# Operator's manual (EPA) 326S<sub>X-series</sub>

Please read the operator's manual carefully and make sure you understand the instructions before using the machine.



# **KEY TO SYMBOLS**

# **Symbols**

WARNING! Careless or incorrect use can result in serious or fatal injury to the operator or others.



Please read the operator's manual carefully and make sure you understand the instructions before using the machine.



Always wear:

 A protective helmet where there is a risk of falling objects



- Hearing protection
- · Approved eye protection

Max. speed of output shaft, rpm



Wear a dust mask.



The operator of the machine must ensure, while working, that no persons or animals come closer than 15 metres.



Arrows which show limits for handle positioning.





Always wear approved protective gloves.



Wear sturdy, non-slip boots.



Other symbols/decals on the machine refer to special certification requirements for certain markets.

The engine is switched off by moving the stop switch to the stop position. CAUTION! The stop switch automatically returns to the start position. In order to prevent unintentional starting, the spark plug cap must be removed from the spark plug when assembling, checking and/or



performing maintenance.

Always wear approved protective gloves.

Regular cleaning is required.



Visual check.



Approved eye protection must always be used.



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# Note the following before starting:

Please read the operator's manual carefully.

Maintenance, replacement, or repair of the emission control devices and system may be performed by any nonroad engine repair establishment or individual.



WARNING! Under no circumstances may the design of the machine be modified without the permission of the manufacturer. Always use genuine accessories. Non-authorized modifications and/or accessories can result in serious personal injury or the death of the operator or others.

Your warranty may not cover damage or liability caused by the use of non-authorized accessories or replacement parts.



WARNING! A sweeper can be dangerous if used incorrectly or carelessly, and can cause serious or fatal injury to the operators or others. It is extremely important that you read and understand the contents of this operator's manual.



WARNING! Long-term exposure to noise can result in permanent hearing impairment. So always use approved hearing protection.



The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

This decal certifies that the product has been approved in accordance with American exhaust emissions requirements EPA Ph II and CARB Tier II.

#### IMPORTANT ENGINE INFORMATION

#### **尚Husqvarna**

HUSQVARNA AB HUSKVARNA SWEDEN TWC
THIS ENGINE CONFORMS TO U.S. EPA PH2 AND 2005 AND LATER
CALIFORNIA EMISSION REGULATIONS FOR SMALL OFFROAD ENGINES.
REFER TO OPERATOR'S MANUAL FOR
MAINTENANCE SPECIFICATIONS AND ADJUSTMENTS.
EMISSIONS COMPLIANCE PERIOD: CATEGORY

The Emissions Compliance Period referred to on the Emissions Compliance label indicates the numbers of operating hours for which the engine has been shown to meet Federal and California emission requirements. Category C = 50 hours, B = 125 hours and A = 300 hours.

# INTRODUCTION

#### **Dear customer!**

Congratulations on your choice to buy a Husqvarna product! Husqvarna is based on a tradition that dates back to 1689, when the Swedish King Karl XI ordered the construction of a factory on the banks of the Huskvarna River, for production of muskets. The location was logical, since water power was harnessed from the Huskvarna River to create the water-powered plant. During over 300 years of continuous operation, the Husqvarna factory has produced a lot of different products, from wood stoves to modern kitchen appliances, sewing machines, bicycles, motorcycles etc. In 1956, the first motor driven lawn mowers appeared, followed by chain saws in 1959, and it is within this area Husqvarna is working today.

Today Husqvarna is one of the leading manufacturers in the world of forest and garden products, with quality as our highest priority. We develop, manufacture and market high quality motor driven products for forestry and gardening as well as for building and construction industry.

Your purchase gives you access to professional help with repairs and service whenever this may be necessary. If the retailer who sells your machine is not one of our authorized dealers, ask for the address of your nearest servicing dealer.

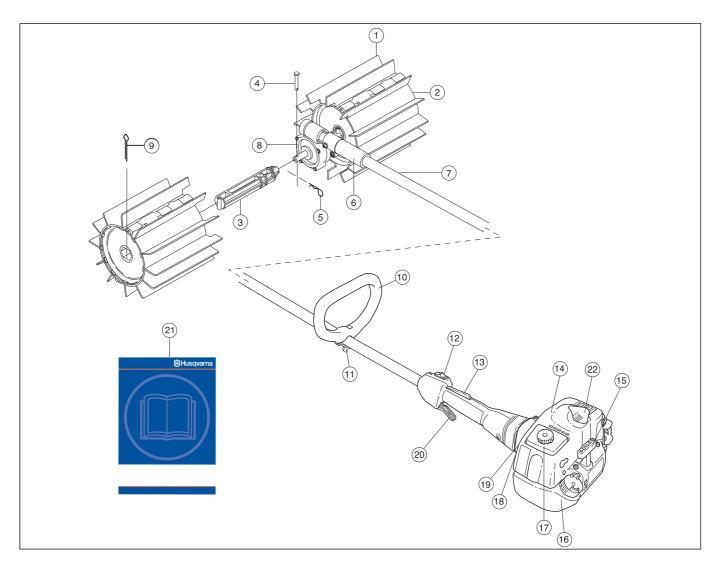
It is our wish that you will be satisfied with your product and that it will be your companion for a long time. Think of this operator's manual as a valuable document. By following its' content (using, service, maintenance etc) the life span and the second-hand value of the machine can be extended. If you ever lend or sell this machine, make sure that the borrower or buyer gets the operator's manual, so they will also know how to properly maintain and use it.

Thank you for using a Husqvarna product.

Husqvarna AB has a policy of continuous product development and therefore reserves the right to modify the design and appearance of products without prior notice.

For customer assistance call: 704-921-7000 or contact us at our website: www.husqvarna.com

# **WHAT IS WHAT?**



# What is what on the sweeper?

- 1 Blade
- 2 Sweeper roller
- 3 Roller shaft
- 4 Pin
- 5 Hairpin spring
- 6 Plastic sleeve
- 7 Tube
- 8 Gearbox
- 9 Split Pin
- 10 Loop handle
- 11 Handle adjustment

- 12 Stop switch
- 13 Throttle lock
- 14 Cylinder cover
- 15 Starter handle
- 16 Fuel tank
- 17 Air filter cover
- 18 Air purge
- 19 Choke control
- 20 Throttle control
- 21 Operator's manual
- 22 Spark plug

# SAFETY INSTRUCTIONS

## **Important**

#### IMPORTANT!

The machine is only designed for sweeping lawns, pathways, asphalt roads and the like.

Never use the machine if you are tired, if you have drunk alcohol, or if you are taking medication that could affect your vision, your judgement or your co-ordination.

Never use the machine in extreme weather conditions such as severe cold, very hot and/or humid climates.

Wear personal protective equipment. See instructions under the heading Personal protective equipment.

Never use a machine that has been modified in any way from its original specification.

Never use a machine that is faulty. Carry out the checks, maintenance and service instructions described in this manual. Some maintenance and service measures must be carried out by trained and qualified specialists. See instructions under the heading Maintenance.

All covers and guards must be fitted before starting. Ensure that the spark plug cap and ignition lead are undamaged to avoid the risk of electric shock.



WARNING! Never allow children to use or be in the vicinity of the machine. As the machine is equipped with a spring-loaded stop switch and can be started by low speed and force on the starter handle, even small children under some circumstances can produce the force necessary to start the machine. This can mean a risk of serious personal injury. Therefore remove the spark plug cap when the machine is not under close supervision.

# Personal protective equipment

#### IMPORTANT!

A sweeper can be dangerous if used incorrectly or carelessly, and can cause serious or fatal injury to the operators or others. It is extremely important that you read and understand the contents of this operator's manual.

You must use approved personal protective equipment whenever you use the machine. Personal protective equipment cannot eliminate the risk of injury but it will reduce the degree of injury if an accident does happen. Ask your dealer for help in choosing the right equipment.



WARNING! Listen out for warning signals or shouts when you are wearing hearing protection. Always remove your hearing protection as soon as the engine stops.

#### HEARING PROTECTION

Wear hearing protection that provides adequate noise reduction.



#### **EYE PROTECTION**

Always wear approved eye protection. If you use a visor then you must also wear approved protective goggles. Approved protective goggles must comply with standard ANSI Z87.1 in the USA or EN 166 in EU countries.



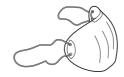
#### **GLOVES**

Gloves should be worn when necessary, e.g., when fitting cutting attachments.



#### **DUST MASK**

Wear a dust mask.



#### BOOTS

Wear sturdy, non-slip boots.



#### CLOTHING

Wear clothes made of a strong fabric and avoid loose clothing that can catch on twigs and branches. Always wear heavy, long pants. Do not wear jewellery, shorts sandals or go barefoot. Secure hair so it is above shoulder level.

#### FIRST AID KIT

Always have a first aid kit nearby.



# SAFETY INSTRUCTIONS

# Machine's safety equipment

This section describes the machine's safety equipment, its purpose, and how checks and maintenance should be carried out to ensure that it operates correctly. See the "What is what?" section to locate where this equipment is positioned on your machine.

The life span of the machine can be reduced and the risk of accidents can increase if machine maintenance is not carried out correctly and if service and/or repairs are not carried out professionally. If you need further information please contact your nearest servicing dealer.

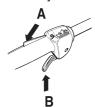
IMPORTANT! All servicing and repair work on the machine requires special training. This is especially true of the machine's safety equipment. If your machine fails any of the checks described below you must contact your service agent. When you buy any of our products we guarantee the availability of professional repairs and service. If the retailer who sells your machine is not a servicing dealer, ask him for the address of your nearest service agent.



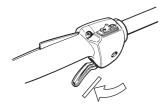
WARNING! Never use a machine with faulty safety equipment. The machine's safety equipment must be checked and maintained as described in this section. If your machine fails any of these checks contact your service agent to get it repaired.

#### Throttle lock

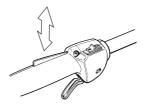
The throttle lock is designed to prevent accidental operation of the throttle control. When you press the lock (A) (i.e. when you grasp the handle) it releases the throttle control (B). When you release the handle the throttle control and the throttle lock both move back to their original positions. This movement is controlled by two independent return springs. This arrangement means that the throttle control is automatically locked at the idle setting.



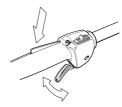
Make sure the throttle control is locked at the idle setting when the throttle lock is released.



Press the throttle lock and make sure it returns to its original position when you release it.



Check that the throttle control and throttle lock move freely and that the return springs work properly.



See instructions under the heading Start. Start the machine and apply full throttle. Release the throttle and check that the sweeper rollers stops and remains at a standstill. If the sweeper rollers rotates with the throttle in the idle position then the carburettor idle setting must be checked. See instructions under the heading Maintenance.



#### Stop switch

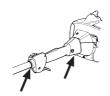
Use the stop switch to switch off the engine.



Start the engine and make sure the engine stops when you move the stop switch to the stop setting.

#### Vibration damping system

Your machine is equipped with a vibration damping system that is designed to reduce vibration and make operation easier.



# SAFETY INSTRUCTIONS

The machine's vibration damping system reduces the transfer of vibration between the engine unit/cutting equipment and the machine's handle unit.





Regularly check the vibration damping units for cracks or deformation. Check that the vibration damping element is undamaged and securely attached.



WARNING! Overexposure to vibration can lead to circulatory damage or nerve damage in people who have impaired circulation. Contact your doctor if you experience symptoms of overexposure to vibration. Such symptoms include numbness, loss of feeling, tingling, pricking, pain, loss of strength, changes in skin colour or condition. These symptoms normally appear in the fingers, hands or wrists. The risk increases at low temperatures.

#### Muffler

The muffler is designed to keep noise levels to a minimum and to direct exhaust fumes away from the user. A muffler fitted with a catalytic converter is also designed to reduce harmful exhaust gases.



In countries that have a warm and dry climate there is a significant risk of fire. We therefore fit certain mufflers with a spark arrestor mesh. Check whether the muffler on your machine is fitted with this kind of mesh.



For mufflers it is very important that you follow the instructions on checking, maintaining and servicing your machine.

Never use a machine that has a faulty muffler.



Regularly check that the muffler is securely attached to the machine.



If the muffler on your machine is fitted with a spark arrestor mesh this must be cleaned regularly. A blocked mesh will cause the engine to overheat and may lead to serious damage.





WARNING! Mufflers fitted with catalytic converters get very hot during use and remain so for some time after stopping. This also applies at idle speed. Contact can result in burns to the skin. Remember the risk of fire!



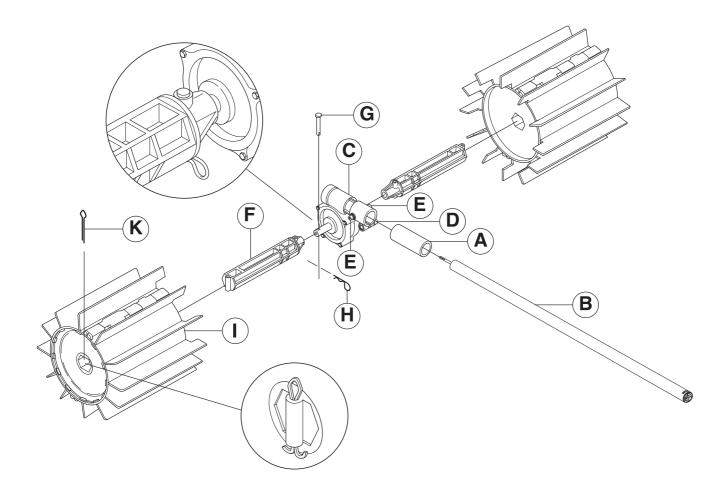
WARNING! The inside of the muffler contain chemicals that may be carcinogenic. Avoid contact with these elements in the event of a damaged muffler.



WARNING! Bear in mind that: Engine exhaust fumes contain carbon monoxide, which can cause carbon monoxide poisoning. For this reason you should not start or run the machine indoors, or anywhere that is poorly ventilated.

The exhaust fumes from the engine are hot and may contain sparks which can start a fire. Never start the machine indoors or near combustible material!

# **ASSEMBLY**



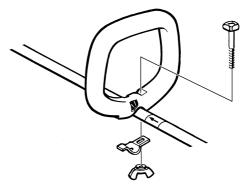
# Assembling the sweeper

- Slide the plastic sleeve (wear protection) (A) onto the shaft (B).
- Fit the gearbox (C) on the tube (B). Tighten clamp screw (D) at the gearbox. Tighten the two locking screws (E) on the gearbox.
- Press one of the roller shafts (F) onto one of the two output drive shafts from the gearbox. If necessary rotate the roller shaft so that the hole for the pin lines up with the corresponding hole in the drive shaft.
- Secure the roller shaft on the drive shaft using a pin (G) and hairpin spring (H).
- Slide one of the sweeper rollers (I) onto the fitted tube. The end with the extended rubber blades must be fitted closest to the gearbox. Slide the sweeper roller on until it touches the pin.
- Secure the roller to the shaft using a split pin (K) (see diagram). The split pin must be flush with the outer end of the roller, so you may need to push on the end plate slightly to fit it.
- · Repeat steps 1-7 to fit the shaft and roller on the other side.

CAUTION! The rollers are identical, but they must both be fitted with the extended rubber blades nearest the gearbox.

# Fitting the loop handle

Position the handle on the shaft. Note that the handle must be mounted below the arrow on the shaft.



- Fit the screw, securing plate and wing nut as shown in the diagram.
- · Tighten the wing nut.

# **FUEL HANDLING**

# **Fuel safety**

Never start the machine:

- 1 If you have spilt fuel on it. Wipe off the spillage and allow remaining fuel to evaporate.
- 2 If you have spilt fuel on yourself or your clothes, change your clothes. Wash any part of your body that has come in contact with fuel. Use soap and water.
- 3 If the machine is leaking fuel. Check regularly for leaks from the fuel cap and fuel lines.

#### Transport and storage

- Store and transport the machine and fuel so that there is no risk of any leakage or fumes coming into contact with sparks or naked flames, for example, from electrical machinery, electric motors, electrical relays/switches or boilers.
- When storing and transporting fuel always use approved containers intended for this purpose.
- When storing the machine for long periods the fuel tank must be emptied. Contact your local gas station to find out where to dispose of excess fuel.
- Ensure the machine is cleaned and that a complete service is carried out before long-term storage.
- In order to prevent unintentional starting of the engine, the spark plug cap must always be removed during long-term storage, if the machine is not under close supervision and when performing all service measures.



WARNING! Take care when handling fuel. Bear in mind the risk of fire, explosion and inhaling fumes.

#### **Fuel**

**CAUTION!** The machine is equipped with a two-stroke engine and must always been run using a mixture of gasoline and two-stroke engine oil. It is important to accurately measure the amount of oil to be mixed to ensure that the correct mixture is obtained. When mixing small amounts of fuel, even small inaccuracies can drastically affect the ratio of the mixture.



WARNING! Fuel and fuel fumes are highly inflammable and can cause serious injury when inhaled or allowed to come in contact with the skin. For this reason observe caution when handling fuel and make sure there is adequate ventilation.

#### Gasoline



**CAUTION!** Always use a quality petrol/oil mixture with an octane rating of at least 87 octane ((RON+MON)/2). If your machine is equipped with a catalytic converter (see chapter on Technical data) always use a good quality unleaded petrol/oil mixture. Leaded petrol will destroy the catalytic converter.

Use low-emission gasoline, also known as alkylate gasoline, if it is available.



#### This engine is certified to operate on unleaded gasoline.

- The lowest recommended octane grade is 87
   ((RON+MON)/2). If you run the engine on a lower octane
   grade than 87 so-called knocking can occur. This gives
   rise to a high engine temperature and increased bearing
   load, which can result in serious engine damage.
- When working at continuous high revs a higher octane rating is recommended.

#### Two-stroke oil

- For best results and performance use HUSQVARNA twostroke engine oil, which is specially formulated for our aircooled two stroke-engines.
- Never use two-stroke oil intended for water-cooled engines, sometimes referred to as outboard oil (rated TCW).
- Never use oil intended for four-stroke engines.
- · Mixing ratio

1:50 (2%) with HUSQVARNA two-stroke oil or equivalent.

Gasoline, litre	Two-stroke oil, litre			
	2% (1:50)			
5	0,10			
10	0,20			
15	0,30			
20	0,40			
US gallon	US fl. oz.			
1	2 1/2			
2 1/2	6 1/2			
5	12 7/8			

# **FUEL HANDLING**

#### Mixing

- Always mix the gasoline and oil in a clean container intended for fuel.
- Always start by filling half the amount of the gasoline to be used. Then add the entire amount of oil. Mix (shake) the fuel mixture. Add the remaining amount of gasoline.
- Mix (shake) the fuel mixture thoroughly before filling the machine's fuel tank.



- Do not mix more than one month's supply of fuel at a time.
- If the machine is not used for some time the fuel tank should be emptied and cleaned.



WARNING! The catalytic converter muffler gets very hot during and after use. This also applies during idling. Be aware of the fire hazard, especially when working near flammable substances and/or vapours.

## **Fueling**





WARNING! Taking the following precautions, will lessen the risk of fire:

Do not smoke or place hot objects near fuel.

Always shut off the engine before refuelling.

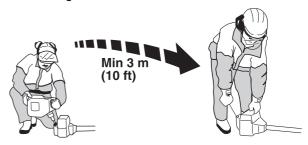
Always stop the engine and let it cool for a few minutes before refuelling.

When refuelling, open the fuel cap slowly so that any excess pressure is released gently.

Tighten the fuel cap carefully after refuelling.

Always move the machine away from the refuelling area before starting.

- Clean the area around the fuel cap. Contamination in the tank can cause operating problems.
- Ensure that the fuel is well mixed by shaking the container before filling the tank.



# STARTING AND STOPPING

## Starting and stopping





WARNING! The complete clutch cover and shaft must be fitted before the machine is started, otherwise the clutch can come loose and cause personal injury.

Always move the machine away from the refuelling area before starting. Place the machine on a flat surface. Ensure the sweeper rollers cannot come into contact with any object.

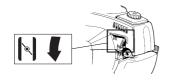
Make sure no unauthorised persons are in the working area, otherwise there is a risk of serious personal injury. The safety distance is 15 metres.

#### **Starting**

**Primer bulb:** Press the primer bulb repeatedly until fuel begins to fill the bulb. The bulb need not be completely filled.



Choke: Set the choke control in the choke position.





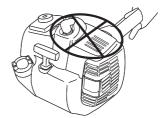
WARNING! When the engine is started with the choke in the choke or start position the sweeper rollers starts to rotate immediately. Hold the body of the machine on the ground using your left hand (CAUTION! Not with your foot!). Grip the starter handle, slowly pull out the cord with your right hand until you feel some resistance (the starter pawls grip), now quickly and powerfully pull the cord. **Never wrap the starter cord around your hand** 

Repeat pulling the cord until the engine starts. When the engine starts, return choke control to run position and apply full throttle; the throttle will automatically disengage from the start setting.

**CAUTION!** Do not pull the starter cord all the way out and do not let go of the starter handle when the cord is fully extended. This can damage the machine.

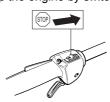


**CAUTION!** Do not put any part of your body in marked area. Contact can result in burns to the skin, or electrical shock if the spark plug cap has been damaged. Always use gloves. Do not use a machine with damaged spark plug cap.



#### **Stopping**

Stop the engine by switching off the ignition.



**CAUTION!** The stop switch automatically returns to the start position. In order to prevent unintentional starting, the spark plug cap must be removed from the spark plug when assembling, checking and/or performing maintenance.

# **WORKING TECHNIQUES**

# **General working instructions**

#### IMPORTANT!

This section describes the basic safety precautions for working with the sweeper.

If you encounter a situation where you are uncertain how to proceed you should ask an expert. Contact your dealer or your service workshop.

Avoid all usage which you consider to be beyond your capability.

#### **Basic safety rules**







- 1 Look around you:
- To ensure that people, animals or other things cannot affect your control of the machine.
- To prevent the above-mentioned from coming into contact with the sweeper or being hit by loose objects that are thrown out.
- CAUTION! Do not use the machine unless you are able to call for help in the event of an accident.
- 2 Do not use the machine in bad weather, such as dense fog, heavy rain, strong wind, intense cold, etc. To work in bad weather conditions is tiring and can create dangerous circumstances, e.g. slippery surfaces.
- 3 Make sure you can move and stand safely. Check the area around you for possible obstacles (roots, rocks, branches, ditches, etc.) in case you have to move suddenly. Take great care when working on sloping ground.



- 4 The engine must be switched off before moving.
- 5 Never put the machine down with the engine running unless you have it in clear sight.
- 6 Do not over-reach.
- 7 Keep sweeper rollers below waist level.

#### **Basic working techniques**

#### Safety instructions while working

- Keep a good balance and a firm foothold.
- Always hold the machine with both hands. Hold the machine on the right of your body.
- Never use other parts of the body to manoeuvre the machine.
- Keep your hands and feet away from the sweeper when the engine is running.
- When the engine has been switched off, keep your hands and feet away from the sweeper until it has come to a complete stop.
- Always use full throttle when using the sweeper.
- The sweeper works best when the rubber blades can quickly slide over or stroke the surface. New or replaced sweeper rollers tend to stick or drag on hard surfaces, and should therefor be run in properly before use. The easy way run them in is to run the machine at full throttle for 3-5 minutes on loose gravel or a similarly abrasive material. After running-in, the sweeper can easily clear a wide variety of materials, from snow and puddles of water, to heavier objects such as gravel and wood chippings. With practice you will learn how the sweeper works, but you must think of safety right from the start!
- Always drop to idling speed after each working operation.
  Longer periods running at full throttle without loading the
  engine (that is without resistance, which the engine feels
  from the sweeper rollers when sweeping) can lead to
  serious engine damage
- If heavy vibration occurs, stop the machine. Disconnect the HT lead from the spark plug. Check that the machine is not damaged. Repair any damage.



WARNING! Watch out for thrown objects. Always wear approved eye protection. Never lean over the cutting attachment guard. Stones, rubbish, etc. can be thrown up into the eyes causing blindness or serious injury.

Keep unauthorised persons at a distance. Children, animals, onlookers and helpers should be kept outside the safety zone of 15 m. Stop the machine immediately if anyone approaches.

The bevel gear can get hot during use and may remain so for a while afterwards. You could get burnt if you touch it.

- Run the sweeper at full (or almost full) throttle, with the rubber blades resting on the surface.
- When you want to clear narrow areas, such as pavements, the machine can be used so that it throws the material straight ahead of you. If you want to cover wider areas you may need to work at an angle so that long heaps build up on one side. Long heaps consisting of light material can be gathered together in a single line or pile for collecting later, while hard or bulky material may have

# **WORKING TECHNIQUES**

to be collected in several long heaps. To clear in corners you can change the direction of rotation by turning over the machine.





WARNING! When you turn the machine over, litter is thrown backwards towards the user. Use a lower engine speed when you reverse with the machine and remember that it is easy to trip over material that is thrown out!

· Keep your working angle low.

A large working angle could cause you to lose control!



 CAUTION! It is both tiring and unnecessary to raise the rubber blades or hold them above the surface while you are working.



WARNING! Maintain a low working angle with the surface! If the working angle is high the sweeper will tend to move towards you and there is a risk you will lose control over the machine.

The sweeper rollers may start turning when the sweeper is started! Always hold the machine firmly when you start it up. Watch out for objects that could become entangled in the rotating sweeper rollers or thrown out by them.

ALWAYS WATCH OUT FOR OBJECTS THAT ARE THROWN OUT!

Even though the sweeper rollers do not exert the same force as a lawn mower blade, for example, you should avoid working with materials that could cause damage to people or property if they are thrown out.

#### Carburetor

Your Husqvarna product has been designed and manufactured to specifications that reduce harmful emissions. After the engine has used 8-10 tanks of fuel the engine will be run-in. To ensure that it continues to run at peak performance and to minimise harmful exhaust emissions after the running-in period, ask your dealer/service workshop (who will have a rev counter at their disposal) to adjust your carburettor.



WARNING! The complete clutch cover and shaft must be fitted before the machine is started, otherwise the clutch can come loose and cause personal injury.

#### **Function**

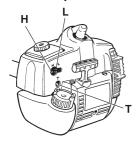


- The carburetor governs the engine's speed via the throttle control. Air and fuel are mixed in the carburetor. The air/ fuel mixture is adjustable. Correct adjustment is essential to get the best performance from the machine.
- The setting of the carburetor means that the engine is adapted to local conditions, for example, the climate, altitude, fuel and the type of 2-stroke oil.
- · The carburetor has three adjustment controls:

L = Low speed jet

H = High speed jet

T = Idle adjustment screw



- The L and H-jets are used to adjust the supply of fuel to match the rate that air is admitted, which is controlled with the throttle. If they are screwed clockwise the air/fuel ratio becomes leaner (less fuel) and if they are turned anticlockwise the ratio becomes richer (more fuel). A lean mixture gives a higher engine speed and a rich mixture gives a lower engine speed.
- The T-screw regulates the throttle setting at idle speed. If the T-screw is turned clockwise this gives a higher idle speed; turning it anti-clockwise gives a lower idle speed.

#### **Basic setting**

 The basic carburetor settings are adjusted during testing at the factory. The basic setting is richer than the optimal setting and should be maintained for the first few hours the machine is in use. The carburettor should then be finely adjusted. Fine adjustment should be carried out by a skilled technician.

**CAUTION!** If the sweeper rollers rotates/moves while the engine is idling, the T-screw should be turned anti-clockwise until the sweeper rollers stops.

Rec. idle speed 2700 rpm

**Recommended max. speed:** See the Technical data section.



WARNING! If the idling speed cannot be adjusted so that the sweeper rollers stops, contact your service workshop. Do not use the machine until it has been correctly adjusted or repaired.

## Fine adjustment

 When the machine has been "run-in" the carburetor should be finely adjusted. The fine adjustment should be carried out by a qualified person. First adjust the Ljet, then the idling screw T and then the H-jet.

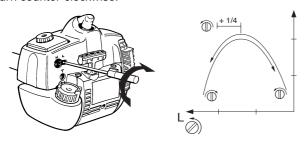
#### **Conditions**

- Before any adjustments are made, make sure that the air filter is clean and the air filter cover is fitted. If you adjust the carburettor when the air filter is dirty it will result in a leaner mixture when the filter is finally cleaned. This can lead to serious engine damage.
- Carefully turn both jets, L and H, so that they are midway between fully screwed in and fully screwed out.
- Do not attempt to adjust the L and H jets beyond either stop as this could cause damage.
- Now start the machine according to the starting instructions and let it warm up for 10 minutes.

**CAUTION!** If the sweeper rollers rotates/moves while the engine is idling, the T-screw should be turned anticlockwise until the sweeper rollers stops.

#### Low speed jet L

Try to find the highest idling speed, turning the low speed needle L clockwise respectively counter-clockwise. When the highest speed has been found, turn the low speed needle L 1/4 turn counter-clockwise.



**CAUTION!** If the sweeper rollers rotates/moves while the engine is idling, the T-screw should be turned anti-clockwise until the sweeper rollers stops.

#### Fine adjustment of the idle speed T

Adjust the idling speed with the T-screw, if it is necessary to readjust. First turn the idle speed adjusting screw T clockwise until the sweeper rollers starts to rotate/move. Then turn, anticlockwise until the sweeper rollers stops. A correctly adjusted idle speed setting occurs when the engine runs smoothly in every position. It should also be good margin to the rpm when the sweeper rollers starts to rotate/move.





WARNING! If the idling speed cannot be adjusted so that the sweeper rollers stops, contact your service workshop. Do not use the machine until it has been correctly adjusted or repaired.

#### High speed jet H

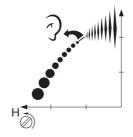
The high speed jet H affects the engine power, speed, temperature and fuel consumption. If the high speed jet H is set too lean (screwed in too far) the engine speed will be too high and cause engine damage. Do not let the engine run at full speed for more than 10 seconds.



Apply full throttle and turn the high speed jet H very slowly clockwise until the engine slows down. Then turn the high speed jet H very slowly anticlockwise until the engine starts to run unevenly. Now turn the high speed jet H slowly clockwise a little way until the engine runs smoothly.

Note that the engine should be run unloaded when adjusting the high speed needle. Therefore dismantle the sweeper rollers and roller shafts before adjusting the high speed needle.

The high speed jet H is adjusted correctly when the machine burbles a little. If the machine races then the setting is too lean. If the engine produces a lot of smoke and burbles a lot then the setting is too rich.



**CAUTION!** For optimum adjustment of the carburettor, contact a qualified dealer/service workshop that has a revolution counter at their disposal.

### Correctly adjusted carburetor

When the carburetor is correctly adjusted the machine will accelerate without hesitation and burble a little at maximum speed. It is also important that the sweeper rollers does not rotate/move at idle.

If the high speed jet H is set too lean it will result in less power, less performance, poor acceleration and/or damage to the engine.

If both the L and H jets are set too rich it will results in acceleration problems or too low a working speed.

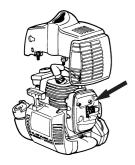
#### Muffler





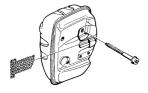
**CAUTION!** Some mufflers are fitted with a catalytic converter. See chapter on Technical data to see whether your machine is fitted with a catalytic converter.

The muffler is designed to reduce the noise level and to direct the exhaust gases away from the operator. The exhaust gases are hot and can contain sparks, which may cause fire if directed against dry and combustible material.



Some mufflers are equipped with a special spark arrestor mesh. If your machine has this type of muffler, you should clean the mesh at least once a week. This is best done with a wire brush. On mufflers without a catalytic converter the mesh should be cleaned weekly, or replaced if necessary. On mufflers fitted with a catalytic converter the mesh should be checked, and if necessary cleaned, monthly. If the mesh is damaged it should be replaced.

If the mesh is frequently blocked, this can be a sign that the performance of the catalytic converter is impaired. Contact your dealer to inspect the muffler. A blocked mesh will cause the machine to overheat and result in damage to the cylinder and piston.



**CAUTION!** Never use a machine with a defective muffler.



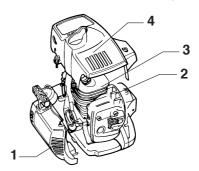
WARNING! Mufflers fitted with catalytic converters get very hot during use and remain so for some time after stopping. This also applies at idle speed. Contact can result in burns to the skin. Remember the risk of fire!

## Cooling system





To keep the working temperature as low as possible the machine is equipped with a cooling system.



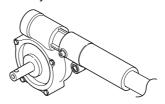
The cooling system consists of:

- Air intake on the starter.
- 2 Fins on the flywheel.
- 3 Cooling fins on the cylinder.
- 4 Cylinder cover (directs cold air over the cylinder).

Clean the cooling system with a brush once a week, more often in demanding conditions. A dirty or blocked cooling system results in the machine overheating which causes damage to the piston and cylinder.

# Angle gear

The angle gear is filled with a sufficient quantity of grease at the factory.



Normally, the grease does not need to be changed except when repairs are carried out.

#### Air filter





The air filter must be regularly cleaned to remove dust and dirt in order to avoid:

- · Carburettor malfunctions
- Starting problems
- · Loss of engine power
- Unnecessary wear to engine parts
- · Excessive fuel consumption.



Clean the filter every 8 hours, or more regularly if conditions are exceptionally dusty.

#### Cleaning the air filter

Remove the air filter cover and take out the filter. Wash it clean in warm, soapy water. Ensure that the filter is dry before refitting it.

An air filter that has been in use for a long time cannot be cleaned completely. The filter must therefore be replaced with a new one at regular intervals. A damaged air filter must always be replaced.

#### **IMPORTANT!**

The sweeper is often used under dusty conditions. It is extremely important to maintain the air filter regularly, often daily. The air filter must be oiled in order to work satisfactorily.

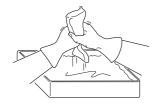
### Oiling the air filter





Always use HUSQVARNA filter oil, art. no. 531 00 92-48. The filter oil contains a solvent to make it spread evenly through the filter. You should therefore avoid skin contact.

Put the filter in a plastic bag and pour the filter oil over it. Knead the plastic bag to distribute the oil. Squeeze the excess oil out of the filter inside the plastic bag and pour off the excess before fitting the filter to the machine. Never use common engine oil. This would drain through the filter quite quickly and collect in the bottom.





#### Spark plug

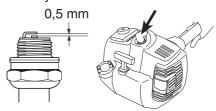


The spark plug condition is influenced by:

- · Incorrect carburetor adjustment.
- An incorrect fuel mixture (too much or incorrect type of oil).
- · A dirty air filter.

These factors cause deposits on the spark plug electrodes, which may result in operating problems and starting difficulties.

If the machine is low on power, difficult to start or runs poorly at idle speed: always check the spark plug first before taking any further action. If the spark plug is dirty, clean it and check that the electrode gap is 0.5 mm (0,020"). The spark plug should be replaced after about a month in operation or earlier if necessary.



CAUTION! Always use the recommended spark plug type! Use of the wrong spark plug can damage the piston/cylinder.

IMPORTANT! Use only HUSQVARNA replacement parts. Use of other brands of replacement parts can cause damage to your unit or injury to the operator or others. Your warranty does not cover damage or liability caused by the use of accessories and/or attachments not specifically recommended by HUSQVARNA.

# **Maintenance schedule**

The following is a list of the maintenance that must be performed on the machine. Most of the items are described in the Maintenance section. The user must only carry out the maintenance and service work described in this manual. More extensive work must be carried out by an authorised service workshop.

Maintenance	Daily maintenance	Weekly maintenance	Monthly maintenance
Clean the outside of the machine.	X		
Make sure the throttle trigger lock and the throttle function correctly from a safety point of view.	х		
Check that the stop switch works correctly.	Х		
Check that the sweeping attachment does not rotate at idle.	X		
Clean the air filter. Replace if necessary.	Х		
Check that the sweeper rolls are undamaged.	Х		
Check the sweeper for cracks and chips or damage. Replace if necessary.	X		
A non-balanced sweeper induces heavy vibrations that may damage the machine.	х		
Check that nuts and screws are tight.	X		
Check that there are no fuel leaks from the engine, tank or fuel lines.	X		
Check the starter and starter cord.		Х	
Check that the vibration damping elements are not damaged.		Х	
Clean the outside of the spark plug. Remove it and check the electrode gap. Adjust the gap to 0.5 mm (.20"), or replace the spark plug. Check that the spark plug is fitted with a suppressor.		Х	
Clean the machines cooling system.		X	
Check that the angle gear is not leaking.		Х	
Clean or replace the spark arrestor mesh on the muffler (only applies to mufflers without a catalytic converter).		Х	
Clean the outside of the carburettor and the space around it.		X	
Clean the fuel tank.			Х
Check the fuel filter from contamination and the fuel hose from cracks or other defects. Replace if necessary.			Х
Check all cables and connections.			Х
Check the clutch, clutch springs and the clutch drum for wear. Replace if necessary by an autorized service workshop.			Х
Replace the spark plug. Check that the spark plug is fitted with a suppressor.			х
Check and clean the spark arrestor mesh on the muffler (only applies to mufflers fitted with a catalytic converter).			х
Check and if necessary, clean the exhaust port of cylinder from carbon deposits.			х

# **TECHNICAL DATA**

#### **Technical data**

Technical data 326SX

**Engine** 

Cylinder displacement, cu.in/cm<sup>3</sup> 1,50/24,5
Cylinder bore, inch/mm 1,34/34,0
Stroke, inch/mm 1,06/27
Idle speed, rpm 2700

Recommended max. fast idle speed, rpm 11000-11700

Speed of output shafts, rpm 262

Max. engine output, acc. to ISO 8893, kW/ rpm 0,9/8400

Catalytic converter muffler Yes

Speed-regulated ignition system Yes

Ignition system

Manufacturer/type of ignition system Walbro MB

Spark plug Champion RCJ 6Y

Electrode gap, inch/mm 0,02/0,5

Fuel and lubrication system

Manufacturer/type of carburetor Zama C1Q Fuel tank capacity, US pint/litre 1,06/0,5

Weight

Weight without fuel, Lbs/kg 19,8/9,0

Sound levels

(see note 1)

Equivalent sound pressure level at the user's ear, measured according to ANSI B175.3-1997, dB(A), min/ 92 max:

#### **Vibration levels**

Vibration levels at handles, measured according to ANSI

B175.3-1997, m/s<sup>2</sup>

At idle, left/right handles: 2,2/1,5
At max. speed, left/right handles: 4,3/5,7

Sweeper

Sweeper roller width, mm 575 Sweeper roller diameter, mm 270

Note 1: Equivalent noise pressure level is calculated as the time-weighted energy total for noise pressure levels under various working conditions with the following time distribution: 1/2 idle and 1/2 max. speed.

# FEDERAL EMISSION CONTROL WARRANTY STATEMENT

# YOUR WARRANTY RIGHTS AND OBLIGATIONS

The EPA (The US Environmental Protection Agency), Environment Canada and Husqvarna Forest & Garden are pleased to explain the emissions control system warranty on your 2001 and later small nonroad engine. In U.S. and Canada, new small nonroad engines must be designed, built and equipped to meet the federal stringent anti-smog standards. Husqvarna Forest & Garden must warrant the emission control system on your small nonroad engine for the period of time listed below provided there has been no abuse, neglect or improper maintenance of your unit. Your emission control system includes Parts such as the carburetor and the ignition system. Where a warrantable condition exists, Husqvarna Forest & Garden will repair your small nonroad engine at no cost to you. Expenses covered under warranty include diagnosis, parts and labor.

# MANUFACTURER'S WARRANTY COVERAGE

The 2001 and later small nonroad engines are warranted for two years. If any emission related part on you engine (as listed above) is defective, the part will be repaired or replaced by Husqvarna Forest & Garden.

# OWNER'S WARRANTY RESPONSIBILITIES

As the small nonroad engine owner, you are responsible for the performance of the required maintenance listed in your Operator's Manual. Husqvarna Forest & Garden recommends that you retain all receipts covering maintenance on your small nonroad engine, but Husqvarna Forest & Garden cannot deny warranty solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance. As the small nonroad engine owner, you should, however, be aware that Husqvarna Forest & Garden may deny you warranty coverage if your small nonroad engine or a part of it has failed due to abuse, neglect, improper maintenance, unapproved modifications or the use of parts not made or approved by the original equipment manufacturer. You are responsible for presenting your small nonroad engine to a Husqvarna Forest & Garden authorized servicing dealer as soon as a problem exists. The warranty repairs should be completed in a reasonable amount of time. not to exceed 30 days. If you have any questions regarding your warranty rights and responsibilities, you should contact your nearest authorized servicing dealer or call Husqvarna Forest & Garden at 1-800-487-5963.

#### WARRANTY COMMENCEMENT DATE

The warranty period begins on the date small nonroad engine is delivered.

#### LENGTH OF COVERAGE

Husqvarna Forest & Garden warrants to the initial owner and each subsequent purchaser that the engine is free from defects in materials and workmanship which cause the failure of a warranted part for a period of two years.

#### WHAT IS COVERED

**REPAIR OR REPLACEMENT OF PARTS** Repair or replacement of any warranted part will be performed at no charge to the owner at an approved Husqvarna Forest & Garden servicing dealer. If you have any questions regarding

your warranty rights and responsibilities, you should contact your nearest authorized servicing dealer or call Husqvarna Forest & Garden at 1-800-487-5963.

WARRANTY PERIOD Any warranted part which is not scheduled for replacement as required maintenance, or which is scheduled only for regular inspection to the effect of "repair or replace as necessary" shall be warranted for 2 years. Any warranted part which is scheduled for replacement as required maintenance shall be warranted for the period of time up to the first scheduled replacement point for that part.

**DIAGNOSIS** The owner shall not be charged for diagnostic labor which leads to the determination that a warranted part is defective, if the diagnostic work is performed at an approved Husqvarna Forest & Garden servicing dealer.

**CONSEQUENTIAL DAMAGES** Husqvarna Forest & Garden may be liable for damages to other engine components caused by the failure of a warranted part still under warranty.

#### WHAT IS NOT COVERED

All failures caused by abuse, neglect or improper maintenance are not covered.

#### **ADD -ON OR MODIFIED PARTS**

The use of add-on or modified parts can be grounds for disallowing a warranty claim. Husqvarna Forest & Garden is not liable to cover failures of warranted parts caused by the use of add-on or modified parts.

#### **HOW TO FILE A CLAIM**

If you have any questions regarding your warranty rights and responsibilities, you should contact your nearest authorized servicing dealer or call Husqvarna Forest & Garden at 1-800-487-5963.

#### WHERE TO GET WARRANTY SERVICE

Warranty services or repairs shall be provided at all Husqvarna Forest & Garden authorized servicing dealers.

# MAINTENANCE, REPLACEMENT AND REPAIR OF EMISSION-RELATED PARTS

Any Husqvarna Forest & Garden approved replacement part used in the performance of any warranty maintenance or repairs on emission-related parts, will be provided without charge to the owner if the part is under warranty.

# EMISSION CONTROL WARRANTY PARTS LIST

- 1 Carburetor and internal parts
- 2 Intake pipe, airfilter holder and carburetor bolts.
- 3 Airfilter and fuelfilter covered up to maintenance schedule.
- 4 Ignition System
  - 1 Spark Plug, covered up to maintenance schedule
  - 2 Ignition Module
- 5 Muffler with catalytic converter

#### MAINTENANCE STATEMENT

The owner is responsible for the performance of all required maintenance, as defined in the operator's manual.





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