

WARNING HYDRAULIC BREAKER

Any piece of equipment can be dangerous if not operated properly. **YOU** are responsible for the safe operation of this equipment. The operator must carefully read and follow any warnings, safety signs and instructions provided with or located on the equipment. Do not remove, defeat, deface or render inoperable any of the safety devices or warnings on this equipment. **IF** any safety devices or warnings have been removed, defeated, defaced or rendered inoperable, **DO NOT USE THIS EQUIPMENT!!!**

IMPORTANT SAFETY RULES TO FOLLOW.

Post this Safety and operating instruction at work locations, provide copies to employees, and make sure that everyone reads the Safety and operating instruction before operating or servicing the machine. In addition, the operator or the operator's employer must assess the specific risks that may be present as a result of each use of the machine.

Safety signal words: The safety signal words **Danger**, **Warning** and **Caution** have the following meanings:

DANGER: Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

WARNING: Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

CAUTION: Personal precautions and qualifications only qualified and trained persons may operate or maintain the machine. They must be physically able to handle the bulk, weight, and power of the tool. Always use your common sense and good judgment.

PERSONAL PROTECTIVE EQUIPMENT

Always use approved protective equipment. Operators and all other persons in the working area must wear protective equipment, including at a minimum: **Protective helmet, Hearing protection, Impact resistant eye protection with side protection, Respiratory protection when appropriate, Protective gloves, Proper protective boots, Appropriate work overall or similar clothing (not loose-fitting) that covers your arms and legs.**

WARNING Drugs, alcohol or medication Drugs, alcohol or medication may impair your judgment and powers of concentration. Poor reactions and incorrect assessments can lead to severe accidents or death.

▶ Never use the machine when you are tired or under the influence of drugs, alcohol or medication.

▶ No person who is under the influence of drugs, alcohol or medication may operate the machine.

WARNING Hydraulic oil at high pressure Thin jets of hydraulic oil under high pressure can penetrate the skin and cause permanent injury. Immediately consult a doctor if hydraulic oil has penetrated the skin. Never use your fingers to check for hydraulic fluid leaks. Keep your face away from any possible leaks.

WARNING Hydraulic oil Spilled hydraulic oil can cause burns, accidents due to slippery conditions and will also harm the environment. Take care of all spilled oil and handle it according to your safety and environmental regulations. Never dismount the hydraulic machine when the hydraulic oil is hot.

CAUTION Skin eczema Hydraulic oil can cause eczema if it comes in contact with the skin. Avoid getting hydraulic oil on your hands. Always use protective gloves when working with hydraulic oil. Wash hands after contact with hydraulic oil.

CAUTION Moving parts Risk for crushed hands and fingers. Never check bores or passages with hands or fingers. Never operate the machine when adjusting the choke control or fuel valve.

WARNING Whipping hydraulic hose Hydraulic hoses under pressure can whip uncontrollably if screws loosen or are loosened. A whipping hydraulic hose can cause severe injuries. Depressurize the hydraulic system before loosening the connection of a hydraulic hose. Tighten the nuts on the connections of the hydraulic hoses to the required torque. Check that the hydraulic hose and the connections are not damaged.

If the person receiving this handout will not be the user of the equipment, forward these instructions to the operator. **IF** there is any doubt as to the operation or safety of the equipment, **DO NOT USE!!! CALL A TOOL SHED IMMEDIATELY!!! FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN INJURY OR DEATH**

▲ DANGER Compressed gas, explosion hazard

The accumulator is pressurized even when the hydraulic system is shut off. To dismount the accumulator without first releasing the nitrogen gas can cause serious personal injury or death.

- ▶ Fill the high-pressure accumulator with nitrogen (N₂) only.
- ▶ Only authorised personnel are qualified to work with the accumulator.

▲ WARNING Hydraulic oil at high pressure

Thin jets of hydraulic oil under high pressure can penetrate the skin and cause permanent damage.

- ▶ Immediately consult a doctor if hydraulic oil has penetrated the skin.
- ▶ Never use your fingers to check for hydraulic fluid leaks.
- ▶ Keep your face away from any possible leaks.

▲ WARNING Hydraulic oil

Spilled hydraulic oil can cause burns, accidents due to slippery conditions and will also harm the environment.

- ▶ Take care of all spilled oil and handle it according to your safety and environmental regulations.
- ▶ Never dismount the hydraulic machine when the hydraulic oil is hot.
- ▶ Never run any hydraulic lines for attachment of the hydraulic machine through the drivers cab.

▲ CAUTION Skin eczema

Hydraulic oil can cause eczema if it comes in contact with the skin.

- ▶ Avoid getting hydraulic oil on your hands.
- ▶ Always use protective gloves when working with hydraulic oil.
- ▶ Wash hands after contact with hydraulic oil.

▲ CAUTION Moving parts

Risk for crushed hands and fingers.

- ▶ Never check bores or passages with hands or fingers.

Operation, precautions**▲ DANGER Explosion hazard**

If an insertion tool comes into contact with explosives or explosive gases, an explosion could occur. When working on certain materials and when using certain materials in machine parts, sparks and ignition can occur. Explosions will lead to severe injuries or death.

- ▶ Never operate the machine in any explosive environment.
- ▶ Never use the machine near flammable materials, fumes or dust.
- ▶ Make sure that there are no undetected sources of gas or explosives.

▲ WARNING Operating pressure

If the maximum operating pressure for the hydraulic machine is exceeded, the accumulator can be over charged which can result in material damage and personal injury.

- ▶ Always run the hydraulic machine with the correct operating pressure. See "Technical data".

▲ WARNING Unexpected movements

The inserted tool is exposed to heavy strains when the machine is used. The inserted tool may break due to fatigue after a certain amount of use. If the inserted tool breaks or gets stuck, there may be sudden and unexpected movement that can cause injuries. Furthermore, losing your balance or slipping may cause injury.

- ▶ Make sure that you always keep a stable position with your feet as far apart as your shoulder width, and keeping a balanced body weight.
- ▶ Always inspect the equipment prior to use. Never use the equipment if you suspect that it is damaged.
- ▶ Make sure that the handles are clean and free of grease and oil.
- ▶ Keep your feet away from the inserted tool.
- ▶ Stand firmly and always hold on to the machine with both hands.
- ▶ Never start the machine when it is lying on the ground.
- ▶ Never 'ride' on the machine with one leg over the handle.
- ▶ Never strike or abuse the equipment.

- ▶ Check regularly for wear on the insertion tool, and check whether there are any signs of damage or visible cracks.
- ▶ Pay attention and look at what you are doing.

▲ WARNING Dust and fume hazard

Dusts and/or fumes generated or dispersed when using the machine may cause serious and permanent respiratory disease, illness, or other bodily injury (for example, silicosis or other irreversible lung disease that can be fatal, cancer, birth defects, and/or skin inflammation).

Some dusts and fumes created by drilling, breaking, hammering, sawing, grinding and other construction activities contain substances known to the State of California and other authorities to cause respiratory disease, cancer, birth defects, or other reproductive harm. Some examples of such substances are:

- > Crystalline silica, cement, and other masonry products.
- > Arsenic and chromium from chemically-treated rubber.
- > Lead from lead-based paints.

Dust and fumes in the air can be invisible to the naked eye, so do not rely on eye sight to determine if there is dust or fumes in the air.

To reduce the risk of exposure to dust and fumes, do all of the following:

- ▶ Perform site-specific risk assessment. The risk assessment should include dust and fumes created by the use of the machine and the potential for disturbing existing dust.
- ▶ Use proper engineering controls to minimize the amount of dust and fumes in the air and to minimize build-up on equipment, surfaces, clothing, and body parts. Examples of controls include: exhaust ventilation and dust collection systems, water sprays, and wet drilling. Control dusts and fumes at the source where possible. Make sure that controls are properly installed, maintained and correctly used.
- ▶ Wear, maintain and correctly use respiratory protection as instructed by your employer and as required by occupational health and safety regulations. The respiratory protection must be effective for the type of substance at issue (and if applicable, approved by relevant governmental authority).
- ▶ Work in a well ventilated area.
- ▶ If the machine has an exhaust, direct the exhaust so as to reduce disturbance of dust in a dust filled environment.
- ▶ Operate and maintain the machine as recommended in the operating and safety instructions
- ▶ Select, maintain and replace consumables/ inserted tools/ other accessory as recommended in the operating and safety instructions. Incorrect selection or lack of maintenance of consumables/ inserted tools/ other accessories may cause an unnecessary increase in dust or fumes.
- ▶ Wear washable or disposable protective clothes at the worksite, and shower and change into clean clothes before leaving the worksite to reduce exposure of dust and fumes to yourself, other persons, cars, homes, and other areas.
- ▶ Avoid eating, drinking, and using tobacco products in areas where there is dust or fumes.
- ▶ Wash your hands and face thoroughly as soon as possible upon leaving the exposure area, and always before eating, drinking, using tobacco products, or making contact with other persons.
- ▶ Comply with all applicable laws and regulations, including occupational health and safety regulations.
- ▶ Participate in air monitoring, medical examination programs, and health and safety training programs provided by your employer or trade organizations and in accordance with occupational health and safety regulations and recommendations. Consult with physicians experienced with relevant occupational medicine.
- ▶ Work with your employer and trade organization to reduce dust and fume exposure at the worksite and to reduce the risks. Effective health and safety programs, policies and procedures for protecting workers and others against harmful exposure to dust and fumes should be established and implemented based on advice from health and safety experts. Consult with experts.

▲ WARNING Projectiles

Failure of the work piece, of accessories, or even of the machine itself may generate high velocity projectiles. During operating, splinters or other particles from the working material may become projectiles and cause personal injury by striking the operator or other persons. To reduce these risk:

- ▶ Use approved personal protective equipment and safety helmet, including impact resistant eye protection with side protection.
- ▶ Make sure that no unauthorised persons trespass into the working zone.
- ▶ Keep the workplace free from foreign objects.
- ▶ Ensure that the work piece is securely fixed.

▲ WARNING Splinters hazard

Using the insertion tool as a hand struck tool can result in splinters hitting the operator and can cause personal injury.

- ▶ Never use a insertion tool as a hand struck tool. They are specifically designed and heat-treated to be used only in a machine.

▲ WARNING Slipping, tripping and falling hazards

There is a risk of slipping or tripping or falling, for example tripping on the hoses or on other objects. Slipping or tripping or falling can cause injury. To reduce this risk:

- ▶ Always make sure that no hose or other object is in your way or in any other person's way.
- ▶ Always make sure you are in a stable position with your feet as far apart as your shoulders width and keeping a balanced body weight.

▲ WARNING Motion hazards

When using the machine to perform work-related activities, you may experience discomfort in the hands, arms, shoulders, neck, or other parts of the body.

- ▶ Adopt a comfortable posture whilst maintaining secure footing and avoiding awkward off-balanced postures.
- ▶ Changing posture during extended tasks may help avoid discomfort and fatigue.
- ▶ In case of persistent or recurring symptoms, consult a qualified health professional.

▲ WARNING Vibration hazards

Normal and proper use of the machine exposes the operator to vibration. Regular and frequent exposure to vibration may cause, contribute to, or aggravate injury or disorders to the operator's fingers, hands, wrists, arms, shoulders and/or nerves and blood supply or other body parts, including debilitating and/or permanent injuries or disorders that may develop gradually over periods of weeks, months, or years. Such injuries or disorders may include damage to the blood circulatory system, damage to the nervous system, damage to joints, and possibly damage to other body structures.

If numbness, persistent recurring discomfort, burning sensation, stiffness, throbbing, tingling, pain, clumsiness, weakened grip, whitening of the skin, or other symptoms occur at any time, when operating the machine or when not operating the machine, stop operating the machine, tell your employer and seek medical attention. Continued use of the machine after the occurrence of any such symptom may increase the risk of symptoms becoming more severe and/or permanent.

Operate and maintain the machine as recommended in these instructions, to prevent an unnecessary increase in vibration.

The following may help to reduce exposure to vibration for the operator:

- ▶ Let the tool do the job. Use a minimum hand grip consistent with proper control and safe operation.
- ▶ If the machine has vibration absorbing handles, keep them in a central position, avoid pressing the handles into the end stops.
- ▶ When the percussion mechanism is activated, the only body contact with the machine you should have are your hands on the handle or handles. Avoid any other contact, for example supporting any part of the body against the machine or leaning onto the machine trying to increase the feed force. It is also important not to keep the start and stop device engaged while extracting the tool from the broken work surface.
- ▶ Make sure that the inserted tool is well-maintained (including sharpness, if a cutting tool), not worn out, and of the proper size. Insertion tools that are not well-maintained, or that are worn out, or that are not of the proper size result in longer time to complete a task (and a longer period of exposure to vibration) and may result in or contribute to higher levels of vibration exposure.

- ▶ Immediately stop working if the machine suddenly starts to vibrate strongly. Before resuming the work, find and remove the cause of the increased vibrations.
- ▶ Never grab, hold or touch the inserted tool when using the machine.
- ▶ Participate in health surveillance or monitoring, medical exams and training programs offered by your employer and when required by law.
- ▶ When working in cold conditions wear warm clothing and keep hands warm and dry.

See the "Noise and vibration declaration statement" for the machine, including the declared vibration values. This information can be found at the end of these Safety and operating instructions.

▲ DANGER Electrical hazard

The machine is not electrically insulated. If the machine comes into contact with electricity, serious injuries or death may result.

- ▶ Never operate the machine near any electric wire or other source of electricity.
- ▶ Make sure that there are no concealed wires or other sources of electricity in the working area.

▲ WARNING Concealed object hazard

During operating, concealed wires and pipes constitute a danger that can result in serious injury.

- ▶ Check the composition of the material before operating.
- ▶ Watch out for concealed cables and pipes for example electricity, telephone, water, gas and sewage lines etc.
- ▶ If the inserted tool seems to have hit a concealed object, switch off the machine immediately.
- ▶ Make sure that there is no danger before continuing.

▲ WARNING Involuntary start

Involuntary start of the machine may cause injury.

- ▶ Keep your hands away from the start and stop device until you are ready to start the machine.
- ▶ Learn how the machine is switched off in the event of an emergency.
- ▶ Stop the machine immediately in all cases of power supply interruption.

▲ WARNING Noise hazard

High noise levels can cause permanent and disabling hearing loss and other problems such as tinnitus (ringing, buzzing, whistling, or humming in the ears). To reduce risks and prevent an unnecessary increase in noise levels:

- ▶ Risk assessment of these hazards and implementation of appropriate controls is essential.
- ▶ Operate and maintain the machine as recommended in these instructions.
- ▶ Select, maintain and replace the insertion tool as recommended in these instructions.
- ▶ If the machine has a silencer, check that it is in place and in good working condition.
- ▶ Always use hearing protection.
- ▶ Use damping material to prevent work pieces from 'ringing'.

Maintenance, precautions

▲ WARNING Machine modification

Any machine modification may result in bodily injuries to yourself or others.

- ▶ Never modify the machine. Modified machines are not covered by warranty or product liability.
- ▶ Always use original parts, insertion tools, and accessories.
- ▶ Change damaged parts immediately.
- ▶ Replace worn components in good time.

▲ CAUTION Hot machine

The insertion tool and the machine can become hot during use. Touching it can lead to burns.

- ▶ Never touch a hot insertion tool or machine.
- ▶ Wait until the insertion tool and the machine has cooled down before carrying out maintenance work.

▲ WARNING Insertion tool hazards

Accidental engagement of the start and stop device during maintenance or installation can cause serious injuries, when the power source is connected.

- ▶ Never inspect, clean, install, or remove the insertion tool while the power source is connected.

Overview

To reduce the risk of serious injury or death to yourself or others, read the Safety instructions section found on the previous pages of this manual before operating the machine.

Design and function

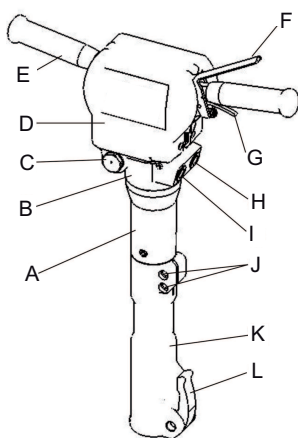
Handheld hydraulic breakers are sturdy and reliable breakers designed for working together with Chicago Pneumatic hydraulic power packs or, by means of a Chicago Pneumatic OFD oil flow divider, with most hydraulic excavators, backhoe loaders and tractors.

There are no limitations on the ambient temperature at the work place as long as the hydraulic fluid used keeps within its operational parameters.

The handheld breakers are available in many different sizes with varying impact energies and commonly used tool sizes. The handheld breakers are designed for various jobs from light brickwork and asphalt jobs to heavy duty jobs in reinforced concrete. No other use is permitted. To choose the correct insertion tool, see the spare part list or accessories catalogue.

All handheld breakers are delivered with tail-hoses with Flat-Face quick-release couplings for easy connection to the Chicago Pneumatic power packs.

Main parts



- A. Striking mechanism
- B. Valve housing
- C. Sockets
- D. Accumulator (inside)

- E. Handles
- F. Trigger
- G. Safety trigger
- H. Outlet oil
- I. Inlet oil
- J. Screws
- K. Front body
- L. Latch

Choosing the correct breaker for a task

It is important to choose the correct size of breaker for the work to be performed.

A breaker that is too small means that the work will take longer.

A breaker that is too large means that there must be frequent repositioning, which is unnecessarily tiring for the operator.

A simple rule for choosing the correct size of breaker is that a normal sized piece of broken material should be removed from the workpiece within 10–20 seconds operation.

- > If it takes less than 10 seconds a smaller breaker should be selected.
- > If it takes more than 20 seconds a larger breaker should be selected.

Labels

The machine is fitted with labels containing important information about personal safety and machine maintenance. The labels must be in such condition that they are easy to read. New labels can be ordered from the spare parts list.

| | Oil flow rate | | | |
|---------------------|--|---|--|---|
| | 20 l.p.m Back Pressure <10bar | 20 l.p.m Back Pressure 10-35 bar | 30 l.p.m Back Pressure <10bar | 30 l.p.m Back Pressure 10-35 bar |
| BRK 55 HBP | restrictor 2.8 | restrictor 3.2 | restrictor 3.4 | no restrictor |
| BRK 55 VR HBP | restrictor 2.8 | restrictor 3.2 | restrictor 3.4 | no restrictor |
| BRK 70 HBP | restrictor 2.8 | restrictor 3.2 | restrictor 3.2 | no restrictor |
| BRK 70 VR HBP | restrictor 2.8 | restrictor 3.2 | restrictor 3.2 | no restrictor |

There is no EHTMA category for the intermediate flows.

Replacing the nipple

1. Disconnect the breaker from the power source.
2. Fix the breaker in vertical position in a vice or in another way so that the breaker is fixed. Never place it on the nose part because the breaker can tilt.
3. Loosen the fitting on the T-hose. Remember to have an oil pan ready to take the oil spill from the breaker. Drain the oil from the T-hose into the oil pan.
4. Loosen the nipple on the breaker. Remember to have an oil pan ready to take the oil spill from the breaker.
5. Move the seal from the old nipple to the new nipple. Apply Loctite 245 and fit the nipple. Tighten with a torque of 56 ± 2 Nm.
6. Refit the hose.
7. Replace the existing EHTMA label, on the breaker with the new one from the plastic bag, so that it can be seen that the breaker is now set to a different flow.
8. Connect the breaker to the power source and check it for leakage.

Insertion tool

▲ CAUTION Hot insertion tool

The tip of the insertion tool can become hot and sharp when used. Touching it can lead to burns and cuts.

- ▶ Never touch a hot or sharp insertion tool.
- ▶ Wait until the insertion tool has cooled down before carrying out maintenance work.

NOTICE Never cool a hot insertion tool in water, it can result in brittleness and early failure.

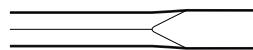
Selecting the right insertion tool

Selecting the right insertion tool is a precondition for proper machine function. It is important to select insertion tools of high quality to avoid unnecessary machine damage.

The machine can be destroyed if you use an incorrect insertion tool.

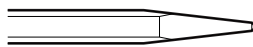
Recommended insertion tools are listed in the machine's spare parts list.

Narrow chisel



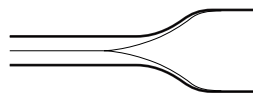
The narrow chisel is used for demolition and cutting work in concrete and other types of hard materials.

Moil point



The moil point is only used for making holes in concrete and other types of hard materials.

Wide bladed chisel

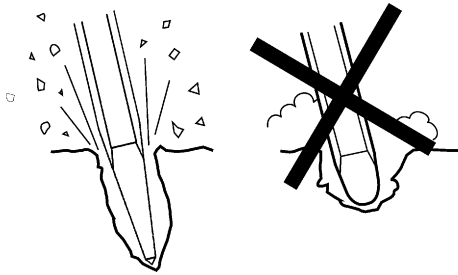


The wide bladed chisel is used in soft materials, such as asphalt and frozen ground.

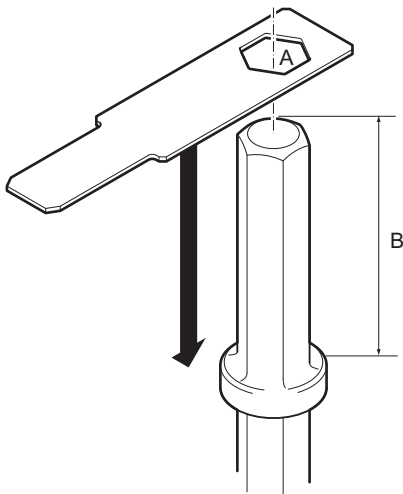
▲ WARNING Vibration hazard

Using inserted tools that do not fulfil the criterias mentioned below, will result in a longer time to complete a task, and may result in higher levels of vibration exposure. A worn tool will also cause increased working time.

- ▶ Make sure that the inserted tool is well-maintained, not worn out and of the proper size.
- ▶ Always use a sharp tool in order to work efficiently.



Checking for wear on the tool shank



Use the gauge that corresponds to the insertion tool's shank dimension. See section "Technical data" for correct tool shank dimensions.

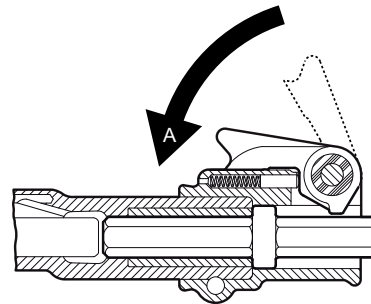
- > Check if the gauge's hole (A) can be pushed down on the insertion tool's shank, this means that the shank is worn out and the insertion tool should be replaced.
- > Check the length (B), that it is according to the ordered machine type.

Fitting and removing the insertion tool

Whenever fitting or removing the insertion tool the following instructions must be observed:

1. To prevent an accidental start: switch off the power supply and bleed the machine by pressing the start and stop device. Disconnect the machine from the power source.
2. Before inserting a tool, lubricate the tool shank with grease.
3. Fit or remove the insertion tool.

4. Close the tool retainer (position A) and check the lock function by tugging the inserted tool sharply outwards.



Operation

▲ WARNING Involuntary start

Involuntary start of the machine may cause injury.

- ▶ Keep your hands away from the start and stop device until you are ready to start the machine.
- ▶ Learn how the machine is switched off in the event of an emergency.
- ▶ Stop the machine immediately in all cases of power supply interruption.

Start and stop

Start

- > Check that the tool is in good order and pressed fully home in the nose of the breaker.
- > Check that the latch is locked, so that the tool does not fall out.
- > Remove the protective caps from the quick-release couplings.
- > Clean the quick-release couplings if needed and connect the tail-hoses to the extension hoses of the power source.
- > Place the breaker at a right angle on the material to be broken and activate the trigger lever.

Stop

- > Release the trigger. Press the breaker against the surface, until the breaker has stopped completely.
- > Stop the power source.
- > Disconnect the hoses and fit the protective caps to the quick-release couplings.

Operating

Preparation before starting

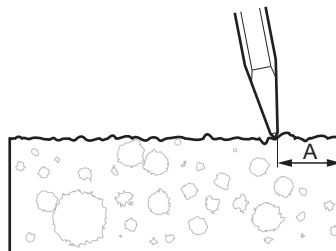
The following checks should be made each time you start to use the breaker. All these checks concern the serviceability of the breaker. Some concern your safety:

- ◆ Clean all safety stickers. Replace any that are missing or cannot be read.
- ◆ Inspect the hoses generally for signs of damage.
- ◆ Inspect the working tool for wear and damage. Do not use an excessively worn or damaged tool.
- ◆ Connect the tool.
- ◆ Ensure that the hydraulic couplings are clean and fully serviceable.
- ◆ Never invert the breaker without first isolating it from the power source. The working tool might be ejected violently while connecting it, if the breaker is connected to the power source.
- ◆ Ensure that any power source you plan to use is compatible with the breaker model used (see the "Technical data"). Use the recommended oil flow divider, if the flow from the power source can exceed the maximum allowed oil flow.
- ◆ Never exceed the maximum relief valve setting stated on the tool.
- ◆ Always connect T and P hoses before starting.

Starting a cut

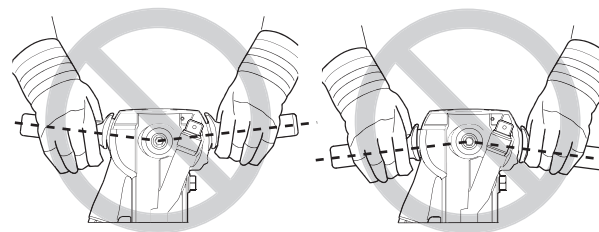
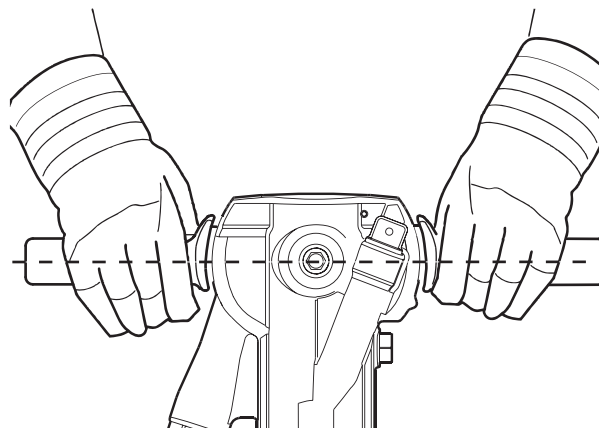
- ◆ Stand in a stable position with your feet well away from the inserted tool.
- ◆ Press the machine against the working surface before you start.
- ◆ Start collaring at such a distance from the edge that the machine is capable of breaking the material without leverage.

- ◆ Never break off too large pieces. Adjust the breaking distance (A) so that the inserted tool does not get stuck.



Breaking

- ◆ Let the machine do the work; do not press too hard. The vibration-reducing handle must absolutely not be pressed all the way down to the base.
- ◆ Hydraulic breakers with vibration-reducing handles: The feed force should be adapted so that the handles are pressed down 'half way'. The best vibration damping and breaking effect is achieved at this position.



- ◆ Avoid working in extremely hard materials for example granite and reinforcing iron (re-bar) which would cause substantial vibrations.
- ◆ Any form of idling, operating without insertion tool or operating with an uplifted machine must be avoided.

- ◆ When the machine is lifted, the start and stop device must not be activated.
- ◆ Check regularly that the machine is well lubricated.
- ◆ Never use the machine as a hand held impact tool.
- ◆ Ensure that the work piece is securely fixed.

When taking a break

- ◆ During all breaks you must place the machine in such a way that there is no risk for it to be unintentionally started. Make sure to place the machine on the ground, so that it can not fall.
- ◆ In the event of a longer break or when leaving the workplace: Switch off the power supply and then bleed the machine by activating the start and stop device.

Maintenance

Regular maintenance is a basic requirement for the continued safe and efficient use of the machine. Follow the maintenance instructions carefully.

- ◆ Before starting maintenance on the machine, clean it in order to avoid exposure to hazardous substances. See “Dust and fume hazards”
- ◆ Use only authorised parts. Any damage or malfunction caused by the use of unauthorised parts is not covered by warranty or product liability.
- ◆ When cleaning mechanical parts with solvent, comply with appropriate health and safety regulations and ensure there is satisfactory ventilation.
- ◆ For major service of the machine, contact your nearest authorised workshop.
- ◆ After each service, check that the machine's vibration level is normal. If not, contact your nearest authorised workshop.

Every day

- ◆ Clean and inspect the machine and its functions each day before the work commences.
- ◆ Check the tool retainer for wear and function.
- ◆ Conduct a general inspection for leaks and damage and wear.
- ◆ For the machine to maintain the specified vibration values, always check the following:
Too big a clearance between the insertion tool's shank and the chisel bushing will generate increased vibrations. To avoid exposure to excessive vibrations, check the chisel bushing for wear every day.
- ◆ Check that the handle is moving freely (up and down) and does not jam.
- ◆ Change damaged parts immediately.
- ◆ Replace damaged and worn components in good time.
- ◆ Make sure that all the attached and related equipment, such as hoses and flow dividers are properly maintained.

Every week

- ◆ Check that the springs are not damaged.

Every three month

- ◆ Check tightness of nuts, bolts, screws and hose fittings. When retightening see the correct torque settings in the spare part list.
- ◆ Check the bushing in the nose for wear and damage.
- ◆ If the breaker is equipped with Ergonomic handles check the adjustment of the handles. When the trigger lever is pressed fully down you should be able to move the trigger pawl (with a screwdriver) approximately 1 millimetre further.



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