



STIGA PARK

PRO 20

PRO 16

ROYAL

PRESIDENT

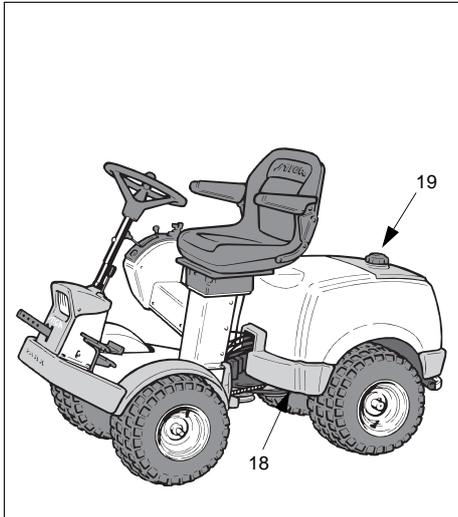
COMFORT

EXCELLENT

STIGA[®]

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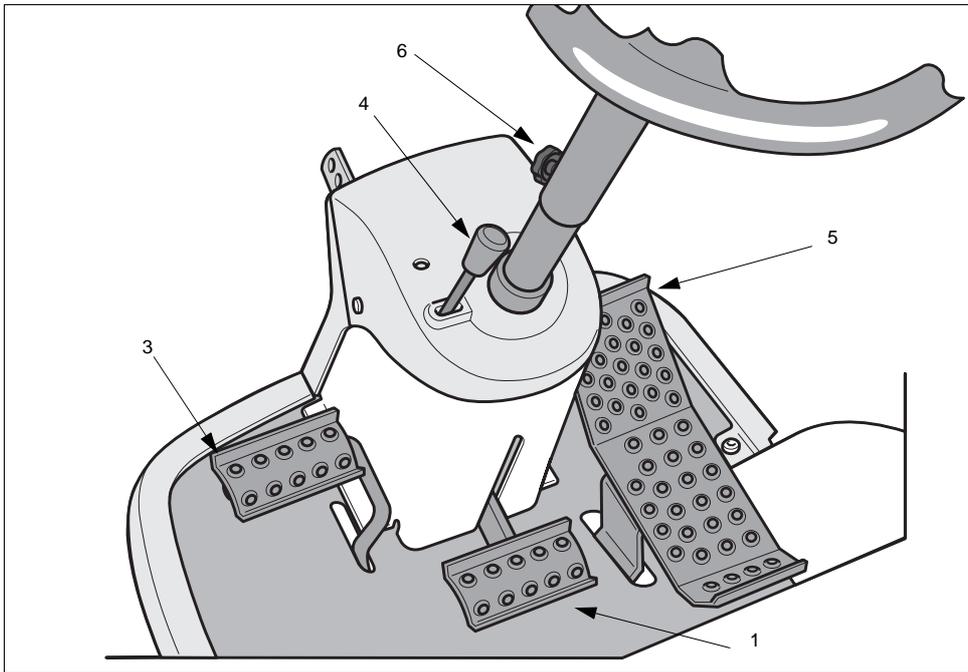
PARK



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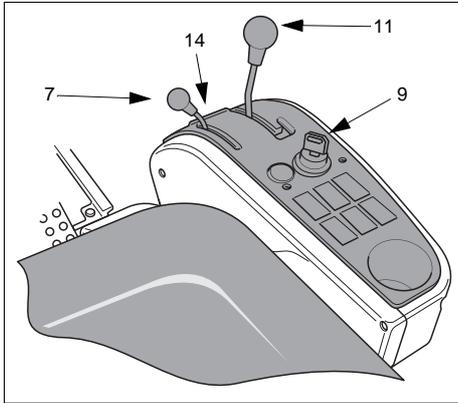


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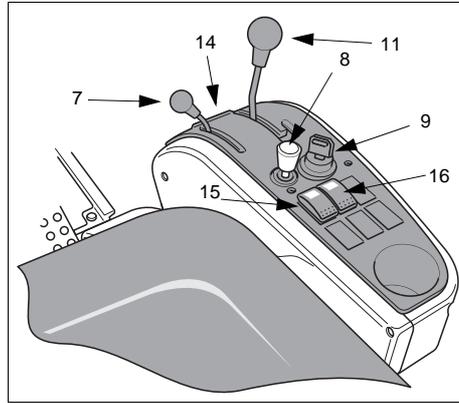


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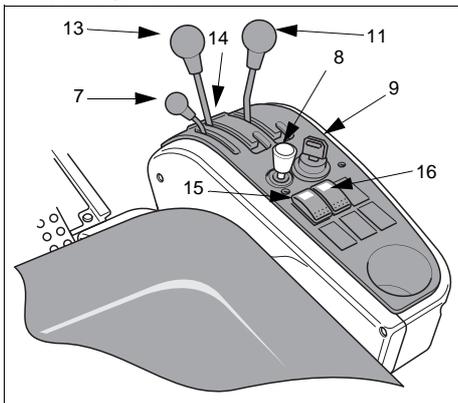
PARK



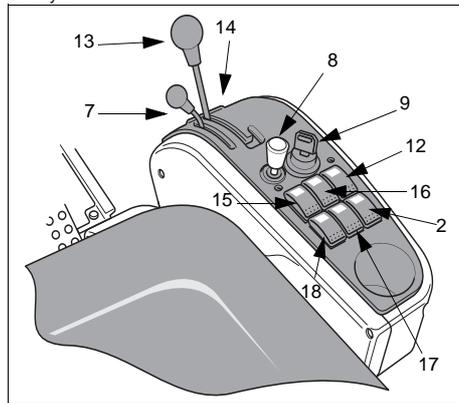
4. President - Comfort



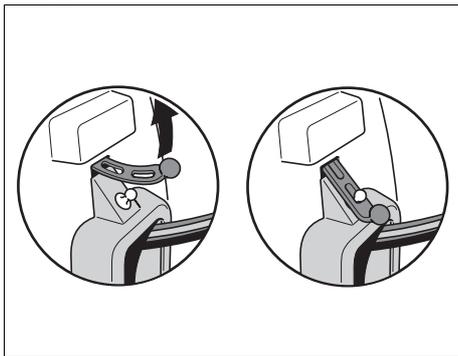
5. Royal



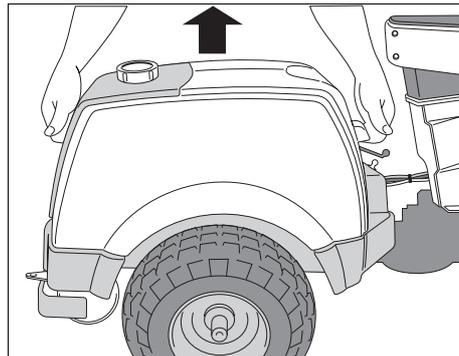
6. Pro 16



7. Pro 20

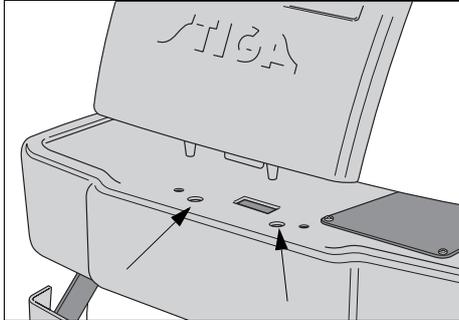


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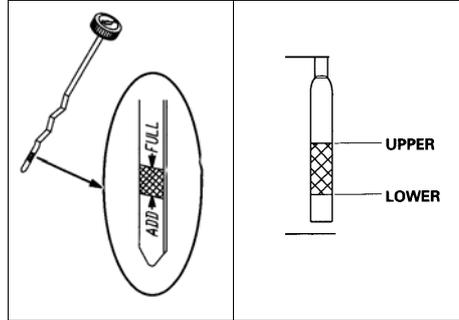


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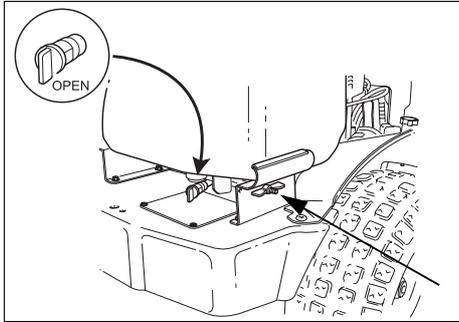
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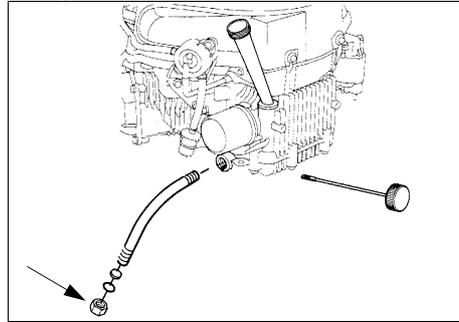
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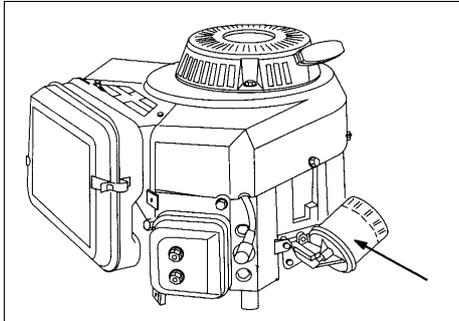
11. Briggs & Stratton Honda



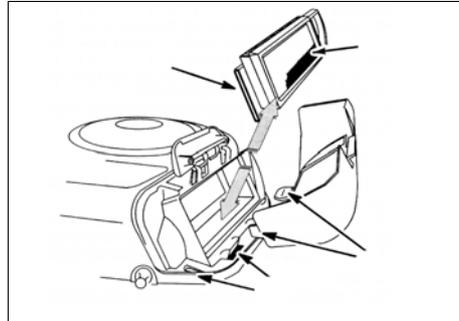
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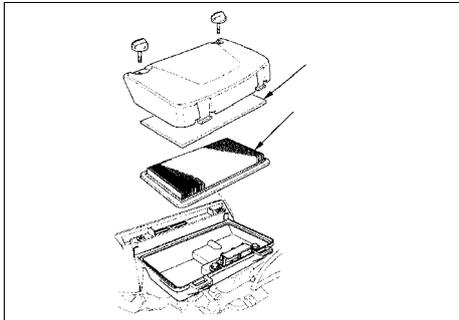
13. Royal



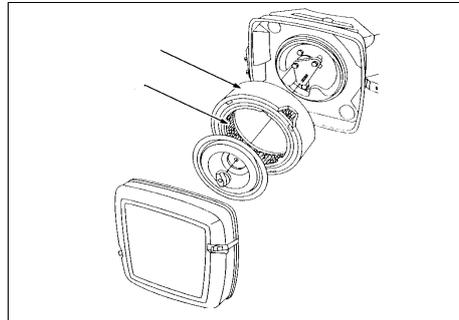
14. Pro 16 - Pro 20



15. President - Comfort



16. Royal

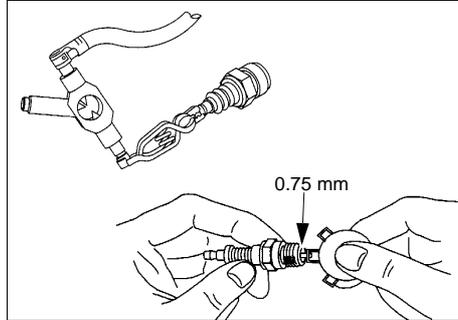


17. Pro 16 - Pro 20

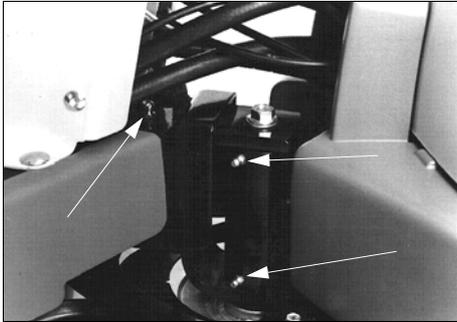
PARK



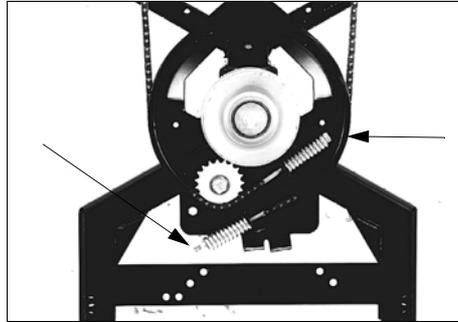
18. Pro 20 Cat



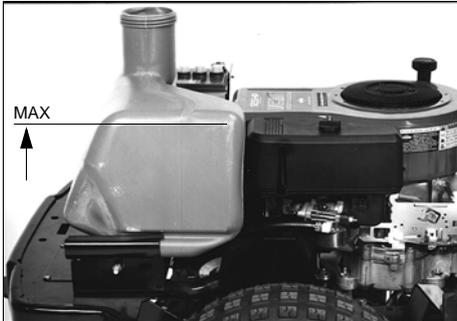
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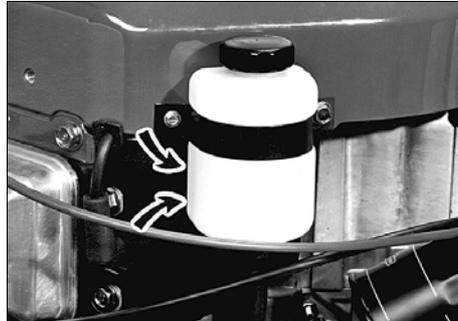
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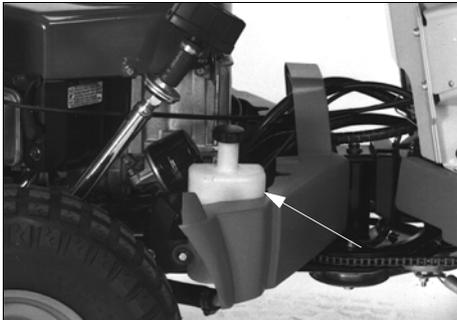
21.



22.



23a. President - Comfort - Royal



23b. Pro 16 - Pro 20



24. President - Comfort - Royal

GENERAL



This symbol indicates **WARNING**. 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.

SYMBOLS

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

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 onlookers 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.

CONTROLS AND INSTRUMENTS

Items 1 - 19, see figures 1 - 7.

1. IMPLEMENT LIFTER (President - Comfort - Royal - Pro16)

A pedal for raising front-mounted implement to the transport position.

To lift up the implement, press the pedal down as far as it will go. Then release the pedal, the implement lifter is now locked in the raised position.

To lower the implement, press the pedal down so that the lock is released. Lower the implement lifter to the working position by slowly lifting your foot from the pedal.

2. HYDRAULIC LIFTER (Pro20)

Hydraulic implement lifter for raising front-mounted implements to the transport position.



To raise the implement, press the rear part of the switch. Release the switch in the required position.

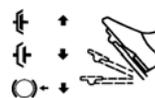
To lower the accessory, press the front part of the switch. The switch stays in the pressed position and the implement lifter is lowered until it reaches a floating position. This means that the implement can follow the contours of the ground.

The floating position, with the switch in the tilted forward position, is recommended for normal use. To secure the implement lifter, place the switch in neutral.

NOTE! The hydraulic implement lifter must be in floating position in order for the power take-off to be connected.

3. SERVICE BRAKE

A pedal that acts on the machine's braking system. There are 3 positions:



1. Pedal released – service brake not activated.

2. Pedal depressed halfway – forward drive disengaged. Service brake not activated.

3. Pedal fully depressed – forward drive disengaged. Service brake fully activated.

4. PARKING BRAKE

An inhibitor that can lock the brake pedal in the depressed position.

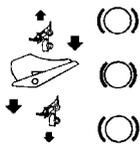
 Depress the brake pedal fully. Move the inhibitor to the right and then release the brake pedal.

The parking brake is released by pressing the brake pedal. The spring-loaded inhibitor slides to one side.

Make sure that the parking brake is released when operating the machine.

5. DRIVE PEDAL

A pedal that activates the variable transmission.

- 
1. Depress the pedal with the ball of your foot – the machine moves forwards.
 2. No load on the pedal – the machine is stationary.
 3. Depress the pedal with your heel – the machine reverses.

The drive pedal regulates the speed. The more pressure applied, the faster the machine will move.

6. ADJUSTABLE STEERING WHEEL

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

Do not adjust the steering wheel during operation.

7. THROTTLE/CHOKE CONTROL

A control for setting the engine speed and to choke the engine when starting from cold. (The latter does not apply to Royal-Pro16-Pro20 - Excellent which have separate choke control – see item 8).

- 
1. Choke – for starting a cold engine. The choke is located in top of groove (does not apply to Royal-Pro16-Pro20 - Excellent). Avoid operating the machine in this position, taking care to move the control to full throttle (see below) when the engine is warm.
 2. Full throttle – when the machine is in operation, full throttle should always be used.
 3. Idling.

8. CHOKE CONTROL (Royal - Pro16 - Pro20 - 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.

9. IGNITION LOCK/SPOTLIGHT

Ignition lock used for starting/stopping the engine. Also includes switch for spotlight (Senator does not have a spotlight). Four positions:

- 
1. Stop position – the engine is short-circuited. The key can be removed.
 2. Operating position – spotlight activated.
 3. Operating position – spotlight 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.

To turn on the spotlight, turn the key to position 2.

NOTE! If the key is turned from the stop position to operating position 2, the spotlight is activated. This uses up battery power. Do not leave the machine with the key in position 2 (applies to Pro16-Pro20 - Excellent).

10. POWER TAKE-OFF

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.

11. POWER TAKE-OFF (Pro20)

Switch for engaging/disengaging the electromagnetic power take-off for operating front-mounted accessories. Two positions:

- 
1. Press the front part of the switch – the power take-off is engaged. The symbol will light up.
 2. Press the rear part of the switch – the power take-off is disengaged.

12. DIFFERENTIAL INHIBITOR (Pro16 - Pro20)

Lever for engaging the differential inhibitor. This improves the towing capacity by locking the rear wheels so that both wheels drive simultaneously. Two positions:

1. Forward position – the differential inhibitor is not engaged. For normal operation.



2. Lever in backward position - differential inhibitor engaged. Works for both forward and reverse drive.

The differential inhibitor is of greatest use when the rear wheels are unevenly loaded. For example when turning sharp corners where the inner rear wheel bears a lesser load.

When driving during the winter on slippery surfaces, the drive capacity is improved if snow chains are not used.

When the differential inhibitor is engaged, the steering is heavy. Avoid turning the steering wheel!

13. HOUR COUNTER

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

14. CRUISE CONTROL (Royal - Pro16 - Pro20)

A switch for activating the cruise control. The cruise control allows the drive pedal (5) to be locked in the desired position.



1. Press down the drive pedal until the desired speed is obtained. Then press the front part of the switch to activate the cruise control. The symbol will light up.
2. Disengage the cruise control by braking or pressing the rear part of the switch.

15. CUTTING HEIGHT ADJUSTMENT (Royal - Pro16 - Pro20)

The machine is equipped with a control for using the cutting deck with electrical cutting height adjustment (available as an accessory).



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

The contact used for connecting the cutting deck is mounted on the right side, in front of the front wheel (fig. 2).

16. REAR RAKE (Pro20)

The machine is fitted with a control for electrical adjustment of a rear rake (available as an accessory).



The switch is used to raise and lower the rear rake.

Cables for connecting the rear rake are found at the rear of the machine, to the left of the upper side of the bumper. (Pro16 is prepared for a rear rake, cables routed).

17. SAND SPREADER (Pro20)

The machine has been designed for electrical adjustment of a sand spreader (available as an accessory).

12V The switch is used to start and stop the spreader.

The contact for connecting the sand spreader is found at the rear of the machine, to the left of the upper side of the bumper. (Pro16 is prepared for a sand spreader, cables routed).

18. DISENGAGING LEVER

A lever for disengaging the variable transmission. Enables the machine to be moved by hand without the help of the engine. Two positions:



1. Lever moved back – transmission engaged for normal operation.
2. Lever moved forward – 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.

19. FUEL GAUGE/FUEL CAP



Fuel cap with built-in fuel gauge that indicates how much fuel there is in the fuel tank (applies to Royal-Pro16-Pro20 - Excellent).

Comfort and President have a fuel cap without a fuel gauge. The fuel tank holds approx. 11.5 litres.

AREAS OF USE

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

1. Mowing

Using cutting deck 92M, 107M, 107 M HD, 121M, 125 Combi Pro or flail mower.

2. Sweeping

Using brush unit or collector brush unit. Use of dust guard is recommended with the first option.

3. Snow clearance

Using snow blade or snow thrower. Snow chains and frame weights are recommended.

4. Grass clipping and leaf collection

Using towed collector.

5. Grass and leaf transport

Using dump cart.

6. Sand spreading

Using sand spreader. Can also be used for spreading salt. Snow chains and frame weights recommended.

7. Weeding on gravel paths

Using front mounted hoe and rear-mounted rake.

8. Lawn edge trimming

Using edge trimmer.

9. 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.

STARTING AND OPERATION

ENGINE CASING

To inspect and maintain the engine and battery, remove the engine casing. Dismantling:

1. Unscrew the fuel cap/fuel gauge.
2. Pull up the rubber strap at the front edge of the casing (fig. 8).
3. Carefully lift off the engine casing (fig. 9).

Assembly:

1. Place the casing over the lip on each side.
2. Make sure that the pins on the rear edge of the casing go down into the respective holes (fig. 10).
3. Secure the front edge of the casing with the rubber strap (fig. 8).
4. Finally, screw in the fuel cap/fuel gauge.



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

FILLING THE FUEL TANK

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

NOTE! Bear in mind that ordinary lead-free petrol is a perishable; do not purchase more petrol than can be used within thirty 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 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 (fig. 28).

CHECKING THE ENGINE OIL LEVEL (President - Comfort - Pro16 - Pro20 - Excellent)

On delivery, the crankcase is filled with SAE 30 oil.

Check the oil level every time before using to ensure it is correct. The machine should be standing on level ground.



Wipe clean around the oil dipstick. Unscrew and pull it up. Wipe off the dipstick. Slide it down completely and tighten it.

Then unscrew it and pull it up again. Read off the oil level. Top up with oil to the "FULL" mark, if the level comes below it (figs. 11).

CHECKING THE ENGINE OIL LEVEL (Royal)

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

Check the oil level every time before using to ensure it is correct. The machine should be standing on level ground.



Wipe clean around the oil dipstick. Unscrew and pull it up. Wipe off the dipstick. Slide it down completely *without tightening it*.

Pull it up again and read off the oil level. Top up with oil to the "UPPER" mark, if the oil level is below it (fig. 11).

CHECKING THE TRANSMISSION OIL LEVEL

The transmission is filled with SAE 10W-40 oil when the machine is delivered from the factory.

Check the oil level every time before using to ensure it is correct. The machine should be standing on level ground.

Read off the oil level in the reservoir (fig. 23). It should be between the "MAX" and "MIN" marks. If necessary, top up with more oil. Use oil SAE 10W-40 (20W-50).

SAFETY SYSTEM

This machine is equipped with a safety system that consists of:

- a switch at the brake pedal.
- a switch in the seat (Comfort, President) or the seat bracket (other models).
- a switch at the power take-off engagement lever.

In order to start the machine, the following are necessary:

- brake pedal pressed down.
- driver sitting on seat.
- power take-off engagement lever in forward position (i.e. power take-off disengaged).



Always check the operation of the safety system before using the machine!

With the engine running and the driver sitting on the seat, check as follows:

- press the drive pedal so that the machine starts to move, release the drive pedal – the machine must stop.
- press the drive pedal so that the machine starts to move, engage the cruise control, lift your weight off the seat – the machine must stop (applies to Royal, Pro16, Pro20).
- press the drive pedal so that the machine starts to move, engage the cruise control, press the brake pedal – the machine must stop (applies to Royal, Pro16, Pro20).
- engage the power take-off, lift your weight off the seat – the engine must stop (applies to Comfort, President, Royal, Pro16).
- engage the power take-off, lift your weight off the seat – the power take-off must be disengaged (applies to Pro20).



Do not use the machine if the safety system is not working! Take the machine to a service workshop for inspection!

STARTING ENGINE

1. Open the fuel cock (fig. 12).
2. Make sure that the spark plug cable is properly in place.
3. Check to make sure that the power take-off is disengaged.
4. Do not keep your foot on the drive pedal.

5a. Comfort-President:

Starting cold engine – put the throttle control in the choke position. Starting warm engine – put the throttle control at full throttle (approx. 1 cm behind the choke position).

5b. Royal-Pro16-Pro20 - Excellent:

Put the throttle control at full throttle. Starting cold engine – pull the choke control out fully. Starting warm engine – do not touch the choke control.

6. Depress the brake pedal fully.

7. Turn the ignition key and start the engine.

8a. Comfort-President:

Once the engine has started, move the throttle control gradually to full throttle if the choke has been used.

8b. Royal-Pro16-Pro20 - 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 in use, always operate the engine at full throttle.

STOPPING

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

Allow the engine to idle 1 - 2 mins. Stop the engine by turning off the starter 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 from the spark plug. Also remove the starter 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.

CATALYTIC CONVERTER (Pro20 Cat)

The catalytic converter gets very hot during operation. The heat remains for a long time after the engine has been stopped. Be aware of the fire risk.



Do not park in close proximity to inflammable objects. Do not cover the machine until the catalytic converter has cooled down.

STEERING AID (Pro20)

Built-in function in order to facilitate steering. The operator only has to turn the steering wheel gently. A hydraulic torque amplifier creates the remaining force.

As opposed to normal servo steering (e.g. in a car), the steering aid has a limited capacity. This means that it has some characteristics that might be considered negative:

- at a low engine rpm or in situations where extra steering force is needed, steering can be considered to be “jumpy”.
- the machine should always be moving when the steering is used. Avoid turning the steering wheel when the machine is standing completely still and the accessory is in the lowered working position.

The steering is adapted in order to produce better results at a normal working speed. This produces major benefits.

Even when the engine is not running, the steering works. However, it is harder to turn in this case, if the machine is to be manoeuvred manually.

DRIVING TIPS

Make sure that there is the correct quantity of oil in the engine when driving on slopes (oil level on “FULL”).



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



The machine, equipped with original accessories, may not be driven on slopes greater than 10° in any direction.



Reduce the speed on slopes and when making sharp turns to prevent the machine from tipping over or you losing control of the machine.



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 operate the machine without the engine casing.

SERVICE AND MAINTENANCE

SERVICE PROGRAM

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 program should be followed.

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

We recommend that an authorised workshop carries out every service. This guarantees that the work is performed by trained personnel and with genuine spare parts.

At every service, the service log should be stamped. A “fully stamped” service log is a valuable document that improves the machine's second-hand value.

PREPARATIONS

Unless otherwise stated, all service and maintenance must be carried out on a stationary machine when the engine is not running.



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



Prevent unintentional starting of the engine by always stopping the engine, disconnecting the spark plug cable from the spark plug and earthing it. Disconnect the negative cable from the battery.

CLEANING



To reduce the risk of fire, keep the engine, silencer/catalytic converter, 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.

When washing the machine with water under high pressure, do not point the jet directly at the transmission.

Do not point jets of water directly at the engine. Use a brush or compressed air in order to clean it.

ENGINE OIL (President - Comfort - Pro16 - Pro20 - Excellent)

Change the oil for the first time after 5 hours running, and then after every 50 hours running or once a season. Change oil when the engine is warm.

Always use a good grade of synthetic oil (service grade SF, SG or SH).

Change the oil more often (after 25 hours of operation or at least once a season) if the engine has to operate under demanding conditions or if the ambient temperature is high.



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

1. Oil drain pipe (metal):
Unscrew the oil drain plug at the end of the pipe.

Collect the oil in a collection vessel. Then take the oil to a recycling station. Do not allow oil to get on the V-belts.

2. Screw in the oil drain plug. Make sure that the fibre gasket and the O-ring inside the plug are not damaged and that they are in the correct place.

3. Remove the dipstick and fill up with new oil.

Oil capacity:

Comfort, President - 1.4 l

Pro16, Pro20 - Excellent - 1.7 l (incl. oil filter)

Oil type, summer (> 4°C): SAE-30

(SAE 10W-30 can also be used. However, oil consumption may increase somewhat if 10W-30 is used. Therefore, check the oil level more regularly if you use this type of oil).

Oil type, winter (< 4°C): SAE 5W-30
(if this oil is not available, use SAE 10W-30).

Use oil without any additives.

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

After filling up the oil, start the engine and idle for 30 seconds. Stop the engine. Wait for 30 seconds and then check the oil level.

Check to see if there is any oil leakage. If necessary, fill up the oil up to the "FULL" mark.

ENGINE OIL (Royal)

Change the oil for the first time after 20 hours of operation (or during the first month), and then after every 100 hours of operation or once every 6 months.

Change oil when the engine is warm. Always use a good grade of synthetic oil (service grade SF, SG or SH).



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

Unscrew the oil drain plug at the end of the pipe (fig. 13).

Collect the oil in a collection vessel. Then take the oil to a recycling station. Do not allow oil to get on the V-belts.

Screw in the oil drain plug. Make sure that the fibre gasket and the O-ring inside the plug are not damaged and that they are in the correct place.

Remove the dipstick and fill up with new oil up to the "UPPER" mark.

Oil capacity:

Royal - 0.9 l (= oil quantity at change. In total the engine holds 1.15 l).

Oil type for all seasons: SAE 10W-40.

For extremely low temperatures (< -20° C), use SAE 5W-30.

Use oil without any additives.

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

OIL FILTER – ENGINE (Pro16 - Pro20 - Excellent)

Replace the oil filter after every 100 hours of operation or once a season.

Before screwing the new filter, oil the filter gasket with engine oil.

Screw the filter by hand, until the filter gasket touches the filter attachment. Then tighten ½ to ¾ of a full turn (fig. 14).

Start the engine and **idle** to see if any leakage occurs. Stop the engine. Check the oil level. If necessary, fill up the oil up to the "FULL" mark.

AIR FILTER - ENGINE

Comfort - President - Pro16 - Pro20 - Excellent:

Clean the foam pre-filter every 3 months or after every 25 hours of operation, whichever comes first.

Clean the paper filter insert once a year or after every 100 hours of operation, whichever comes first.

Royal:

Clean the air filter every 3 months or after every 50 hours of operation, whichever comes first.

Clean the paper filter insert once a year or after every 200 hours of operation, whichever comes first.

All models:

Note! Both filters should be cleaned more often if the machine operates on dusty ground.

1. Remove the protective cover of the air filter (fig. 15 - 17).

2. Dismantle the paper filter insert and the foam pre-filter. Make sure that no dirt gets into the carburettor. Clean the air filter housing.

- 3a. Pro 16, Pro 20:

Wash the pre-filter in liquid detergent and water. Squeeze dry. Pour a little oil on the filter and squeeze in the oil.

- 3b. President, Comfort:

Replace the pre-filter once a year or after every 25 hours of operation, whichever comes first.

4. Clean the paper filter insert as follows: Knock it lightly against a flat surface. If the filter is very dirty, change it.

5. Assemble in the reverse order.

Petroleum-based solvents such as kerosene may not be used for cleaning the paper filter insert. These solvents can destroy the filter.

Do not use compressed air for cleaning the paper filter insert. The paper filter insert must not be oiled.

AIR FILTER – CATALYTIC CONVERTER (Pro20 Cat)

Clean the catalytic converter's air filter every 3 months or after every 25 hours of operation, whichever comes first.

1. Remove the cover by pressing in the locking mechanism with a screwdriver etc. (fig. 18).
2. Remove the foam filter and wash it in liquid detergent and water. Squeeze dry. Do not oil the filter.
3. Replace the filter and snap the cover into place.

SPARK PLUG

Only use a Briggs & Stratton sparking tester to check the spark in the sparking plug(s) (fig. 19).

Clean the spark plug after every 100 hours of operation or once a season. For replacing a spark plug, a spark plug sleeve A and a torsion pin B are provided in the accessories bag.

The engine manufacturer recommends:

Royal: NGK BPR5ES or DENSO W16EPR-U
President-Comfort-Pro16-Pro20 - Excellent:
Champion RC12YC

Correct spark gap: 0.75 mm.

COOLING AIR INTAKE - ENGINE

The engine is air-cooled. A blocked cooling system can damage the engine. The engine should be cleaned at least once a year or every 100 hours of operation.

Remove the fan casing. Clean the cooling fins on the cylinder, the fan and the rotating protective grille. Clean more frequently if mowing dry grass.

BATTERY

The battery is a valve-regulated battery with 12 V nominal voltage. The battery is completely maintenance free. You don't have to check or top up the electrolyte level.

On delivery, the battery is in the accessories box.



The battery must be fully charged before being used for the first time. The battery should always be stored fully charged. If the battery is stored while totally flat it could sustain permanent damage.

If the machine is not going to be used for an extended period (more than 1 month), the battery should be charged, disconnected and then stored in a cool, safe place. Charge the battery completely before reinstalling.

The battery can be charged in two ways:

1. Via a battery charger (recommended). This must be a charger with constant voltage. The battery can be damaged if a standard type battery charger (for acid batteries) is used. Stiga recommends battery charger with item no. 1136-0602-01 which may be ordered by an authorised dealer.
2. You can also allow the engine to charge the battery. In this case it is very important, above all when starting the machine for the first time and when it has not been used for a long time, to allow the engine to run continuously for at least 45 minutes.



Do not short circuit the battery's terminals. Sparks occur which can result in fire. Do not wear metal jewellery which can come into contact with the battery terminals.

In the event of damage to the battery casing, cover, terminals or interference to the strip covering the valves, the battery should be replaced.

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

LUBRICATION

The machine's articulated steering joint has four grease nipples that should be lubricated with universal grease after every 25 hours of operation (fig. 20).

Note: The fourth grease nipple is not shown on the picture. It is located on the underside, on the flexible axle's front bearing.

Comfort-President-Royal:

Lubricate the steering chain with chain spray a couple of times per season.

Pro16-Pro20:

Lubricate the steering chains with chain spray a couple of times per season. If the steering chains are really dirty, dismantle them, wash them and then grease them once more.

Comfort-President-Royal:

The front wheel hub has grease nipples that should be lubricated after every 50 hours of operation (fig. 24).

Apply universal grease to all the plastic bearings a couple of times per season.

Apply a coating of engine oil to the tension arm joints a couple of times each season.

Apply a few drops of engine oil to both ends of the throttle control cables a couple of times a season. The hydrostatic transmission is filled with oil (10W-40) on delivery from the factory. Unless it is opened (only to be performed by a specialist), and provided no leakage occurs, no topping up with oil should normally be carried out. Transmission oil does not normally need to be changed.

STEERING CABLES (President - Comfort - Royal)

The steering cables should be adjusted for the first time after the machine has been in operation for 2 - 3 hours, and then after every 25 hours of operation.

Put the machine in the straight-ahead position.

Tension the steering cables by tightening the nuts that are located on the underside of the articulated steering joint (fig. 21). The screws in the ends of the cables should be held firmly during adjustment so that the cables are not twisted. Use an adjustable wrench or similar for this purpose, inserting it in the key handles in the ends of the screws. Tension until all play is removed.

Adjust both the nuts the same amount to ensure that the alignment of the steering wheel is not changed.

Once the adjustment is complete, turn the steering wheel as far as it will go in either direction. Check that the chain does not come into contact with the pulley, and that the cables do not become entangled with the steering pinions.

Do not tension the steering cables too hard. Otherwise the steering will be heavy and wear and tear on the cables will increase.

STEERING CHAINS (Pro16 - Pro20)

The steering chains should be adjusted for the first time after the machine has been in operation for 2 - 3 hours, and then after every 50 hours of operation.

Put the machine in the straight-ahead position.

Tension the steering chains by tightening up the nuts that are located on the underside of the articulated steering joint (fig. 21). Tension until all play is removed.

Adjust both the nuts the same amount to ensure that the alignment of the steering wheel is not changed.

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

PATENT - DESIGN REGISTRATION

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

9900627-2 (SE), SE00/00250 (PCT), 9901091-0 (SE), SE00/00577 (PCT), 9901730-3 (SE), SE00/00895 (PCT), 9401745-6 (SE), SE95/00525 (PCT), 595 7497 (US), 95920332.4 (EPC), 99 1095 (SE), 499 11 740.9 (DE), M1990 000734 (IT), 577 251-253 (FR), 115325 (US).

GGP reserves the right to make alterations to the product without prior notification.



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GGP Sweden AB • Box 1006 • SE-573 28 TRANÅS