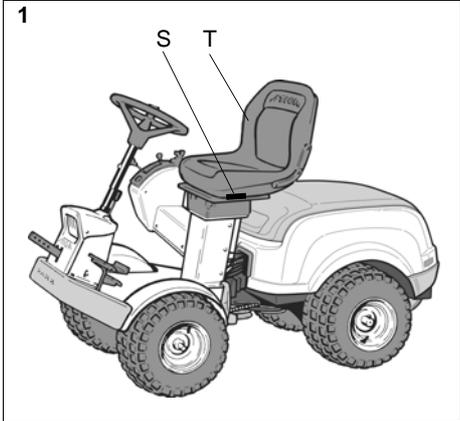
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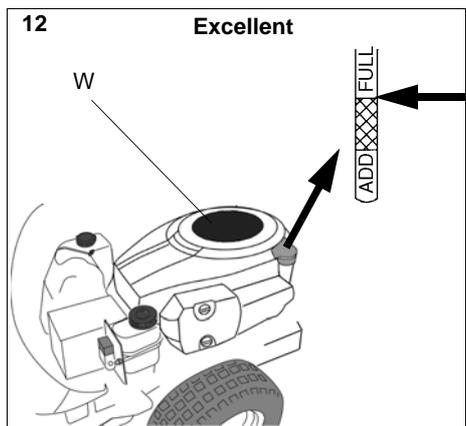
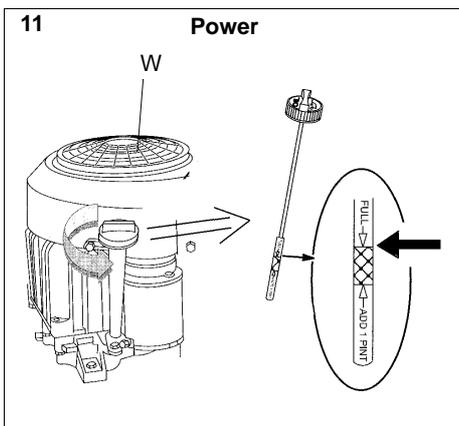
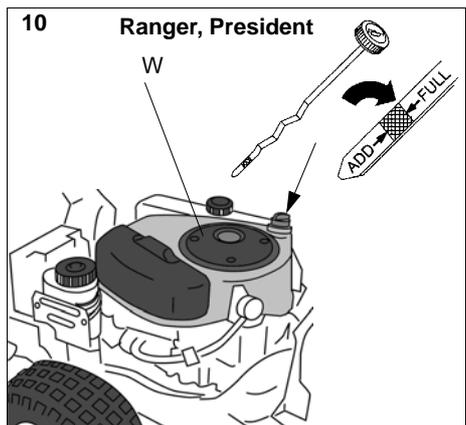
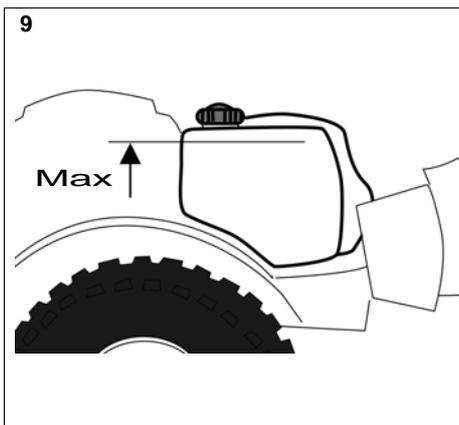
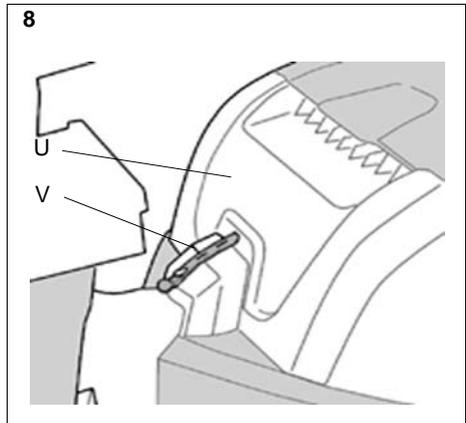
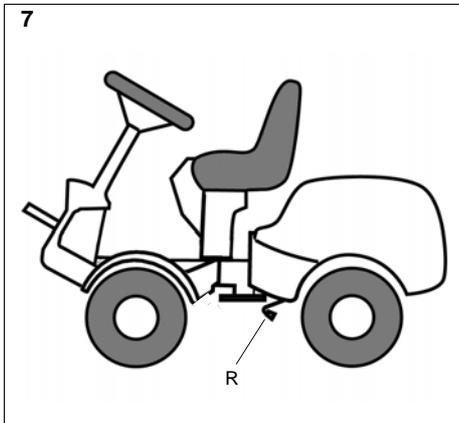
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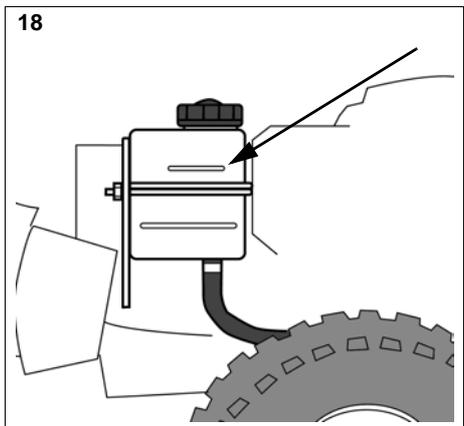
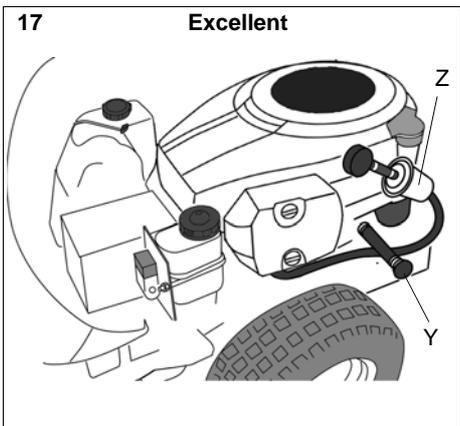
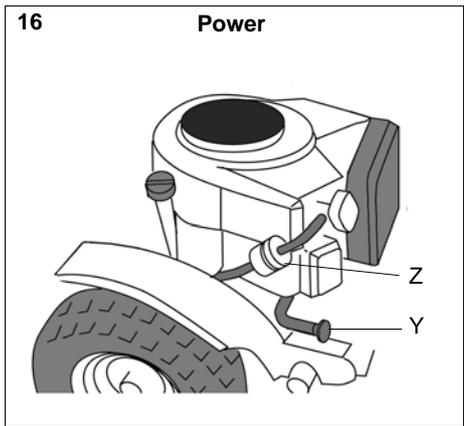
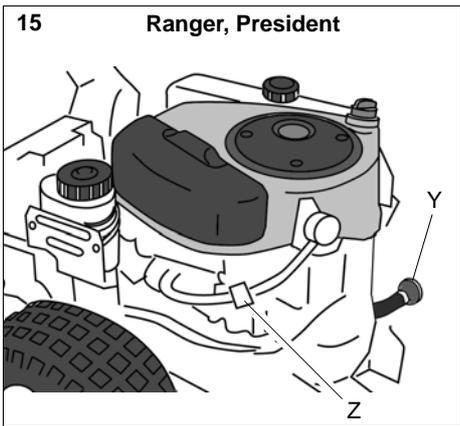
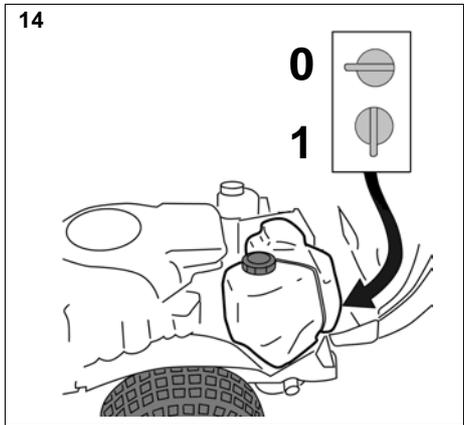
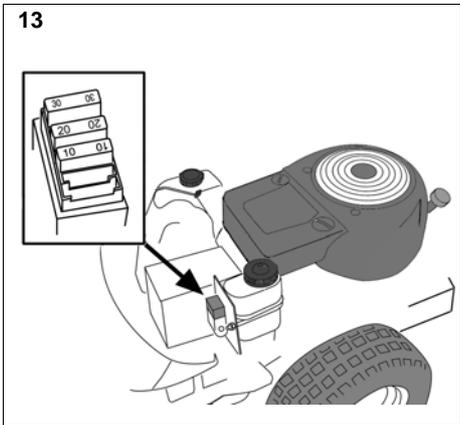
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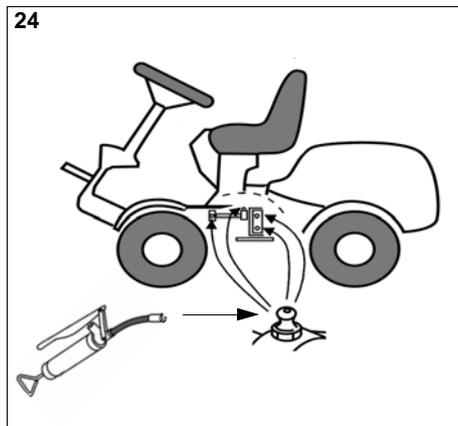
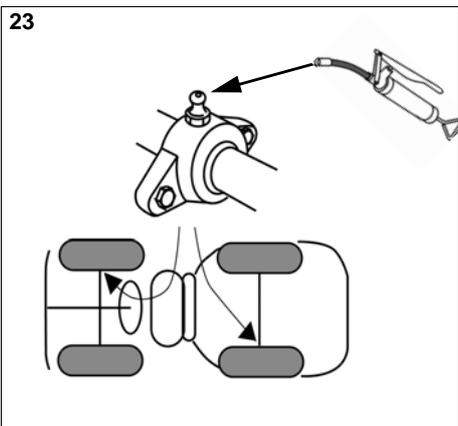
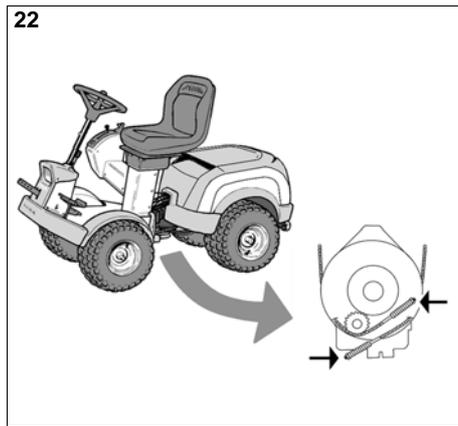
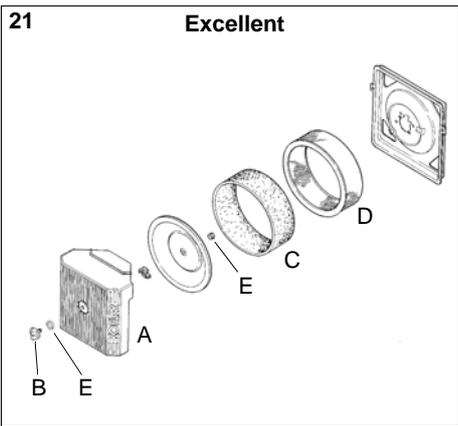
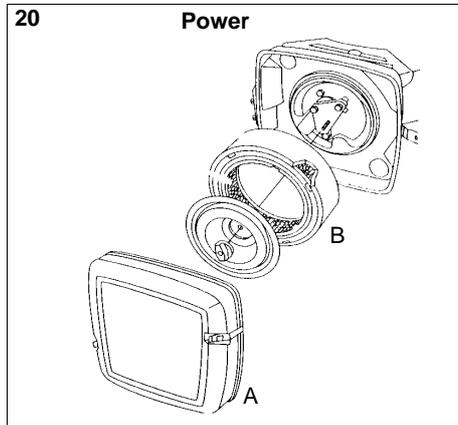
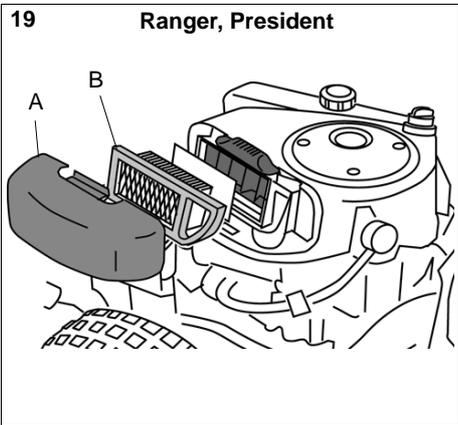
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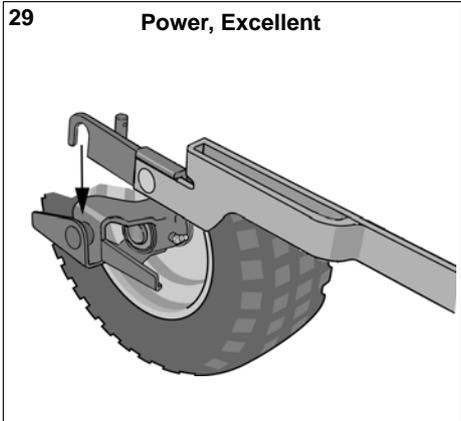
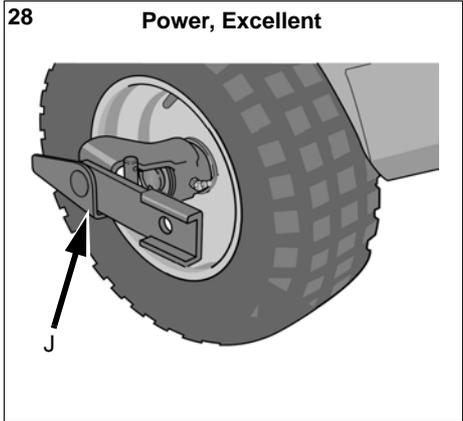
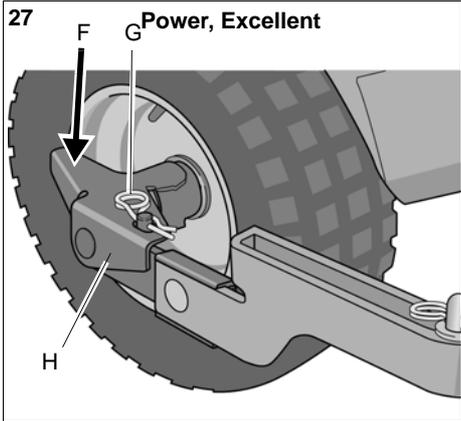
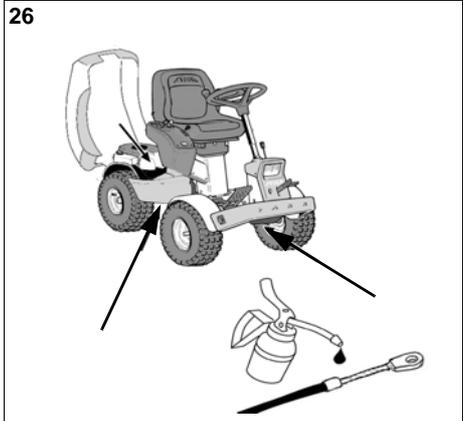
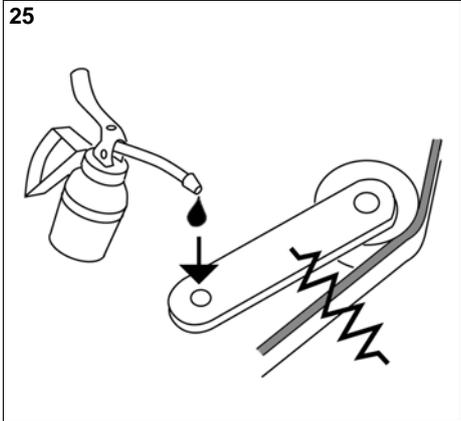
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1 GENERAL



This symbol indicates **WARNING**. Serious personal injury and/or damage to property may result if the instructions are not followed carefully.



You must read these instructions for use and the accompanying pamphlet “SAFETY INSTRUCTIONS” carefully, before starting up the machine.

1.1 SYMBOLS

The following symbols appear on the machine. They are there to remind you of the care and attention required during use and maintenance.

This is what the symbols mean:



Warning!
Read the instruction manual and the safety manual before using the machine.



Warning!
Watch out for discarded objects. Keep on-lookers away.



Warning!
Always wear hearing protectors.



Warning!
This machine is not designed to be driven on public roads.



Warning!
The machine, equipped with original accessories, must not be driven in any direction on slopes with a gradient greater than 10°.



Warning!
Risk of crushing injuries. Keep hands and feet well away from the articulated steering joint.



Warning!
Risk of burn injuries. Do not touch the silencer/catalytic converter.

1.2 References

1.2.1 Figures

The figures in these instructions for use are numbered 1, 2, 3, etc.

Components shown in the figures are marked A, B, C, etc.

A reference to component C in figure 2 is written “2:C”.

1.2.2 Headings

The headings in these instructions for use are numbered in accordance with the following example:

“1.3.1 General safety check” is a subheading to “1.3 Safety checks” and is included under this heading.

When referring to headings, only the number of the heading is normally specified. E.g. “See 1.3.1”.

2 DESCRIPTION

2.1 Drive

The machine is rear wheel drive.

The rear axle is equipped with a hydrostatic transmission with infinitely variable forward and reverse gear ratios.

The rear axle is also equipped with a differential to facilitate turning.

Front mounted tools are driven by drive belts.

2.2 Steering

The machine is articulated. This means that the chassis is divided into a front and a rear section, which can be turned in relation to each other.

The articulated steering means that the machine can turn around trees and other obstacles with an extremely small turning radius.

2.3 Safety system

The machine is equipped with an electrical safety system. The safety system interrupts certain activities that can entail a danger of incorrect manoeuvres. For example, the engine cannot be started if the clutch-parking brake pedal is depressed.



The operation of the safety system must always be checked every time before use.

2.4 Controls

2.4.1 Implement lifter, mechanical (3:C)

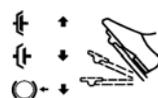
To switch between working position and transport position:

1. Depress the pedal fully.
2. Release the pedal slowly.

2.4.2 Clutch-parking brake (3:B)



Never press the pedal while driving. There is a risk of overheating in the power transmission.



The pedal (3:B) has the following three positions:

- **Released.** The clutch is not activated. The parking brake is not activated.
- **Depressed halfway.** Forward drive disengaged. The parking brake is not activated.

Fully depressed. Forward drive disengaged. The parking brake is fully activated but not locked. This position is also used as emergency brake.

Ranger, Power, Excellent:

There is an adjustment plate on the upper section of the pedal. The adjustment plate can be adjusted to three (3) positions to suit the driver's foot.

2.4.3 Inhibitor, parking brake (3:A)

 The inhibitor locks the “clutch-brake” pedal in the depressed position. This function is used to lock the machine on slopes, during transport, etc., when the engine is not running.

 **The parking brake must always be released during operation.**

Locking:

1. Depress the pedal (3:B) fully.
2. Move the inhibitor (3:A) to the right.
3. Release the pedal (3:B).
4. Release the inhibitor (3:A).

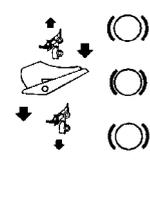
Unlocking:

Press and release the pedal (3:B).

2.4.4 Driving-service brake (3:F)

 **If the machine does not brake as expected when the pedal is released, the left pedal (1:B) should be used as an emergency brake.**

The pedal (3:F) determines the gearing ratio between the engine and the drive wheels (= the speed). When the pedal is released, the service brake is activated.

- 
1. Press the pedal forward – the machine moves forward.
 2. No load on the pedal – the machine is stationary.
 3. Press the pedal backward – the machine reverses.
 4. Reduce the pressure on the pedal – the machine brakes.

The service brake has no effectiveness when the variable transmission is disengaged. See 2.4.13.

2.4.5 Steering wheel (3:D)

The height of the steering wheel is infinitely adjustable. Undo the adjustment knob (3:E) on the steering column and raise or lower the steering wheel to the desired position. Tighten.

 **Do not adjust the steering wheel during operation.**

 **Never turn the steering wheel when the machine is stationary with a lowered implement. There is a risk of abnormal loads on the servo and steering mechanisms.**

2.4.6 Throttle and choke control (4:G) (Ranger, President)



If the engine runs unevenly there is a risk that the control is too far forward so that the choke is activated. This damages the engine, increases fuel consumption and is harmful to the environment.

A control for setting the engine speed and to choke the engine when starting from cold.



1. Choke – for starting a cold engine. The choke position is located at the front of the groove.

Do not operate in this position when the engine is warm.



2. Full throttle – when the machine is in operation, full throttle should always be used.

The full throttle position is approximately 2 cm behind the choke position.



3. Idling.

2.4.7 Throttle control (5:G) (Power, Excellent)

Control for setting the engine's revs.



1. Full throttle – when the machine is in operation, full throttle should always be used.



2. Idling.

2.4.8 Choke control (5, 6:H) (Power, Excellent)

A pull-type control to choke the engine when starting from cold.



1. Control fully pulled out – choke valve in carburettor closed. For starting cold engine.

2. Control pushed in – choke valve open. For starting warm engine and when operating the machine.

Never operate the machine with the choke pulled out when the engine is warm.

2.4.9 Ignition lock/headlight (4, 5, 6:I)

The ignition lock is used for starting and stopping the engine. The ignition lock is also the switch for the headlight.



Do not leave the machine with the key in position 2 or 3. There is a fire risk, fuel can run into the engine through the carburettor, and there is a risk of the battery being discharged and damaged.

Four positions:



1. Stop position – the engine is short-circuited. The key can be removed.



2. Operating position – headlight activated.



3. Operating position – headlight not activated.



4. Start position – the electric start motor is activated when the key is turned to the spring-loaded start position. Once the engine has started, let the key return to operating position 3.

Turn the key to position 2 to light the headlight.

2.4.10 Power take-off (4, 5, 6:K)

A lever for engaging and disengaging the power take-off for operating front-mounted accessories. Two positions:



1. Lever in forward position – power take-off disengaged.



2. Lever in backward position - power take-off engaged.

2.4.11 Hour meter (2:P)

Indicates the number of working hours. Only works when the engine is running.

2.4.12 Cutting height adjustment (4, 6:J) (Ranger, Excellent)

The machine is equipped with a control for using the cutting deck with electrical cutting height adjustment.



The switch is used to adjust the cutting height in continuously variable positions.

The cutting deck is connected to the contact (2:Q).

2.4.13 Clutch release lever

A lever for disengaging the variable transmission. 2WD is equipped with a lever, connected to the rear axle. See (7:R).

The lever enables the machine to be moved by hand without the help of the engine.



The disengagement lever must never be between the outer and inner positions. This overheats and damages the transmission.

Two positions:



1. Lever in the inner position – transmission engaged for normal operation.

2. Lever in the outer position – transmission disengaged. The machine can be moved by hand.

The machine may not be towed over long distances or at high speeds. The transmission could be damaged.

2.4.14 Seat (1:S)

The seat can be folded and adjusted front-rear. The seat can be adjusted as follows:

1. Move the control lever (1:T) upwards.
2. Set the seat to the desired position.
3. Release the control lever (1:S) to lock the seat.

The seat is equipped with a safety switch that is connected to the machine's safety system. This means that certain dangerous activities are not possible when there is nobody sitting on the seat. Also see 4.4.2.

2.4.15 Engine casing (8:U)

In order to access the fuel cock, battery and engine, the machine has an engine casing that can be opened. The engine casing is locked with a rubber strap.

The engine casing is opened as follows:

1. Undo the rubber strap (8:V) at the front edge of the casing.
2. Carefully lift the engine casing back.

Close in the reverse order.



The machine may not be operated unless the engine casing is closed and locked. Risk of burns and crushing injuries.

2.4.16 Quick-release mounting (27:H) (Power, Excellent)



The quick connections can be separated, which makes it very easy to shift between the different implements.

The quick connections allow the deck to be moved easily between the two positions:

- Normal position with fully tensioned belt.
- 4 cm behind the normal position with slackened belt so that the deck gets closer to the base machine.

As the belt idler is released from the belt, the quick connections simplify belt and deck replacement, and also make shifting to the washing position and service positions easier.

Releasing the belt tension:

1. Remove the locking pins (27:G) from both sides.
2. Open the quick connections by depressing their rear sections with your heel. See (27:F).



When the quick connections are opened, the deck arms rest loosely in the shaft sections. The deck must never be set to the service position or washing position without relocking the quick connections after unhooking the deck belt.

3. Carry out the necessary corrective action, e.g.:
 - Unhook the belt.
 - Replace the deck by unhooking the deck arms. See fig. 29.

Tensioning the belt:

First tension one side and then the other according to the instructions below.



Do not turn the lever using your hands. Risk of crushing injuries.

1. Place your foot on the lever (28:J) and carefully turn a half turn forwards.
2. Install the locking pin (27:G).
3. Carry out the above on the other side.

3 AREAS OF USE

The machine may only be used for the following tasks using the genuine STIGA accessories stated.

Work	Accessories, STIGA genuine
Mowing	<p>President: Using mowing decks: 95 C och 105 C, s and with flail mower.</p> <p>Ranger: Using mowing decks: 95 C, 95C El, 105C, 105 C El, 110 Combi Pro and with flail mower.</p> <p>Power: Using mowing decks: 95 C, 105 C, 110 Combi Pro and with flail mower.</p> <p>Excellent: Using mowing decks: 95 C, 95C El, 105C, 105 C El, 110 Combi Pro, 110 Combi Pro El and with flail mower.</p>
Sweeping	Using brush unit or collector brush unit. The use of a dust guard is recommended with the first option.
Snow clearance	Using snow blade or snow thrower Snow chains and frame weights are recommended.
Grass clipping and leaf collection	Using towed collector 30" or 42". Pro Cart.
Grass and leaf transport	Using dump cart Pro or Combi.
Weeding on gravel paths	Using front-mounted hoe.
Lawn edge trimming	Using edge trimmer.
Moss scarification	Using moss scarifier.

The maximum vertical load on the towing hitch must not exceed 100 N.

The maximum over-run load on the towing hitch from towed accessories must not exceed 500 N.
NOTE! Before using a trailer – contact your insurance company.

NOTE! This machine is not intended to be driven on public roads.

4 STARTING AND OPERATION



The machine may not be operated unless the engine casing is closed and locked. Risk of burns and crushing injuries.

4.1 Filling with petrol

Always use lead-free petrol. You must never use 2-stroke petrol mixed with oil.

The tank holds 12 litres. The level can easily be read through the transparent tank.

NOTE! Ordinary lead-free petrol is a perishable and must not be stored for more than 30 days.

Environmental petrol can be used, i.e. alkylate petrol. This type of petrol has a composition that is less harmful for people and nature.



Petrol is highly inflammable. Always store fuel in containers that are made especially for this purpose.



Only fill or top up with petrol outdoors, and never smoke when filling or topping up. Fill up with fuel before starting the engine. Never remove the filler cap or fill with petrol while the engine is running or still warm.

Never completely fill the petrol tank. Leave an empty space (= at least the entire filler tube plus 1 - 2 cm at the top of the tank) to allow the petrol to expand when it warms up without overflowing. See fig. 9.

4.2 Checking the engine oil level

On delivery, the crankcase is filled with SAE 10W-40 oil.

Always check the oil level before use to ensure it is correct. The machine should be standing on level ground.

 Wipe around the dipstick. Unscrew and pull it up. Wipe the dipstick.

Push the dipstick down completely *and screw into place*.

Unscrew and pull the dipstick up again. Read off the oil level.

Top up with oil to the "FULL" mark if the oil level is below this mark. See fig. 10-12.

The oil level must never exceed the "FULL" mark. This results in the engine overheating. If the oil level exceeds the "FULL" mark, the oil must be drained until the correct level is achieved.

4.3 Level check, transmission oil

On delivery, the crankcase is filled with SAE 10W-40 oil.

Always check the oil level before use to ensure it is correct. The machine should be standing on level ground.

1. Place the machine on a flat surface.
2. Read off the oil level in the reservoir. See fig. 18. The level should be level with the line.
3. If necessary, top up with more oil.

4.4 Safety checks

Check that the results of the safety checks below are achieved when testing the machine in question.



The safety checks must always be carried out every time before use.



If any of the results below is not achieved, the machine must not be used! Take the machine to a service workshop for repair.

4.4.1 General safety check

Object	Result
Fuel lines and connections.	No leaks.
Electrical cables.	All insulation intact. No mechanical damage.
Exhaust system.	No leaks at connections. All screws tightened.
Oil lines	No leaks. No damage.
Drive the machine forwards/backwards and release the driving-service brake pedal.	The machine will stop.
Test driving	No abnormal vibrations. No abnormal sound.

4.4.2 Electrical safety check



The operation of the safety system should always be checked every time before use.

Status	Action	Result
The clutch-brake pedal is not depressed. The power take-off is not activated.	Try to start.	The engine will not start.
The clutch-brake pedal is depressed. The power take-off is activated.	The driver gets up from the seat.	The engine will not start.
Engine running. The power take-off is activated.	The driver gets up from the seat.	The engine will stop.
Engine running.	Remove fuse 10 A. See fig. 13.	The engine will stop.

4.5 Start

1. Open the fuel cock. See 14.
2. Check that the spark plug cable(s) is/are installed on the spark plug(s).
3. Check to make sure that the power take-off is disengaged.
4. Do not keep your foot on the drive pedal.
5. **Ranger, President:**
Starting cold engine – put the throttle control in the choke position.
Starting warm engine – put the throttle control at full throttle (approx. 2 cm behind the choke position).
- Power, Excellent:**
Put the throttle control at full throttle.
Starting cold engine – pull the choke control out fully.
Starting warm engine – the choke control should be pressed in.
6. Depress the clutch-brake pedal fully.
7. Turn the ignition key and start the engine.
8. **Ranger, President:**
Once the engine has started, move the throttle control gradually to full throttle (approx. 2 cm behind the choke position) if the choke has been used.
- Power, Excellent:**
Once the engine has started, push the choke control in gradually if it has been used.
9. When starting from cold, do not make the machine work under load immediately, but let the engine run for a few minutes first. This will allow the oil to warm up.

When the machine is in operation, full throttle should always be used.

4.6 Operating tips

Always check that there is the correct volume of oil in the engine. This is particularly important when operating on slopes. See 4.2.



Be careful when driving on slopes. No sudden starting or stopping when driving up or down a slope. Never drive across a slope. Move from the top down or from the bottom to the top.



The machine may not be driven on slopes greater than 10° in any direction.



Reduce the speed on slopes and when making sharp turns in order to retain control and reduce the risk of tipping over.



Do not turn the steering wheel to full lock when driving in top gear and at full throttle. The machine can easily topple over.



Keep hands and fingers well away from articulated steering joint and seat bracket. Risk of crushing injuries. Never drive with the engine casing open.

4.7 Stop

Disengage the power take-off. Apply the parking brake.

Allow the engine to idle 1-2 mins. Stop the engine by turning off the ignition key.

Shut off the petrol cock. This is particularly important if the machine is to be transported on a trailer for example.



If the machine is left unattended, remove the spark plug cable(s) and remove the ignition key.



The engine may be very warm immediately after it is shut off. Do not touch the silencer, cylinder or cooling fins. This can cause burn injuries.

4.8 Cleaning



To reduce the risk of fire, keep the engine, silencer, battery and fuel tank free from grass, leaves and oil.



To reduce the risk of fire, regularly check the machine for oil and/or fuel leakage.

Clean the machine after each use. The following instructions apply for cleaning:

- When washing the machine with water under high pressure, do not point the jet directly at axle seals, electrical components or hydraulic valves.
- Do not spray water directly at the engine.
- Clean the engine with a brush and/or compressed air.
- Clean the engine's cooling air intake (10, 11, 12:W).

5 MAINTENANCE

5.1 Service programme

In order to keep the machine in good condition as regards reliability and operational safety as well as from an environmental perspective, STIGA's Service programme should be followed.

The contents of this programme can be found in the attached service log.

Basic service must always be carried out by an authorised workshop.

First service and intermediate service should be carried out by an authorised workshop, but can also be carried out by the user. The content of this

can be found in the service log and the actions are described under "4 STARTING AND OPERATION" as well as below.

Servicing carried out at an authorised workshop guarantees professional work using genuine spare parts.

At each basic service and intermediate service carried out at an authorised workshop, the service log is stamped. A service log presenting these services is a valuable document that improves the machine's second-hand value.

5.2 Preparation

All service and all maintenance must be carried out on a stationary machine with the engine switched off.



Prevent the machine from rolling by always applying the parking brake.



Stop the engine.



Prevent unintentional starting of the engine by disconnecting the spark plug cable(s) from the spark plug(s) and removing the ignition key.

5.3 Tyre pressure

Adjust the air pressure in the tyres as follows:

Front: 0.6 bar (9 psi).

Rear: 0.4 bar (6 psi).

5.4 Changing engine oil

This section contains tables covering the different engines that are included in STIGA's Pro range. To facilitate reading, mark the data that applies to the relevant machine/engine.

5.4.1 Change intervals

The table below states hours of operation and calendar months. Carry out the relevant action at whichever occurs first.

Machine	1st time	Then at intervals of
Ranger, President, (B&S)	Hours of operation/ Calendar months	
Changing the oil	5 hours	50 hours/ 12 months
Excellent (B&S)	Hours of operation/ Calendar months	
Changing the oil	5 hours	50 hours/ 12 months
Changing the filter		100 hours
Power (Kohler)	Hours of operation/ Calendar months	
Changing the oil	-	100 hours
Changing the filter		200 hours

Change the oil more frequently if the engine has to operate in demanding conditions or if the ambient temperature is high.

5.4.2 Engine Oil

Use synthetic oil according to the table below.

Oil	SAE 10W-40
Service class	SJ or higher

Use oil without any additives.

Do not fill with too much oil. This can cause the engine to overheat.

Change oil when the engine is warm.



The engine oil may be very hot if it is drained off directly after the engine is shut off. Therefore allow the engine to cool a few minutes before draining the oil.

1. Attach the clamp on the oil drainage hose. Use a polygrip or similar. See fig. 15-17:Y.
2. Move the clamp up 3-4 cm on the oil drainage hose and pull out the plug.
3. Collect the oil in a collection vessel.
4. Hand in the oil for disposal in accordance with local provisions.
5. Install the oil drainage plug and move the clamp back so that it clamps above the plug.
6. Remove the dipstick and fill with new oil.

Oil quantity:

Machine	Oil volume, approx.	
	No filter replacement	Filter replacement
Ranger	-	1,6 liter
President	-	1,6 liter
Power	1,9 liter	2,0 liter
Excellent	1,6 liter	1,7 liter

7. After filling up the oil, start the engine and idle for 30 seconds.
8. Check to see if there is any oil leakage.
9. Stop the engine. Wait for 30 seconds and then check the oil level in accordance with 4.2.

5.4.3 Oil filter(Power)

The oil filter must be replaced during every second oil change, i.e. after 200 hours of operation. First drain the engine oil and install the oil drainage plug as described above. Then replace the oil filter as follows:

1. Clean the area around the filter and dismantle the filter.
2. Place the new filter with the hole facing upwards in a vessel.

3. Fill up with the new engine oil through the hole in the filter until the level reaches the bottom of the thread.
4. Wait 1-2 minutes so that the oil is absorbed by the filter material.
5. Moisten the filter's gasket with oil.
6. Install the filter. First screw in the filter so that the gasket comes into contact with the engine. Then screw in the filter a further 2/3-1 turn.
7. Continue with point 7 in accordance with 5.4.2 Engine Oil above.

5.4.4 Oil filter (Excellent)

The oil filter must be replaced during every second oil change, i.e. after 100 hours of operation. First drain the engine oil and install the oil drainage plug as described above. Then replace the oil filter as follows:

1. Clean the area around the filter and dismantle the filter.
2. Moisten the new filter's gasket with oil.
3. Install the filter. First screw in the filter so that the gasket comes into contact with the engine. Then screw in the filter a further 1/2-3/4 turn.
4. Continue with point 7 in accordance with 5.4.2 Engine Oil above.

5.5 Fuel filter

Ranger, President, Power

Replace the fuel filter every season.

Excellent

Replace the fuel filter after 1,500 hours of operation.

Check for fuel leaks once the new filter has been installed.

5.6 Belt transmissions

After 5 hours of operation, check that all the belts are intact and undamaged.

5.7 Steering

The steering must be checked/adjusted after 5 hours of operation and thereafter after 100 hours of operation.

5.7.1 Checks

Briefly turn the steering wheel back and forth. There must be no mechanical clearance in the steering chains.

5.7.2 Adjustment

Adjust the steering chains if required as follows:

1. Put the machine in the straight-ahead position.
2. Adjust the steering chains with the two nuts, located under the central point. See fig. 26.
3. Adjust both nuts by the same amount until there is no clearance.

4. Test drive the machine straight forwards and check that the steering wheel is not off centre.
5. If the steering wheel is off centre, undo one nut and tighten the other.

Do not over-tighten the steering chains. This will cause the steering to become heavy and will increase wear on the steering chains.

5.8 Battery



If acid comes into contact with the eyes or skin, this can cause serious injuries. If any part of the body has come into contact with acid, rinse immediately with copious amounts of water and seek medical assistance as soon as possible.

The battery is a valve-regulated battery with 12 V nominal voltage. The battery fluid does not need to be checked or topped up. The only maintenance that is required is charging, for example after extended storage.



The battery must be fully charged before being used for the first time. The battery must always be stored fully charged. If the battery is stored while discharged, serious damage will occur.

5.8.1 Charging with the engine

The battery can be charged using the engine's generator as follows:

1. Install the battery in the machine as shown below.
2. Place the machine outdoors or install an extraction device for the exhaust fumes.
3. Start the engine according to the instructions in the user guide.
4. Allow the engine to run continuously for 45 minutes.
5. Stop the engine. The battery will now be fully charged.

5.8.2 Charging using battery charger

When charging using a battery charger, a battery charger with constant voltage must be used.

Contact your dealer to purchase a battery charger with constant voltage.

The battery can be damaged if a standard type battery charger is used.

5.8.3 Removal/Installation

The battery is placed under the engine casing. During removal/installation, the following applies regarding connection of the cables:

- During removal. First disconnect the black cable from the battery's negative terminal (-). Then disconnect the red cable from the battery's positive terminal (+).
- During installation. First connect the red cable

to the battery's positive terminal (+). Then connect the black cable to the battery's negative terminal (-).



If the cables are disconnected/connected in the wrong order, there is a risk of a short-circuit and damage to the battery.



If the cables are interchanged, the generator and the battery will be damaged.



The engine must never be driven with the battery disconnected. There is a risk of serious damage to the generator and the electrical system.

5.8.4 Cleaning

If the battery terminals are coated with oxide, they should be cleaned. Clean the battery terminals with a wire brush and lubricate them with terminal grease.

5.9 Air filter, engine

5.9.1 Air filter

(Ranger, President, Power)

The pre-filter (foam filter) must be cleaned/replaced after 25 hours of operation.

The air filter (paper filter) must be cleaned/replaced after 100 hours of operation.

NOTE! The filters should be cleaned/replaced more often if the machine operates on dusty ground.

Remove/install the air filters as follows.

1. Clean carefully around the air filter cover.
2. Dismantle the air filter cover (23:A) by removing the two clamps.
3. Dismantle the filter assembly (23:B). The pre-filter is placed over the air filter. Make sure that no dirt gets into the carburettor. Clean the air filter housing.
4. Clean the paper filter by tapping it gently against a flat surface. If the filter is very dirty, replace it.
5. Clean the pre-filter. If the filter is very dirty, replace it.
6. Assemble in the reverse order.

Compressed air or petroleum-based solvents such as kerosene may not be used for cleaning the paper filter insert. This will damage the filter.

5.9.2 Air filter (Excellent)

The pre-filter (foam filter) must be cleaned after 25 hours of operation.

The air filter (paper filter) must be replaced after 100 hours of operation.

NOTE! The filters should be cleaned/replaced more often if the machine operates on dusty ground.

Remove/install the air filters as follows.

1. Dismantle the right rear wheel.
2. Clean carefully around the air filter cover.
3. Dismantle the air filter cover (21:A) by undoing its screw (21:B).
4. Dismantle the filters. The pre-filter (21:C) is placed over the air filter (21:D). Make sure that no dirt gets into the carburettor. Clean the air filter housing.
5. Wash the pre-filter (21:C) in liquid detergent and water. Squeeze dry. Pour a little oil on the filter and squeeze in the oil.
6. Assemble in the reverse order. Check that the rubber seal (21:E) is undamaged. Replace the seal if necessary.

5.10 Spark plug

The spark plug(s) must be replaced every 200 hours of operation (=at every other basic service). Before disconnecting the spark plug, clean around its mounting.

Spark plug: Champion RC12YC or equivalent.

Electrode distance: 0.75 mm.

5.11 Air intake

See 10, 11, 12:W. The engine is air-cooled. A blocked cooling system can damage the engine. Clean the engine's air intake after 50 hours of operation. More meticulous cleaning of the cooling system is carried out during each basic service.

5.12 Lubrication

All lubrication points in accordance with the table below must be lubricated every 50 hours of operation as well as after every wash.

Object	Action	Figure
Wheel bearing	2 grease nipples. Use a grease gun filled with universal grease. Pump until the grease emerges.	23
Centre point	4 grease nipples. Use a grease gun filled with universal grease. Pump until the grease emerges.	24
Steering chains	Brush the chains clean with a wire brush. Lubricate with universal chain spray.	-
Tensioning arms	Lubricate the bearing points with an oil can when each control is activated. Ideally carried out by two people.	25
Control cables	Lubricate the cable ends with an oil can when each control is activated. Must be carried out by two people.	26

5.13 Fuses

If any of the faults listed below occurs, replace the relevant fuse. See fig. 13.

Fault	Fuse
The engine does not start or starts and stops immediately. The battery is charged.	10 A
Electrical cutting height adjustment do not work.	20 A
All electrical functions are out of operation. The battery is charged.	30 A

6 PATENT - DESIGN REGISTRATION

This machine or parts thereof is covered by the following patent and design registration:

SE9901091-0, SE9901730-3, SE9401745-6,
US595 7497, FR772384, DE69520215.4,
GB772384, SE0301072-5, SE04/000239 (PCT),
SE0401554-1, SE0501599-5.

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