

Our associates will ensure the tool works properly before you leave the store. If you experience issues with the tool while completing your project, simply bring it back to the Tool Rental Center to get a replacement. If you purchase Damage Protection at the time of your rental, you are not responsible for repair costs for tools that break due to normal use.





DSH 700
DSH 700-X
DSH 900
DSH 900-X

English

1 Information about the documentation

1.1 About this documentation

- Read this documentation before initial operation or use. This is a prerequisite for safe, trouble-free handling and use of the product.
- Observe the safety instructions and warnings in this documentation and on the product.
- Always keep the operating instructions with the product and make sure that the operating instructions are with the product when it is given to other persons.

1.2 Explanation of symbols used

1.2.1 Warnings

Warnings alert persons to hazards that occur when handling or using the product. The following signal words are used:



DANGER !

- ▶ Draws attention to imminent danger that will lead to serious personal injury or fatality.



WARNING !

- ▶ Draws attention to a potential threat of danger that can lead to serious injury or fatality.



CAUTION !

- ▶ Draws attention to a potentially dangerous situation that could lead to slight personal injury or damage to the equipment or other property.

1.2.2 Symbols in the documentation

The following symbols are used in this document:

	Read the operating instructions before use.
	Instructions for use and other useful information
	Dealing with recyclable materials
	Do not dispose of electric equipment and batteries as household waste

1.2.3 Symbols in the illustrations

The following symbols are used in illustrations:

	These numbers refer to the corresponding illustrations found at the beginning of these operating instructions
	The numbering reflects the sequence of operations shown in the illustrations and may deviate from the steps described in the text
	Item reference numbers are used in the overview illustrations and refer to the numbers used in the product overview section
	This symbol is intended to draw special attention to certain points when handling the product.
	Wireless data transfer

1.3 Product-dependent symbols

1.3.1 Symbols on the product

The following symbols are used on the product:

	Direction-of-rotation arrow on the guard
	Engine stop position
	Engine run position
	Primer bulb
	Idling jet adjusting screw
	Full-throttle jet adjusting screw
	Idling adjusting screw
	Fuel mixture
	Fuel-tank cap opening direction
	Choke (not -X)
	Half throttle (not -X)
	Wear ear protection, eye protection, respiratory protection and a hard hat
	Wear protective gloves
	Wear protective footwear
	Wireless data transfer

1.4 Adhesive labels on the machine

Warning signs

	Warning: Risk of fire due to flying sparks
	Warning: Risk of kickback
	Warning: Do not inhale toxic vapors or exhaust fumes
	Maximum spindle speed
	Warning: Hot surface

Prohibition symbols

	Do not use toothed cutting discs
	Do not use damaged cutting discs
	No smoking, no naked flame

1.5 Product information

HILTI products are designed for professional users and only trained, authorized personnel are permitted to operate, service and maintain the products. This personnel must be specifically informed about the possible hazards. The product and its ancillary equipment can present hazards if used incorrectly by untrained personnel or if used not in accordance with the intended use.

The type designation and serial number are printed on the rating plate.

- ▶ Write down the serial number in the table below. You will be required to state the product details when contacting Hilti Service or your local Hilti organization to inquire about the product.

Product information

Abrasive-disc cut-off saw	DSH 700 DSH 900
Generation:	01
Serial no.:	
Abrasive-disc cut-off saw	DSH 700-X DSH 900-X
Generation:	02
Serial no.:	

1.6 Declaration of conformity

We declare, on our sole responsibility, that the product described here complies with the applicable directives and standards. A copy of the declaration issued by the certification department can be found at the end of this documentation.

The technical documentation is filed and stored here:

Hilti Entwicklungsgesellschaft mbH | Tool Certification | Hiltistrasse 6 | 86916 Kaufering, Germany

2 Safety

2.1 Personal safety

- ▶ Use the right tool for the job. Do not use the tool for purposes for which it was not intended. Use it only as directed and when in technically faultless condition.
- ▶ Never tamper with or modify the tool in any way.
- ▶ Only persons who are familiar with it, who have been trained on how to use it safely and who understand the resulting hazards are permitted to use the tool. The tool is not intended for use by children.
- ▶ Stay alert, watch what you are doing and use common sense when operating the tool. Do not use the tool while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating the tool can result in serious personal injury.
- ▶ The user and persons in the vicinity must wear ANSI Z87.1-approved protective goggles, a hard hat, ear protectors, protective gloves, protective footwear and light respiratory protection while the tool is in use.
- ▶ Always hold the tool firmly with both hands on the grips provided. Keep the grips dry, clean and free from oil and grease.
- ▶ Never use the tool without the guard (hood). Adjust the guard to the correct position. The guard must be securely attached and positioned for maximum safety, so that the smallest possible part of the cutting disc is exposed to the operator. Make sure that sparks created during use do not present a hazard. The guard helps to protect the operator from broken disc fragments, inadvertent contact with the cutting disc and uncontrolled flying sparks.
- ▶ Before using the tool, or if an obstacle is contacted while the tool is in use, check the guard immediately for possible damage. Replace the guard immediately if it is damaged or broken.
- ▶ Do not touch rotating parts – risk of injury!
- ▶ Maintain a firm footing and balance at all times. This will allow you to control the tool better, even in unexpected situations, for example, in the event of experiencing kickback or rotational forces. Avoid unusual postures.
- ▶ Wear suitable work clothes. Do not wear jewelry or loose clothing. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be snagged by moving parts.
- ▶ If the tool or the cutting disc has been dropped or has fallen, check the tool and the cutting disc for damage. Change the cutting disc if necessary.
- ▶ Switch the tool off before adjusting the guard or changing the cutting disc.

- ▶ Wear protective gloves when changing the cutting disc. Touching the cutting disc presents a risk of injury (cuts or burns).
- ▶ Make sure fire extinguishers are available for use as there is a risk of fire due to flying sparks and the use of flammable fuel.
- ▶ Do not use reducing sleeves.
- ▶ Use of the wet cutting method is preferable in order to reduce the amount of dust produced when cutting mineral materials and asphalt.
- ▶ Avoid skin contact with the slurry created when using the wet cutting method.
- ▶ Dust from materials such as paint containing lead, some types of wood, minerals and metal can be harmful to health. Contact with or inhalation of the dust can cause allergic reactions and/or respiratory or other diseases to the operator or bystanders. To reduce the amount of dust produced when cutting, we recommend use of the wet cutting method. Make sure that the workplace is well ventilated. It is advisable to wear a filter class P2 dust mask. Comply with national regulations applicable to the materials you will be working with.
- ▶ Cutting material containing asbestos is not permissible.
- ▶ Take breaks between working and do relaxation and finger exercises to improve the blood circulation in your fingers. Exposure to vibration during long periods of work can lead to disorders of the blood vessels and nervous system in the fingers, hands and wrists.
- ▶ Consult the responsible structural engineer, architect or person in charge of the building project before starting work. Slits cut into load-bearing walls or other structures can influence the statics of the structure, especially when reinforcing bars or load-bearing components are cut.
- ▶ If the work involves breaking through, always secure the area on the side opposite to where the work is being carried out. Pieces of debris could drop out and/or fall down and injure other persons.
- ▶ Never leave the tool running while unattended. Switch the engine off and wait until the cutting disc has come to a complete standstill before placing the tool on the ground or before transporting it.
- ▶ Make sure that the pump cover is installed if you operate the tool without an external water pump.
- ▶ Switch the tool off after use.
- ▶ Maintain the tool carefully. Check whether parts are broken or damaged to the extent that the tool is not in full working order. Have damaged parts repaired before using the tool.
- ▶ To avoid risk of injury, use only genuine **Hilti** accessories and accessory tools.
- ▶ Have the tool repaired only by qualified specialists using only genuine Hilti spare parts. The safety of the tool can thus be maintained.
- ▶ Comply with national health and safety requirements.

2.2 Electrical safety

- ▶ Before beginning work, check the working area for concealed electric cables or gas and water pipes. External metal parts of the machine may give you an electric shock if you damage an electric cable accidentally.

2.3 Safety at the workplace

- ▶ Ensure that the workplace is well lit.
- ▶ Don't work in closed rooms. Carbon monoxide, unburned hydrocarbons and benzene in the exhaust gas may cause asphyxiation.
- ▶ Keep the workplace tidy. Objects which could cause injury should be removed from the working area. Untidiness at the workplace can lead to accidents.
- ▶ Hot exhaust gases containing sparks or sparks generated by the cutting operation may cause fire or explosion. Take care to ensure that the sparks generated do not ignite flammable (gasoline, dry grass, etc.) or explosive (gas, etc.) substances.
- ▶ Before fitting the water pump, check to ensure that the maximum permitted water supply pressure of 6 bar is not exceeded.
- ▶ Fit the filled water tank only after the saw has been mounted on the saw trolley. This will help to prevent the trolley falling over.
- ▶ Do not stand the product and the saw trolley on an inclined surface. Always check to ensure that the product and the saw trolley are standing securely.

2.4 Liquids (gasoline and oil) and vapors

- ▶ Allow the product to cool before refueling.
- ▶ Never smoke while refueling.

- ▶ Don't refuel the product at the workplace area. When refueling, take care to avoid fuel spillage. Use a suitable funnel.
- ▶ Avoid inhaling gasoline vapors and exhaust fumes. Take care to ensure adequate ventilation.
- ▶ Don't use the gasoline or other flammable liquids for cleaning.

2.5 Cutting work using cutting discs

- ▶ Use only cutting discs with a rated maximum permissible speed that's at least as high as the highest spindle speed.
- ▶ Check that the outside diameter and the thickness of the cutting disc comply with the capacity rating of the product.
- ▶ Never use cutting discs that are damaged, run untrue or vibrate.
- ▶ Do not use damaged diamond cutting discs (cracks in the steel disc, broken or polished segments, damaged arbor hole, bent or distorted steel disc, heavy discoloration due to overheating, steel disc worn away beneath the segments, diamond segments with no lateral overhang, etc.).
- ▶ Do not use toothed accessory cutting tools (e.g. toothed saw blades).
- ▶ When fitting the cutting disc, always take care to ensure that the disc's specified direction of rotation corresponds to the direction of rotation of the spindle.
- ▶ The cutting disc and flange or any other accessory must fit the arbor of the product exactly. Cutting discs or accessories with arbor holes that do not match the mounting hardware of the product will run out of balance, vibrate excessively and may cause loss of control.
- ▶ Always use an undamaged clamping flange of the correct diameter which fits the cutting disc used. The correctly fitting clamping flange supports the cutting disc and thus reduces the possibility of disc breakage.
- ▶ Guide the product smoothly and do not apply lateral pressure to the cutting disc. Always bring the cutting disc into contact with the workpiece at right angles. Don't attempt to alter the line of cut by applying lateral pressure or by bending the cutting disc while cutting is in progress.
- ▶ Wear protective gloves when changing the cutting disc as the disc will get hot during use.
- ▶ Abrasive cutting discs which are used for wet cutting must be used up the same day as long periods of exposure to moisture have a negative effect on the strength of the disc.
- ▶ Observe the expiry date for resin-bonded cutting discs and don't use the discs after this date.

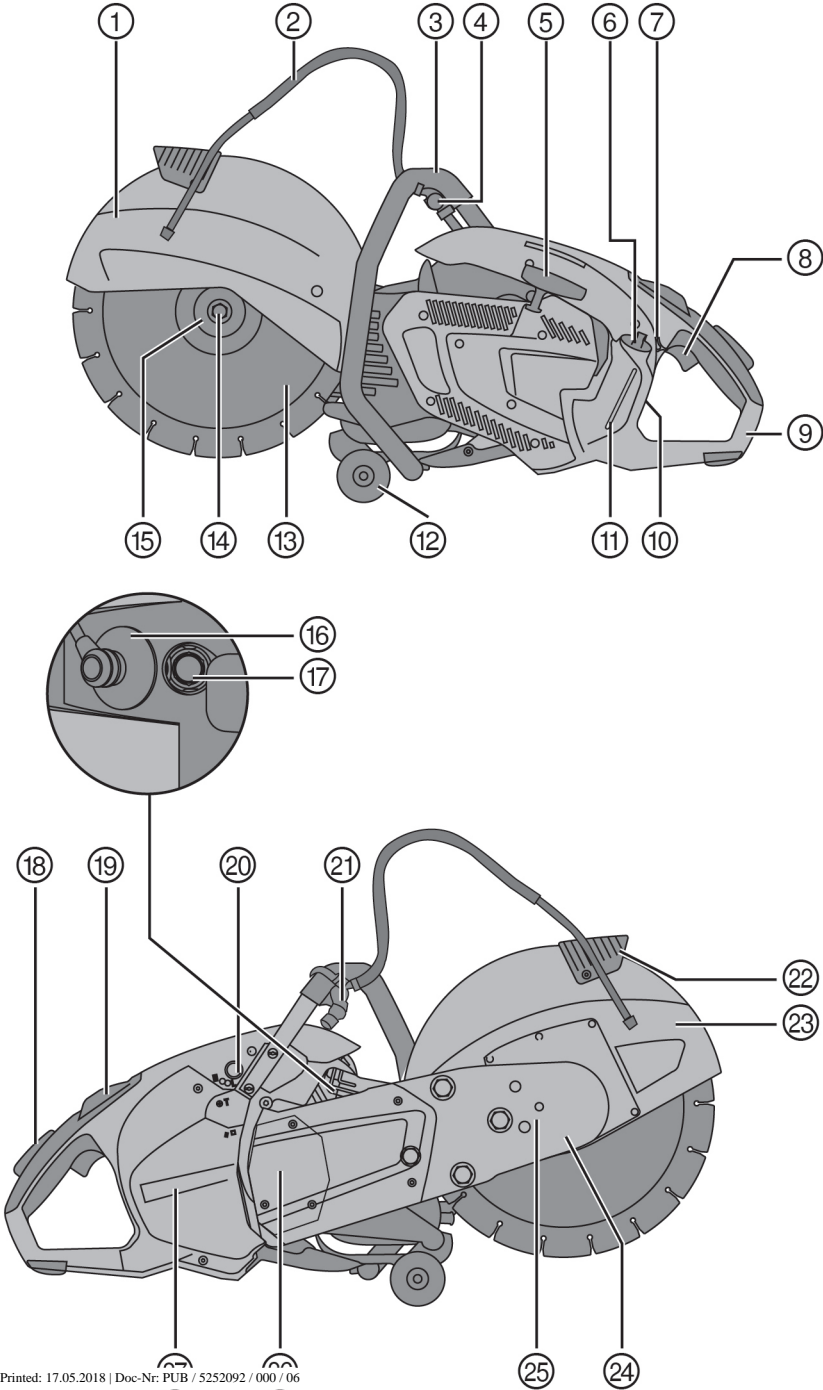
2.6 Transport and storage

- ▶ Switch the product off before transporting it.
- ▶ Remove the cutting disc from the product after use. The cutting disc may suffer damage during transport with the disc fitted.
- ▶ Handle the cutting disc carefully and store it in accordance with the manufacturer's instructions.
- ▶ Always store and transport the product in an upright position, not lying on its side.
- ▶ Do not carry the saw trolley and the product together. Remove the water tank before transporting the saw trolley.
- ▶ Do not lift the product and the saw trolley by crane. This is not permissible.
- ▶ Store the product in a secure place when not in use. Products which are not in use must be stored in a dry, high place or locked away out of reach of children.
- ▶ When laying the product down, make sure that it stands securely.
- ▶ After use, allow the product to cool down before packing it away or placing a cover over it.
- ▶ Store gasoline and oil in a well-ventilated room in fuel containers that comply with regulations.

2.7 CALIFORNIA PROPOSITION 65

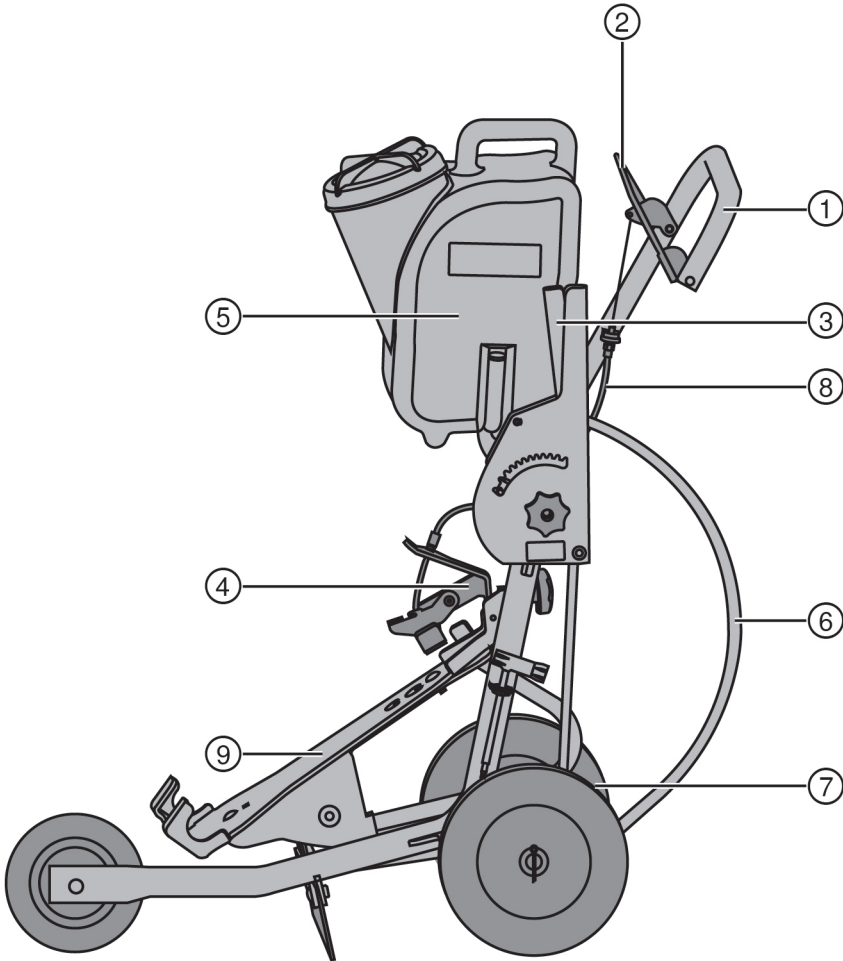


Fuels used in gas- or oil-filled appliances and the product of combustion of such fuels contain chemicals (including benzene, toluene, xylenes, 1,3 butadiene and formaldehyde) known to the State of California to cause cancer, birth defects or other reproductive harm. **Wash hands after handling!**

3 Description**3.1 Product overview****3.1.1 Gasoline-powered cut-off saw**

- ① Guard
- ② Water supply
- ③ Front grip
- ④ Water valve
- ⑤ Pull start
- ⑥ Fuel tank cap
- ⑦ Choke lever / half-throttle lock (DSH 700 OR DSH 900)
- ⑧ Throttle trigger
- ⑨ Rear grip
- ⑩ Type identification plate
- ⑪ Fuel-level sight glass
- ⑫ Guide rollers
- ⑬ Cutting disc
- ⑭ Clamping screw
- ⑮ Clamping flange
- ⑯ Spark plug connector
- ⑰ Decompression valve
- ⑱ Throttle safety grip
- ⑲ Start/stop switch (DSH 700 OR DSH 900)
- ⑲ Start/stop switch with integrated half-throttle lock (DSH 700-X OR DSH 900-X)
- ⑳ Primer bulb
- ㉑ Water connection
- ㉒ Grip for guard adjustment
- ㉓ Disc direction-of-rotation indicator (arrow at front of guard)
- ㉔ Saw arm
- ㉕ Hole for locking pin for changing cutting discs
- ㉖ Pump cover
- ㉗ Air filter cover

3.1.2 Saw trolley (accessory)



- | | | | |
|---|--------------------------|---|------------------|
| ① | Grip | ⑥ | Water connection |
| ② | Throttle trigger | ⑦ | Axial adjustment |
| ③ | Cutting depth adjustment | ⑧ | Throttle cable |
| ④ | Hold-down device | ⑨ | Machine cradle |
| ⑤ | Water tank | | |

3.2 Intended use

The product described is a gasoline-powered cut-off saw for the wet or dry cutting of asphalt, mineral construction materials or metals using diamond cutting discs or abrasive cutting discs. It can be held and guided by hand or mounted on a saw trolley.

The saw is not suitable for use in environments where there is risk of fire or explosion.

3.3 Recommendations for use

We recommend:

- Use of the wet cutting method is preferable in order to reduce the amount of dust produced when cutting. By using the self-priming water pump (accessory) you can work without need for a water supply pipe. The water can be drawn, for example, directly from a container.
- Do not cut right through the workpiece in one pass. Move the saw back and forward several times until it gradually reaches the desired cutting depth.
- To avoid damaging the diamond cutting disc when dry cutting, lift the disc out of the cut for approx. 10 seconds every 30 to 60 seconds while the product is still running.
- Resharpen polished diamond segments (no diamonds project from the segment matrix) by cutting with the disc in a very abrasive material such as sandstone.
- For extensive floor sawing applications, mount the saw on the trolley (accessory).

3.4 Cutting disc specifications

Diamond cutting discs in accordance with ANSI B7.1 are to be used with the product. Synthetic resin-bonded, fiber-reinforced cutting discs in accordance with ANSI B7.1 (straight, not dish-shaped, type cutting-off wheel) may also be used with the product for working on metals.

The disc mounting instructions and instructions for use issued by the cutting disc manufacturer must be observed.

3.5 Items supplied

Gasoline-powered saw, DSH tool set, DSH consumables set (only with the DSH 700-X/900-X), operating instructions.

You can find other system products approved for your product at your local **Hilti** Center or online at: www.hilti.com

3.6 Consumables and wearing parts

- Air filter
- Cord (5 pcs)
- Starter
- Fuel filter
- Spark plug
- Tool set
- Cylinder set
- Mounting screw assy.
- Flange (2)
- Centering ring 20 mm / 1"

4 Technical data

4.1 Gasoline-powered cut-off saw

	DSH 700 30/12" / DSH 700-X 30/12"	DSH 700 35/14" / DSH 700-X 35/14"
Cubic capacity	4.19 in ³ (68.7 cm ³)	4.19 in ³ (68.7 cm ³)
Weight without cutting disc, fuel tank empty	25.6 lb (11.6 kg)	26.2 lb (11.9 kg)
Weight with saw trolley, without cutting disc, fuel tank empty	93.9 lb (42.6 kg)	94.6 lb (42.9 kg)
Rated power at 7500 rpm in accordance with ISO 7293	4.7 hp (3.5 kW)	4.7 hp (3.5 kW)
Maximum spindle speed	5,100 /min	5,100 /min
Maximum cutting depth	3.9 in (100 mm)	4.9 in (125 mm)

	DSH 900 35/14" / DSH 900-X 35/14"	DSH 900 40/16" / DSH 900-X 40/16"
Cubic capacity	5.3 in ³ (87 cm ³)	5.3 in ³ (87 cm ³)
Weight without cutting disc, fuel tank empty	26.5 lb (12.0 kg)	27.3 lb (12.4 kg)
Weight with saw trolley, without cutting disc, fuel tank empty	94.8 lb (43.0 kg)	95.7 lb (43.4 kg)
Rated power at 7500 rpm in accordance with ISO 7293	5.8 hp (4.3 kW)	5.8 hp (4.3 kW)
Maximum spindle speed	5,100 /min	4,700 /min
Maximum cutting depth	4.9 in (125 mm)	5.9 in (150 mm)

4.2 Additional technical data

Engine type	Single-cylinder, air-cooled two-stroke engine
Maximum engine speed	9500 ± 200 /min
Idling speed	2750 ± 250 /min
Ignition (type)	Electronically-controlled ignition timing
Electrode gap	0.02 in (0.5 mm)
Spark plug	Manufacturer: NGK, type: CMR7A-5
Tightening torque for fitting the spark plug	9 ftlb, (12 Nm)
DSH 700/900 carburetor	Manufacturer: Walbro; model: WT; type: 895
DSH 700-X/900-X carburetor	Manufacturer: Walbro; model: WT; type: 1152
Fuel mixture	API-TC oil 2% (1:50)
Tank capacity	54.9 in ³ (900 cm ³)
Cutting disc arbor size / diameter of centering bush	0.8 in (20 mm)
Cutting disc arbor size / diameter of centering bush	1.00 in (25.4 mm)
Minimum flange outside diameter	4.0 in (102 mm)
Max. disc thickness (steel disc thickness)	0.22 in (5.5 mm)
Tightening torque for fitting the cutting disc	18 ftlb, (25 Nm)

5 Before use

5.1 Fuel

The two-stroke engine runs on a mixture of gasoline and oil. The quality of the fuel mixture decisively influences the running and life expectancy of the engine.

⚠ DANGER

Risk of fire and explosion. Gasoline vapors are highly flammable.

- ▶ Never smoke while refueling.
- ▶ Don't refuel the product at the area where you are working (move at least 3 meters (10 feet) away from the working area).
- ▶ Don't refuel the product while the engine is running. Wait until the engine has cooled down.
- ▶ Make sure there are no naked flames or sparks that could ignite the gasoline vapors.
- ▶ Take care to avoid fuel spillage. If fuel is spilled, clean up the areas affected immediately.
- ▶ Check to ensure there is no leakage from the fuel tank.

⚠ CAUTION

Risk of injury. The inhalation of gasoline vapors and skin contact with gasoline may be hazardous to the health.

- ▶ Avoid direct skin contact with gasoline. Wear protective gloves.
- ▶ If your clothing becomes soiled with gasoline, it is essential to change your clothing.
- ▶ Ensure that the workplace is well ventilated in order to avoid breathing in gasoline fumes.
- ▶ Use a fuel container that complies with the applicable regulations.



Alkylate gasoline does not have the same density (specific weight) as conventional gasoline. To avoid damage when alkylate gasoline is used, the engine settings must be readjusted by **Hilti Service**. Alternatively, the oil content can be increased to 4% (1:25).

5.1.1 Gasoline

- ▶ Use regular or super gasoline with an octane rating of at least 89 ROZ.



The alcohol content (e.g. ethanol, methanol or others) of the fuel used must not exceed 10%, otherwise the life expectancy of the engine will be greatly reduced.

5.1.2 Two-stroke oil

- ▶ Use good-quality two-stroke oil for air-cooled engines that meets at least the API TC specification.

5.1.3 Mixing fuel

The engine will suffer damage if run with fuel mixed in the wrong ratio or with unsuitable oil.

Use a mixing ratio of 1:50. This corresponds to 1 part good-quality two-stroke oil that complies with the API-TC specification and 50 parts gasoline (e.g. 100 ml oil and 5 liters of gasoline mixed in a suitable canister).

1. Pour the required quantity of two-stroke oil into the fuel canister.
2. Then fill the gasoline into the fuel canister.
3. Close the fuel canister.
4. Mix the fuel by shaking the fuel container.



If the quality of the two-stroke oil or the gasoline is unknown, then increase the mixing ratio to 1:25.

5.1.4 Filling the fuel tank

1. Mix the fuel (two-stroke oil / gasoline mixture) by shaking the fuel container.
2. Place the product in a steady upright position.
3. Open the fuel tank by turning the cap counterclockwise and then removing the cap.
4. Fill the tank slowly using a funnel.
5. Close the fuel tank by fitting the cap and then turning it clockwise.
6. Close the fuel canister.

5.2 Assembly and adjustment

WARNING

Risk of injury. Contact with the rotating cutting disc can lead to injury. Hot parts of the machine or a hot cutting disc may cause burning injuries.

- ▶ Before fitting or adjusting any parts of the product, make sure that the engine is switched off, that the cutting disc has completely stopped rotating and that the product has cooled down.
- ▶ Wear protective gloves.

5.2.1 Fitting a cutting disc

WARNING

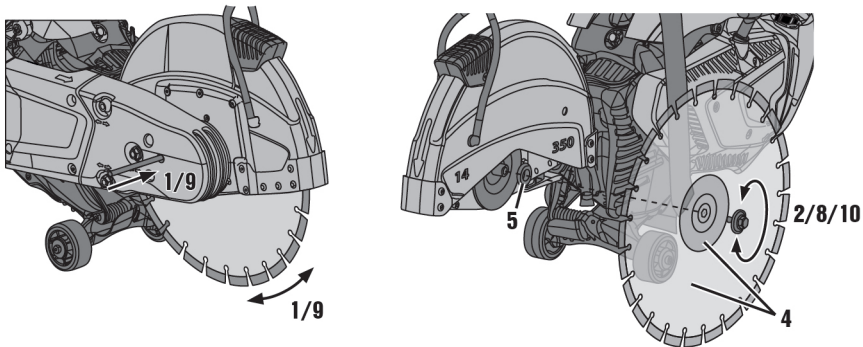
Risk of injury and damage. Cutting discs or fastening parts that don't fit correctly can suffer irreparable damage or lead to loss of control of the product.

- ▶ Use only cutting discs with a rated maximum permissible speed that's at least as high as the maximum speed stated on the product. The cutting discs, flanges and screws used must fit the product.
- ▶ Use only cutting discs with an arbor size (mounting hole diameter) of 20 mm or 25.4 mm (1").

CAUTION

Risk of injury and damage. Damaged cutting discs may break.

- ▶ If the cutting disc has been subjected to an impact, check the disc for damage and replace it if necessary.
- ▶ Never use cutting discs that are damaged, run untrue or vibrate.
- ▶ Don't use synthetic resin-bonded fiber-reinforced cutting discs which have exceeded their use-by date or already softened due to water absorption.



1. Insert the locking pin in the hole in the drive belt cover and turn the cutting disc until the locking pin engages.
2. Release the securing screw by turning the screw counterclockwise with the wrench and then remove the screw and washer.
3. Remove the locking pin.
4. Remove the clamping flange and the cutting disc.
5. Check that the mounting bore of the cutting disc to be fitted corresponds with the centering collar of the cutting disc mounting flange.

i The mounting flange is equipped with a 20 mm diameter centering collar on one side and a 25.4 mm (1") diameter centering collar on the opposite side.

6. Clean the clamping and centering surfaces on the product and on the cutting disc.
7. Place the cutting disc with centering collar on the drive arbor and check that the direction of rotation is correct.
 - ◀ The direction-of-rotation arrow on the cutting disc must match the direction of rotation indicated on the product.
8. Place the clamping flange and washer on the drive arbor and tighten the securing screw by turning it clockwise.

9. Insert the locking pin in the locking hole in the drive belt cover and turn the cutting disc until the locking pin engages.
10. Tighten the clamping screw securely (tightening torque: 25 Nm).
11. Remove the locking pin.



After fitting a new cutting disc allow the product to run at full speed under no load for approx. 1 minute.

5.2.2 Adjusting the guard



DANGER

Risk of injury. Flying fragments or sparks could cause injury.

- ▶ Adjust the guard so that flying particles or fragments of the material removed and flying sparks are directed away from the operator and the product.
- ▶ Hold the guard by the grip provided and rotate it to the desired position.

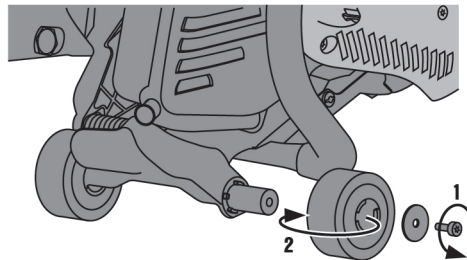
5.2.3 Conversion from normal cutting to flush cutting



The front section of the saw arm can be converted to allow flush cuts to be made (e.g. as close as possible to edges and walls).

- ▶ If you wish to use the product in the flush cutting position, have the product converted by **Hilti Service**.

5.3 Locking rotary movement of the guide wheels



WARNING

Risk of injury. The saw could move inadvertently or fall down.

- ▶ When working on roofs, scaffolds and/or on slightly sloping ground or surfaces, always take steps to prevent rotation of the guide wheels when the saw is not in use.
1. Release the guide wheel mounting screws and remove the guide wheels.
 2. Reverse the guide wheels (turn through 180°) and refit the mounting screws.
 - ◀ The integrated locking function is active.
 3. Check that the guide wheels are securely fastened.

6 Operation

6.1 Starting the engine

⚠ DANGER

Risk of asphyxiation. Carbon monoxide, unburned hydrocarbons and benzene in the exhaust gas may cause asphyxiation.

- ▶ Don't work in closed rooms, trenches or pits and make sure the area is well ventilated.

⚠ WARNING

Risk of burning injury. The exhaust system gets extremely hot when the engine is running. It stays hot for a long time after the engine is switched off.

- ▶ Wear protective gloves and avoid touching the exhaust system.
- ▶ Do not lay the product down on flammable material while hot.

⚠ WARNING

Risk of injury. A damaged exhaust system will raise the noise level above the permissible limit and thus cause hearing damage.

- ▶ Never use the product if the exhaust system is damaged, missing or if it has been tampered with.

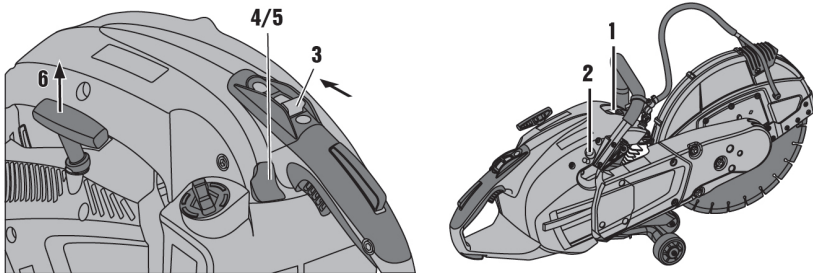
⚠ CAUTION

Risk of burns or injury through pinching the fingers when the water pump is fitted. Touching the pump housing can cause burning injuries.

- ▶ Hold the forward grip only at the top and on the left side.

1. If the following equipment exists, also take this action:

DSH 700
DSH 900



- ▶ Press the decompression valve (once).
- ▶ Squeeze the primer bulb 2 to 3 times until the primer bulb is completely filled with fuel.
- ▶ Move the start/stop switch to the "start" position.
- ▶ If the following conditions are met, also take this action:

Conditions: The engine is cold.

- ▶ Pull the choke lever upwards.
 - ◀ The choke and half throttle are engaged.

- ▶ If the following conditions are met, also take this action:

Conditions: The engine is hot.

- ▶ Pull the choke lever upwards and then push it back down again.
 - ◀ This engages half throttle. The choke is not engaged.
- ▶ Check that the cutting disc is free to rotate.
- ▶ Position your right foot over the lower part of the rear grip.
- ▶ Pull the starter handle slowly with your right hand until resistance is felt.
- ▶ Pull the starter handle vigorously.
- ▶ When the motor fires for the first time (after 2 to 5 pulls of the starter), move the choke lever back down to its original position.
- ▶ Pull the starter handle vigorously and repeat this action until the engine starts.

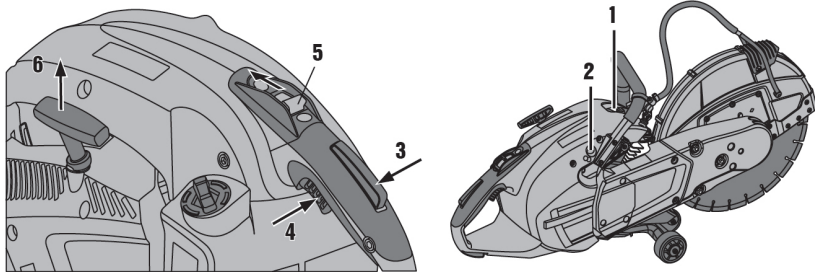


The motor will flood if the starting procedure is repeated too many times with the choke engaged.

- ▶ Press the throttle trigger briefly as soon as the engine starts.
 - ◀ This disengages the half-throttle position and the engine then runs at idling speed when the throttle is released.

2. If the following equipment exists, also take this action:

DSH 700-X
DSH 900-X



- ▶ Press the decompression valve (once).
- ▶ When starting the cold engine (only when cold), squeeze the primer bulb 2 to 3 times (until the primer bulb is completely filled with fuel).
- ▶ Press the throttle safety grip and keep it pressed.
- ▶ Press the throttle trigger and keep it pressed.
- ▶ Move the start/stop switch to the “start” position.
- ▶ Release the throttle safety grip and throttle trigger.
 - ◀ This half-throttle position is activated.
- ▶ Check that the cutting disc is free to rotate.
- ▶ Position your right foot over the lower part of the rear grip.
- ▶ Pull the starter handle slowly with your right hand until resistance is felt.
- ▶ Pull the starter handle vigorously.
- ▶ Repeat this action until the engine starts.
- ▶ Press the throttle trigger briefly as soon as the engine starts.
 - ◀ This disengages the half-throttle position and the engine then runs at idling speed when the throttle is released.

6.2 Checks after starting the engine

1. Check that the cutting disc remains stationary when the engine is idling and, after briefly running at full speed, that the disc again comes to a complete standstill.
 - ◀ Readjust (reduce) the idling speed if the cutting disc doesn't stop rotating when the engine is idling. If this is not possible, please bring the product to **Hilti Service**.

2. Check that the start/stop switch is functioning correctly. Move the start/stop switch to the “stop” position.
3. If the following equipment exists, also take this action:

DSH 700
DSH 900

- ▶ If the engine doesn't stop, push the choke lever upwards. If the engine still doesn't stop, pull the spark plug connector off the spark plug and bring the product to **Hilti Service**.

4. If the following equipment exists, also take this action:

DSH 700-X
DSH 900-X

- ▶ If the engine doesn't stop, compress the primer bulb. If the engine still doesn't stop, pull the spark plug connector off the spark plug and bring the product to **Hilti Service**.

6.3 Switching the engine off

WARNING

Risk of injury. A rotating cutting disc can break or shatter, possibly resulting in flying fragments.

- ▶ Allow the rotating cutting disc to come to a complete standstill before you lay the saw down.

1. Release the throttle trigger.
2. Move the start/stop switch to the “stop” position.
 - ◀ The engine stops.

6.4 Cutting techniques

WARNING!

In order to work optimally with this tool, comply with the following safety instructions:

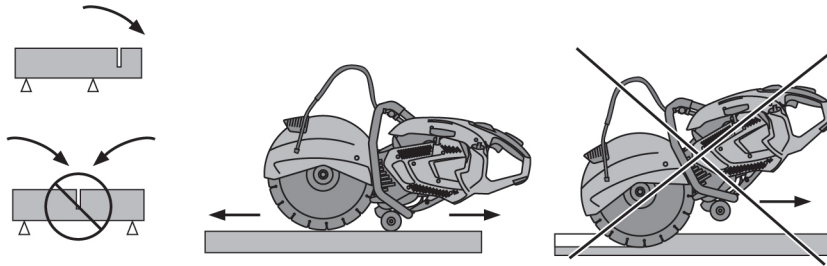
- ▶ Always hold the product and the saw trolley firmly with both hands on the grips provided. Keep the grips dry, clean and free from oil and grease.
- ▶ Before starting work, and immediately after unforeseen contact is made with an obstacle, make sure that the cutting disc and the guard are undamaged.
- ▶ Make sure there is no-one in the working area and, in particular, in the direction in which the cut is to be made. Keep everyone approx. 15 m away from your workplace.
- ▶ Guide the product smoothly and do not apply lateral pressure to the cutting disc.
- ▶ Avoid dangerous operating positions.
- ▶ Always bring the cutting disc into contact with the workpiece at right angles. Do not attempt to change the line of cut by applying lateral pressure or by bending the cutting disc while cutting is in progress.
- ▶ Secure the workpiece. Use clamps or a bench vise to hold the workpiece in position. The workpiece is thus held more securely than by hand and both hands remain free to operate the product.
- ▶ Clamp round workpieces so that they cannot turn.
- ▶ Do not attempt to cut two or more workpieces at the same time. Cut them one after the other.
- ▶ Secure both the workpiece and the off-cut to prevent uncontrolled movement.
- ▶ When working with the saw trolley, check before use that the gasoline-powered saw is mounted correctly on the saw trolley.
- ▶ Switch the gasoline-powered saw off immediately at the ON/STOP switch if the saw trolley throttle cable sticks or if the throttle trigger sticks.
- ▶ Always use full throttle when cutting.

Prevent the cutting disc from stalling

WARNING

Risk of bruising or other injuries. Sticking / stalling of the cutting disc in the kerf may cause the saw to be pulled forward, to climb or cause kickback.

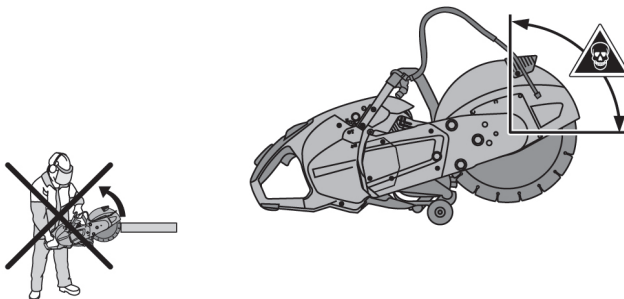
- ▶ Take care to avoid sticking / stalling of the cutting disc while cutting.



Reasons for the cutting disc stalling:

- The cut is too deep.
- The kerf closes (e.g. when cutting pipes or slabs).
- The cutting disc is off-square in the kerf.
- The cutting disc is unsuitable for the job (the cutting disc becomes clogged).
- The cutting disc is inserted too quickly into an existing kerf.

The hazardous situations that result from stalling differ, depending on the working position.



- Forward pull can occur when a horizontal cut is being made (e.g. in the ground). The saw suddenly snatches forward, possibly pulling out of your hands.
- Climbing can occur when a vertical cut is being made (e.g. in a wall). The saw suddenly snatches upward, possibly pulling out of your hands.
- Kickback can occur if the prohibited area of the disc is brought into contact with the workpiece.

To avoid the hazardous situations that result from stalling of the cutting disc:

- ▶ When cutting a thick workpiece, increase the depth of the kerf in steps. Avoid excessively deep cuts.
- ▶ Support slabs or large workpieces so that the kerf remains open during and after the cutting operation.
- ▶ Always bring the cutting disc into contact with the workpiece from above.
 - ◀ Allow the cutting disc to contact the workpiece only at a point below the rotational axis of the disc.
- ▶ Take great care when guiding the cutting disc into an existing kerf.
- ▶ Do not tilt the cutting disc in the kerf.

7 Care and maintenance

WARNING

Risk of injury. Touching the rotating cutting disc or hot parts of the machine may lead to injury or burns.

- ▶ Switch the engine off and allow the product to cool down before all maintenance, repairs, cleaning or servicing.

8 Transport and storage

8.1 Transportation in a vehicle

DANGER

Risk of fire and explosion. If the product tips over during transport, fuel may run out of the fuel tank.

- ▶ Empty the product's fuel tank completely before packing and shipping it.
- ▶ Transport the product, as far as possible, in its original packaging.

WARNING

Fire hazard. Hot parts of the machine could ignite material lying about in the surrounding area.

- ▶ Allow the product to cool down completely before packing it away or loading it into a vehicle.

1. Remove the cutting disc.
2. Secure the product to prevent it falling over, thereby causing damage or fuel spillage.
3. Transport the saw trolley only when the water tank has been emptied.

8.2 Storing the fuel mixture

CAUTION

Risk of injury. As pressure may build up in the fuel tank there is a risk of fuel being forced out when the fuel cap is opened.

- ▶ Accordingly, take care when opening the cap on the fuel tank.
- ▶ Store the fuel in a dry, well-ventilated room.

1. Mix only enough fuel for a few days' use.
2. Clean the fuel container occasionally.

9 Troubleshooting

If the trouble you are experiencing isn't listed in this table or you are unable to remedy the problem by yourself, please contact **Hilti Service**.

Trouble or fault	Possible cause	Action to be taken
Cutting disc slows down or stops completely while cutting	Excessive cutting pressure applied (cutting disc sticks and stalls in the kerf).	▶ Reduce pressure when cutting and guide the product in a straight line.
	The cutting disc is not correctly fitted and tightened.	▶ Check how it is fitted and the tightening torque.
	Wrong direction of rotation.	▶ Fit the cutting disc. → page 14
	The forward section of the saw arm is loose.	▶ Have the product repaired by Hilti Service .
High vibration, disc wanders off the cutting line.	The cutting disc is not correctly fitted and tightened.	▶ Check how it is fitted and the tightening torque.
	Cutting disc is damaged (or unsuitable specification, cracked, segments missing, bent, overheated, deformed, etc.).	▶ Change the cutting disc.
	The centering bushing is fitted incorrectly.	▶ Check that the mounting bore of the cutting disc to be fitted corresponds with the centering collar of the cutting disc mounting flange.
The saw doesn't start or is difficult to start.	The fuel tank is empty (no fuel in the carburetor).	▶ Fill the fuel tank. → page 13
	Air filter clogged with dirt or dust.	▶ Change the air filter.

Trouble or fault	Possible cause	Action to be taken
The saw doesn't start or is difficult to start.	DSH 700 DSH 900 The engine is flooded (spark plug wet).	<ul style="list-style-type: none"> ▶ Remove the spark plug, dry the plug and allow the cylinder to dry out. ▶ Disengage the choke lever and repeat the starting procedure several times.
	DSH 700-X DSH 900-X The engine is flooded (spark plug wet).	<ul style="list-style-type: none"> ▶ Remove the spark plug, dry the plug and allow the cylinder to dry out.
	Wrong fuel mixture.	<ul style="list-style-type: none"> ▶ Empty the fuel tank and flush out the tank and fuel supply line. ▶ Fill the fuel tank with the correct fuel.
	Air in the fuel line (no fuel reaching the carburetor).	<ul style="list-style-type: none"> ▶ Remove the air from the fuel line by operating the fuel pump several times.
	The fuel filter is dirty or blocked (no fuel or too little fuel reaching the carburetor).	<ul style="list-style-type: none"> ▶ Clean the fuel tank and change the fuel filter.
	No ignition spark visible or spark is too weak (seen when spark plug is removed).	<ul style="list-style-type: none"> ▶ Clean the spark plug to remove carbon deposits. ▶ Check the spark plug electrode gap and set it correctly. ▶ Change the spark plug. ▶ Check the ignition coil, cable, plug connections and switch and change the defective part if necessary.
	Engine compression is too low.	<ul style="list-style-type: none"> ▶ Check the engine compression and, if necessary, replace worn parts (piston rings, piston, cylinder, etc.).
	The ambient temperature is too low.	<ul style="list-style-type: none"> ▶ Allow the saw to warm up to room temperature and repeat the starting procedure.
	The spark arrestor or exhaust exit is clogged.	<ul style="list-style-type: none"> ▶ Clean the spark arrestor or exhaust exit.
Low engine power / poor cutting performance	The decompression valve is stiff to operate.	<ul style="list-style-type: none"> ▶ Make sure that the valve operates freely.
	Air filter clogged with dirt or dust.	<ul style="list-style-type: none"> ▶ Change the air filter.
	No ignition spark visible or spark is too weak (seen when spark plug is removed).	<ul style="list-style-type: none"> ▶ Clean the spark plug to remove carbon deposits. ▶ Check the spark plug electrode gap and set it correctly. ▶ Change the spark plug. ▶ Check the ignition coil, cable, plug connections and switch and change the defective part if necessary.
	Wrong fuel mixture.	<ul style="list-style-type: none"> ▶ Empty the fuel tank and flush out the tank and fuel supply line. ▶ Fill the fuel tank with the correct fuel.
	The disc specification is unsuitable for the material to be cut.	<ul style="list-style-type: none"> ▶ Change the cutting disc or ask Hilti Service for advice.

Trouble or fault	Possible cause	Action to be taken
Low engine power / poor cutting performance	Drive belt or cutting disc slips.	<ul style="list-style-type: none"> ▶ Check that the cutting disc is clamped securely. ▶ Have the product repaired by Hilti Service.
	Engine compression is too low.	▶ Check the engine compression and, if necessary, replace worn parts (piston rings, piston, cylinder, etc.).
	The product is used at an altitude greater than 1500 meters above sea level.	▶ Have the carburetor adjusted by Hilti Service .
	Incorrect carburetor setting (fuel / air mixture).	▶ Have the carburetor adjusted by Hilti Service .
Cutting disc rotates while the engine is idling.	Idling speed is too high.	▶ Check the idling speed and adjust it if necessary.
	The half-throttle position is engaged.	▶ Release the half-throttle position.
	Faulty centrifugal clutch.	▶ Change the centrifugal clutch.
Cutting disc doesn't rotate.	Inadequate drive belt tension or the drive belt is broken.	▶ Have the product repaired by Hilti Service .
Starter assembly doesn't work.	The clutch claws are not engaging.	▶ Clean the clutch claws so that they move freely.
	Starter cord is broken.	▶ Replace the starter cord.

10 Disposal

Most of the materials from which **Hilti** products are manufactured can be recycled. The materials must be correctly separated before they can be recycled. In many countries, your old tools, machines or appliances can be returned to **Hilti** for recycling. Ask **Hilti Service** or your Hilti representative for further information.

Drilling slurry

Disposal of drilling slurry directly into rivers, lakes or the sewerage system without suitable pretreatment presents environmental problems.

- ▶ Ask the local public authorities for information about current regulations.

We recommend the following pretreatment:

- ▶ Collect the drilling slurry (for example, using a wet-type vacuum cleaner).
- ▶ Allow the drilling slurry to settle and dispose of the solid material at a construction waste disposal site (addition of a flocculent may accelerate the settling process).
- ▶ The remaining water (alkaline, pH value greater than 7) must be neutralized by the addition of an acidic neutralizing agent or diluted with a large volume of water before it is allowed to flow into the sewerage system.

11 Manufacturer's warranty

- ▶ Please contact your local **Hilti** representative if you have questions about the warranty conditions.

11.1 Federal emission control warranty statement

Your warranty rights and obligations

The U.S. Environmental Protection Agency (EPA), the California Air Resources Board (CARB), and **Hilti** are pleased to explain the Emission Control System Warranty applicable to your small non-road engine. In U.S. and Canada, small non-road engines must be designed, built and equipped to meet the stringent federal antismog standards. The equipment engine must be free from defects in materials and workmanship which cause it to fail to conform with U.S. EPA standards for the first two years from the date of sale to the ultimate purchaser. **Hilti** must warrant the emission control system on your small non-road engine for the periods of time listed above, 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