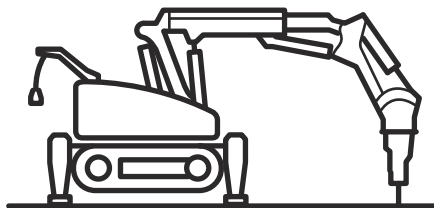




# Husqvarna®



## DXR 145, DXR 275, DXR 305, DXR 315

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## Introduction

### Owner responsibility



**WARNING:** Processing of concrete and stone by methods such as cutting, grinding or drilling, especially during dry operation, generates dust that comes from the material being processed, which frequently contains silica. Silica is a basic component of sand, quartz, brick clay, granite and numerous other minerals and rocks. Exposure to excessive amount of such dust can cause:

Respiratory disease (affecting your ability to breathe), including chronic bronchitis, silicosis and pulmonary fibrosis from exposure to silica. These diseases may be fatal;

Skin irritation and rash.

Cancer according to NTP\* and IARC\* \*\*/ National Toxicology Program, International Agency for Research on Cancer.

Take precautionary steps:

Avoid inhalation of and skin contact with dust, mist and fumes.

Wear and ensure that all bystanders wear appropriate respiratory protection such as dust masks designed to filter out microscopic particles. (See OSHA 29 CFR Part 1926.1153)

To minimize dust emissions, use water to bind the dust, when feasible. If dry operation is necessary, use an appropriate dust extractor.

It is the owner's/employer's responsibility that the operator has sufficient knowledge about how to use the product safely. Supervisors and operators must have read and understood the Operator's Manual. They must be aware of:

- The product's safety instructions.
- The product's range of applications and limitations.
- How the product is to be used and maintained.

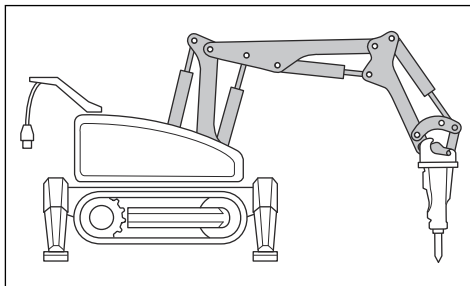
National/Local regulations could restrict the use of this product. Find out what regulations are applicable where you work before you start using the product.

### Product description

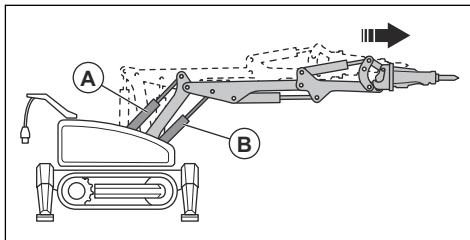
The product is a demolition robot. The product is operated with a remote control.

### Arm system

The 3 parts of the arm system give good movement properties and a long range. Operate the arm system near the work object.

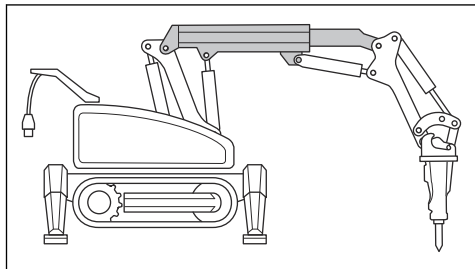


Operation of cylinder 1 (A) and 2 (B) in parallel can expand the range of the product when the product is stationary.



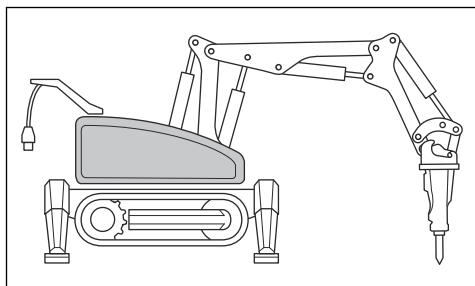
### Telescopic arm (DXR 315)

The arm system on model DXR 315 also has a telescopic arm that gives more range.



### Tower

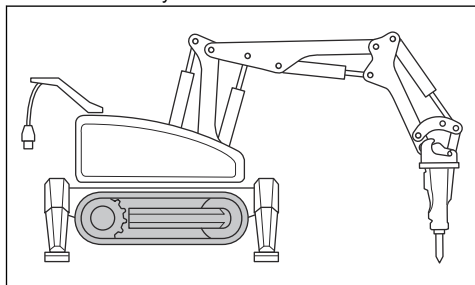
The tower can rotate 360°. This lets you operate the product in all directions when the product is stationary. The product has a slew brake. When the tower is not in operation, the slew brake is on.



**CAUTION:** Do not install tools that are too heavy. The rotate function can become damaged.

### Caterpillar tracks

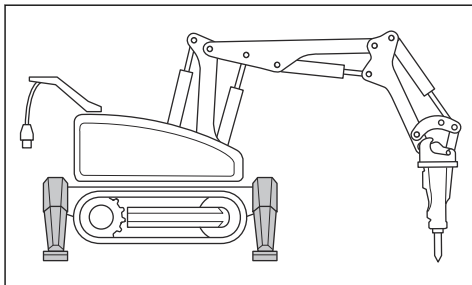
The product has 1 caterpillar track on each side of the product. Each caterpillar track has a hydraulic drive motor. When the caterpillar tracks are not in operation, the brakes of the hydraulic drive motors are on.



**CAUTION:** Do not use the rubber caterpillar tracks in temperatures that are higher than 70°C/158°F. If the temperature is higher than 70°C/158°F, use steel tracks.

### Outriggers

The product has 2 outriggers on each side of the product. The outriggers make the product stable. When the product is in operation, the outriggers must always be extended.



### Tools



**WARNING:** Please read the operator's manual carefully and make sure you understand the instructions before using the machine. You should also read and understand the manual that accompanies the tool.



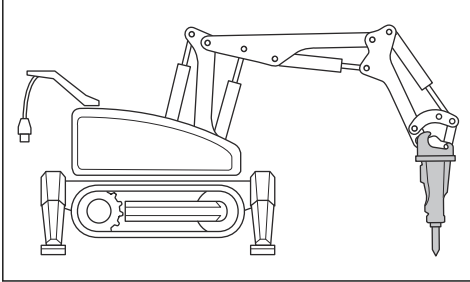
**CAUTION:** Ensure that the tool's and the machine's performance (weight, hydraulic pressure, flow etc) are compatible.

The machine must be equipped with the tools and accessories appropriate for the job and the machine. The weight and performance requirements of the tools are important in determining the suitability and compatibility for installation on the machine. Read, understand and follow the handling instructions in the operator's manual and the tool supplier's recommendations and instructions. Never use the machine with a tool contrary to operator's manual or tool supplier's recommendations. Contact the machine manufacturer if you have any doubts. Always read

separate precautions and handling instructions from the relevant tool supplier before using a new tool.

The machine is recommended to be used with the following tools or accessories marketed by Husqvarna. Refer to *Tools overview on page 112*.

The tools are installed on the tool holder on the arm system. Only use tools that are correct for the operation task.



## Hydraulic system

The hydraulic system operates the hydraulic pressure and flow in the product. The hydraulic system has a hydraulic oil tank with filters, a hydraulic pump, a hydraulic oil cooler, hydraulic motors, hydraulic cylinders

and valves of different types. Hoses or pipes connect the components.

The pressure control valves limit or decrease pressure to the valves. The flow control valves control the flow of the hydraulic oil and the speed of the functions of the product. The directional control valves make sure that the hydraulic oil goes to different functions of the product.

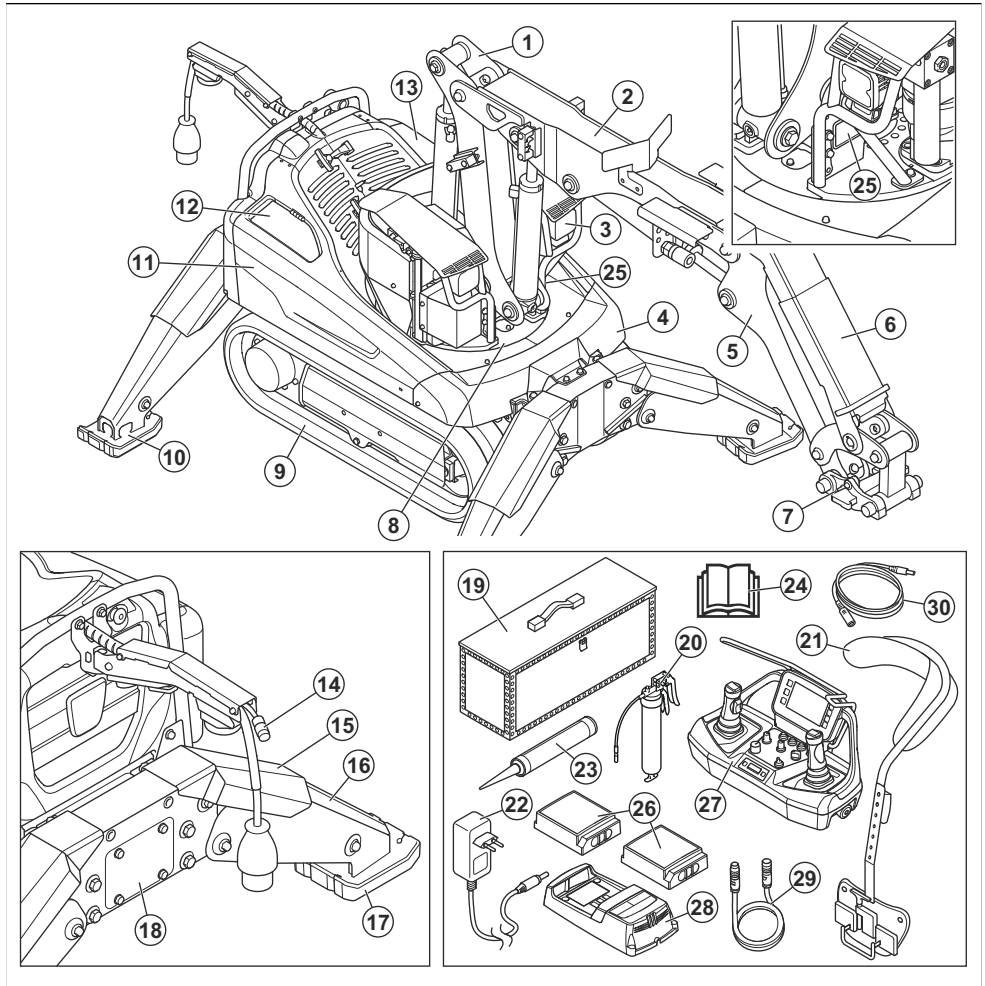
The hydraulic system has different pressure levels. Refer to *Technical data on page 108*. If many functions are used at the same time, the pressure is set to the lowest value. If the oil temperature is more than 80°C/ 176°F, the pressure of the breaker is automatically decreased. This increases the operation time before the product becomes too hot.

## Intended use

The product is used for demolition in many different environments and for different types of constructions. The product can be used in risk areas, for example where there is a risk that objects can fall down. The product can be equipped for very high temperatures and can also be used in environments with dangerous materials and chemicals. The remote control lets the operator control the product at a safe distance from the risk area. The product can be used indoors and outdoors. Do not use the product for other tasks.



## Product overview (DXR 145)

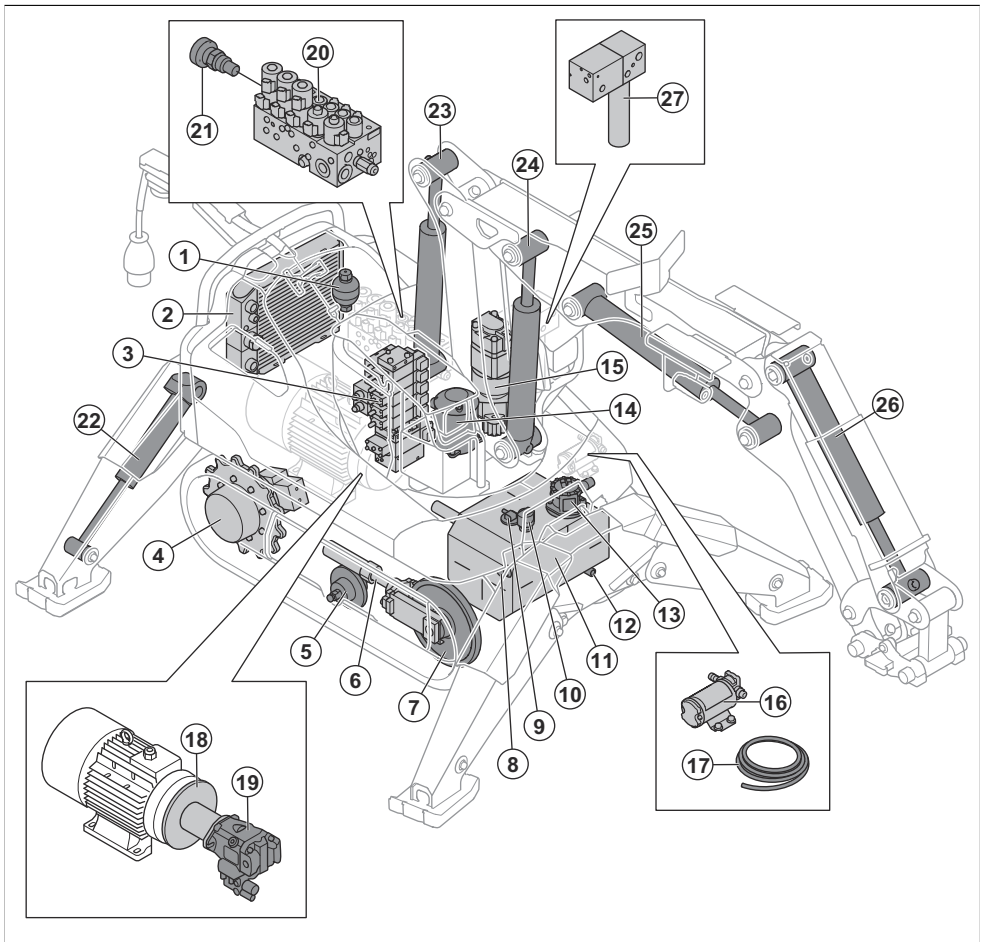


- |                      |  |
|----------------------|--|
| 1. Arm 1             | 13. Left hatch   |
| 2. Arm 2             | 14. Connector for the CAN bus cable                          |
| 3. Headlight         | 15. Cylinder guard   |
| 4. Front cover       | 16. Outrigger  |
| 5. Arm 3             | 17. Outrigger foot   |
| 6. Cylinder guard    | 18. Inspection cover   |
| 7. Tool hitch        | 19. Box of wood  |
| 8. Gear ring         | 20. Grease tube  |
| 9. Caterpillar track | 21. Remote control harness                                   |
| 10. Lifting eye      | 22. AC/DC adapter with different plugs for different markets |
| 11. Right side cover | 23. Grease gun   |
| 12. Right hatch      |  |

- 24. Operator's manual
- 25. Rating plate
- 26. Remote control battery
- 27. Remote control

- 28. Battery charger for remote control battery
- 29. CAN bus cable
- 30. DC cable

## Product overview, hydraulic system (DXR 145)



- |  |                             |
|--|-----------------------------|
| 1. Hydraulic accumulator for caterpillar track tension | 11. Hydraulic oil tank      |
| 2. Hydraulic oil cooler                                | 12. Drain plug              |
| 3. Valve block, arm system                             | 13. Hydraulic oil filter    |
| 4. Drive motor   | 14. Swivel                  |
| 5. Support wheel                                       | 15. Slew motor              |
| 6. Cylinder for caterpillar track tension              | 16. Hydraulic fill pump     |
| 7. Tension wheel                                       | 17. Suction hose            |
| 8. Sight glass   | 18. Clutch housing          |
| 9. Level indicator                                     | 19. Hydraulic pump          |
| 10. Air filter   | 20. Valve block for chassis |

21. Valve for caterpillar track tension

22. Cylinders for outriggers

23. Cylinder 1

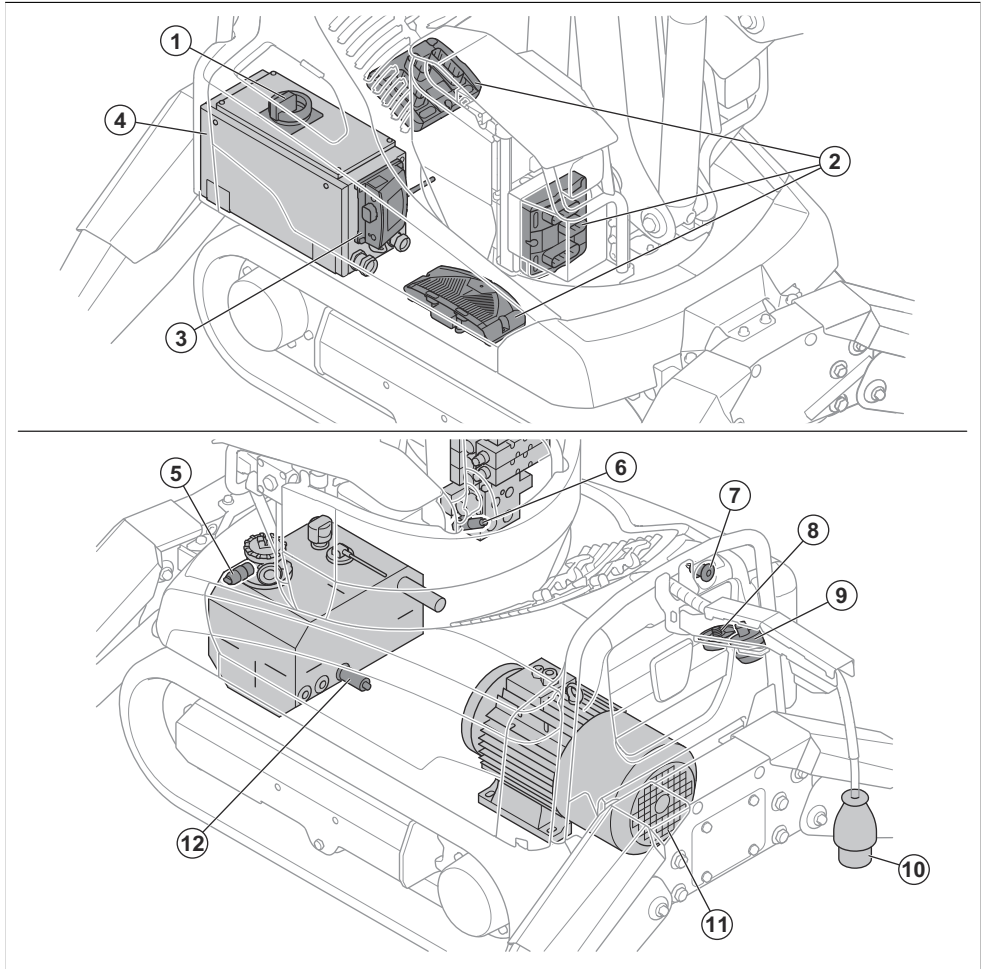
24. Cylinder 2

25. Cylinder 3

26. Cylinder 4

27. Breaker grease pump

## Product overview, electrical system (DXR 145)



1. Main switch

2. Control modules

3. Radio communication receiver

4. Electrical enclosure, including fuses

5. Pressure switch

6. Pressure sensor

7. Emergency stop button

8. Antenna

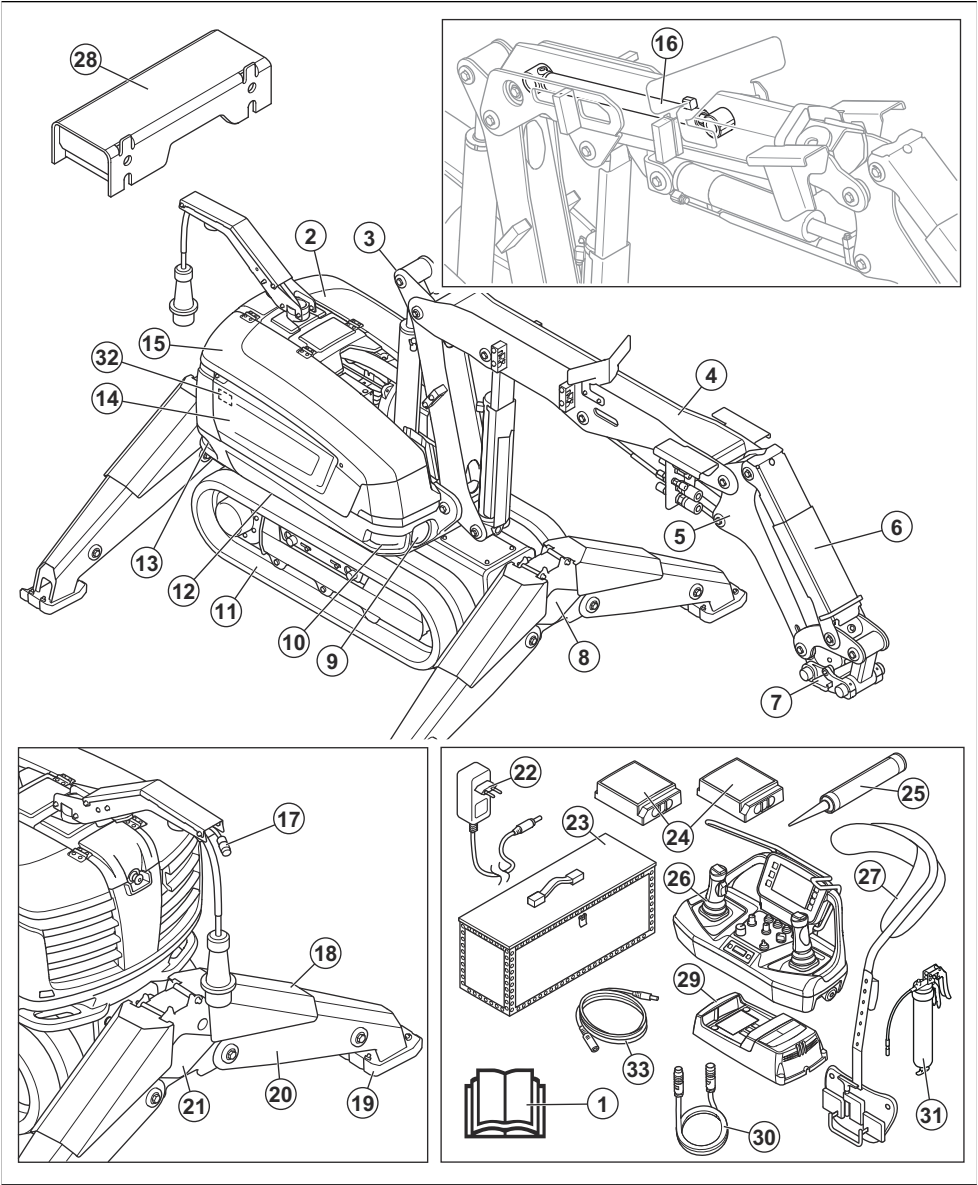
9. Indicator light, for operation

10. Power cord

11. Electric motor

12. Temperature sensor hydraulic oil

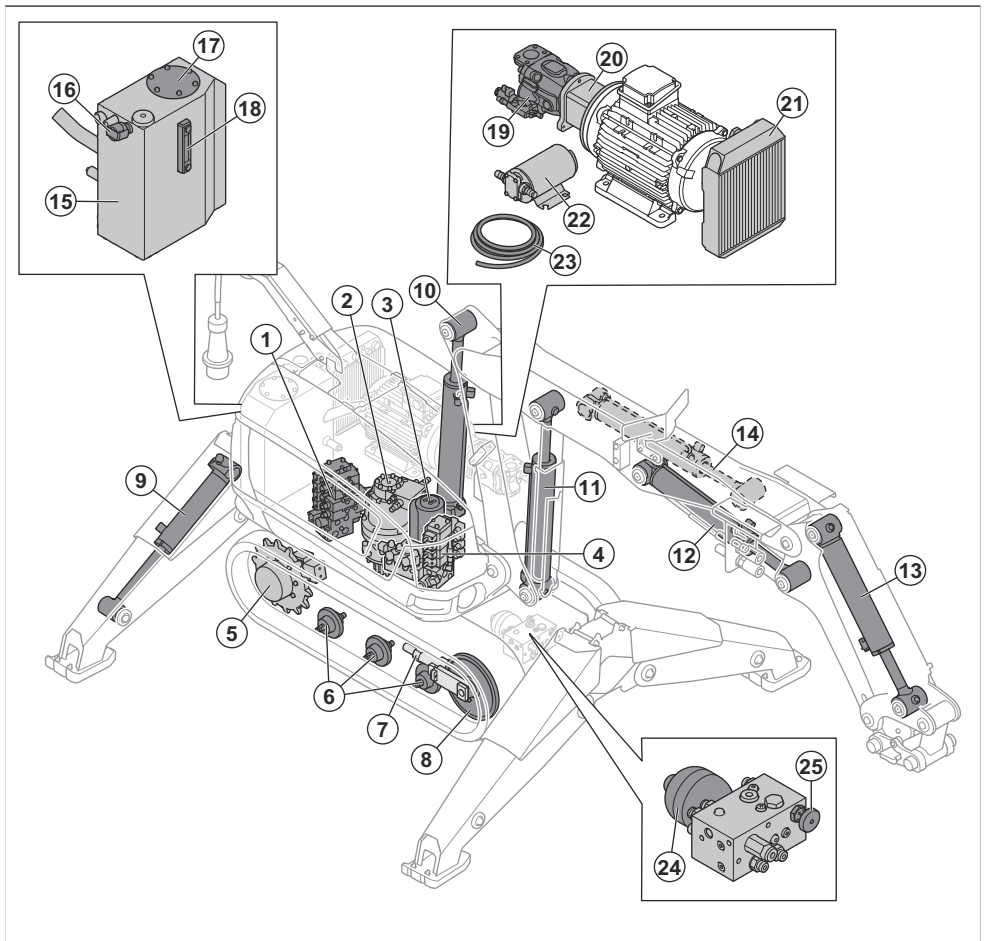
Product overview (DXR 275, DXR 305, DXR 315)



- |                      |   |
|----------------------|---|
| 1. Operator's manual | 6. Cylinder guard                                 |
| 2. Left hatch        | 7. Tool hitch                                     |
| 3. Arm 1             | 8. Inspection cover for caterpillar track tension |
| 4. Arm 2             | 9. Headlight                                      |
| 5. Arm 3             | 10. Lifting eye                                   |

- |  |  |
|--|--|
| 11. Caterpillar track  | 23. Box of wood                                |
| 12. Gear ring  | 24. Remote control battery                     |
| 13. Lifting eye  | 25. Grease gun                                 |
| 14. Right side cover   | 26. Remote control                             |
| 15. Right hatch  | 27. Remote control harness                     |
| 16. Telescopic arm, only for DXR 315                         | 28. Caterpillar track widener                  |
| 17. Connector for the CAN bus cable                          | 29. Battery charger for remote control battery |
| 18. Cylinder guard   | 30. CAN bus cable                              |
| 19. Outrigger foot   | 31. Grease tube                                |
| 20. Outrigger  | 32. Rating plate                               |
| 21. Inspection cover   | 33. DC-cable                                   |
| 22. AC/DC adapter with different plugs for different markets |  |

## Product overview, hydraulic system (DXR 275, DXR 305, DXR 315)

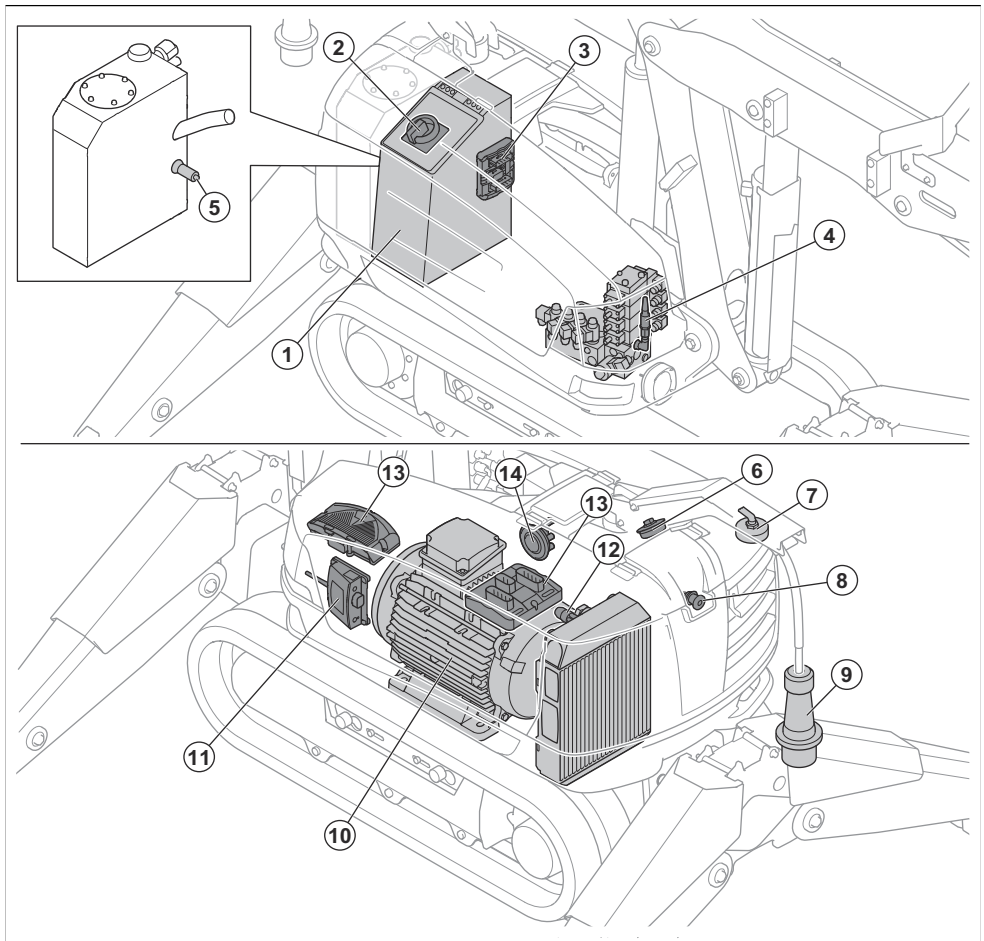


1. Valve block for arm system

2. Slew motor

- |   |   |
|---|---|
| 3. Swivel                                 | 15. Hydraulic oil tank                                  |
| 4. Valve block for chassis                | 16. Air filter  |
| 5. Drive motor                            | 17. Hydraulic oil filter cover                          |
| 6. Support wheel                          | 18. Sight glass   |
| 7. Cylinder for caterpillar track tension | 19. Hydraulic pump                                      |
| 8. Tension wheel                          | 20. Clutch housing                                      |
| 9. Cylinders for outriggers               | 21. Hydraulic oil cooler                                |
| 10. Cylinder 1                            | 22. Hydraulic fill pump                                 |
| 11. Cylinder 2                            | 23. Suction hose  |
| 12. Cylinder 3                            | 24. Hydraulic accumulator for caterpillar track tension |
| 13. Cylinder 4                            | 25. Valve for caterpillar track tension                 |
| 14. Cylinder 5, only for DXR 315          |   |

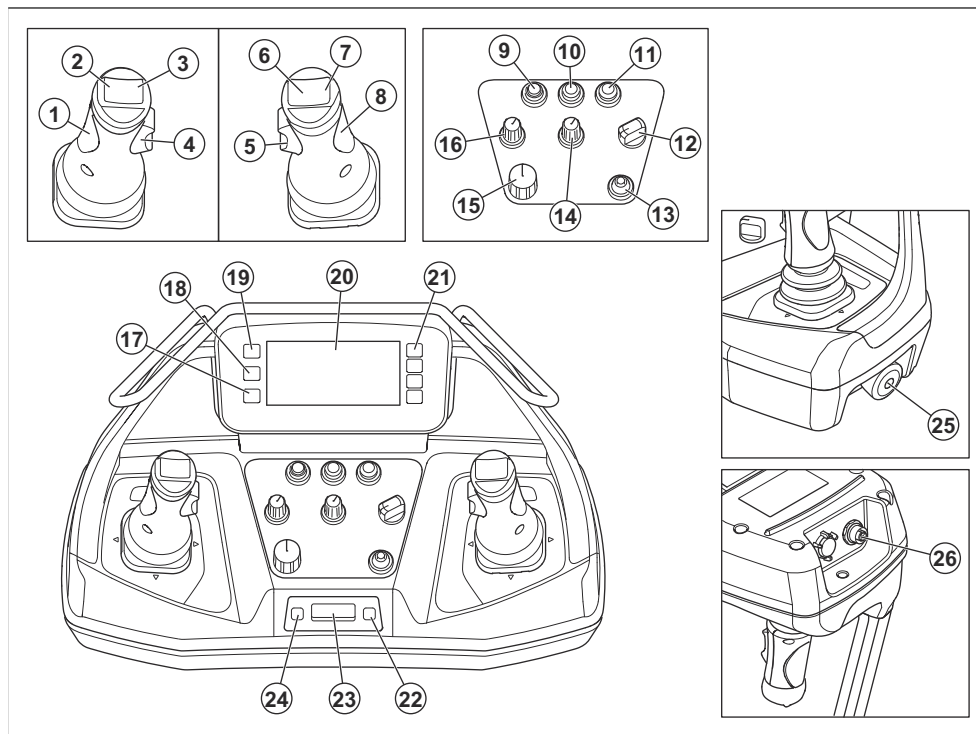
## Product overview, electrical system (DXR 275, DXR 305, DXR 315)



- |  |                    |
|--|--------------------|
| 1. Electrical enclosure, including fuses | 3. Control module  |
| 2. Main switch                           | 4. Pressure sensor |

- 5. Temperature sensor hydraulic oil
- 6. Antenna
- 7. Indicator light, for operation
- 8. Emergency stop button
- 9. Power cord
- 10. Electric motor
- 11. Radio communication receiver
- 12. Pressure switch
- 13. Control modules
- 14. Horn

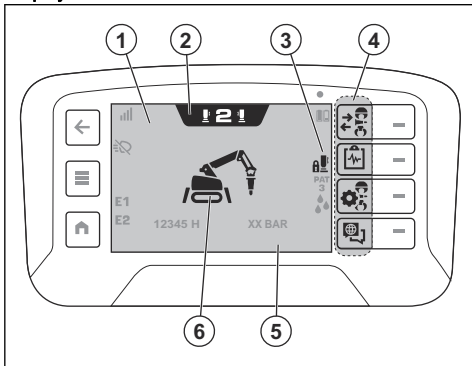
## Remote control overview



- 1. Left joystick
- 2. Left top button on the left joystick
- 3. Right top button on the left joystick
- 4. Left side switch
- 5. Right side switch
- 6. Left top button on the right joystick
- 7. Right top button on the right joystick
- 8. Right joystick
- 9. Headlights button
- 10. Lock button for the remote control
- 11. Horn button
- 12. Transport mode switch
- 13. Operation mode switch
- 14. Knob for adjustment of the product speed
- 15. OFF/ON/START switch
- 16. Knob for adjustment of the tool speed
- 17. Home button
- 18. Menu button
- 19. Button to go back in the menu structure
- 20. Display
- 21. Selection buttons
- 22. Right side button for the information center display
- 23. Information center display
- 24. Left side button for the information center display
- 25. Machine stop button
- 26. Connector for the CAN bus cable



## Display overview



1. Top bar
2. Operation mode tab
3. Status bar
4. Quick action bar
5. Bottom bar
6. Product view

## Fuses

The location of the fuses is in the fuse holder, behind the cover of the electrical enclosure. A blown fuse is identified by a burned connector. For information about low voltage (24 DC), refer to *Fuse overview on page 91*.

The connection to the mains socket has high voltage (400/460 VAC). For information about the correct fuses for the product, refer to *Guide values for connection to a mains socket on page 114*. The product has SoftStart and can be started with most types of fuses.

If the fuse blows again a short period after you replaced it, there is a short circuit. Let an approved servicing agent repair the product before you operate the product again. The fault can be in the electrical system or in the product that it is connected to.

## Symbols on the product



**WARNING:** This product can be dangerous and cause serious injury or death to the operator or others. Be careful and use the product correctly.



Read the manual carefully and make sure that you understand the instructions before you use the product.



Use heavy duty clothing that is not loose but lets you move freely.



Use protective gloves.



Use boots with steel toe-caps and non-slip soles.



Use respiratory protection in location where the air can be harmful to your health. Use a protective helmet, hearing protection and eye protection. Refer to *Personal protective equipment on page 21*.



High voltage.



Risk of injury. Make sure that no material can fall down and cause damage when you operate the product.



Risk of injury. Material can fall during operation. Use personal protective equipment and keep distance to the product during operation.



Risk of injury. Make sure that you are above the product when you operate on a slope. There is a risk that the product falls.



Always be careful when you operate near edges. Make sure that the product is stable and does not move to the edge during operation. Make sure that the surface has satisfactory bearing capacity.



Do the inspection and/or maintenance with the motor stopped and the power plug disconnected.



Always connect the product through an RCD with personal protection. The RCD must trip at a ground fault of 30 mA.



Make sure that the power cord is behind the product when you move the product. Also make sure that the power cord is behind the product when the outriggers are retracted or extended. There is a risk



A triangular warning sign with a black border. Inside the triangle, there are three wavy vertical lines above a horizontal line, representing a hot surface.

### Decals on the product



DXR 145: 531 17 65-01  
DXR 2-3xx: 531 17 65-02

**PERIODIC MAINTENANCE CHART**

**Legend:**

- Check engine oil
- Check hydraulic oil
- Check fuel filter
- Check air filter
- Check battery
- Check track tension
- Check track rollers
- Check track idlers
- Check track links
- Check track pins
- Check track shoes
- Check track sprockets
- Check track guides
- Check track scrapers
- Check track cleaners
- Check track brushes
- Check track rollers
- Check track idlers
- Check track links
- Check track pins
- Check track shoes
- Check track sprockets
- Check track guides
- Check track scrapers
- Check track cleaners
- Check track brushes

**Frequency Legend:**

- 50
- 100
- 250
- 500
- 1000

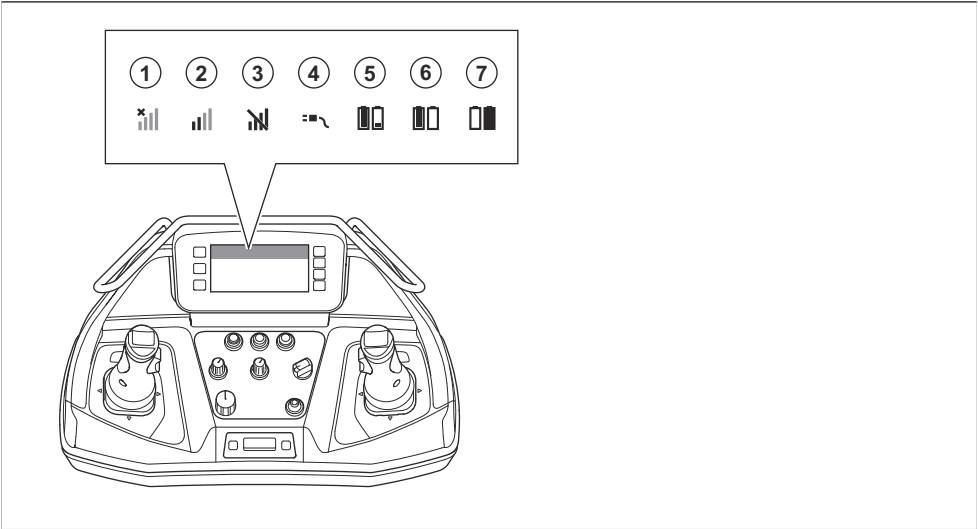
**Tasks and Frequencies:**

- Check engine oil (50, 100, 250, 500, 1000)
- Check hydraulic oil (50, 100, 250, 500, 1000)
- Check fuel filter (50, 100, 250, 500, 1000)
- Check air filter (50, 100, 250, 500, 1000)
- Check battery (50, 100, 250, 500, 1000)
- Check track tension (50, 100, 250, 500, 1000)
- Check track rollers (50, 100, 250, 500, 1000)
- Check track idlers (50, 100, 250, 500, 1000)
- Check track links (50, 100, 250, 500, 1000)
- Check track pins (50, 100, 250, 500, 1000)
- Check track shoes (50, 100, 250, 500, 1000)
- Check track sprockets (50, 100, 250, 500, 1000)
- Check track guides (50, 100, 250, 500, 1000)
- Check track scrapers (50, 100, 250, 500, 1000)
- Check track cleaners (50, 100, 250, 500, 1000)
- Check track brushes (50, 100, 250, 500, 1000)

**Husqvarna**

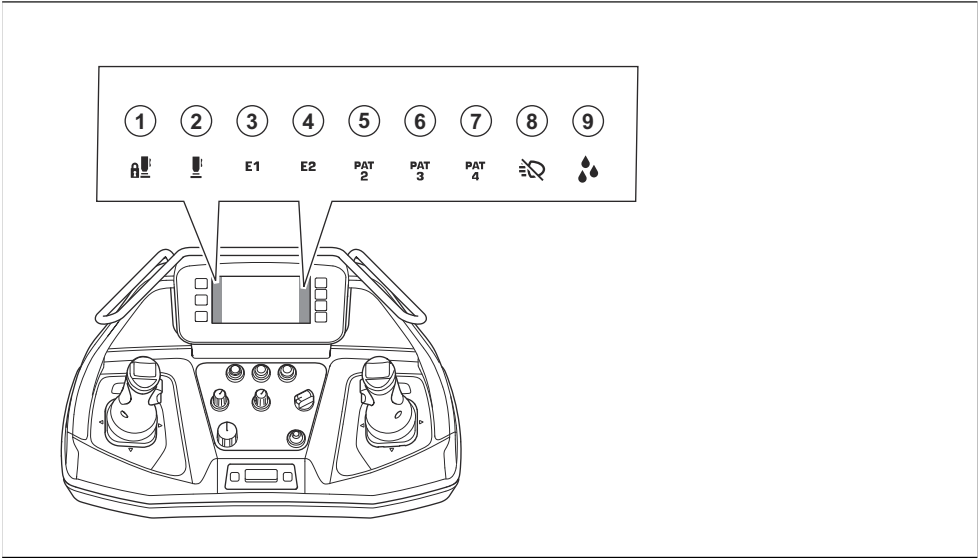
13

**Symbols in the top bar on the display**



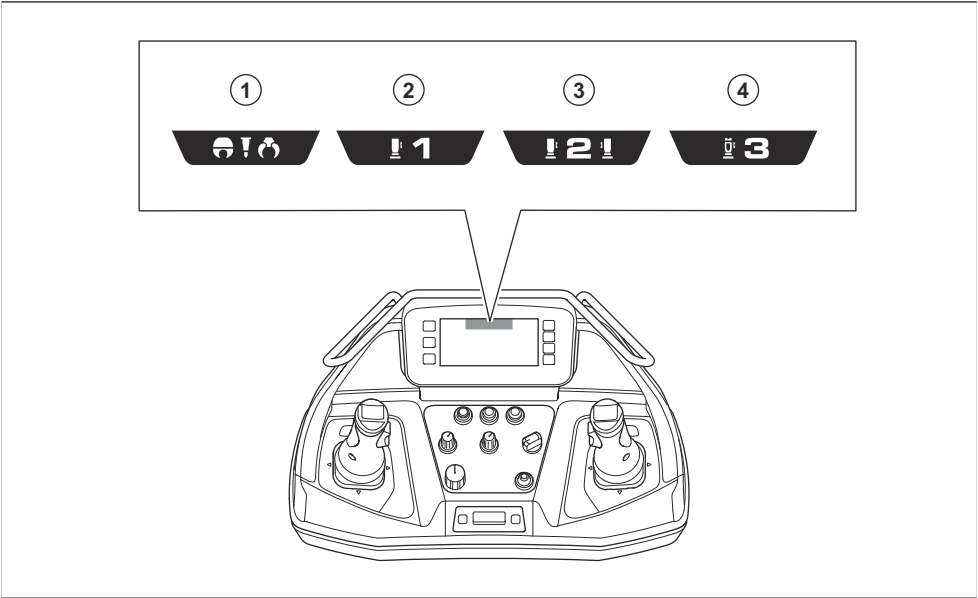
Position	Function
1	No radio signal. No connection with the product.
2	Radio signal strength.
3	The radio signal is blocked.
4	The CAN bus cable is attached between the product and the remote control.
5	State of charge. When the battery symbol is yellow, the state of charge is 11–20%. When the battery symbol is red, the state of charge is less than 10%.
6	The battery in the left slot.
7	The battery in the right slot.

Symbols in the status bar on the display



Position	Function
1	The controls on the remote control are locked.
2	The controls on the remote control are unlocked.
3	"Extra function 1" is in operation.
4	"Extra function 2" is in operation.
5	Joystick pattern 2 is in operation.
6	Joystick pattern 3 is in operation.
7	Joystick pattern 4 is in operation.
8	The headlight is off.
9	The water function is in operation.

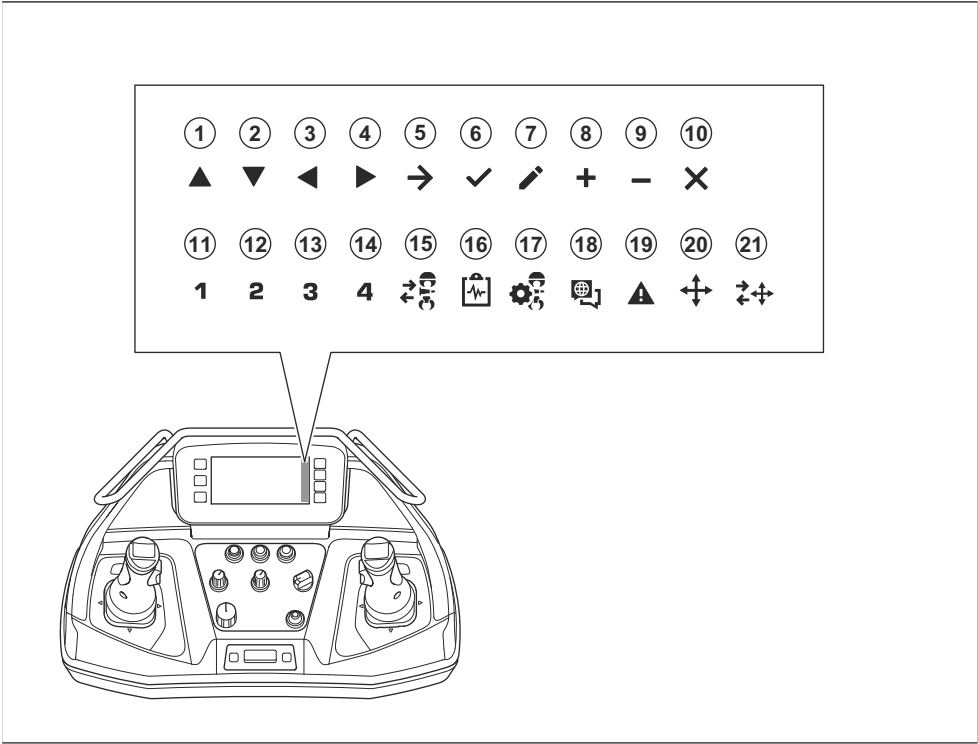
**Symbols in the operation mode tab on the display**



The operation mode tab changes from orange to blue when the pattern test is in operation. Refer to *"Pattern test mode"* on page 50.

Position	Function
1	Work mode is in operation.
2	Transport mode, one lever control is in operation.
3	Transport mode, two lever control is in operation.
4	Transport mode, crawl is in operation.

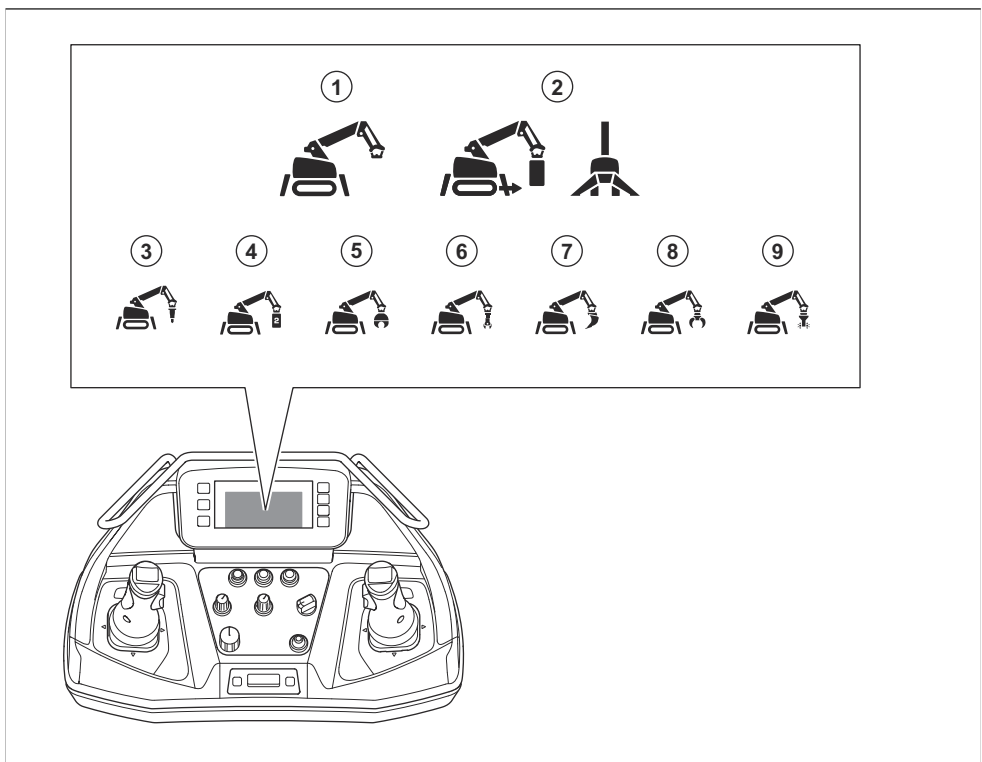
Symbols in the quick action bar on the display



Position	Function
1	Move up in the display.
2	Move down in the display.
3	Move left in the display.
4	Move right in the display.
5	Move down in the menu structure in the display.
6	Make the selection in the display.
7	Edit in the display.
8	Increase a value in the display.
9	Decrease a value in the display.
10	Cancel in the display.
11	Enter number 1 in the display.
12	Enter number 2 in the display.

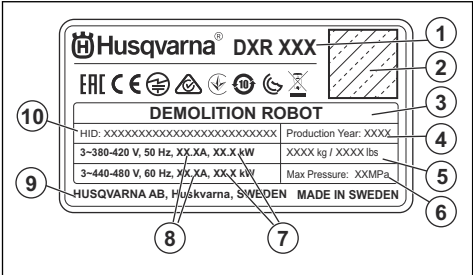
Position	Function
13	Enter number 3 in the display.
14	Enter number 4 in the display.
15	Quick action to select the tool in operation.
16	Quick action to see the product status.
17	Quick action to set the water and the grease level.
18	Quick action to change the language.
19	Quick action to see the faults.
20	Quick action to select the pattern test mode.
21	Quick action in the pattern test mode to the change pattern.

### Symbols in the product view on the display



Position	Function
1	Movable parts on the product are shown in orange. Not movable parts are shown in gray.
2	In pattern test. The product part that moves is shown in orange. Movable parts in the selected operation mode is shown in light blue. Not movable parts are shown in dark blue.
3	The breaker is in operation.
4	The custom tool 1, 2 or 3 is in operation.
5	The concrete crusher is in operation.
6	The steel shear is in operation.
7	The bucket is in operation.
8	The grapple is in operation.
9	The drum cutter is in operation.

### Rating plate



1. Product type
2. Scannable code
3. Product designation
4. Production year
5. Product weight with no tools
6. Pressure
7. Rated power
8. Rated current
9. Manufacturer
10. HID number, refers to the production year

### The manufacturer's reservation

Husqvarna Construction Products reserves the right to alter specifications and instructions for the machine without prior notification. The machine may not be modified without the manufacturer's written permission. If the machine is modified after delivery from Husqvarna

Construction Products and without the manufacturer's written permission, it is the owner's responsibility.

Modification can entail new risks for operators, the machine and the surroundings. These can include impaired strength or inadequate protection. It is the responsibility of the owner to specify which alterations are going to be made and to contact the supplier of the machine for approval before commencing the modifications.

Husqvarna Construction Products does not make representation or warranty on fitness or compatibility of unapproved tools installed on the machine and shall not be responsible for the use of tools not marketed by Husqvarna.

All information and all data in the operator's manual were applicable at the time the operator's manual was sent to print.

### Product liability

As referred to in the product liability laws, we are not liable for damages that our product causes if:

- the product is incorrectly repaired.
- the product is repaired with parts that are not from the manufacturer or not approved by the manufacturer.
- the product has an accessory that is not from the manufacturer or not approved by the manufacturer.
- the product is not repaired at an approved service center or by an approved authority.

## Safety

### Safety definitions

Warnings, cautions and notes are used to point out specially important parts of the manual.



**WARNING:** Used if there is a risk of injury or death for the operator or bystanders

if the instructions in the manual are not obeyed.



**CAUTION:** Used if there is a risk of damage to the product, other materials or the adjacent area if the instructions in the manual are not obeyed.

**Note:** Used to give more information that is necessary in a given situation.

## General safety instructions



**WARNING:** Read the warning instructions that follow before you use the product.

- This product is a dangerous tool if you are not careful or if you use the product incorrectly. This product can cause serious injury or death to the operator or others. Before you use the product, you must read and understand the contents of this operator's manual.
  - Save all warnings and instructions.
  - Comply with all applicable laws and regulations.
  - The operator and the employer of the operator must know and prevent the risks during operation of the product.
  - Do not let a person operate the product unless they read and understand the contents of the operator's manual.
  - Do not operate the product unless you receive training before use. Make sure that all operators receive training.
  - Do not let a child operate the product.
  - Only let approved persons operate the product.
  - The operator is responsible for accidents that occur to other persons or their property.
  - Do not use the product if you are tired, ill, or under the influence of alcohol, drugs or medicine.
  - Always be careful and use your common sense.
  - This product produces an electromagnetic field during operation. This field can under some circumstances interfere with active or passive medical implants. To decrease the risk of serious injury or death, we recommend persons with medical implants to speak to their physician and the medical implant manufacturer before operating this product.
  - Keep the product clean. Make sure that you can clearly read signs and decals.
  - Do not use the product if it is defective.
  - Do not do modifications to this product.
  - Do not operate the product if it is possible that other persons have done modifications to the product.
- ## Safety instructions for operation
- WARNING:** Read the warning instructions that follow before you use the product.
- Make sure that you know the work area, such as the strength in floor structures and the position of the cables. It is the responsibility of the operator to examine the work area.
  - Use personal protective equipment. Refer to *Personal protective equipment on page 21*.
  - Keep not approved persons at a safe distance from the work area.
  - Make sure that you are in a safe and stable position during operation.
  - Put on approval fall protection system when you operate the product in locations where there is a fall risk.
  - Do not stay where the product can hit you. Do not stay below the arm system if it is lifted.
  - Do not stay below the work object.
  - Do not stay where you can become hit by material that becomes loose during operation.
  - Operate the product safely. Do not put the product into operation before all safety risks are removed.
  - Do not use the product to lift persons.
  - Do not go away from the product when the motor is on.
  - Keep the remote control from not approved persons.
  - Always disconnect the power cord before you go away from the product.
  - Keep your feet away from the remote control cable and the power cord to decrease the risk of fall injury.
  - Do not use cable connection between the product and the remote control if there is a risk that the product can fall.
  - If the product does not operate correctly, stop the motor.
  - Do not operate the product unless you can get aid if an accident occurs.
  - If vibrations occur in the product or the noise level from the product is unusually high, stop the product immediately. Examine the product for damages. Repair damages or let an approved service agent do the repair.
  - This manual cannot include all situations that can occur when you use the product. Be careful and use common sense. Do not operate the product or do maintenance on the product if you are not sure about the situation. Speak to a product expert, your dealer, service agent or approved service center for information.
  - Always use approved accessories. Speak to your dealer for more information.
  - Do not use the product if the hydraulic oil temperature is higher than 90°C/194°F. The



hydraulic system and electronic components can be damaged.

- Do not operate the product with tools and use lower speed, if the hydraulic oil temperature is less than 10°C/50°F. Refer to *To let the product become warm on page 31*.
- Use the product in altitudes lower than 1000 m. If it is necessary to operate the product in altitudes higher than 1000 m, speak to your Husqvarna service agent.

## Personal protective equipment



**WARNING:** Read the warning instructions that follow before you use the product.

- Always use correct personal protective equipment when you operate the product. The personal protective equipment does not erase the risk of injury. The personal protective equipment decreases the grade of injury if an accident occurs. Let your dealer help you select the right equipment.
- Use approved eye protection while you operate the product.
- Use heavy duty clothing that is not loose but lets you move freely.
- Use approved protective gloves that enables a solid hold.
- Use an approved protective helmet.
- Always use approved hearing protection while you operate the product. Noise for a long period can cause noise-induced hearing loss.
- The product can cause dust and fumes that contain dangerous chemicals. Use an approved respiratory protection.
- Do not let chemicals such as cleaning agent, grease and hydraulic oil touch the skin.
- Put on approval fall protection system when you operate the product in locations where there is a fall risk.
- Use boots with steel toe-caps and non-slip soles.
- Make sure that you have a first aid kit near.
- Sparks can occur when you operate the product. Make sure that you have a fire extinguisher near.

## Work area safety

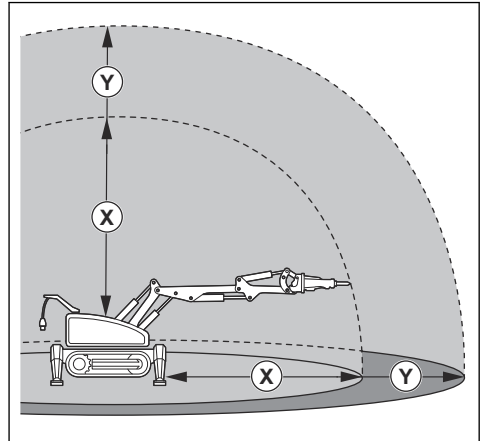


**WARNING:** Make sure that there are no persons, children or animals in the work area. If a person or animal enters the area, immediately stop the product.

- Look out for bystanders, objects and situations that can prevent safe operation of the product.
- During operation, no person is permitted in the work area (X) and (Y) shown in the illustration. This applies to bystanders and the operator. The area (X)

is the range of the product. Refer to *Range dimensions on page 118*.

Different work methods, work objects, tools and surfaces can change the dimension of the work area (Y). Look for possible risks before you operate the product. Change the work area if the conditions change during operation.



- Cordon off the work area.
- Increase the work area when you do work at a height. Cordon off the risk area at ground level. Make sure that no materials can fall down and cause injury.
- Keep the work area sufficiently illuminated.
- The product can be operated by a remote control for long distances. Do not operate the product unless you have clear view of the product and its risk area. Use a camera system if the view is not sufficient.
- Clear the work area of obstacles.
- Be careful when there is a risk of slippery surfaces.
- Do a check of the ground conditions and the support structures to make sure that materials, equipment and bystanders cannot fall.
- Do not use the product in areas where fire or explosions can occur.
- Make sure that no pipelines or electrical cables are in the material to be cut. Make marks where the pipelines and electrical cables are in the work area.
- Make sure that there is no flow in the pipelines in the work area. Make sure that the electrical cables in the work area are disconnected. The product must not come near power lines in the air.

## Electrical safety



**WARNING:** There is always a risk of shocks from electrical products. Do not use the product in bad weather conditions, for example, heavy fog or rain, strong wind and sand storm. Always use the product as

given in this operator's manual to prevent injury.



**WARNING:** The most severe physiological effect of current flowing through the body is the effect it can have on the heart. For this reason service personnel should be trained in first aid including cardiopulmonary resuscitation (CPR) and the use of an automatic external defibrillator (AED).

- Make sure that the power supply and its fuse and mains voltage, are the same as the voltage shown on the rating plate of the product. Refer to *Technical data on page 108*.
- Keep the power cord away from heat, oil, sharp edges or moving parts. A damaged power cord increases the risk of electrical shock.
- Always stop the product before you disconnect the power plug.
- Do not use the product if the power cord or power plug is damaged. Let an approved service center repair the product. A damaged power cord can cause serious injury and death.
- Make sure that the power cord does not go below the product when the product moves or the outriggers are retracted or extended.
- Use the power cord correctly. Do not use the power cord to move, pull or disconnect the product. Pull the power plug to disconnect the power cord. Do not pull the power cord.
- Do not operate the product in water depths where the electrical equipment of the product becomes wet. The electrical equipment can become damaged and the product can become energized and cause injury.
- Do not open the electrical enclosure when the product is connected to a power source. Some components in the electrical enclosure are permanently live.
- Always connect the product with a ground fault circuit that releases at a ground fault of 30 mA.

#### Grounded product instructions



**WARNING:** Incorrect connection can result in electrical shock. Speak to an approved electrician if you are not sure if your mains outlet is correctly grounded.

Do not do modifications to the power plug from its factory specification. If the power plug or power cord is damaged or must be replaced, speak to your Husqvarna service agent. Obey local regulations and laws.

If you do not fully understand the instructions about the grounded product, speak to an approved electrician.

Use only grounded outdoor extension cables with grounding plugs and grounding outlet that accepts the product power plug.

The product has a grounded power cord and power plug. Always connect the product to a grounded mains outlet. This decreases the risk of electrical shock if there is a malfunction.

Do not use electrical adapters with the product.

#### Extension cables

- Use only approved extension cables with sufficient length.
- The rated value on the extension cable must be the same or higher than given on the rating plate of the product.
- Use grounded extension cables.
- When you operate the product outdoors, use an extension cable that is applicable for outdoor operation. This decreases the risk of electrical shock.
- Keep the connection to the extension cable dry and off the ground.
- Keep the extension cable away from heat, oil, sharp edges or moving parts. A damaged cable increases the risk of electrical shock.
- Make sure that the extension cable is in good condition and not damaged.
- Do not use the extension cable while it is wound up. This can cause the extension cable to become too hot.

#### Battery safety



**WARNING:** Read the warning instructions that follow before you use the product.

- Only use the Li-ion batteries that we recommend for your product. The batteries are software encrypted.
- Use only original batteries for this product. There is a risk of explosion if the batteries are replaced with batteries of incorrect type. Speak to your dealer for more information.
- Use Li-ion batteries that are rechargeable as a power supply for the related Husqvarna products only. To prevent injury, do not use the batteries as a power supply for other devices.
- Risk of electrical shock. Do not connect the battery terminals to keys, screws or other metal. This can cause a short circuit of the battery.
- If a battery leaks, do not let the liquid touch your body or eyes. If you touch the liquid, clean the area with a large quantity of water and get medical aid.
- Do not use batteries that are non-rechargeable.
- Do not do modifications to the batteries.
- Do not put objects into the air slots of the batteries.

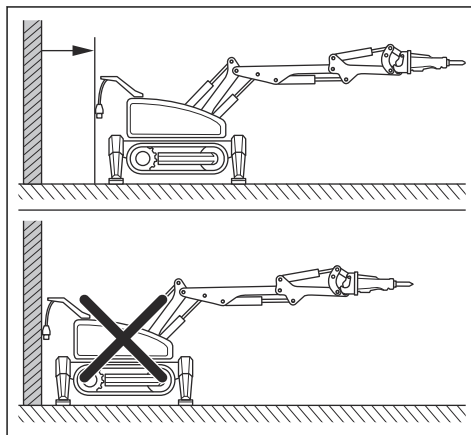
- Keep the batteries away from sunlight, heat or open flame. The batteries can cause an explosion and cause burns and/or chemical burns.
- Keep the batteries away from rain and wet conditions.
- Keep the batteries away from microwaves and high pressure.
- Do not try to disassemble or break the batteries.
- Use the batteries in ambient temperatures between -20°C/-4°F and 60 °C/140°F.
- Charge the batteries in ambient temperatures between 10°C/50°F and 45°C/113°F.
- Do not clean the batteries or the battery charger with water. Refer to *To clean the batteries and the battery charger on page 68*.
- Do not use defective or damaged batteries.
- Keep batteries in storage away from metal objects such as nails, screws or jewelry.
- Keep the batteries away from children.
- Put the product near the work object to decrease the load on the arm system. This decreases the risk that the product falls.
- Do not attach the product to walls or other objects to increase the force on the work object. This can cause overload on the product and the tool.

## Operation safety

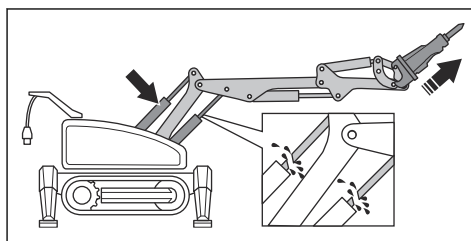


**WARNING:** Read the warning instructions that follow before you use the product.

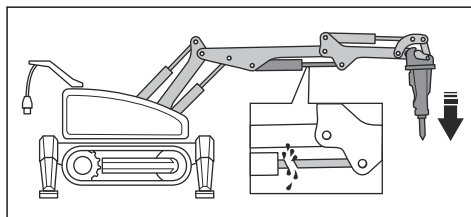
- Make sure that you know which side of the product is the front and which is the rear. Refer to the forward direction marks on the side of the caterpillar tracks to prevent incorrect operation.
- Make sure that the arm system is retracted when the outriggers are retracted. This decreases the risk that the product falls.
- During operation with a breaker or a bucket the outriggers can come off the ground. To keep the load on the remaining support mechanism to a minimum, keep the outriggers near the ground.
- In some small spaces it is not possible to extend the outriggers. If the outriggers are not extended, adapt your operation. There is an increased risk that the product falls when the arm system moves if the outriggers are not extended.
- Operation with a breaker can increase the risk that the product tilts. This can cause the outriggers to hit the ground with a large force. Make sure that there is no risk of damage or injury if this occurs.
- Make sure that the outriggers are extended and that the arm system operates near the ground when the tower rotates to the side.
- Operate the tower carefully. The direction of rotation is not easy to know before you start to operate.
- Do not hit the work object with the arm system or the tower. Use the installed tools only for the operation.
- During operation, make the product as level as possible and make sure that the outriggers are fully extended. Do not operate the arm system if the outriggers are retracted.



- To prevent overload, do not operate the cylinders in the inner or outer end position. Keep a small distance to the end positions.
- Do not operate the cylinders to their end positions when you operate the breaker in an up direction. This can cause damage to cylinders 1 and 2.



- Do not operate the cylinders to their end positions when you operate the breaker in a down direction. This can cause damage to cylinder 3.



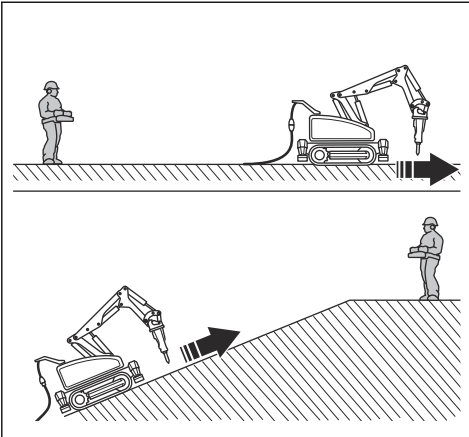
- DXR 315: Do not use the telescopic arm to push the tool against the work object.
- When the operation is completed, lower the arm system to the ground before you stop the product.

## Safety instructions for operation on slopes



**WARNING:** Read the warning instructions that follow before you use the product.

- Make sure that the work area is safe. Be very careful on slopes and rough surfaces. Wet and loose soil increases the risk of an accident. For information about maximum slope angle, refer to *Technical data on page 108*.
- During operation on flat surfaces, walk behind or at the side of the product. Be very careful during operation on slopes. Do not walk or stay below the product. The product is heavy and can cause serious injury if it falls.



- Loose ground, vibrations and the operation speed can cause the product to fall on a slope with a smaller angle.
- Make sure that the surface is sufficiently stable when you operate on ramps.
- Move smoothly and slowly on slopes.
- Operate the product up and down the slope, not from side to side. Make sure that the arm system points in the direction of the slope.
- Do not operate the caterpillar tracks and the tower at the same time to prevent sudden unwanted movements.
- Keep the arm system and the outriggers as low as possible on slopes.
- Attach the product if there is a risk of sudden unwanted movements during operation on a slope.
- Make sure that the product cannot fall during the operation. There is a risk of injury and damage.
- If it is necessary to park the product, make sure that the surface is flat. Pull the arm system in and put the tools against level ground.

## Safety instructions for operation near edges



**WARNING:** Read the warning instructions that follow before you use the product.

- Do not operate by cable connection if the product is near an edge. Only use radio connected operation.
- Surfaces that are not sufficiently stable and incorrect operation can cause unwanted movements of the product. Be careful when you operate near shafts and trenches or at heights.
- Always attach the product and loose tools when you operate near edges.
- Make sure that the product is stable and does not move near the edge during the operation.
- Make sure that the surface is sufficiently stable for the product weight. Refer to *Technical data on page 108*.
- Make sure that the surface can hold the vibrations from the product. During operation, vibrations go from the product to the surface.

## Safety instructions for operation on rough surfaces



**WARNING:** Read the warning instructions that follow before you use the product.

- Extend the outriggers until they are directly above the surface when you move the product across rough surfaces.
- The arm system can be used to lift the caterpillar tracks above rough surfaces. Do not turn or lift up the arm system too high. There is a risk that the product falls.
- Rough surfaces can cause the product to tilt and fall. Retract the arm system to move the center of gravity near the product center. This decreases the risk that the product falls.
- Surfaces with an unsatisfactory bearing capacity can cause the product to change the direction or fall. Always examine the surface before you start the product. Also make sure that there are no holes below materials with unsatisfactory bearing capacity.
- The caterpillar tracks give a low level of friction against smooth surfaces. Water, dust and contamination can decrease the friction more. Less friction increases the risk of unwanted movement of the product.

## Safety devices on the product



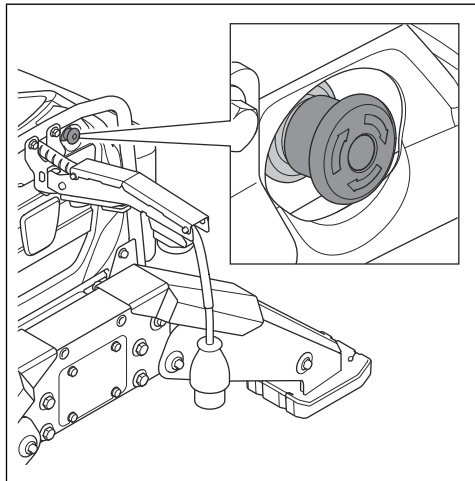
**WARNING:** Read the warning instructions that follow before you use the product.

- Do not use a product with defective safety devices.

- Do a check of the safety devices regularly. If the safety devices are defective, speak to your Husqvarna approved service agent.
- Do not do modifications to the safety devices.

### Emergency stop button on the product (DXR 145)

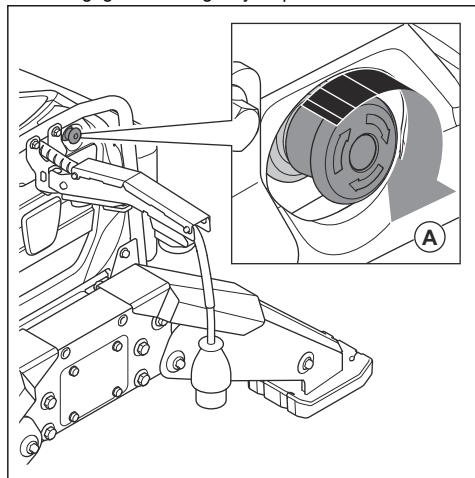
The emergency stop button is used to quickly stop the motor and all dangerous movements.



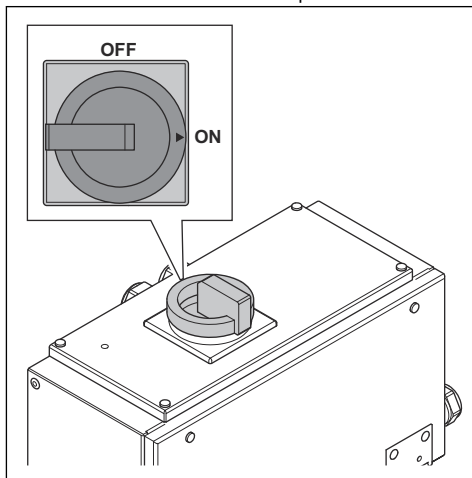
**CAUTION:** Do not use the emergency stop button as the stop button for the product.

### To do a check of the emergency stop button on the product (DXR 145)

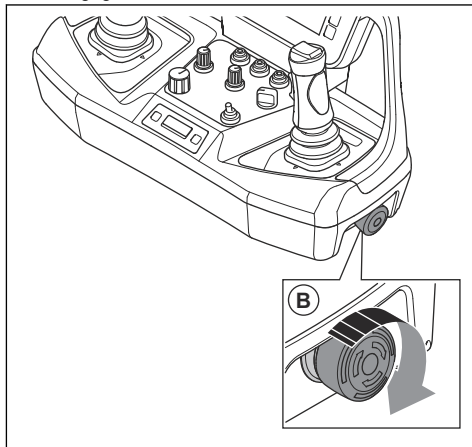
1. Turn the emergency stop button (A) clockwise to disengage the emergency stop.



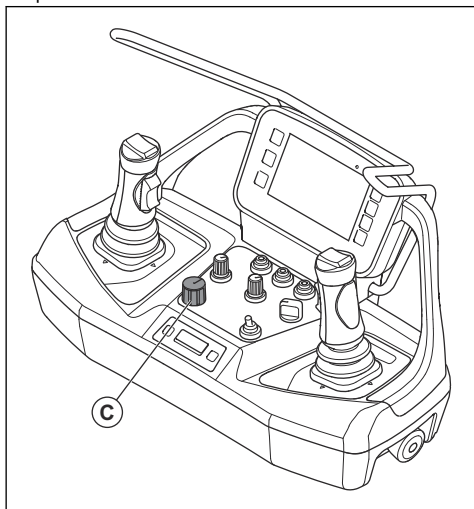
2. Open the right hatch on the product.
3. Turn the main switch to the ON position.



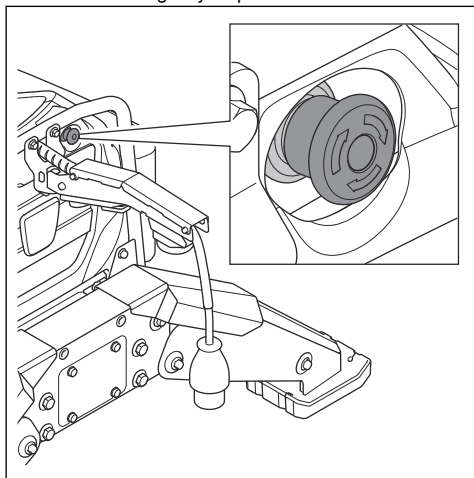
4. Step out of the work area with the remote control.
5. Make sure that the machine stop button (B) is disengaged.



6. Turn the OFF/ON/START switch (C) to the START position.



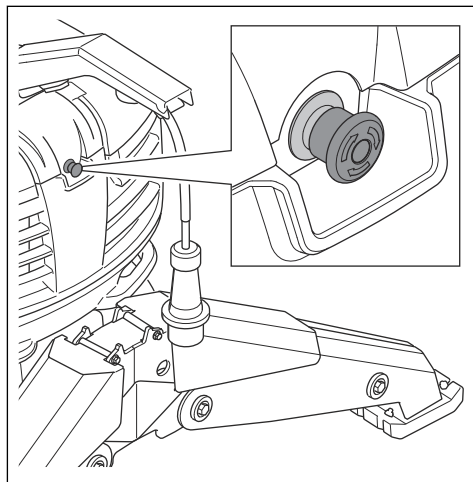
7. Push the emergency stop button.



8. Turn the emergency stop button clockwise to disengage.

### Emergency stop button on the product (DXR 275, DXR 305, DXR 315)

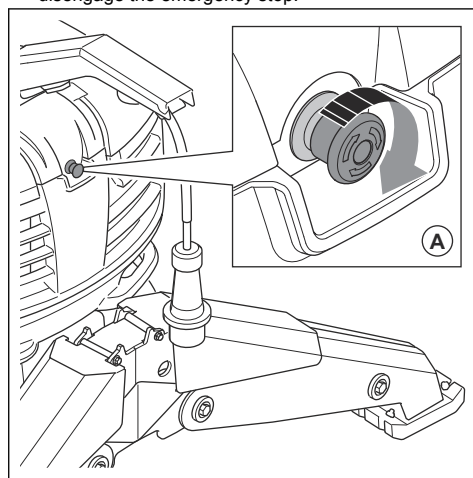
The emergency stop button is used to quickly stop the motor and all dangerous movements.



**CAUTION:** Do not use the emergency stop button as the stop button for the product.

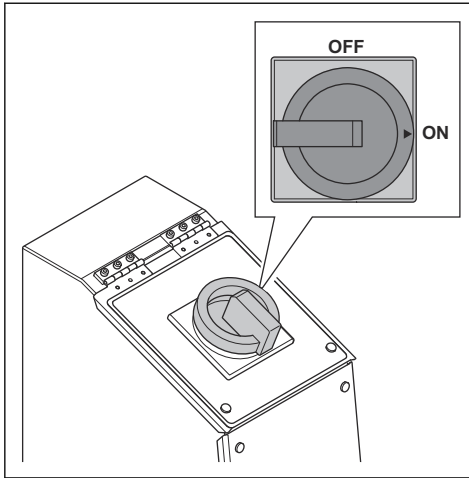
### To do a check of the emergency stop button on the product (DXR 275, DXR 305, DXR 315)

1. Turn the emergency stop button (A) clockwise to disengage the emergency stop.

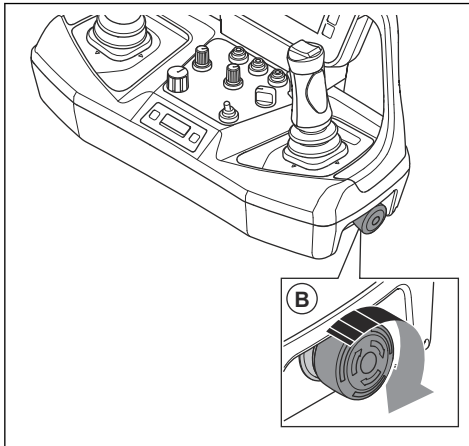


2. Open the right hatch on the product.

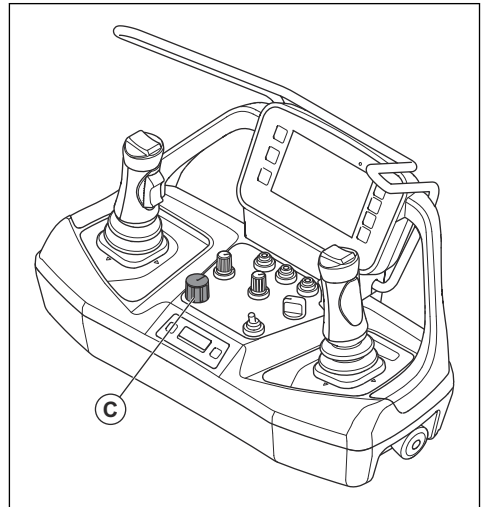
3. Turn the main switch to the ON position.



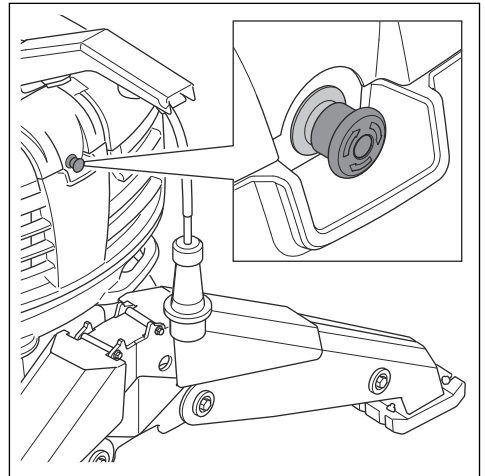
4. Step out of the work area with the remote control.  
5. Make sure that the machine stop button (B) is disengaged.



6. Turn the OFF/ON/START switch (C) to the START position.



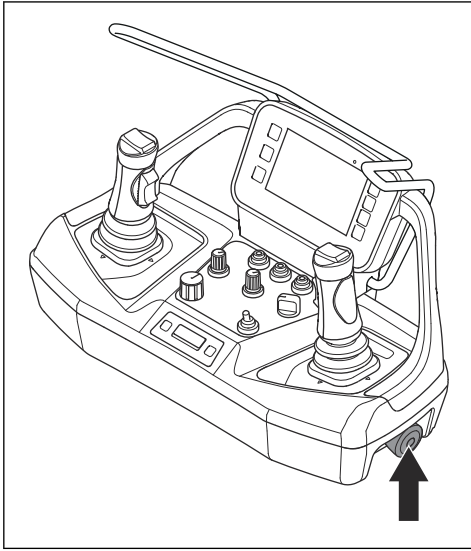
7. Push the emergency stop button.



8. Turn the emergency stop button clockwise to disengage.

### Machine stop button on the remote control

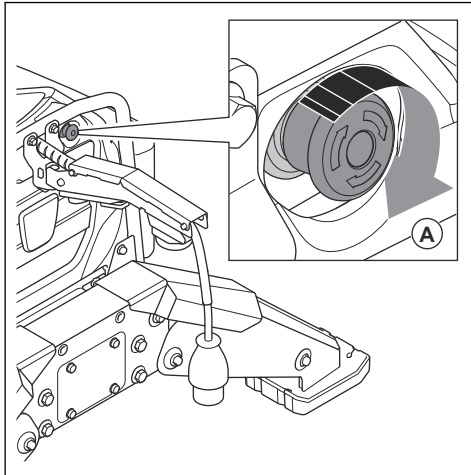
The machine stop button is used to quickly stop the motor.



**CAUTION:** Do not use the machine stop button as the stop button for the product.

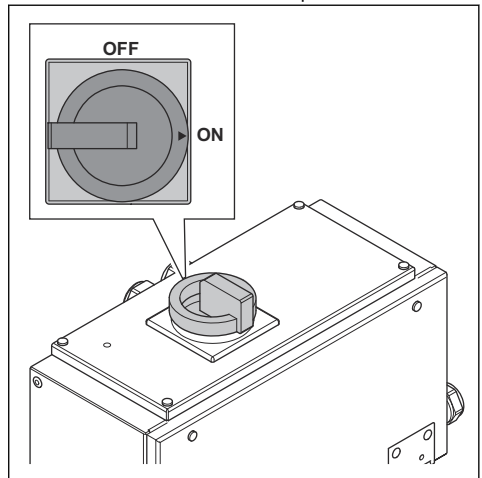
### To do a check of the machine stop button on the remote control (DXR 145)

1. Turn the emergency stop button (A) clockwise to disengage the emergency stop.

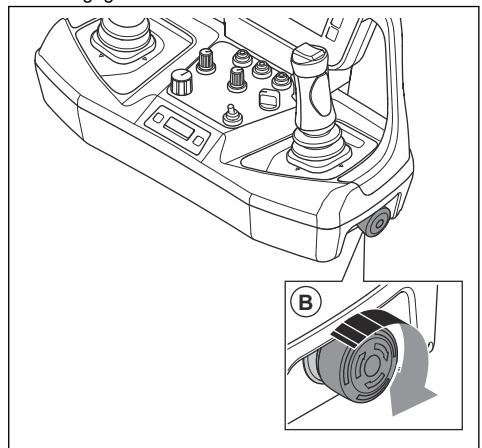


2. Open the right hatch on the product.

3. Turn the main switch to the ON position.

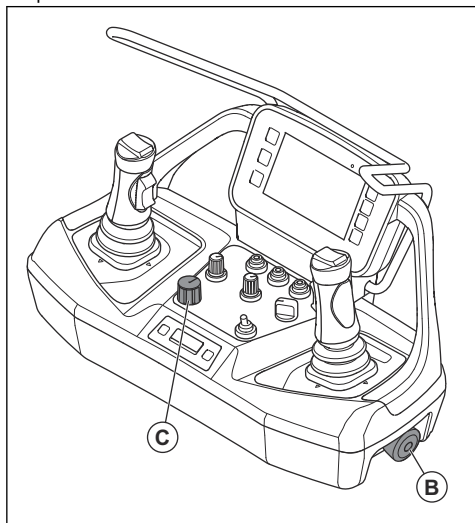


4. Step out of the work area with the remote control.
5. Make sure that the machine stop button (B) is disengaged.





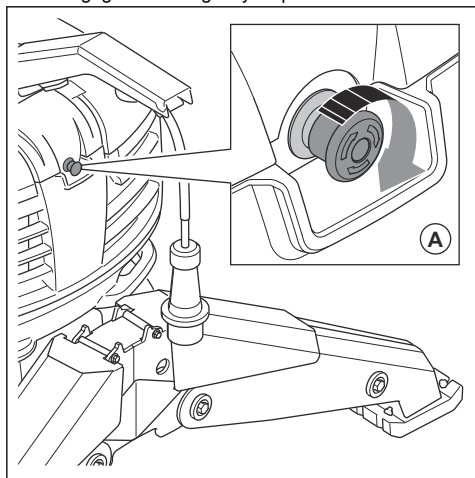
6. Turn the OFF/ON/START switch (C) to the START position.



7. Push the machine stop button (B).  
8. Turn the machine stop button (B) to disengage the machine stop.

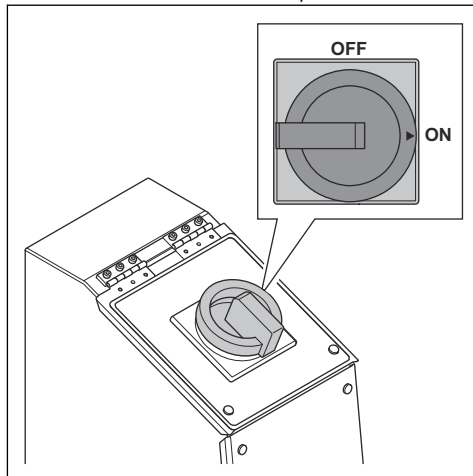
**To do a check of the machine stop button on the remote control (DXR 275, DXR 305, DXR 315)**

1. Turn the emergency stop button (A) clockwise to disengage the emergency stop.

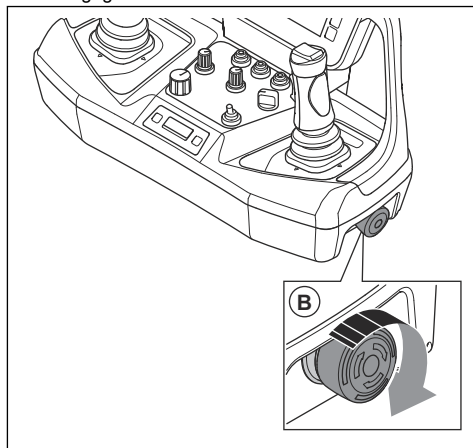


2. Open the right hatch on the product.

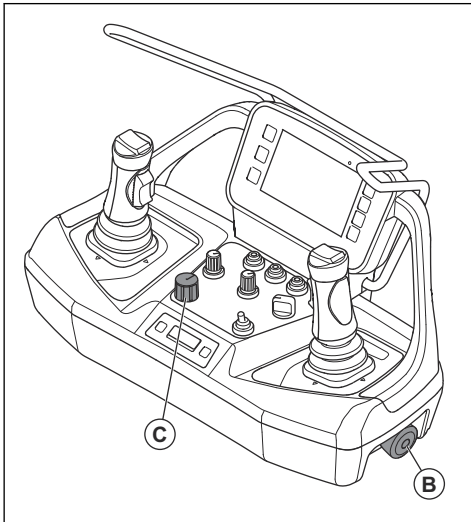
3. Turn the main switch to the ON position.



4. Step out of the work area with the remote control.  
5. Make sure that the machine stop button (B) is disengaged.



- Turn the OFF/ON/START switch (C) to the START position.



- Push the machine stop button (B).
- Turn the machine stop button (B) to disengage the machine stop.

## Emergency lowering device

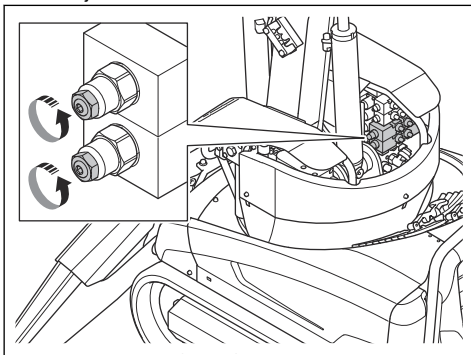
The emergency lowering device is used to manually lower the arm system to the ground if the product does not operate correctly or if there is motor failure.



**WARNING:** If the product does not operate correctly, the operator must stay at the product until the product is stable and in safe condition.

## To operate the emergency lowering device (DXR 145)

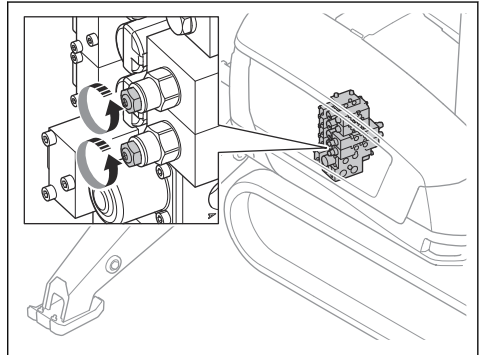
- Turn the locknut some turns on each valve to unlock the adjustment screw.



- Tighten the adjustment screw on each valve to release the hydraulic pressure. The arm system lowers to the ground.
- Stay by the product until the arm system is on the ground and the product is stable.

## To operate the emergency lowering device (DXR 275, DXR 305, DXR 315)

- Remove the right side cover on the product.
- Turn the locknut some turns on each valve to unlock the adjustment screw.



- Tighten the adjustment screw on each valve to release the hydraulic pressure. The arm system lowers to the ground.
- Stay by the product until the arm system is on the ground and the product is stable.

## Safety-critical components

Have your safety-critical components serviced by a Husqvarna service dealer using only identical replacement parts. Do not do modifications to the safety-critical components. Safety-critical components are the safety PLC, the emergency stop button, the AC contactor, the rotation valve, the circulation valve, the pressure sensor, the pump and the remote control.

## Safety instructions for maintenance



**WARNING:** Read the warning instructions that follow before you use the product.



**WARNING:** Electric shock can cause injury or death. Do all inspections and maintenance work with the motor stopped and the power plug disconnected.

- Keep all parts in good condition and make sure that all fixtures are correctly tightened.
- Replace worn components. There is an increased risk of mechanical failure if the product is used with damaged or worn components.

- Replace worn or missing signs and decals.
- Do not use a product that is defective. Do the safety checks, maintenance and the servicing as given in this manual. All other maintenance work must be done by an approved service agent.
- Make sure you have necessary training to do maintenance.
- Use lifting equipment to lift heavy product parts and to keep them in a stable position during maintenance. Lock product parts mechanically before maintenance to prevent injury from moving parts.
- If you go away from the product, do a lockout-tagout procedure.
- Only approved servicing personnel are permitted to do maintenance in the electrical system and the hydraulic system.
- Do the maintenance to make sure that the product operates correctly. Refer to *Maintenance schedule on page 64*.
- Do not do the troubleshooting of hydraulic leakage with your hands. Do the troubleshooting visually.

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## Operation

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### Introduction



**WARNING:** Before you operate the product, you must read and understand the safety chapter.

### To do before you operate the product

1. Read the operator's manual carefully and make sure that you understand the instructions.
2. Put on necessary personal protective equipment. Refer to *Personal protective equipment on page 21*.
3. Use a remote control harness to keep your body in correct position and prevent injury.
4. Make sure that no persons are in the work area.
5. Do daily maintenance. Refer to *Maintenance schedule on page 64*.
6. Make sure that the product is not damaged.
7. Install the tool on the product. Make sure that the tool is correctly and safely installed. Refer to *To install and remove the tools on the product on page 32*.
8. Make sure that the safety devices on the product are not defective.
9. Put the product in the work area. Make sure that the transportation of the product to and in the work area is done safely and correctly. Refer to *Transportation on page 104*.
10. Make sure that the power cord and extension cable are in good condition and not damaged.
11. Connect the product to a power source. Refer to *To connect the product to a power source on page 31*.
12. Make sure that tools, such as screwdrivers or other objects that are not used, are removed from the product.
13. Make sure that the temperature of the hydraulic oil is not less than 10°C/50°F. Refer to *To let the product become warm on page 31*.

### To connect the product to a power source



**WARNING:** Always connect the product through an RCD with personal protection. The RCD must trip at a ground fault of 30 mA.

1. Make sure that the voltage is compatible with the product and that the correct fuses are used. Refer to *Guide values for connection to a mains socket on page 114*.
2. Connect the power plug of the product to the extension cable.
3. Connect the extension cable to a mains outlet.

### To let the product become warm



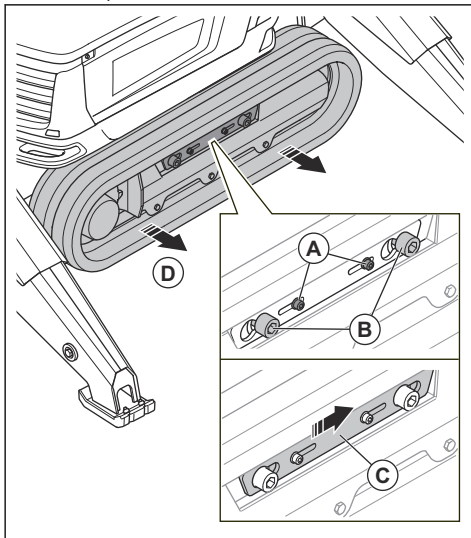
**CAUTION:** Do not use maximum pump pressure if the temperature of the hydraulic oil is less than 10°C/50°F. You get maximum pump pressure when you operate the outriggers or the arm system to maximum extension.

1. Start the product. Refer to *To start the product (DXR 145) on page 53* and *To start the product (DXR 275, DXR 305, DXR 315) on page 54*.
2. Extend the outriggers. Refer to *To operate the outriggers on page 62*.
3. First operate the caterpillar tracks slowly and then more quickly.
4. Move the arm system slowly in all directions. Make sure that there is no load on the arm system.
5. Do a check of the temperature of the hydraulic oil. The optimal work temperatures are between 40°C/104°F and 55°C/131°F.
6. If the temperature is not correct, do the procedure again.

## To install and remove the caterpillar track wideners (DXR 275, DXR 305, DXR 315)

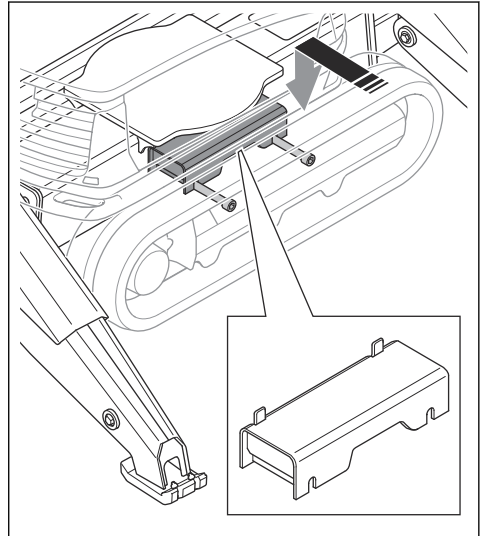
The caterpillar track wideners make the product more stable.

1. Start the product. Refer to *To start the product (DXR 275, DXR 305, DXR 315) on page 54.*
2. Put the product on a stable surface.
3. Extend the outriggers. Refer to *To operate the outriggers on page 62.*
4. Stop the product. Refer to *To stop the product (DXR 275, DXR 305, DXR 315) on page 63.*
5. Do the procedure that follows on each caterpillar track.
  - a) Loosen the 4 screws (A) and (B) for the caterpillar track widener.

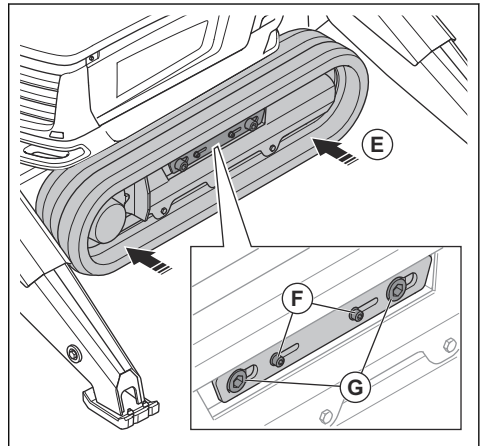


- b) Push the plate (C) to the side.
- c) Pull the caterpillar track (D) out until it stops.
- d) Make sure that the distance between the caterpillar track and product is sufficient for the caterpillar track widener. If it is necessary, loosen the 2 screws (B) some more. Pull the caterpillar track (D) out until it stops.

- e) Install the caterpillar track widener. The holes on the caterpillar track widener must point at the product.



- f) Push the caterpillar track (E) against the product.



- g) Tighten the 2 M10 screws (F) and the 2 M24 screws (G) for the caterpillar track widener. Torque the M10 screws to 47 Nm and the M24 screws to 500 Nm.

6. Remove the caterpillar track wideners in the opposite sequence.

## To install and remove the tools on the product

If a tool is not installed on the product, the hoses on the tool must always be connected together.

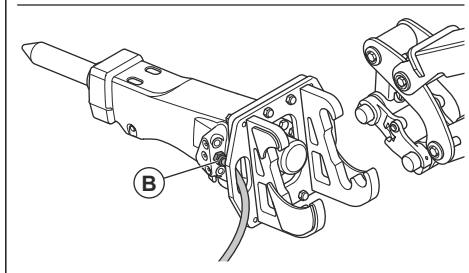
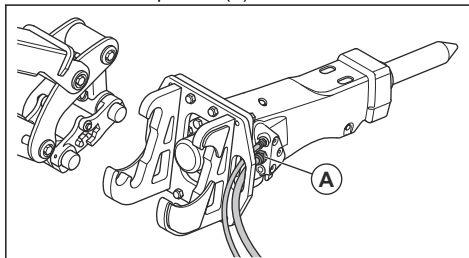


**WARNING:** Make sure that the tool is correctly and safely installed. The tool can cause serious injury if it falls off the product.



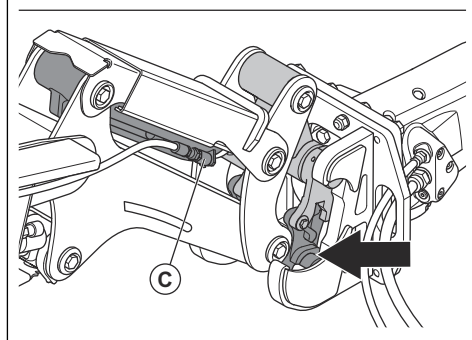
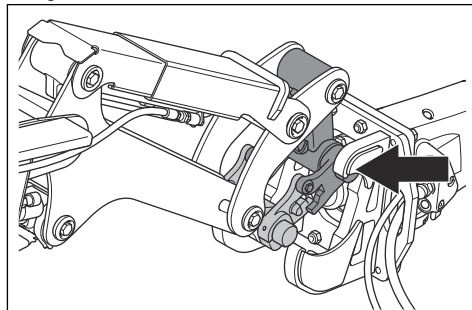
**WARNING:** It can be necessary to be in the work area when you change the tool. Prevent accidental start of the product while you change the tool and make sure that you can quickly stop the product. Keep hands and feet away from areas where there is a risk of crush injury.

1. Remove dirt from the hydraulic couplings on the product.
2. Start the product. Refer to *To start the product (DXR 145)* on page 53 and *To start the product (DXR 275, DXR 305, DXR 315)* on page 54.
3. Put the product on a stable surface.
4. Extend the outriggers. Refer to *To operate the outriggers* on page 62.
5. Put the tool in front of the product. The holder on the tool must point at the product.
6. Make sure that the tool is in correct position. Do the procedure that follows. The tool is seen from the rear side.
  - a) Make sure that the return hose is on the right side of the product (A).

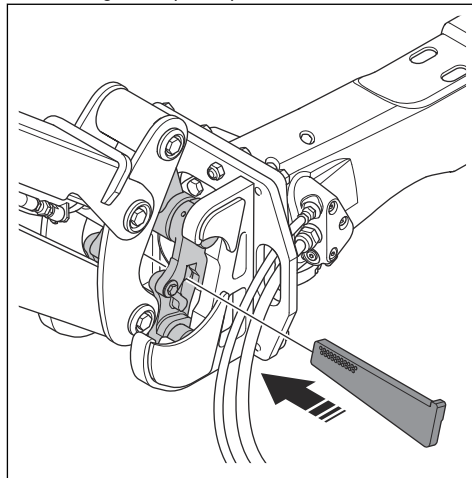


- b) Make sure that the pressure hose of the tool is on the left side of the product (B).
7. Move the arm system until the tool holder on the arm system holds the tool.

8. Lift the arm system and fully retract cylinder 4 (C) to tighten the tool on the tool holder.

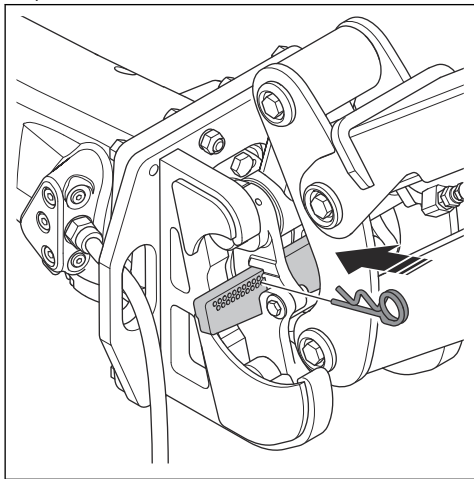


9. Turn the OFF/ON/START switch on the remote control to the OFF position.
10. Install the wedge from the right. The stop notch on the wedge must point up.



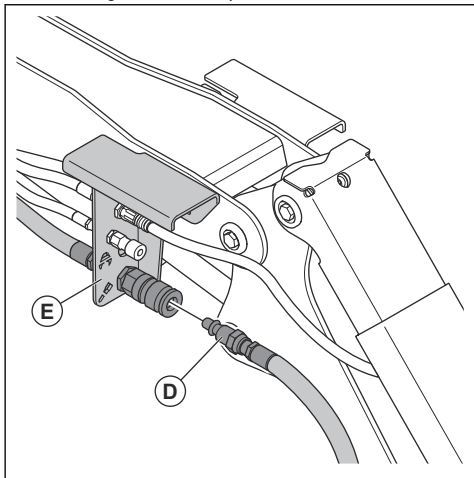
11. Use a hammer to fully lock the wedge.

12. Install the locking pin into the wedge. Put the locking pin in the hole that is nearest the tool.

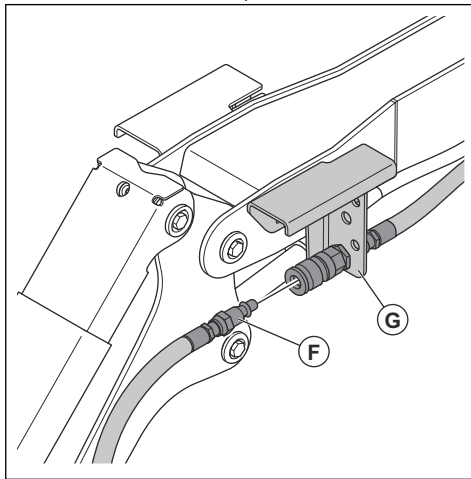


13. Connect the hoses from the tool to the product. Do the procedure that follows. The tool is seen from the rear side.

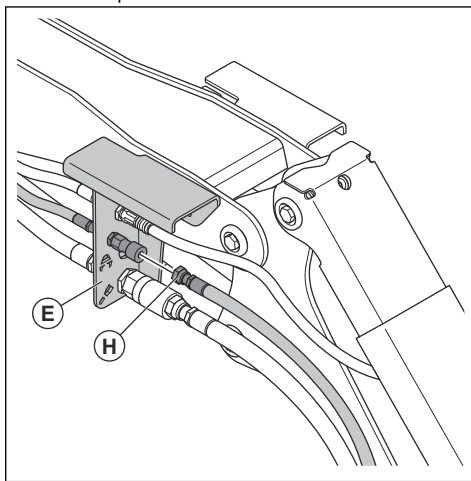
- a) Connect the return hose (D) to the A port (E) on the right side of the product.



- b) Connect the pressure hose (F) to the B port (G) on the left side of the product.



- c) For DXR 305 and the breaker: Connect the return hose (H) to the A port (E) on the right side of the product.



14. Remove the tool in the opposite sequence.

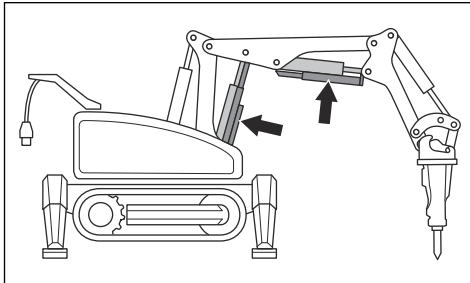
## Accessory packs

Different accessory packs are available to prevent damage to the product and to expand the work area of the product. Refer to the table below. The accessory packs can be installed from factory or can be installed on the product. If the accessory packs are not installed from factory, let an approved Husqvarna service agent install the accessory packs.

Accessory	Access- ory pack P1	Access- ory pack P2	Access- ory pack P3
Cylinder guards, refer to <i>Cylinder guards on page 35</i> .	X		
Extra hydraulic function, refer to <i>Extra hydraulic function (DXR 145) on page 35</i> and <i>Extra hydraulic function (DXR 275, DXR 305, DXR 315) on page 35</i> .	X		
Cooling kit, refer to <i>Cooling kit (DXR 275, DXR 305, DXR 315) on page 35</i> .		X	
Heat protection kit, refer to <i>Heat protection kit (DXR 275, DXR 305, DXR 315) on page 35</i> .			X

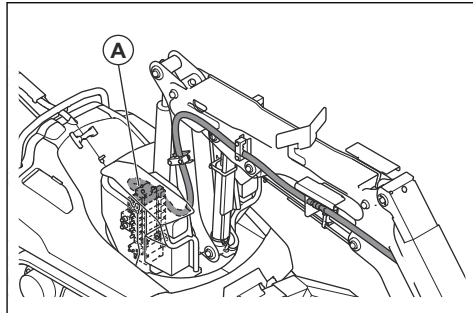
### Cylinder guards

The cylinder guards prevent damage to the piston and the cylinder in cylinder 2 and cylinder 3.



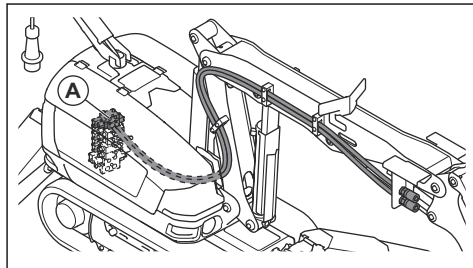
### Extra hydraulic function (DXR 145)

The extra hydraulic function (A) makes it possible to rotate the grapples and the steel shears.



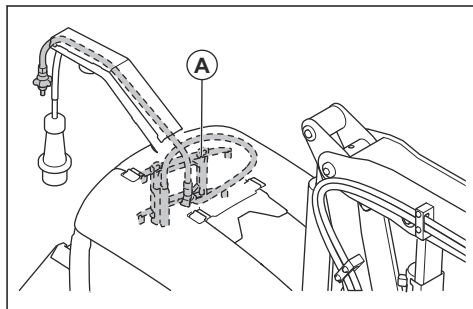
### Extra hydraulic function (DXR 275, DXR 305, DXR 315)

The extra hydraulic function (A) makes it possible to rotate the grapples and the steel shears.



### Cooling kit (DXR 275, DXR 305, DXR 315)

The cooling kit (A) is used in high ambient temperatures. The cooling kit prevents too high temperature in the product. Refer to *Operating temperatures for the cooling kit (DXR 275, DXR 305, DXR 315) on page 109*.



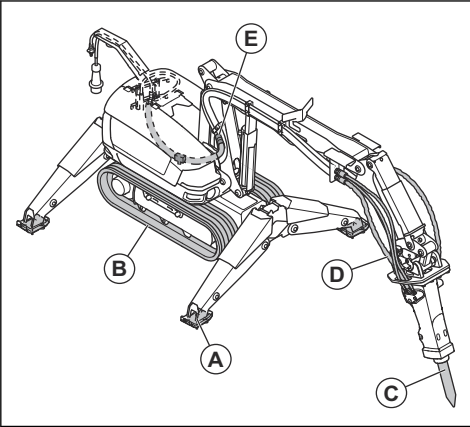
### Heat protection kit (DXR 275, DXR 305, DXR 315)

The heat protection kit is used in very high local temperatures. Refer to *Operating temperatures for the*



cooling kit (DXR 275, DXR 305, DXR 315) on page 109. The heat protection kit includes heat-resistant outrigger feet (A), caterpillar tracks (B) and breaker (C). The heat protection kit also includes heat-resistant hose (D).

The air flow to the installed tool on the product can be adjusted with an adjustable valve (E) on arm 1. If possible, keep the airflow high. If the airflow blows too much dust at the tool, lower the airflow.



Remote control

The product is operated with a remote control.

The remote control can operate by radio signal transmission. If there is an interference in the transmission, the frequency changes automatically. A pairing operation between the product and the remote control is done by the factory. A new pairing operation is necessary if the remote control is replaced or if you change remote controls between products. Refer to *To do a pairing operation between the remote control and the product (DXR 145) on page 57* and *To do a pairing operation between the remote control and the product (DXR 275, DXR 305, DXR 315) on page 58*.

The remote control can also operate with a CAN bus cable connected between the remote control and the product. The CAN bus cable can for example be used when the state of charge in the remote control batteries is low. For instructions on how to connect the remote control to the product with a cable, refer to *To connect the remote control to the product with a CAN bus cable (DXR 145) on page 60* and *To connect the remote control to the product with a CAN bus cable (DXR 275, DXR 305, DXR 315) on page 60*.

The remote control has all controls that are necessary to operate the product. The remote control has a digital display with a menu system. Refer to *Menu system on page 37*.

Home view

The display has 2 home views. There is 1 home view for when the motor is off. Refer to *To start the remote*

*control on page 55*. The other home view is for when the motor is on. Refer to *To start the product (DXR 145) on page 53* and *To start the product (DXR 275, DXR 305, DXR 315) on page 54*.

The symbols in the quick action bar changes if the motor is off or on.

Home view, motor off

A screenshot of the remote control's LCD screen. At the top, a status bar shows a battery level icon and a signal strength icon. Below this, a large central area displays a stylized excavator icon. To the left of the excavator are two small icons labeled 'E1' and 'E2'. To the right are two small icons labeled '12345 H' and 'XX BAR'. On the far left of the screen are three vertically stacked icons: a back arrow, a list icon, and a home icon. On the far right is a vertical 'quick action bar' with four icons: a four-way directional pad, a power icon, a water/grease level icon, and a fault/warning icon. A circled number '1' points to the top of the quick action bar.

Position	Description
1	Quick action to select the pattern test mode. Refer to "Pattern test mode" on page 50.

Home view, motor on

A screenshot of the remote control's LCD screen, similar to the previous one but with different icons in the quick action bar. The central area now shows a different excavator icon. The quick action bar on the right has four icons: a tool icon (labeled 1), a status icon (labeled 2), a water/grease level icon (labeled 3), and a fault/warning icon (labeled 4). A circled number '1' points to the top of the quick action bar.

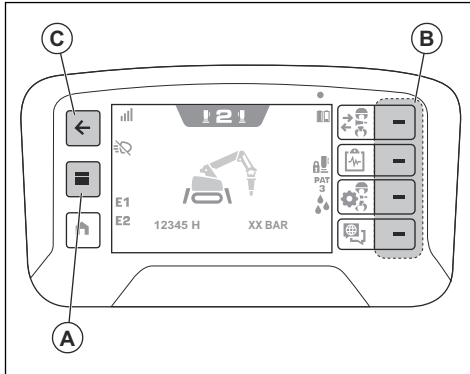
Position	Description
1	Quick action to select the tool in operation.
2	Quick action to see the product status.
3	Quick action to set the water and the grease level.
4	Quick action to change language or to see the faults. The symbol will change if the product finds a warning or an error.



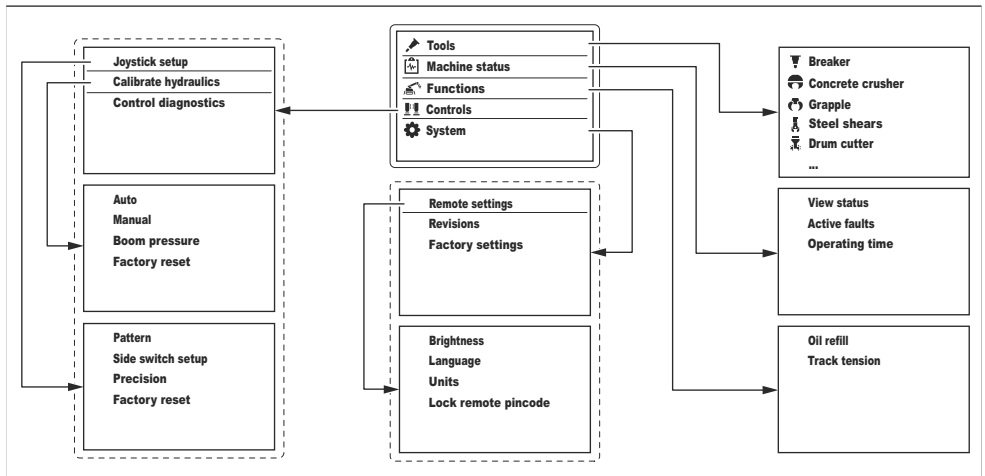
## Menu system

Select the menu button (A) on the remote control to open the menu system.

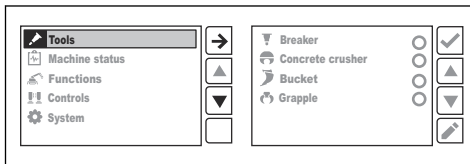
The symbols in the quick action bar changes if a new selection is done on the display. The buttons (B) adjacent to the quick action bar makes the selection. The button (C) lets you go back in the menu structure.



## Menu overview



### "Tools" menu



- Select the tool that is installed on the product with the button (A) in the quick action bar.

- Edit the selected tool with the button (B) in the quick action bar.

### "Breaker"

- "Grease": Adjust the quantity of grease that the hydraulic pump supplies to the product.
- "Water": Disengage or engage the water function. Refer to *"Water"* on page 38.

### "Concrete crusher"

- "Water": Disengage or engage the water function. Refer to *"Water" on page 38*.

### "Grapple"

- "Water": Disengage or engage the water function. Refer to *"Water" on page 38*.

### "Steel shears"

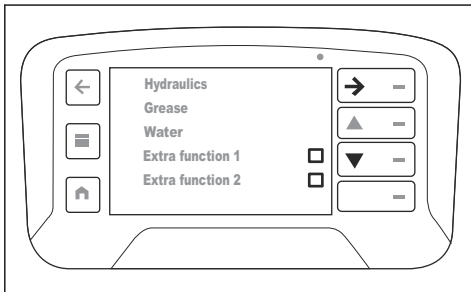
- "Water": Disengage or engage the water function. Refer to *"Water" on page 38*.

### "Drum cutter"

- "Water": Disengage or engage the water function. Refer to *"Water" on page 38*.

### "Custom tool 1–3"

- "Hydraulics": The value for the hydraulic oil pressure and the flow can be adjusted from port A to port B. Select the direction of the hydraulic oil.
- "Grease": Adjust the quantity of grease that the hydraulic pump supplies to the product.
- "Water": Disengage/engage the function.
- "Extra function 1": Custom tool is controlled with right side switch on the right joystick. The value for the hydraulic oil pressure and the flow can be adjusted from port A to port B. Select the direction of the hydraulic oil. "E1" is shown in the display.
- "Extra function 2": Custom tool is controlled with left side switch on the left joystick. The value for the hydraulic oil pressure and the flow can be adjusted from port A to port B. Select the direction of the hydraulic oil. "E2" is shown in the display.



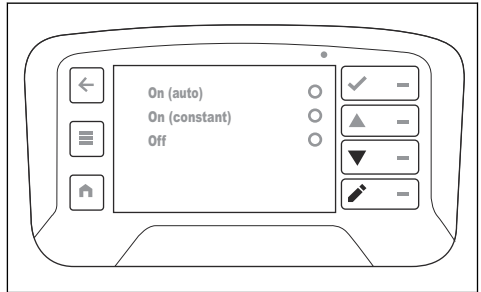
### "Water"

To use the water function it is necessary to install the optional dust reduction kit. The water function is applicable for many tools.

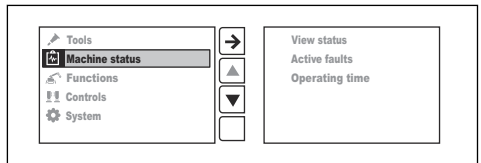
The water function is in operation when a drop symbol is shown on the display with the selected tool.

- "Extended time": extended water supply after the tool goes into standby mode.

- "On (auto)": the water supply is applied automatically when you use the tool.
- "On (auto close)": the water supply is applied automatically when concrete crusher closes.
- "On (auto open/close)": the water supply is applied automatically when you use the concrete crusher.
- "On (constant)": the water supply is constant until you stop the product or use a different tool.
- "Off": the water supply is closed.

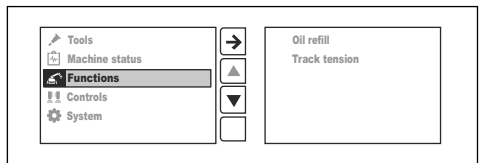


### "Machine status" menu



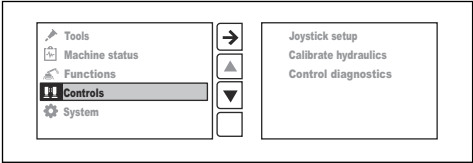
- "View status" shows the temperature, the voltage and the current.
- "Active faults" is a list of faults that the product finds. The list shows all active messages. The newest message is at the top of the list. Refer to *Messages on the display on page 95*.
- "Operating time" shows the total operation time of the product.

### "Functions" menu



- The "Oil refill" fills the hydraulic oil. Refer to *To do a check of the hydraulic oil level (DXR 145) on page 69* and *To do a check of the hydraulic oil level (DXR 275, DXR 305, DXR 315) on page 69*.
- The "Track tension" engages the automatic track tension. Refer to *To do automatic caterpillar track tension on page 88*.

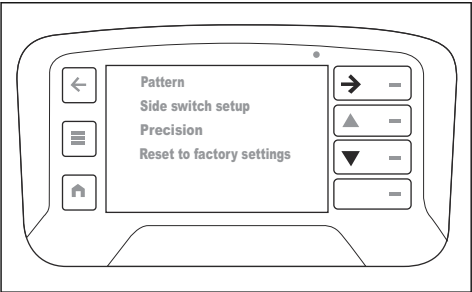
**"Controls" menu**



**"Joystick setup"**

- In "Pattern" you can start a pattern test. Refer to *"Pattern test mode" on page 50*. You can also change joystick pattern for the operation of the remote control. Refer to *"Pattern 1" on page 39*, *"Pattern 2" on page 43*, *"Pattern 3" on page 45* and *"Pattern 4" on page 47*.
- "Side switch setup" sets the function for the 2 side switches on the joysticks.
  - "Auto": if "Extra function 1" is in operation, the right side switch controls the function. If "Extra function 1" is not in operation, the right side switch has the same function as the top buttons on the right joystick. If "Extra function 2" is in operation, the left side switch controls the function. If "Extra function 2" is not in operation, the left side switch has the same function as the top buttons on the left joystick. Refer to *"Custom tool 1–3" on page 38*.

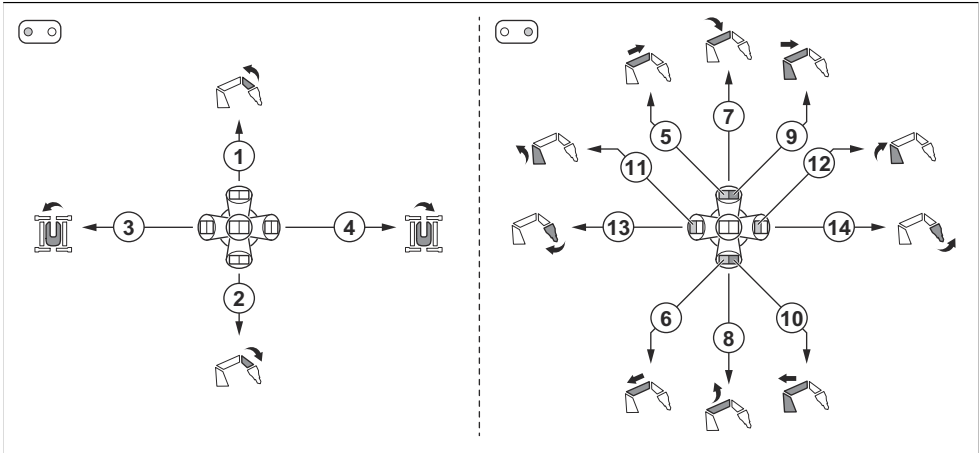
- "Extra 1/Extra 2": the side switch controls "Extra function 1" and "Extra function 2". If the extra function is not in operation, the side switch is off.
- "Tool": the side switch on the left joystick controls the tool function.
- "Off": the side switch is off.
- "Precision" sets the precision of the joysticks.
- "Reset to factory settings" resets the joysticks.



**"Pattern 1"**

"Pattern 1" is used as standard. The operation mode switch on the remote control is used to select between work mode and transport mode. Refer to *Operation modes on page 61*.

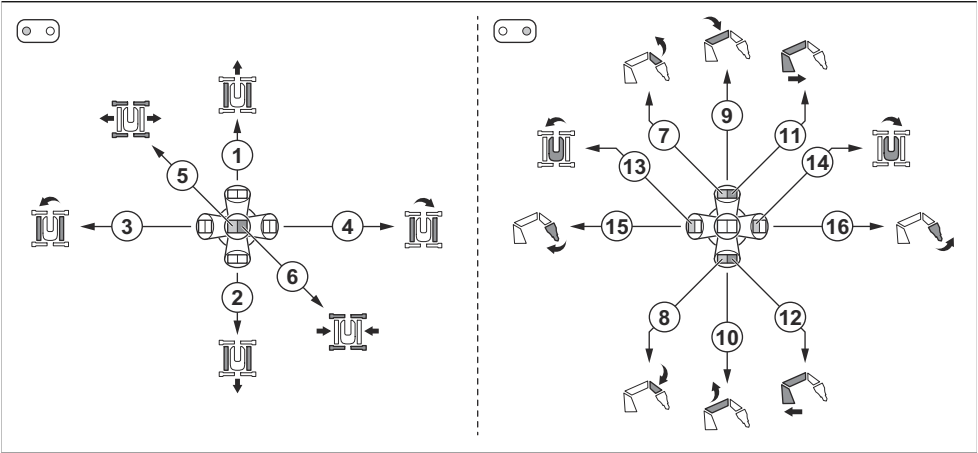
Work mode selected:



Position	Movement
1	Arm 3 up.
2	Arm 3 down.
3	Rotate the tower counterclockwise.
4	Rotate the tower clockwise.

Position	Movement
5	DXR 315: Telescopic arm out.
6	DXR 315: Telescopic arm in.
7	Arm 2 down.
8	Arm 2 up.
9	Arm 1 and 2 out.
10	Arm 1 and 2 in.
11	Arm 1 in.
12	Arm 2 out.
13	Tool in. The function also operates when the right top button is pushed down. Arm 1 and 2 can be operated in parallel and when you move the tool when the right top button is pushed down.
14	Tool out. The function also operates when the right top button is pushed down. Arm 1 and 2 can be operated in parallel and when you move the tool when the right top button is pushed down.

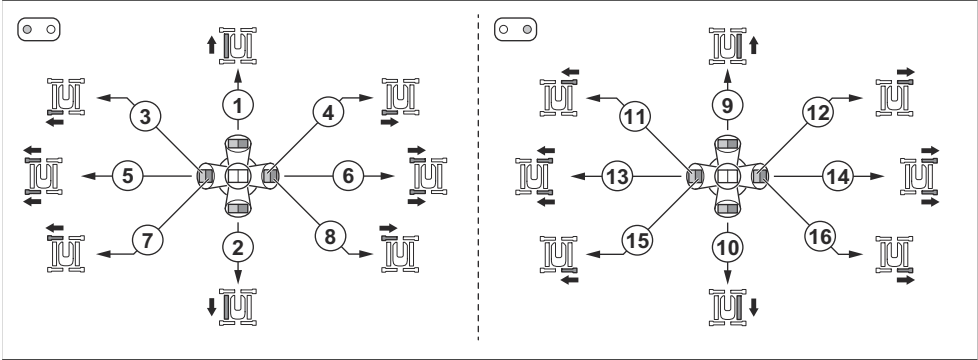
Transport mode and one lever control selected:



Position	Movement
1	Caterpillar tracks forward.
2	Caterpillar tracks rearward.
3	Right caterpillar track forward and the left caterpillar track rearward.
4	Right caterpillar track rearward and the left caterpillar track forward.
5	All outriggers down.
6	All outriggers up.
7	Arm 3 up.
8	Arm 3 down.

Position	Movement
9	Arm 2 down.
10	Arm 2 up.
11	Arm 1 and 2 out.
12	Arm 1 and 2 in.
13	Rotate the tower counterclockwise.
14	Rotate the tower clockwise.
15	Tool in. The function also operates when the right top button is pushed down. Arm 1 and 2 can be operated in parallel and when you move the tool when the right top button is pushed down.
16	Tool out. The function also operates when the right top button is pushed down. Arm 1 and 2 can be operated in parallel and when you move the tool when the right top button is pushed down.

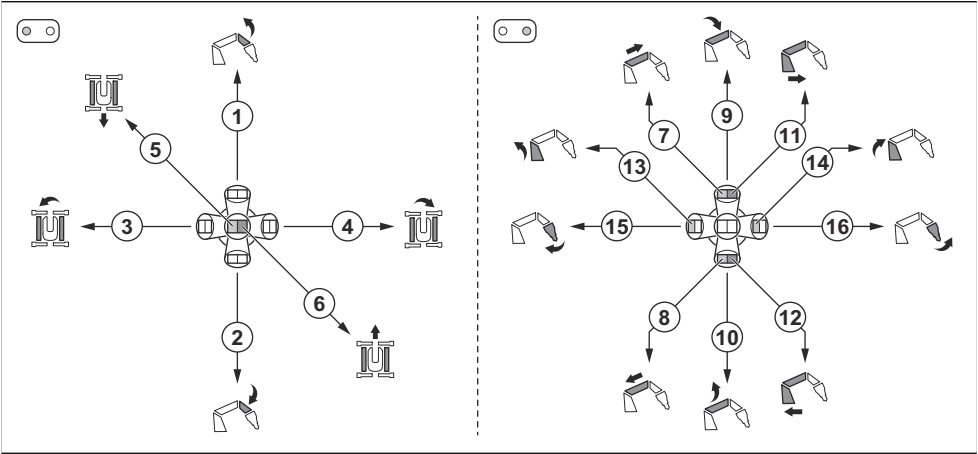
Transport mode and two lever control selected:



Position	Movement
1	Left caterpillar track forward.
2	Left caterpillar track rearward.
3	Left rear outrigger down.
4	Left rear outrigger up.
5	Left outriggers down.
6	Left outriggers up.
7	Front left outrigger down.
8	Front left outrigger up.
9	Right caterpillar track forward.
10	Right caterpillar track rearward.
11	Front right outrigger up.
12	Front right outrigger down.

Position	Movement
13	Right outriggers up.
14	Right outriggers down.
15	Rear right outrigger up.
16	Rear right outrigger down.

Transport mode and crawl selected:



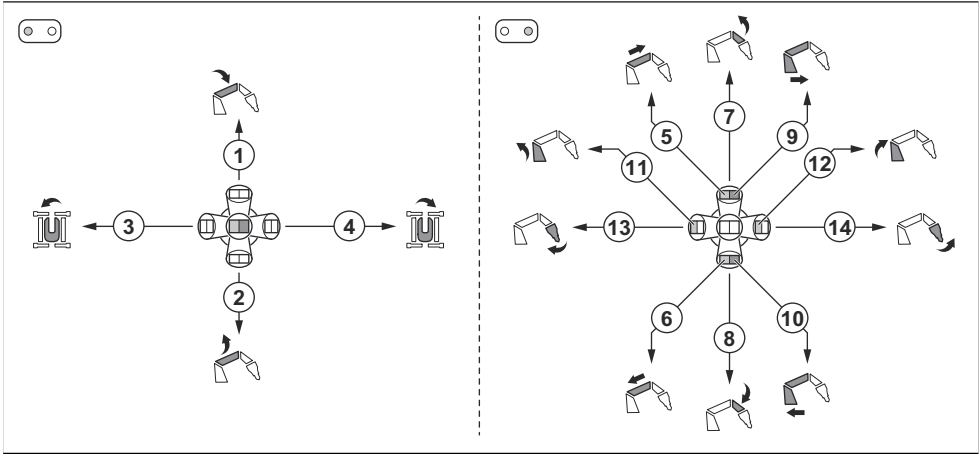
Position	Movement
1	Arm 3 up
2	Arm 3 down.
3	Rotate the tower counterclockwise.
4	Rotate the tower clockwise.
5	Caterpillar tracks forward. The speed of the caterpillar tracks can be adjusted with the knob for adjustment of product speed.
6	Caterpillar tracks rearward. The speed of the caterpillar tracks can be adjusted with the knob for adjustment of product speed.
7	DXR 315: Telescopic arm out.
8	DXR 315: Telescopic arm in.
9	Arm 2 down.
10	Arm 2 up.
11	Arm 1 and arm 2 out.
12	Arm 1 and arm 2 in.
13	Arm 1 in.
14	Arm 1 out.

Position	Movement
15	Tool in. The function also operates when the right top button is pushed down. Arm 1 and 2 can be operated in parallel and when you move the tool when the right top button is pushed down.
16	Tool out. The function also operates when the right top button is pushed down. Arm 1 and 2 can be operated in parallel and when you move the tool when the right top button is pushed down.

**"Pattern 2"**

The operation mode switch on the remote control is used to select between work mode and transport mode. Refer to *Operation modes on page 61*.

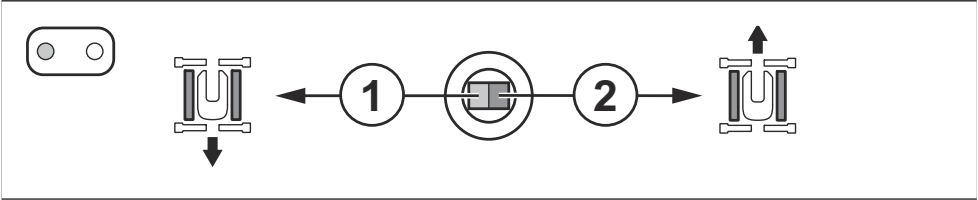
Work mode or transport mode and crawl selected:



Position	Movement
1	Arm 2 down.
2	Arm 2 up.
3	Rotate the tower counterclockwise.
4	Rotate the tower clockwise.
5	DXR 315: Telescopic arm out.
6	DXR 315: Telescopic arm in.
7	Arm 3 up.
8	Arm 3 down.
9	Arm 1 and 2 out.
10	Arm 1 and 2 in.
11	Arm 1 in.
12	Arm 2 out.

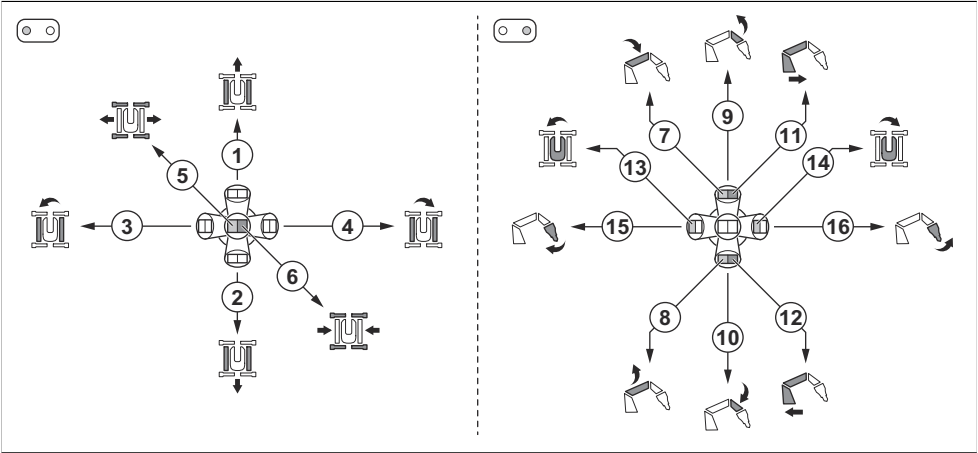
Position	Movement
13	Tool in. The function also operates when the right top button is pushed down. Arm 1 and 2 can be operated in parallel and when you move the tool when the right top button is pushed down.
14	Tool out. The function also operates when the right top button is pushed down. Arm 1 and 2 can be operated in parallel and when you move the tool when the right top button is pushed down.

Left joystick with transport mode and crawl selected:



Position	Movement
1	Caterpillar tracks rearward. The speed of the caterpillar tracks can be adjusted with the knob for adjustment of product speed.
2	Caterpillar tracks forward. The speed of the caterpillar tracks can be adjusted with the knob for adjustment of product speed.

Transport mode and one lever control selected:



Position	Movement
1	Caterpillar tracks forward.
2	Caterpillar tracks rearward.
3	Right caterpillar track forward and left caterpillar track rearward.

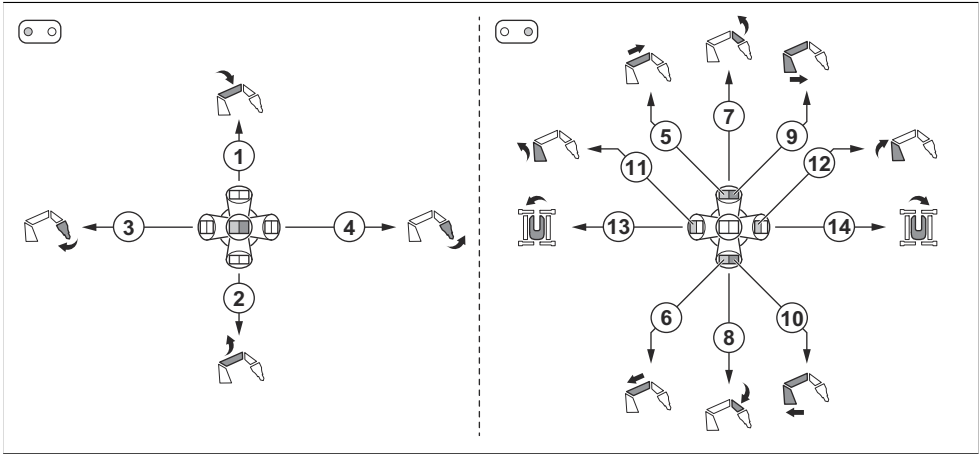


Position	Movement
4	Right caterpillar track rearward and left caterpillar track forward.
5	All outriggers down.
6	All outriggers up.
7	Arm 2 down.
8	Arm 2 up.
9	Arm 3 up.
10	Arm 3 down.
11	Arm 1 and 2 out.
12	Arm 1 and 2 in.
13	Rotate the tower counterclockwise.
14	Rotate the tower clockwise.
15	Tool in. The function also operates when the right top button is pushed down. Arm 1 and 2 can be operated in parallel and when you move the tool when the right top button is pushed down.
16	Tool out. The function also operates when the right top button is pushed down. Arm 1 and 2 can be operated in parallel and when you move the tool when the right top button is pushed down.

**"Pattern 3"**

The operation mode switch on the remote control is used to select between work mode and transport mode. Refer to *Operation modes on page 61*.

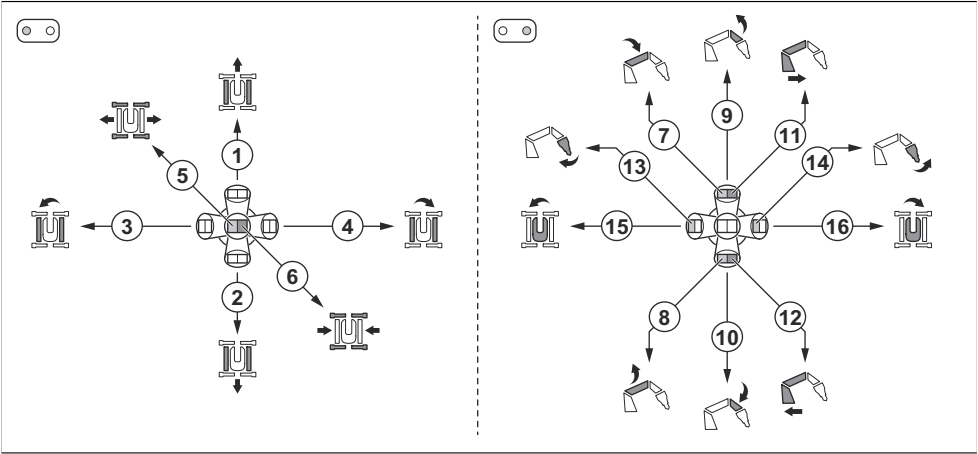
Work mode or transport mode and crawl selected:



Position	Movement
1	Arm 2 down.
2	Arm 2 up.

Position	Movement
3	Tool in. The function also operates when the right top button is pushed down. Arm 1 and 2 can be operated in parallel and when you move the tool when the right top button is pushed down.
4	Tool out. The function also operates when the right top button is pushed down. Arm 1 and 2 can be operated in parallel and when you move the tool when the right top button is pushed down.
5	DXR 315: Telescopic arm out.
6	DXR 315: Telescopic arm in.
7	Arm 3 up.
8	Arm 3 down.
9	Arm 1 and 2 out.
10	Arm 1 and 2 in.
11	Arm 1 in.
12	Arm 2 out.
13	Rotate the tower counterclockwise.
14	Rotate the tower clockwise.

Transport mode and one lever control selected:



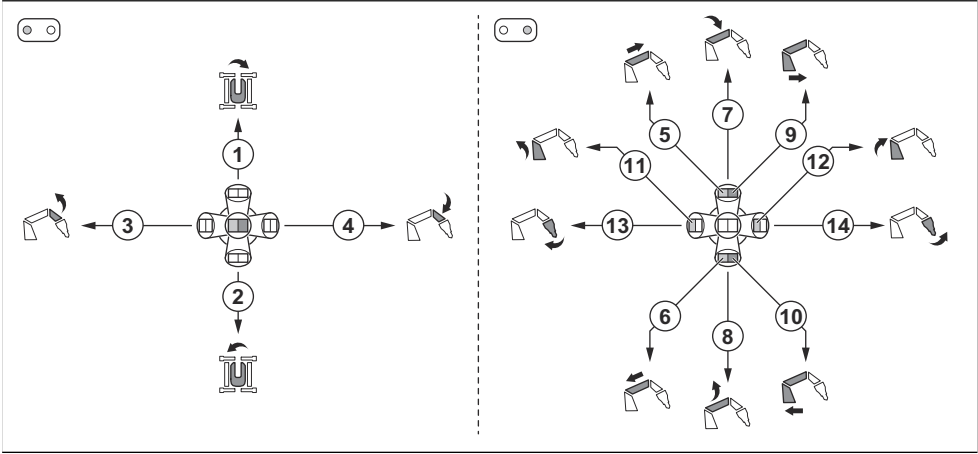
Position	Movement
1	Caterpillar track forward.
2	Caterpillar track forward.
3	Right caterpillar track forward, left caterpillar track rearward.
4	Right caterpillar track rearward, left caterpillar track forward.
5	All outriggers down.
6	All outriggers up.

Position	Movement
7	Arm 2 down.
8	Arm 2 up.
9	Arm 3 up.
10	Arm 3 down.
11	Arm 1 and 2 out.
12	Arm 1 and 2 in.
13	Tool in. The function also operates when the right top button is pushed down. Arm 1 and 2 can be operated in parallel and when you move the tool when the right top button is pushed down.
14	Tool out. The function also operates when the right top button is pushed down. Arm 1 and 2 can be operated in parallel and when you move the tool when the right top button is pushed down.
15	Rotate the tower counterclockwise.
16	Rotate the tower clockwise.

**"Pattern 4"**

The operation mode switch on the remote control is used to select between work mode and transport mode. Refer to *Operation modes* on page 61.

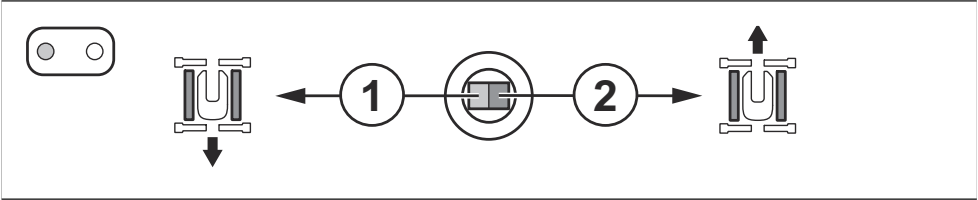
Work mode or transport mode and crawl selected:



Position	Movement
1	Rotate the tower counterclockwise.
2	Rotate the tower clockwise.
3	Arm 3 up.
4	Arm 3 down.
5	DXR 315: Telescopic arm out.

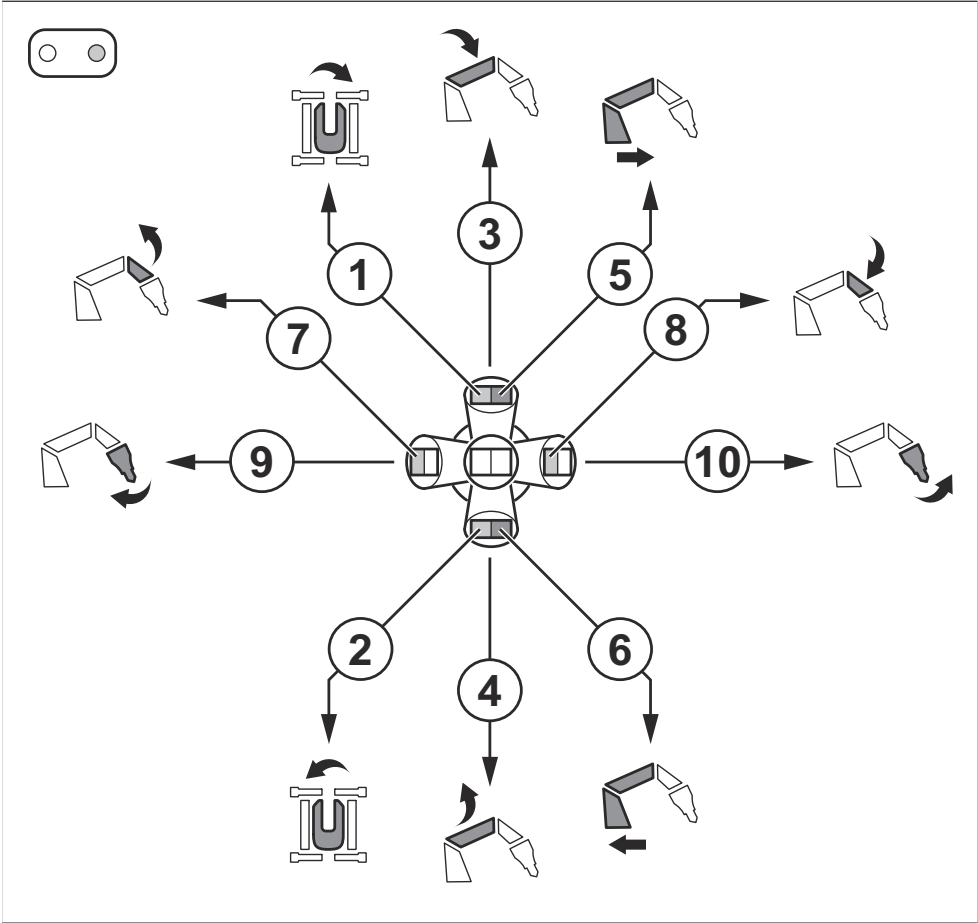
Position	Movement
6	DXR 315: Telescopic arm in.
7	Arm 2 down.
8	Arm 2 up.
9	Arm 1 and 2 out.
10	Arm 1 and 2 in.
11	Arm 1 in.
12	Arm 2 out.
13	Tool in. The function also operates when the right top button is pushed down. Arm 1 and 2 can be operated in parallel and when you move the tool when the right top button is pushed down.
14	Tool out. The function also operates when the right top button is pushed down. Arm 1 and 2 can be operated in parallel and when you move the tool when the right top button is pushed down.

Left joystick with transport mode and crawl selected:



Position	Movement
1	Caterpillar tracks rearward. The speed of the caterpillar tracks can be adjusted with the knob for adjustment of product speed.
2	Caterpillar tracks forward. The speed of the caterpillar tracks can be adjusted with the knob for adjustment of product speed.

Right joystick with transport mode and one lever control selected:

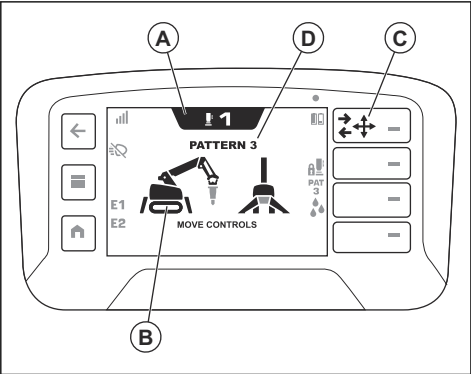


Position	Movement
1	Rotate the tower clockwise.
2	Rotate the tower counterclockwise.
3	Arm 2 down.
4	Arm 2 up.
5	Arm 1 and 2 out.
6	Arm 1 and 2 in.
7	Arm 3 up.
8	Arm 3 down.

Position	Movement
9	Tool in. The function also operates when the right top button is pushed down. Arm 1 and 2 can be operated in parallel and when you move the tool when the right top button is pushed down.
10	Tool out. The function also operates when the right top button is pushed down. Arm 1 and 2 can be operated in parallel and when you move the tool when the right top button is pushed down.

### "Pattern test mode"

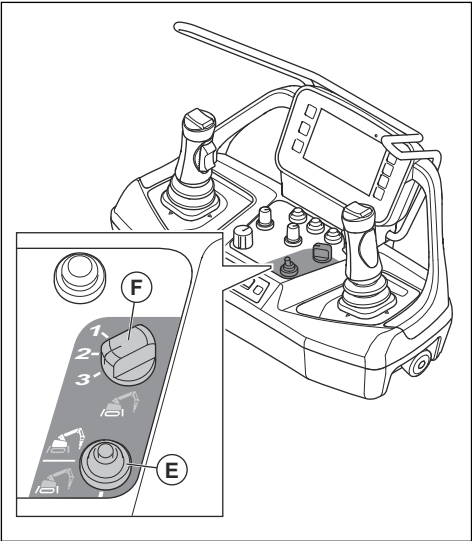
The "Pattern test mode" shows how the product will operate when you use the joysticks on the remote control. Different operation modes and patterns will give different operation movements. To enter the pattern test mode, turn the ON/OFF/START switch to the ON position and select "Pattern test mode" in the quick action bar. The display color (A) changes from orange to blue. The product symbol (B) in the display has different colors and shows the movement of the product parts.



- **Light blue:** Product parts that are movable in the current operation mode.
- **Orange:** Product parts that move in the current operation mode. A white arrow will also show the direction of movement on the display.
- **Dark blue:** Product parts that cannot move in the current operation mode.

In the quick action bar, you can change the pattern (C). When a pattern is selected, it is shown in the display (D). Change the operation mode with the operation

mode switch (E) and the transport mode switch (F) on the remote control.



### "Calibrate hydraulics"

- The function "Auto (calibrate)" calibrates the hydraulic pressure and the valves on the product. Select between "Pressure and valves" and "Pressure".
- The valve calibration makes the control of the product movements better. The hydraulic pressure calibration makes the precision of the hydraulic pressure levels better.
- "Pressure" will only calibrate the hydraulic pressure control function and does not adjust customer specified valve adjustment. Refer to *To calibrate the hydraulics with "Auto (calibrate)" on page 51.*
- With the function "Manual (calibrate)" you can calibrate components on the product one by one.
  - With the function "Boom pressure" you can adjust the maximum hydraulic pressure for the arm system. The hydraulic pressure changes with 5 bar/72.5 psi intervals. Adjust the hydraulic pressure between 200 bar/2901 psi to 150 bar/2175.6 psi.
  - "Reset to factory settings" resets the hydraulic system.

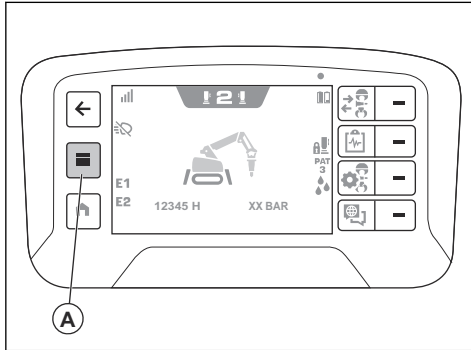
## To calibrate the hydraulics with "Auto (calibrate)"

During calibration of the valves, the product can make small movements.

1. Disconnect the hydraulic hoses from the installed tool.

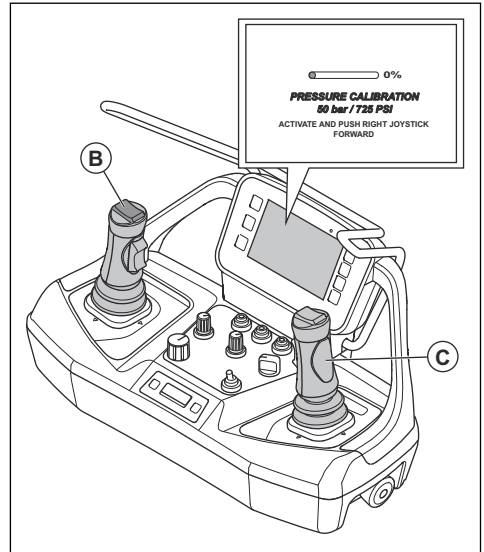
**Note:** It is not necessary to remove the tool from the product.

2. Start the product. Refer to *To start the product (DXR 145)* on page 53 and *To start the product (DXR 275, DXR 305, DXR 315)* on page 54.
3. Extend the outriggers. Refer to *To operate the outriggers* on page 62.
4. Press the menu button (A) on the remote control.



5. Select "Calibrate hydraulics" in the "Controls" menu on the display.
6. Select "Auto (calibrate)".
7. Select "Pressure and valves" or "Pressure".

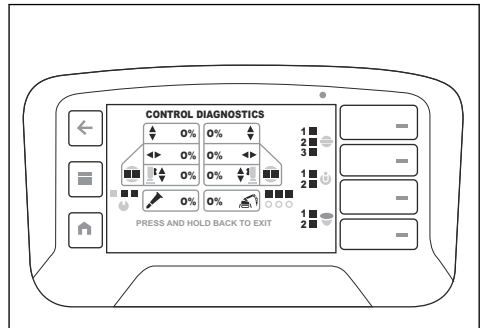
8. Push the left top button (B) on the left joystick.



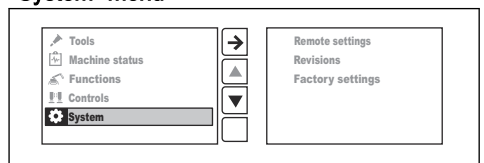
9. Push the right joystick forward (C) until the calibration is completed.

## "Control diagnostics"

In "Control diagnostics" you can do function tests of the controls on the remote control. Each control is shown in the display. The control indicators in the display changes from white to orange when you do the function tests. Operate a control on the remote control to its maximum. The control operates correctly when the control indicator shows 100% in the display.



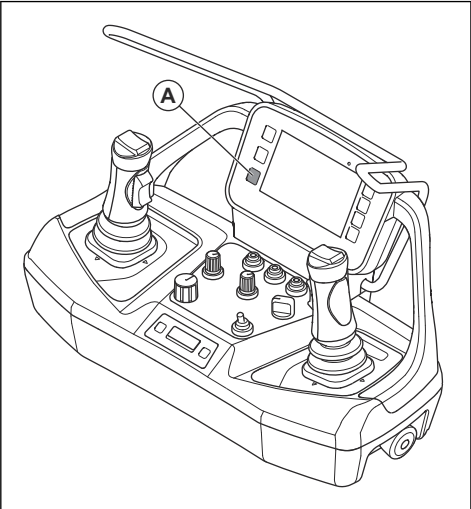
## "System" menu



Remote settings"

- "Brightness" sets the brightness of the display.
- "Language" sets the text language on the display. The factory setting for language is English.

**Note:** To go back to factory setting for language and brightness, push and hold the home button (A) for 10 seconds.



- "Units" sets the units for pressure and temperature in the display.
- "Lock remote pincode" sets the PIN code for the remote control.

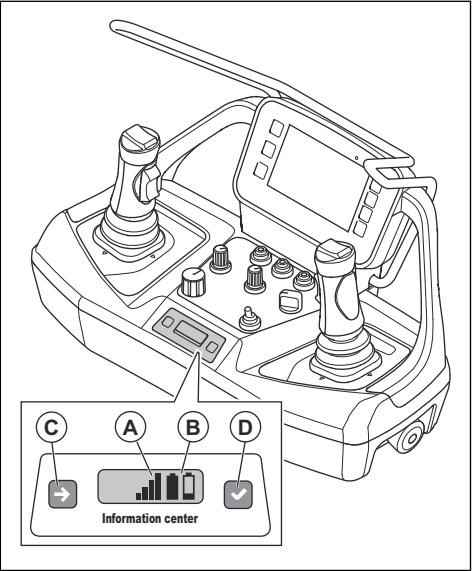
Revisions"

"Revisions" shows the version of the hardware and software in the remote control, control modules and the radio communication module.

Factory settings"

"Factory settings" must only be used by an approved service agent.

Information center display



The information center display on the remote control shows the information that follows about the remote control:

- If the remote control is on or off.
- If the remote control locked or unlocked.
- Fault codes. Refer to *Fault codes and descriptions on page 96*.
- Pairing operation between the remote control and the product. Refer to *To do a pairing operation between the remote control and the product (DXR 145) on page 57* and *To do a pairing operation between the remote control and the product (DXR 275, DXR 305, DXR 315) on page 58*.
- The radio signal strength (A) between the remote control and the product. The same symbols are also shown in the top bar on the display. Refer to *Symbols in the top bar on the display on page 14*

Radio signal	Symbol
There are 4 levels of radio signal strength.	
Radio signal is in standby mode. The remote control does not operate correctly. Make sure that all controls on the remote control are in the neutral positions when you start the remote control.	
No radio signal.	



- Battery status (B). The same symbols are also shown in the top bar on the display. Refer to *Symbols in the top bar on the display on page 14*.

State of charge	Symbol
There are 5 levels of charge for the battery.	
Battery fault.	
Cable connection between the remote control and the product.	

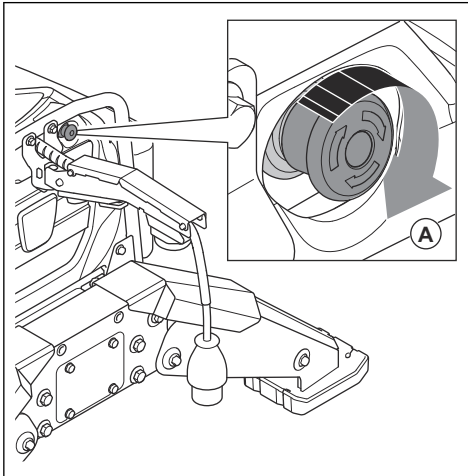
There are 2 buttons for the information center display. The left side button (C) moves to the next symbol in the display. The right button (D) makes the selection.

## To start the product (DXR 145)



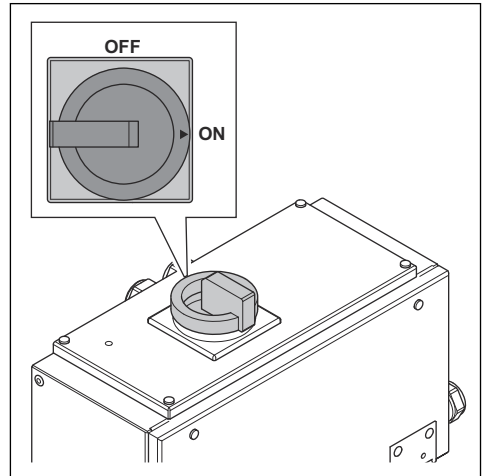
**WARNING:** Restart the product each 24 hours to make sure that the product operates correctly.

1. Turn the emergency stop button (A) clockwise to disengage the emergency stop.

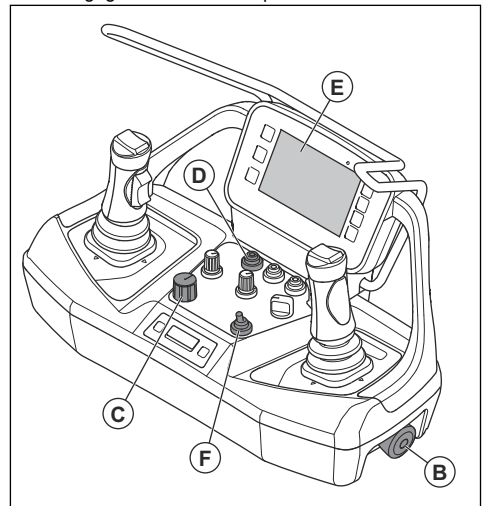


2. Open the right hatch on the product.

3. Turn the main switch to the ON position. The headlight comes on.



4. Close the right hatch on the product.
5. Step out of the work area with the remote control.
6. Turn the machine stop button (B) clockwise to disengage the machine stop.



7. If more than one product with remote control is used in the same workplace, do this procedure to make sure that you have the correct remote control:
  - a) Turn the OFF/ON/START switch to the ON position (C) to start the remote control.
  - b) Push and hold the headlights button (D) until the connected product flashes.



**WARNING:** Do not start the motor before you know which product that is connected.

8. Turn the OFF/ON/START switch to the START position to start the motor. You will hear that the product is on.
9. In the display (E), make sure that the radio signal or cable connection symbol is shown. The symbols show that the connection between the remote control and the product is in operation.

**Note:** An error message shows in the display if there is a fault. Refer to *Messages on the display on page 95*.

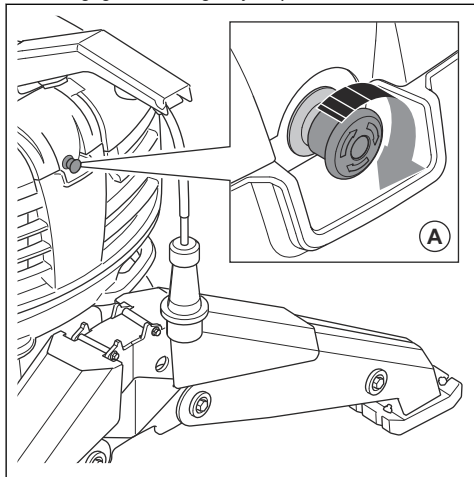
10. Push the operation mode switch (F) up to select work mode. Push the operation mode switch down to select transport mode. Refer to *Operation modes on page 61*.

## To start the product (DXR 275, DXR 305, DXR 315)



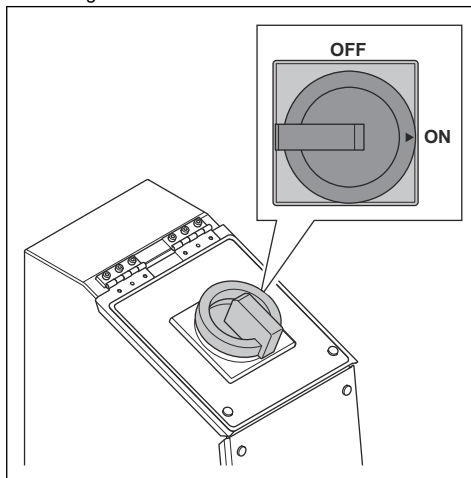
**WARNING:** Restart the product each 24 hours to make sure that the product operates correctly.

1. Turn the emergency stop button (A) clockwise to disengage the emergency stop.

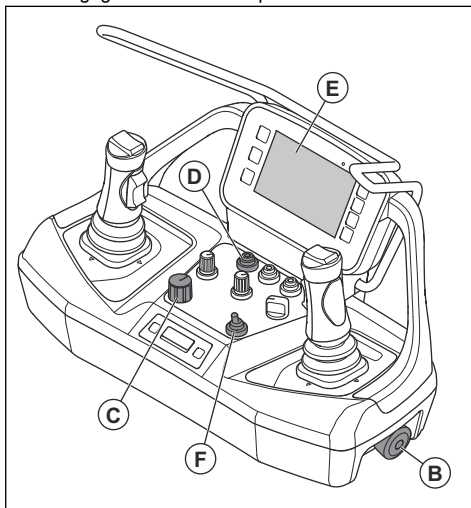


2. Open the right hatch on the product.

3. Turn the main switch to the ON position. The headlight comes on.



4. Close the right hatch on the product.
5. Step out of the work area with the remote control.
6. Turn the machine stop button (B) clockwise to disengage the machine stop.



7. If more than one product with remote control is used in the same workplace, do this procedure to make sure that you have the correct remote control:
  - a) Turn the OFF/ON/START switch to the ON position (C) to start the remote control.
  - b) Push and hold the headlights button (D) until the connected product flashes.



**WARNING:** Do not start the motor before you know which product that is connected.

- Turn the OFF/ON/START switch to the START position to start the motor. You will hear that the product is on.
- In the display (E), make sure that the radio signal or cable connection symbol is shown. The symbols show that the connection between the remote control and the product is in operation.

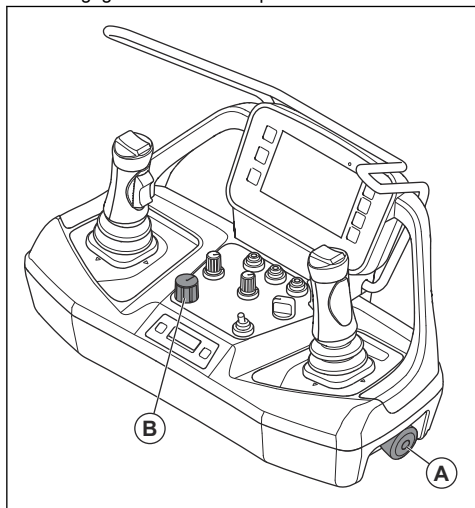
**Note:** An error message shows in the display if there is a fault. Refer to *Messages on the display on page 95*.

- Push the operation mode switch (F) up to select work mode. Push the operation mode switch down to select transport mode. Refer to *Operation modes on page 61*.

## To start the remote control

The remote control can be on with the motor off. The display shows how the product can operate when you use the joysticks as if the motor was on. The test operation is done in the pattern test mode. Refer to "Pattern test mode" on page 50.

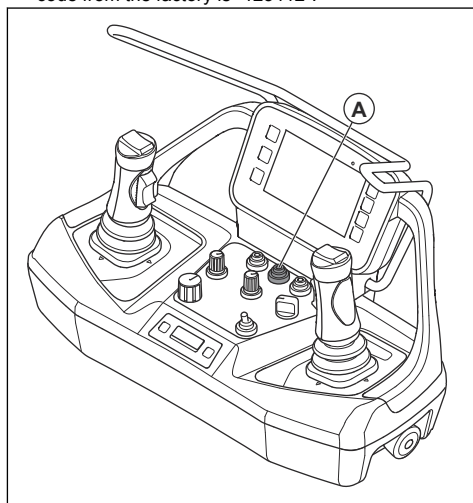
- Turn the machine stop button (A) clockwise to disengage the machine stop.



- Turn the OFF/ON/START switch to the ON position (B) to start the remote control. The display shows the home view for when the motor is off. Refer to *Home view on page 36*.

## To lock and unlock the remote control

- Make sure that the remote control is connected to the product.
- To lock or unlock the remote control, quickly push the lock button (A) and enter the PIN code. The PIN code from the factory is "123412".



**Note:** If the incorrect PIN code is entered 5 times, the product is locked. Speak to an approved service agent.

**Note:** If you push the lock button more than 2 seconds, the remote control is locked and the product stops. Turn the main switch to the OFF position and then to the ON position to restart the product.

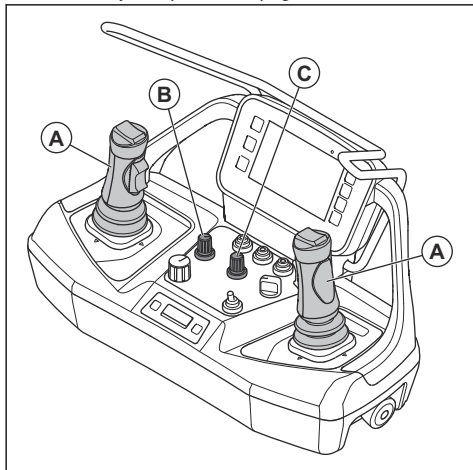
For instructions on how to change PIN code, refer to "Remote settings" on page 52.

## To operate the product



**WARNING:** Make sure that you can see the product at all times when you operate it with the remote control. The operation range of the remote control makes it possible to move the product also when you cannot see it. Risk of injury and damage.

- Use the joysticks (A) to move the product. Small movements of the joystick moves the product slowly. Large movements of the joystick moves the product faster. The remote control has 4 joystick patterns, refer to *Joystick pattern on page 61*.



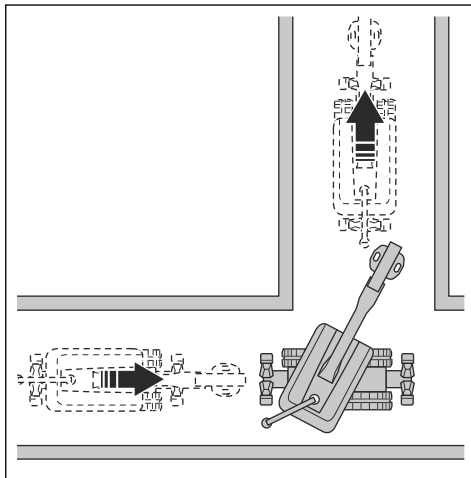
**CAUTION:** Move the joysticks carefully. To move the joysticks with force does not make the performance of the product better. The joysticks can become damaged if you operate them with too much force.



**CAUTION:** Do not lift the remote control by the joysticks.

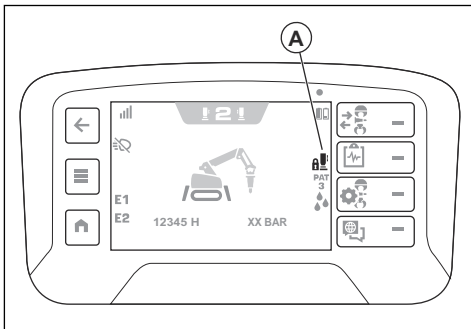
- Turn the knob for adjustment of the tool speed (B) to adjust the speed of the tool.
- Turn the knob for adjustment of the product speed (C) to adjust the speed of the product.
- To turn the product, operate the caterpillar tracks at different speeds.
- To turn the product in small spaces, operate the caterpillar tracks in different directions.

- To move the product around corners in small spaces, move the caterpillar tracks and the tower at the same time.



## To unlock the joysticks on the remote control

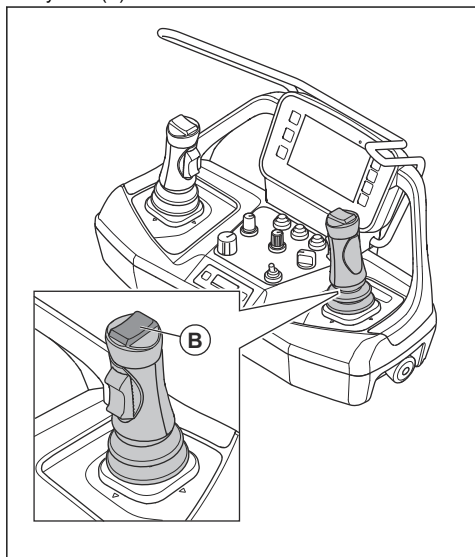
If the joysticks on the remote control are not used for 3 seconds, they are locked. The symbol (A) shows on the display.



When the joysticks are locked, the product goes into idle mode. The hydraulic oil goes into the hydraulic oil tank and there is no pressure in the cylinders.

1. Make sure that the joysticks are in the neutral position.

2. On the right joystick, push the left top button (B). The joysticks on the remote control are unlocked and the symbol (A) is removed.

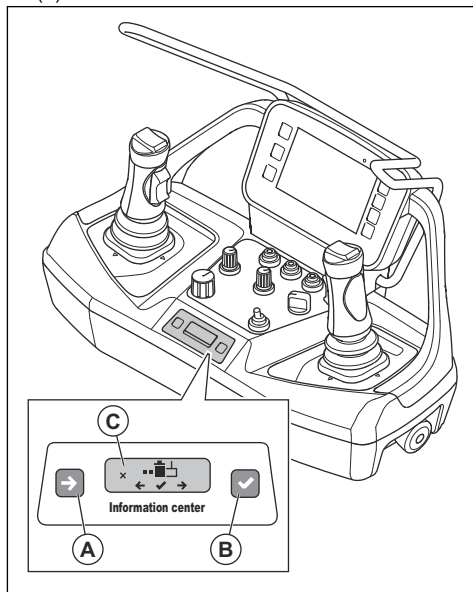


## To do a pairing operation between the remote control and the product (DXR 145)

The pairing operation between the product and the remote control is done by the factory. A new pairing operation is necessary if the remote control is replaced or if you change remote controls between products.

1. Start the remote control. Refer to *To start the remote control on page 55*.

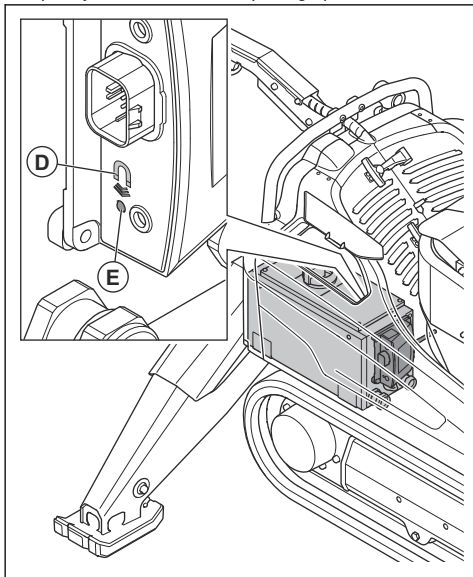
2. Push the left side button (A) and the right side button (B) at the same time.



**Note:** The Information center display change mode if the buttons are pushed at the same time.

3. Push the left side button (A) to go to selection "2" in the information center display.
4. Push the right side button (B) to select selection "2". The symbol (C) shows in the information center display.
5. Push and hold the left and right side button at the same time for 3 seconds.
6. Remove the right side cover on the product.
7. Start the product. Refer to *To start the product (DXR 145) on page 53*.

8. Put a magnet on the bottom side of the radio communication receiver on the magnet symbol (D) in 5s after the start of the product. The indicator (E) on the radio communication receiver flashes orange quickly when it waits for a pairing operation to start.



**Note:** It is necessary to put the magnet on the magnet symbol in 5s after the start of the product. After 5s the radio communication receiver cannot do the pairing operation.

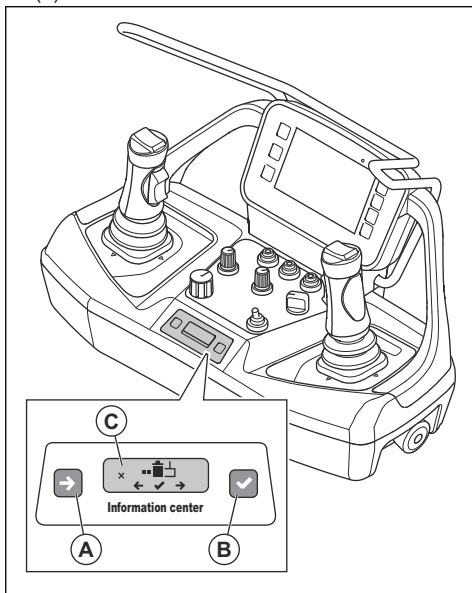
9. Remove the magnet.
10. A serial number shows on the information center display when a radio communication receiver is found.
11. Make sure that the serial number on the information display agrees with the serial number on the radio communicator receiver.
12. If the serial numbers do not agree, the pairing operation was not done correctly. Do the procedure that follows.
  - a) Find the product with the agreed serial number and turn that product off.
  - b) Stop your product. Refer to *To stop the product (DXR 145) on page 63*.
  - c) Do the pairing operation again.
13. Push the right side button when the serial numbers agree. A message on the information center display will show for 2 seconds that the pairing operation is done.
14. Stop the product to restart the radio communication receiver. Refer to *To stop the product (DXR 145) on page 63*.

15. Restart the remote control. Refer to *To start the remote control on page 55*.
16. Start the product. Refer to *To start the product (DXR 145) on page 53*.
17. Make sure that there is a radio signal symbol in the information center display. Refer to *Information center display on page 52*.
18. Install the right side cover on the product.

## To do a pairing operation between the remote control and the product (DXR 275, DXR 305, DXR 315)

The pairing operation between the product and the remote control is done by the factory. A new pairing operation is necessary if the remote control is replaced or if you change remote controls between products.

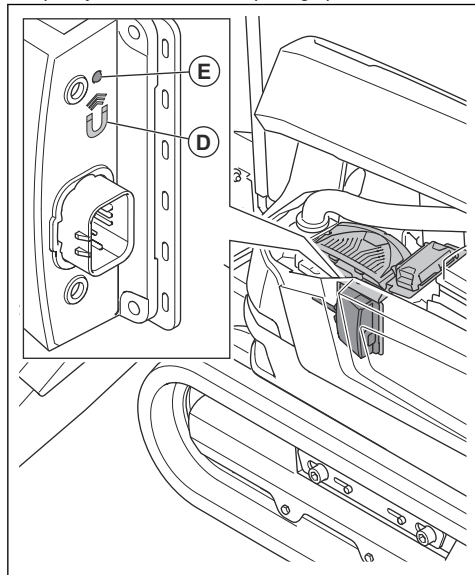
1. Start the remote control. Refer to *To start the remote control on page 55*.
2. Push the left side button (A) and the right side button (B) at the same time.



**Note:** The Information center display change mode if the buttons are pushed at the same time.

3. Push the left side button (A) to go to selection "2" in the information center display.
4. Push the right side button (B) to select selection "2". The symbol (C) shows in the information center display.
5. Push the left and right side button at the same time and hold for 3 seconds.

6. Open the left hatch and remove the left side cover on the product.
7. Start the product. Refer to *To start the product (DXR 275, DXR 305, DXR 315) on page 54.*
8. Put a magnet on the bottom side of the radio communication receiver on the magnet symbol (D) in 5s after the start of the product. The indicator (E) on the radio communication receiver flashes orange quickly when it waits for a pairing operation to start.



**Note:** It is necessary to put the magnet on the magnet symbol in 5s after the start of the product. After 5s the radio communication receiver cannot do the pairing operation

9. Remove the magnet.
10. A serial number shows on the information center display when a radio communication receiver is found.
11. Make sure that the serial number on the information display agrees with the serial number on the radio communicator receiver.
12. If the serial numbers do not agree, the pairing operation was not done correctly. Do the procedure that follows.
  - a) Find the product with the agreed serial number and turn that product off.
  - b) Stop your product. Refer to *To stop the product (DXR 275, DXR 305, DXR 315) on page 63.*
  - c) Do the pairing operation procedure again.
13. Push the right side button when the serial numbers agree. A message on the information center display will show for 2 seconds that the pairing operation is done.
14. Stop the product to restart the radio communication receiver. Refer to *To stop the product (DXR 275, DXR 305, DXR 315) on page 63.*
15. Restart the remote control. Refer to *To start the remote control on page 55.*
16. Start the product. Refer to *To start the product (DXR 275, DXR 305, DXR 315) on page 54.*
17. Make sure that there is a radio signal symbol in the information center display. Refer to *Information center display on page 52.*
18. Install the left side cover and close the left hatch on the product.

## To operate the product with the remote control connected with a CAN bus cable



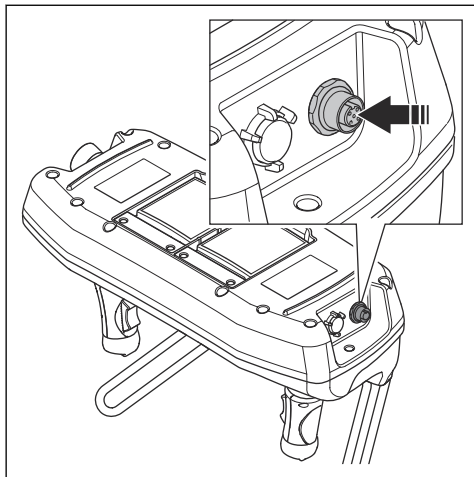
**WARNING:** Do not use the remote control connected with a CAN bus cable where there is a risk that the product can fall.

The radio signal transmission stops when the remote control is connected with the CAN bus cable.

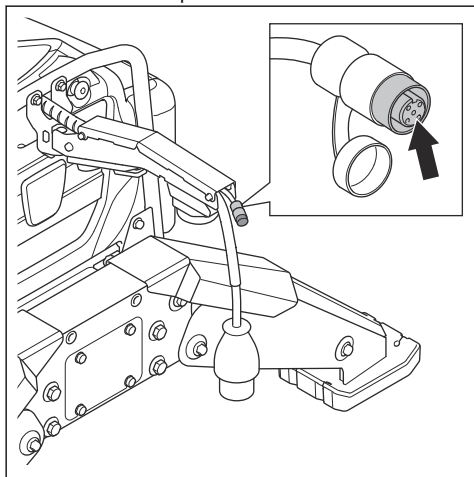
- Connect the CAN bus cable between the remote control and the product. Refer to *To connect the remote control to the product with a CAN bus cable (DXR 145) on page 60* and *To connect the remote control to the product with a CAN bus cable (DXR 275, DXR 305, DXR 315) on page 60.*

**To connect the remote control to the product with a CAN bus cable (DXR 145)**

1. Put one end of the CAN bus cable in the connector on the remote control.



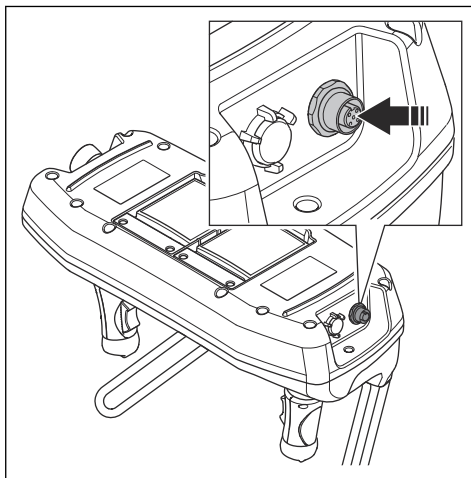
2. Put the other end of the CAN bus cable in the connector on the product.



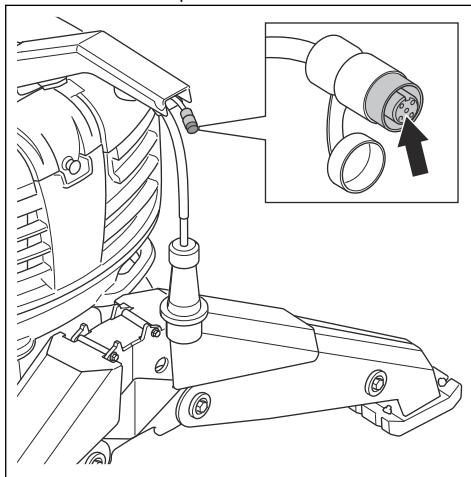
3. Tighten the connector screws for the CAN bus cable by hand.

**To connect the remote control to the product with a CAN bus cable (DXR 275, DXR 305, DXR 315)**

1. Put one end of the CAN bus cable in the connector on the remote control.



2. Put the other end of the CAN bus cable in the connector on the product.

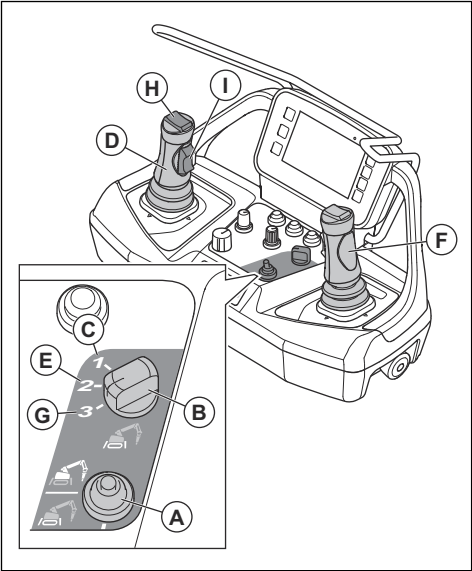


3. Tighten the connector screws for the CAN bus cable by hand.



# Operation modes

The operation mode switch (A) is used to select between work mode and transport mode.



In work mode you can operate arm 1, arm 2, arm 3, the tools and the tower.

The transport mode is divided into 3 modes. The transport mode switch (B) is used to select between the 3 transport modes.

- One lever control (C): The caterpillar tracks, the outriggers, the tower and some arm functions can be operated. The left joystick (D) controls the caterpillar tracks.
- Two lever control (E): The caterpillar tracks and the outriggers can be operated. The left joystick controls the left caterpillar track. The right joystick (F) controls the right caterpillar track.
- Crawl (G): The caterpillar tracks, the tower and all arm functions can be operated. The top button (H) and the side switch (I) on the left joystick controls the caterpillar tracks. The caterpillar tracks can only be moved straight forward or rearward.

If the joysticks on the remote control are not used for 3 seconds, the product goes to idle mode. The hydraulic oil goes into the hydraulic oil tank and there is no pressure in the cylinders.

## Joystick pattern

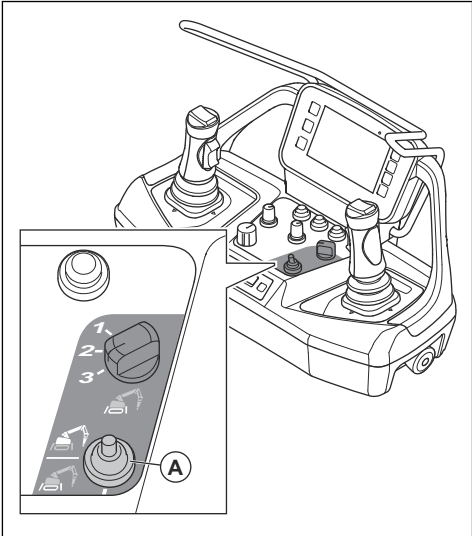
The remote control has 4 joystick patterns. "Pattern 1" is used as standard, refer to "Pattern 1" on page 39. You can change the joystick pattern in "Joystick setup" in the "Controls" menu on the display. Refer to "Joystick setup" on page 39.



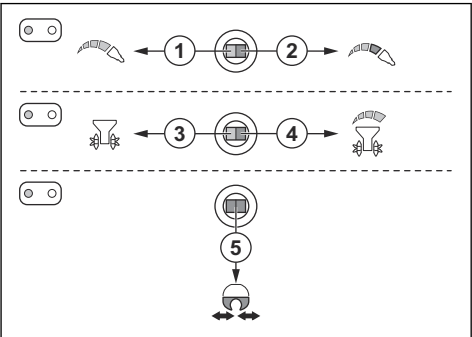
**WARNING:** Risk of injury and damage.  
Make sure that you know which joystick pattern that is in operation before you operate the product. Do a check in the status bar in the display. Refer to *Symbols in the status bar on the display on page 15.*

## To operate the tools

1. Push the operation mode switch (A) up to select work mode.



2. Use the left joystick as shown in the illustration below.

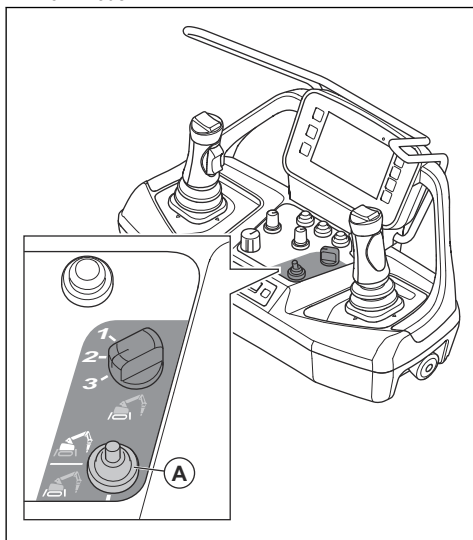


Position	Use
1	To adjust the pressure or the flow to the breaker or the cutter.
2	To give full pressure or flow to the breaker or the cutter.

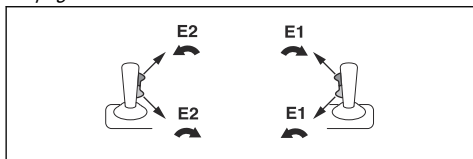
Position	Use
3	To remove objects that are blocked in the drum cutter. The drum cutter rotates in the opposite direction at half speed.
4	To adjust the flow to the drum cutter.
5	To open or close the concrete crusher, the steel shears or the grapple.
<b>Note:</b> Different cutters use different top buttons to open or close the cutters.	

### To operate the joysticks with "Extra function" in operation

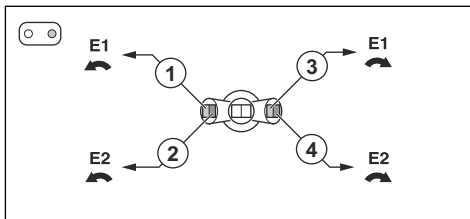
1. Press the menu button on the remote control.
2. Select "Custom tool 1-3" in the "Tools" menu on the display.
3. Select "Extra function 1" or "Extra function 2". Refer to *"Custom tool 1-3" on page 38*.
4. Push the operation mode switch (A) up to select work mode.



5. If "Side switch setup" is set to "Auto" or "Extra 1/ Extra 2", use the side switches on the joysticks as shown in the illustration. Refer to *"Joystick setup" on page 39*.



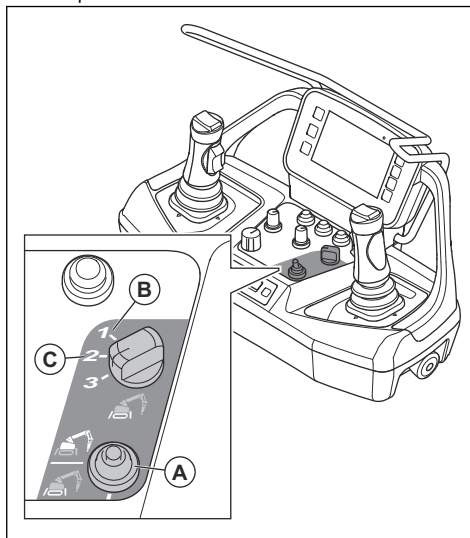
6. If "Side switch setup" is set to "Off", use the right joystick as shown in the illustration below.



Position	Use
1	"Extra function 1": To select direction 1 of the hydraulic oil.
2	"Extra function 1": To select direction 2 of the hydraulic oil.
3	"Extra function 2": To select direction 1 of the hydraulic oil.
4	"Extra function 2": To select direction 2 of the hydraulic oil.

### To operate the outriggers

1. Push the operation mode switch (A) down to select transport mode.

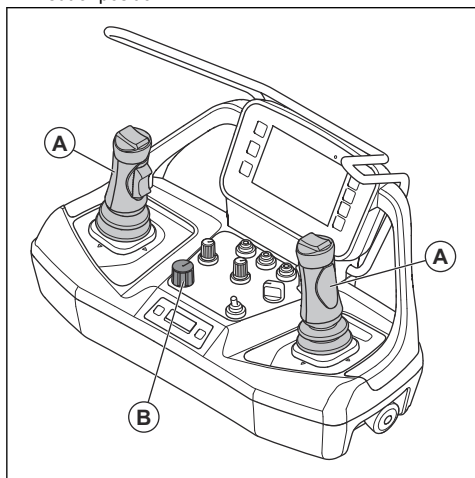


2. Do the procedure that follows for one lever control:
  - a) Turn the transport mode switch to one lever control (B).

- b) Use the joysticks to extend and retract the outriggers. Refer to "Pattern 1" on page 39, "Pattern 2" on page 43 and "Pattern 3" on page 45.
3. Do the procedure that follows for two lever control:
  - a) Turn the transport mode switch to two lever control (C).
  - b) Use the joysticks to extend and retract the outriggers. Refer to "Pattern 1" on page 39.

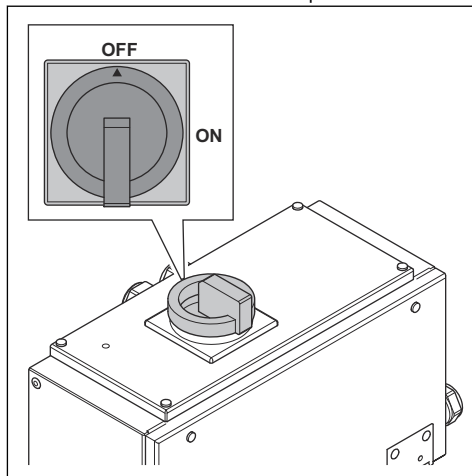
## To stop the product (DXR 145)

1. Retract the arm system until the arm system is on the ground.
2. Set the joysticks (A) on the remote control in the neutral position.



3. Turn the OFF/ON/START switch (B) to the OFF position.
4. Step into the work area and open the right hatch on the product.

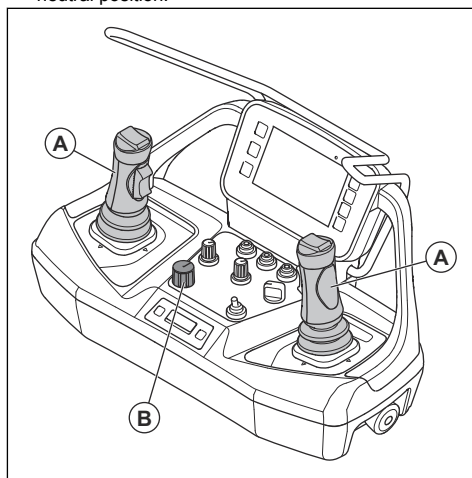
5. Turn the main switch to the OFF position.



6. Close the right hatch on the product.
7. Disconnect the power plug.

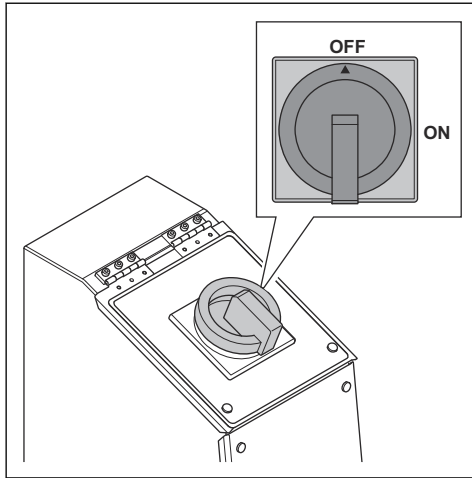
## To stop the product (DXR 275, DXR 305, DXR 315)

1. Retract the arm system until the arm system is on the ground.
2. Set the joysticks (A) on the remote control into the neutral position.



3. Turn the OFF/ON/START switch (B) to the OFF position.
4. Step into the work area and open the right hatch on the product.

5. Turn the main switch to the OFF position.



6. Close the right hatch on the product.

7. Disconnect the power plug.

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## Maintenance

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### Introduction



**WARNING:** Read and understand the safety chapter before you do maintenance on the product.



**WARNING:** To prevent injury, disconnect the power cord before you do maintenance.

### To do before the maintenance



**WARNING:** Electricity can cause serious injury and death. Obey all safety instructions in this manual when do servicing of the product.

- Use personal protective equipment. Refer to *Personal protective equipment on page 21*.
- Park the product in a sufficiently large and safe area.
- Park the product on a level surface with the arm system and outriggers down.
- Some components on the product become very hot during the operation. Let the product become cool before you do maintenance.
- Set out clear signs to give a warning to bystanders that maintenance work is in progress.
- Make sure that the area is sufficiently illuminated.

- Use lifting equipment to lift heavy product parts and to keep them in a stable position during maintenance. Lock product parts mechanically before maintenance to prevent injury from moving parts.
- Stop the motor and disconnect the power plug to prevent accidental start during maintenance. Make sure that the power plug is disconnected during maintenance.
- Clean the area around the product from oil and dirt. Remove unwanted objects.
- Clean the product. Dirt in the hydraulic system can cause damage.
- Keep fire extinguishers, medical supplies and an emergency phone near.
- Lock product parts that can move mechanically before you loosen the screw joints or disconnect the hydraulic hoses.
- Be careful when you disconnect connections. The pipe and hose couplings can stay pressurized although the product is stopped.
- Put marks on all the cables and the hoses to make it easier to assemble the product correctly.

### Maintenance schedule

\* = General maintenance done by the operator. The instructions are not given in this operator's manual.

X = The instructions are given in this operator's manual.

General product maintenance	First 8 h	Daily	Weekly	Each 250 h	Each 500 h	Each 1000 h
Make sure that fasteners on the arm system and the outrigger system are tightened. Tighten the fasteners if it is necessary. Refer to <i>Tightening torques (DXR 145) on page 84</i> and <i>Tightening torques (DXR 275, DXR 305, DXR 315) on page 85</i> .	X	X				
Do a check of the hydraulic cylinders, the slew motor and the drive motor.		*				
Lubricate all joints and cylinder mountings on the arm system and tool hitch. Refer to <i>To lubricate the product (DXR 145) on page 81</i> and <i>To lubricate the product (DXR 275, DXR 305, DXR 315) on page 82</i> .		X				
Make sure that bolts and fasteners are tightened. Tighten the bolts and fasteners if it is necessary.		*				
Do a check for leakage in the cylinders and the hoses.		X				
Examine the power cord, the connectors and the sockets for damage. Refer to <i>To examine the electric cables for wear on page 81</i> .		*				
Examine the caterpillar tracks and outriggers for damage. Refer to <i>To examine the product for cracks on page 81</i> .		*				
Do a check of the hydraulic oil level.		X				
Do a check of the grease cartridge in the breaker grease pump.		X				
Examine the emergency stop button on the product and the machine stop button on the remote control. Make sure that they operate correctly.			X			
Lubricate all joints and mounting brackets on the outriggers.			X			
Lubricate the ball bearings of the gear ring and the gears of the gear ring.			X			
Examine weld seams, holes and sharp corners for damages and cracks.			X			
Clean the product and the hydraulic oil cooler.			X			
Do a check for leakage in the valve blocks, the hydraulic oil cooler, the slew motor and the drive motor.			*			
Examine the signs and decals for damage.				*		
Examine the remote control for damage.				*		
Do a check of the oil level in the drive motor.				X		
DXR 275, DXR 305, DXR 315: Do a check of the oil level in the slew motor.				X		
Replace the hydraulic air filter				X		
Replace the hydraulic oil filter.				X		
Tighten the drive motor sprocket.				*		

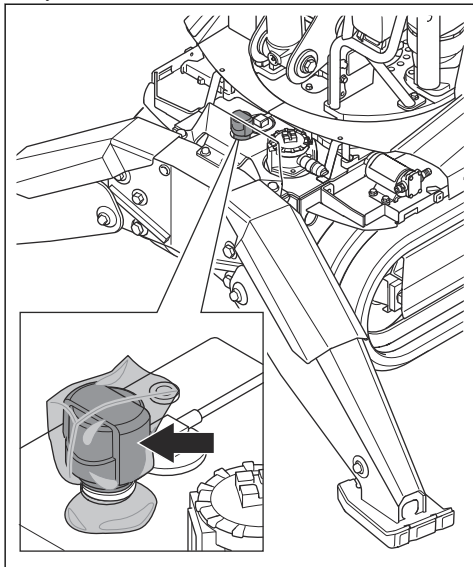
General product maintenance	First 8 h	Daily	Week-ly	Each 250 h	Each 500 h	Each 1000 h
Replace the hydraulic oil.					X	
Replace the oil in the drive motor.						X
DXR 275, DXR 305, DXR 315: Replace the oil in the slew motor.						X



**WARNING:** All safety-critical functions must be replaced each 20 years. Refer to *Safety-critical components on page 30*.

## To clean the product (DXR 145)

- Before you clean the product, put a plastic bag tightly around the air filter on the hydraulic oil tank. This is to make sure that water does not go into the hydraulic oil tank.



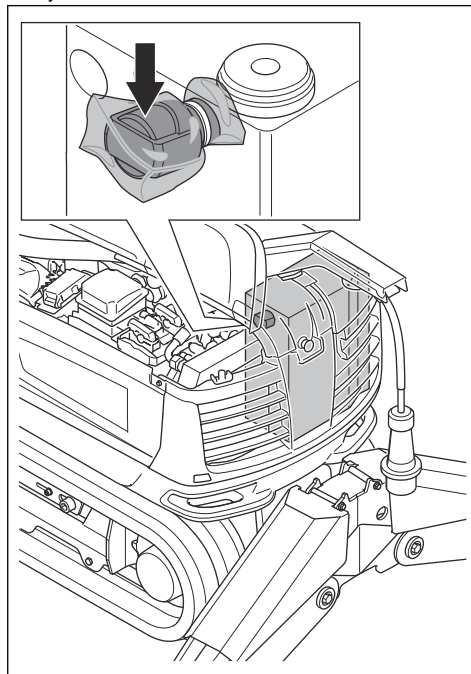
- Clean the product with water or compressed air.
- If the product does not become clean with water, use a weak cleaning agent.



**WARNING:** Do not point a high-pressure washer or compressed air directly at electrical components, hydraulic hoses or seals. Water and dirt can go into the product and cause damage.

## To clean the product (DXR 275, DXR 305, DXR 315)

- Before you clean the product, put a plastic bag tightly around the air filter on the hydraulic oil tank. This is to make sure that water does not go into the hydraulic oil tank.



- Clean the product with water or compressed air.
- If the product does not become clean with water, use a weak cleaning agent.



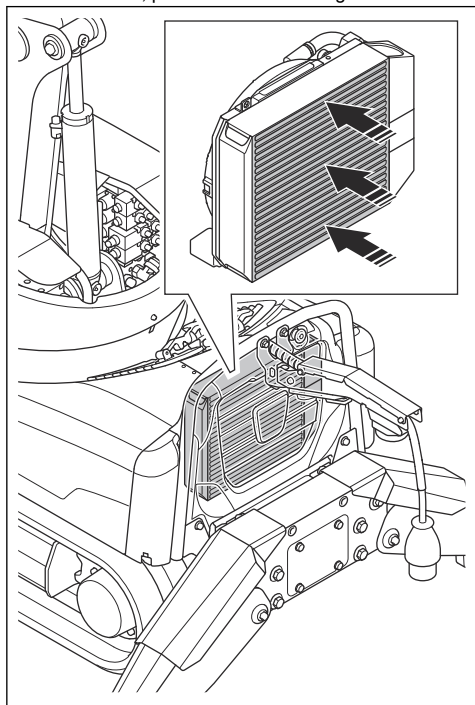
**WARNING:** Do not point a high-pressure washer or compressed air directly at electrical components, hydraulic hoses or seals. Water and dirt can go into the product and cause damage.

## To clean the hydraulic oil cooler (DXR 145)



**WARNING:** Risk of burn injury. Let the hydraulic oil cooler become cool before you clean it.

- Clean the area around the hydraulic oil cooler with water and weak cleaning agent.
- Clean the cooling fins on the hydraulic oil cooler with compressed air.
- If the cooling fins do not become clean with compressed air, use a high pressure washer and a cleaning agent.
- To prevent damage to the cooling fins, obey these instructions:
  - a) Only use maximum pressure of 100 bar/1450 psi.
  - b) Make sure that there is a minimum of 40 cm/15.7 in. between the hydraulic oil cooler and the nozzle.
  - c) Point the water or the air straight at the hydraulic oil cooler, parallel with the cooling fins.

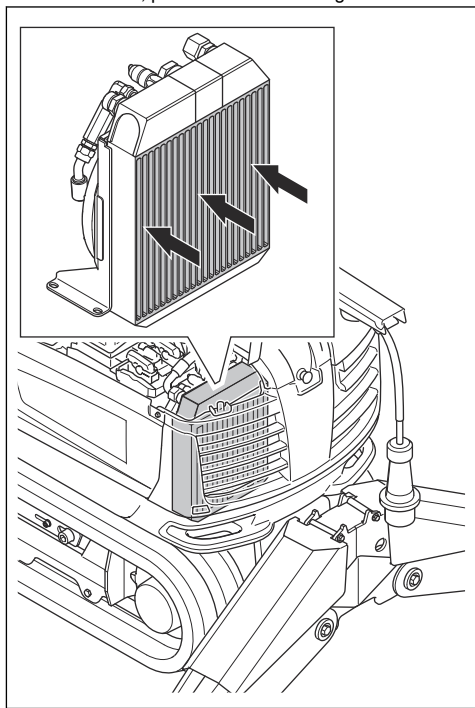


## To clean the hydraulic oil cooler (DXR 275, DXR 305, DXR 315)



**WARNING:** Risk of burn injury. Let the hydraulic oil cooler become cool before you clean it.

- Clean the area around the hydraulic oil cooler with water and weak cleaning agent.
- Clean the cooling fins on the hydraulic oil cooler with compressed air.
- If the cooling fins do not become clean with compressed air, use a high pressure washer and a cleaning agent.
- To prevent damage to the cooling fins, obey these instructions:
  - a) Only use maximum pressure of 100 bar/1450 psi.
  - b) Make sure that there is a minimum of 40 cm/15.7 in. between the hydraulic oil cooler and the nozzle.
  - c) Point the water or the air straight at the hydraulic oil cooler, parallel with the cooling fins.



## To clean the electrical components

- Clean the electric motor, the electrical enclosure, the electrical terminals and the other electrical components. Use a cloth or compressed air.



**CAUTION:** Do not use water directly on the electrical components.

- Clean the outer parts of the remote control with a moist cloth. Clean the inner parts of the remote control with compressed air.



**CAUTION:** Do not use a high-pressure washer on the remote control.

### To clean the batteries and the battery charger



**CAUTION:** Do not clean the batteries or the battery charger with water.

- Make sure that the batteries and the battery charger are clean and dry before you connect the batteries to the battery charger.
- Clean the terminals on the batteries with compressed air or a soft and dry cloth.
- Clean the surfaces of the batteries and the battery charger with a soft and dry cloth.

### To do after you clean the product

- Lubricate all lubrication points on the product. Refer to *To lubricate the product (DXR 145) on page 81* and *To lubricate the product (DXR 275, DXR 305, DXR 315) on page 82*.
- If you have cleaned the product with water, let the product become fully dry before you start the product.

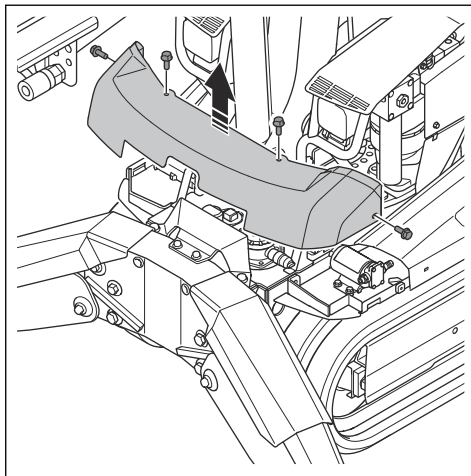


**CAUTION:** Be careful when you start the product after it has been cleaned with water. Components that are damaged because of moisture can have an unwanted effect on the movements of the product.

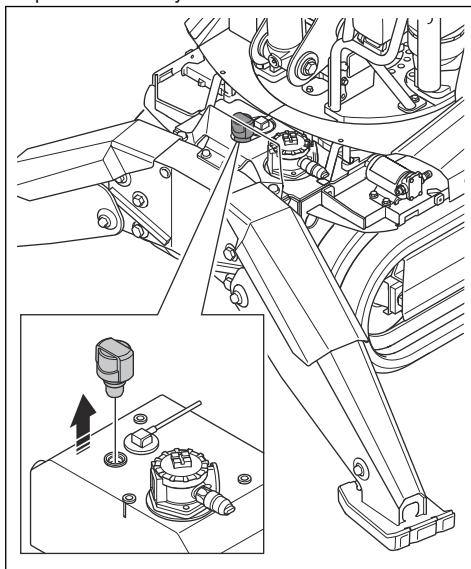
### To release the hydraulic pressure in the hydraulic system (DXR 145)

1. Start the product. Refer to *To start the product (DXR 145) on page 53*.
2. Extend the arm system until the arm system touches the ground with minimum pressure. The hydraulic pressure in the hydraulic cylinders is released.
3. Extend the outriggers until the outriggers touches the ground with minimum pressure. The hydraulic pressure in the hydraulic cylinders is released. Refer to *To operate the outriggers on page 62*.
4. Stop the product. Refer to *To stop the product (DXR 145) on page 63*.

5. Remove the 4 screws and the front cover.



6. Clean the area around the air filter.
7. Remove the air filter to release the hydraulic pressure in the hydraulic oil tank.



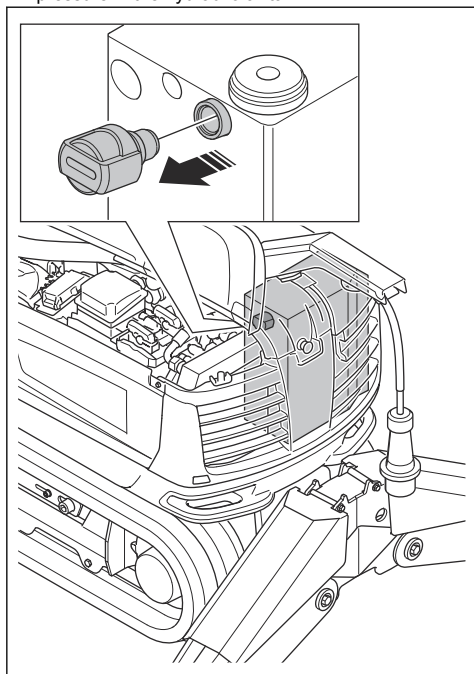
8. Wait 5 minutes for the hydraulic pressure to decrease through internal leakage.
9. Install the air filter on the hydraulic oil tank.
10. Install the front cover and tighten the 4 screws.

For the caterpillar track unit, release the hydraulic pressure in the hydraulic accumulator. Refer to *To remove and install the caterpillar tracks (DXR 145) on page 86*.



## To release the hydraulic pressure in the hydraulic system (DXR 275, DXR 305, DXR 315)

1. Start the product. Refer to *To start the product (DXR 275, DXR 305, DXR 315) on page 54.*
2. Extend the arm system until the arm system touches the ground with minimum pressure. The hydraulic pressure in the hydraulic cylinders is released.
3. Extend the outriggers until the outriggers touches the ground with minimum pressure. The hydraulic pressure in the hydraulic cylinders is released. Refer to *To operate the outriggers on page 62.*
4. Stop the product. Refer to *To stop the product (DXR 275, DXR 305, DXR 315) on page 63.*
5. Open the left hatch on the product.
6. Clean the area around the air filter.
7. Remove the air filter to release the hydraulic pressure in the hydraulic oil tank.

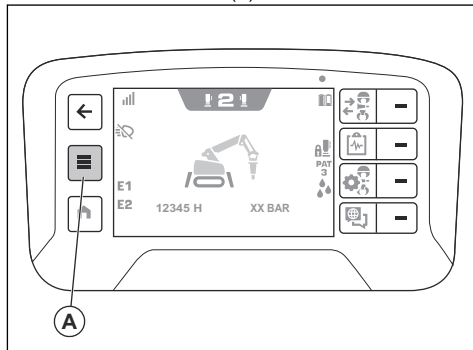


8. Wait 5 minutes for the hydraulic pressure to decrease through internal leakage.
9. Install the air filter on the hydraulic oil tank.
10. Close the left hatch on the product.

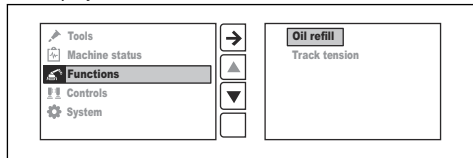
For the caterpillar track unit, release the hydraulic pressure in the hydraulic accumulator. Refer to *To remove and install the caterpillar tracks (DXR 275, DXR 305, DXR 315) on page 87.*

## To do a check of the hydraulic oil level (DXR 145)

1. Park the product on level ground.
2. Fully retract the arm system.
3. Fully retract the outriggers. Refer to *To operate the outriggers on page 62.*
4. Press the menu button (A) on the remote control.



5. Select "Oil refill" in the "Function" menu on the display.

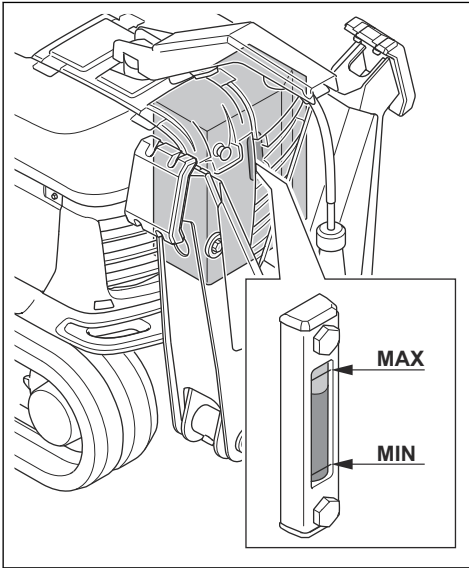


6. Read the hydraulic oil level on the display.
7. Fill with hydraulic oil if the hydraulic oil level is less than 80%. Refer to *To fill the hydraulic oil (DXR 145) on page 72.*

## To do a check of the hydraulic oil level (DXR 275, DXR 305, DXR 315)

1. Park the product on level ground.
2. Fully retract the arm system.
3. Fully retract the outriggers. Refer to *To operate the outriggers on page 62.*

4. Examine the hydraulic oil level in the sight glass for the hydraulic oil tank. The hydraulic oil level must not be more than 1 cm/0.39 in. below the maximum level.



5. If the hydraulic oil level is to low, fill with hydraulic oil. Refer to *To fill the hydraulic oil (DXR 275, DXR 305, DXR 315) on page 73.*

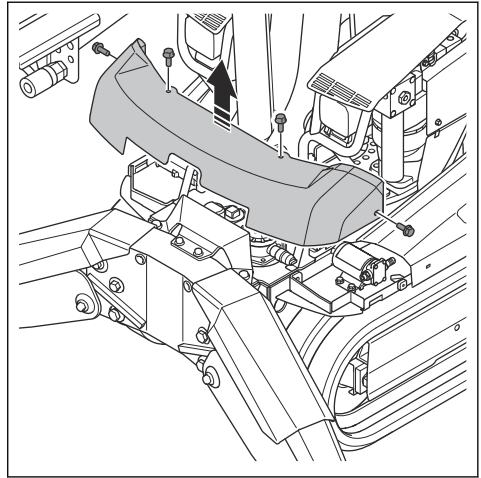
## To drain the hydraulic oil (DXR 145)



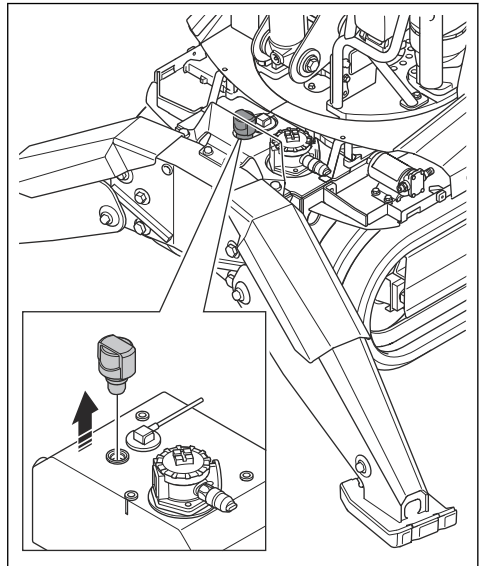
**WARNING:** Risk of burn injury. The hydraulic oil becomes hot during operation of the product. Let the product become cool before you drain the hydraulic oil.

1. Park the product on level ground.
2. Turn the arm system 90° to one side of the product.
3. Fully retract the arm system.
4. Fully retract the outriggers. Refer to *To operate the outriggers on page 62.*
5. Stop the product. Refer to *To stop the product (DXR 145) on page 63.*

6. Remove the 4 screws and the front cover.

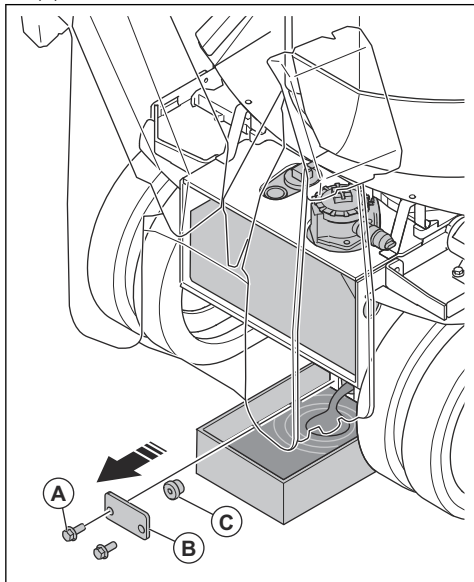


7. Clean the area around the air filter.
8. Remove the air filter to release the pressure in the hydraulic oil tank.



9. Put a container below the drain plug for the hydraulic oil.

10. Remove the 2 screws (A) and the drain plug cover (B).



11. Remove the drain plug (C) for the hydraulic oil.  
12. Let the hydraulic oil drain into the container.  
13. Replace the hydraulic oil filter if it is necessary. Refer to *To replace the hydraulic oil filter (DXR 145)* on page 74.  
14. Install the drain plug for the hydraulic oil and tighten it.  
15. Install the drain plug cover and tighten the 2 screws.  
16. Install the air filter and tighten it.  
17. Install the front cover and tighten the 4 screws.



**CAUTION:** Do not start the product when the hydraulic oil tank is empty. The hydraulic pump will become damaged. Fill the hydraulic oil tank with hydraulic oil. Refer to *To fill the hydraulic oil (DXR 145)* on page 72.

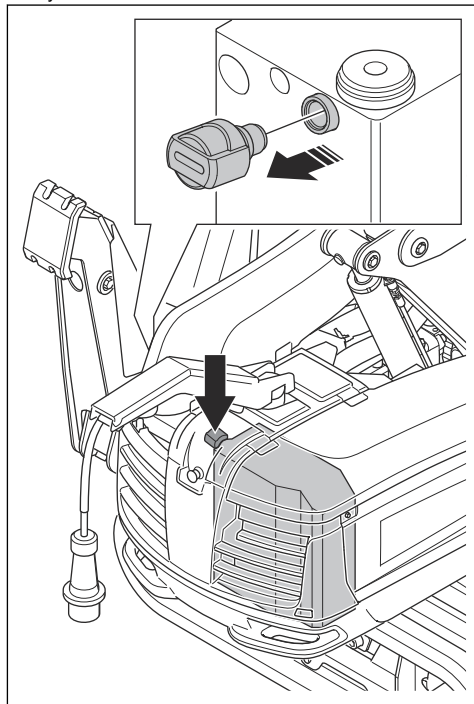
## To drain the hydraulic oil (DXR 275, DXR 305, DXR 315)



**WARNING:** Risk of burn injury. The hydraulic oil becomes hot during operation of the product. Let the product become cool before you drain the hydraulic oil.

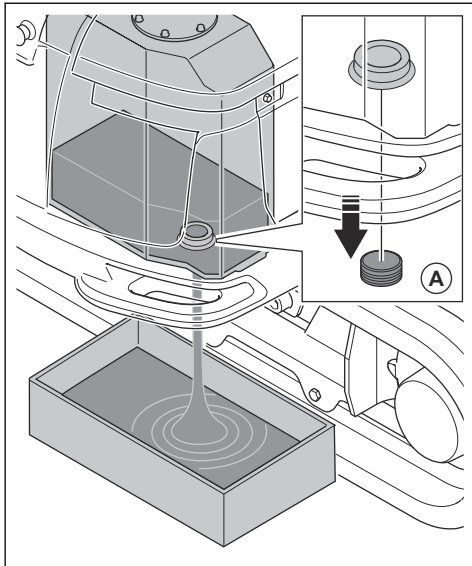
1. Park the product on level ground.  
2. Turn the arm system 90° to one side of the product.  
3. Fully retract the arm system.

4. Fully retract the outriggers. Refer to *To operate the outriggers* on page 62.  
5. Stop the product. Refer to *To stop the product (DXR 275, DXR 305, DXR 315)* on page 63.  
6. Open the left hatch on the product.  
7. Clean the area around the air filter.  
8. Remove the air filter to release the pressure in the hydraulic oil tank.



9. Put a container below the drain plug for the hydraulic oil.

10. Remove the drain plug (A) for the hydraulic oil.



11. Let the hydraulic oil drain into the container.

12. Replace the hydraulic oil filter if it is necessary. Refer to *To replace the hydraulic oil filter (DXR 275, DXR 305, DXR 315) on page 75.*

13. Install the drain plug for the hydraulic oil and tighten it.

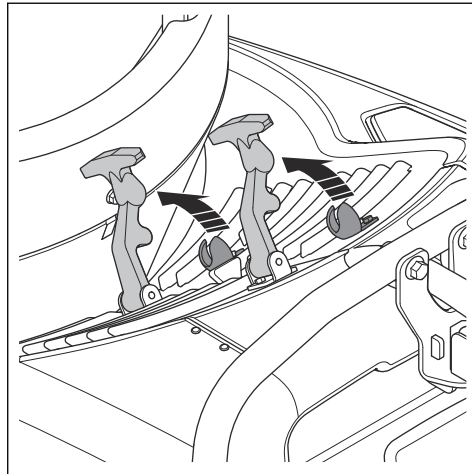
14. Install the air filter and tighten it.

15. Close the left hatch on the product.

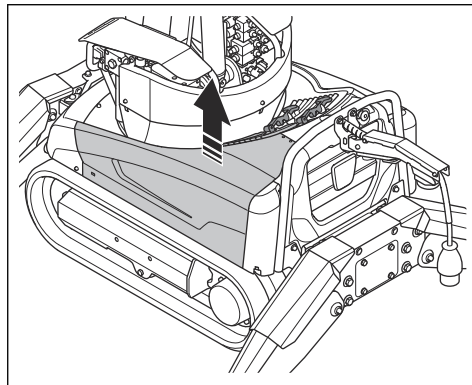


**CAUTION:** Do not start the product when the hydraulic oil tank is empty. The hydraulic pump will become damaged. Fill the hydraulic oil tank with hydraulic oil. Refer to *To fill the hydraulic oil (DXR 275, DXR 305, DXR 315) on page 73.*

5. Open the 2 rubber clips.



6. Remove the left side cover.



## To fill the hydraulic oil (DXR 145)



**WARNING:** Risk of burn injury. The hydraulic oil becomes hot during operation of the product. Let the product become cool before you replace the hydraulic oil.

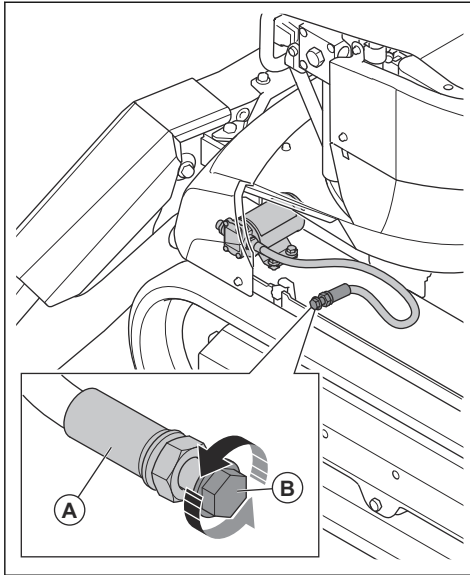
1. Park the product on level ground.

2. Fully retract the arm system.

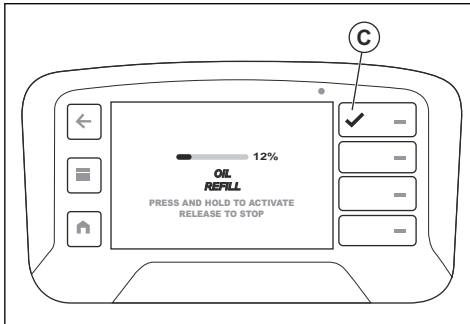
3. Fully retract the outriggers. Refer to *To operate the outriggers on page 62.*

4. Stop the product. Refer to *To stop the product (DXR 145) on page 63.*

7. Clean the suction hose of the hydraulic fill pump (A).



8. Remove the plug of the suction hose (B).
9. Put the suction hose in a hydraulic oil container. Use new hydraulic oil. Refer to *Hydraulic oil* on page 110.
10. Press the menu button on the remote control.
11. Select "Oil refill" in the "Function" menu on the display.
12. Read the hydraulic oil level on the display.
13. Press and hold the button (C) to fill the hydraulic oil. The hydraulic fill pump stops automatically when the hydraulic oil tank is full.



14. Remove the suction hose from the hydraulic oil container.
15. Install the plug of the suction hose.
16. Install the left side cover and tighten the 2 rubber clips.
17. Start the product. Refer to *To start the product (DXR 145)* on page 53.

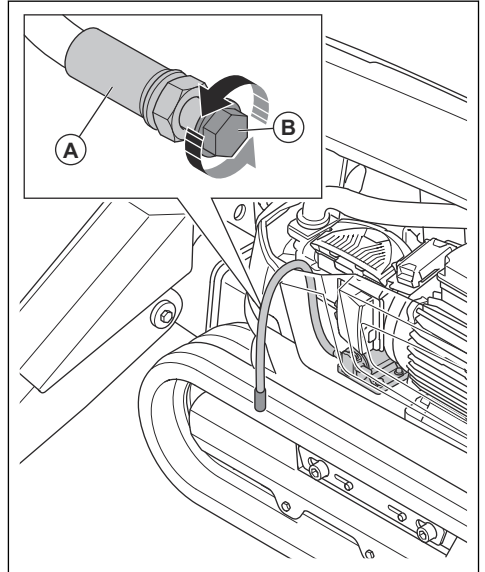
18. Move the arm system between outer and inner end position some times to remove air in the hydraulic system.
19. Stop the product and make sure that there are no leaks.
20. Read the hydraulic oil level on the display. Fill with hydraulic oil if it is necessary.

## To fill the hydraulic oil (DXR 275, DXR 305, DXR 315)



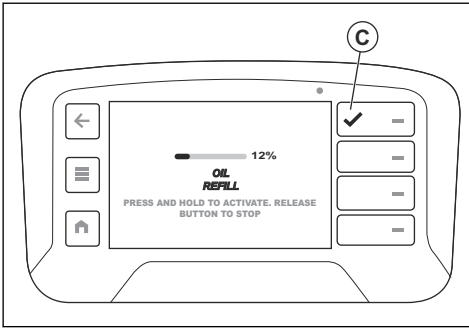
**WARNING:** Risk of burn injury. The hydraulic oil becomes hot during operation of the product. Let the product become cool before you replace the hydraulic oil.

1. Park the product on level ground.
2. Fully retract the arm system.
3. Fully retract the outriggers. Refer to *To operate the outriggers* on page 62.
4. Stop the product. Refer to *To stop the product (DXR 275, DXR 305, DXR 315)* on page 63.
5. Open the left hatch on the product.
6. Clean the suction hose of hydraulic fill pump (A).

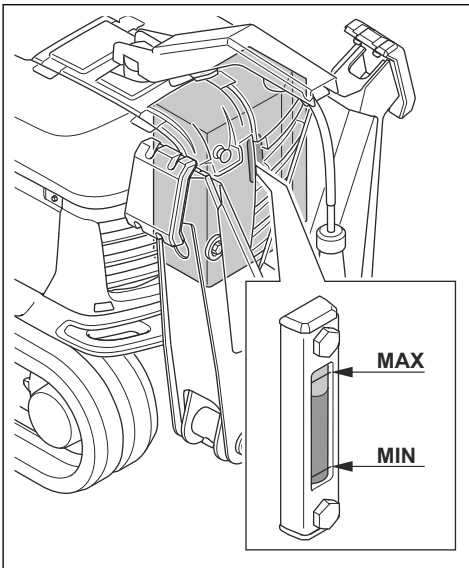


7. Remove the plug of the suction hose (B).
8. Put the suction hose in a hydraulic oil container. Use new hydraulic oil. Refer to *Hydraulic oil* on page 110.
9. Press the menu button on the remote control.
10. Select "Oil refill" in the "Function" menu on the display.

11. Press and hold the button (C) to fill hydraulic oil.



12. Examine the hydraulic oil level in the sight glass on the hydraulic oil tank. The hydraulic oil level must not be more than 1 cm/0.39 in. below the maximum level.



13. Release the button (C) when the hydraulic oil is at the correct level in the sight glass.
14. Remove the suction hose from the hydraulic oil container.
15. Install the plug of the suction hose.
16. Close the left hatch on the product.
17. Start the product. Refer to *To start the product (DXR 275, DXR 305, DXR 315)* on page 54.
18. Move the arm system between outer and inner end position some times to remove air in the hydraulic system.
19. Stop the product and make sure that there are no leaks.

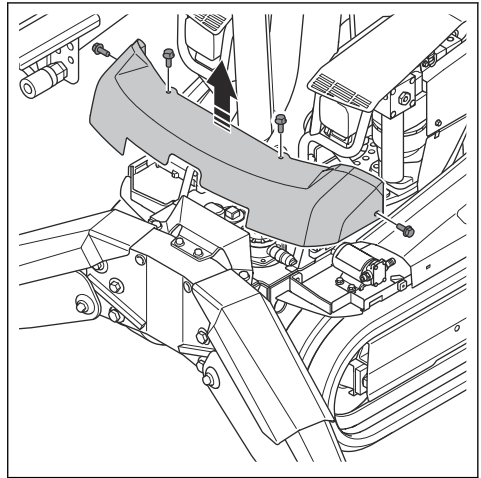
20. Examine the hydraulic oil level in the sight glass on the hydraulic oil tank. Fill with hydraulic oil if it is necessary.

## To replace the hydraulic oil filter (DXR 145)



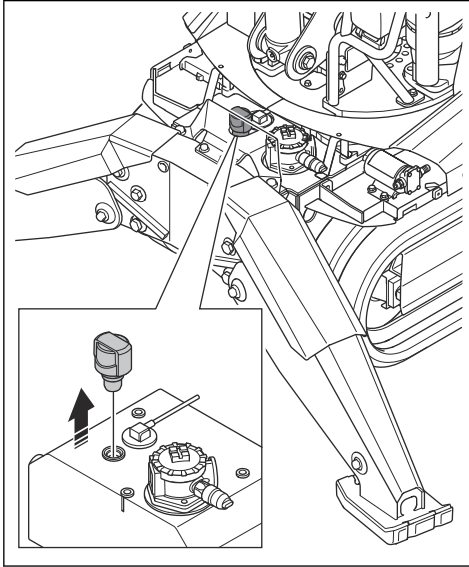
**WARNING:** Risk of burn injury. The hydraulic oil becomes hot during operation of the product. Let the product become cool before you replace the hydraulic oil filter.

1. Park the product on level ground.
2. Stop the product. Refer to *To stop the product (DXR 145)* on page 63.
3. Remove the 4 screws and the front cover.

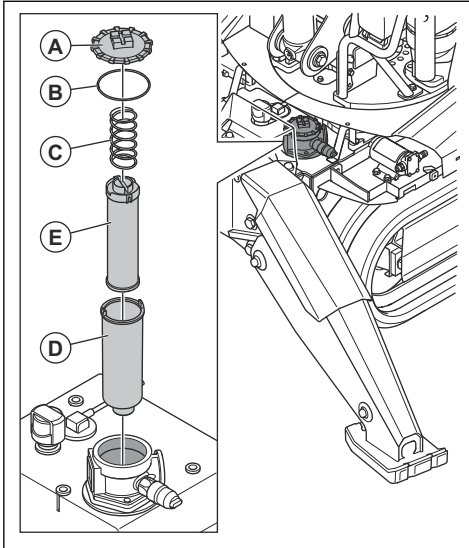


4. Clean the area around the air filter.

5. Remove the air filter to release the pressure in the hydraulic oil tank.



6. Clean the hydraulic oil filter cover (A) and the adjacent parts.



7. Remove the hydraulic oil filter cover together with the sealing ring (B) and the spring (C).
8. Examine the sealing ring for damage. Replace the sealing ring if it is necessary.
9. Remove the filter holder (D).

10. Remove the hydraulic oil filter (E) from the filter holder.
11. Examine the filter holder for unwanted materials or particles. Unwanted materials or particles shows damage or contamination of the hydraulic system.
12. Clean the filter holder with a degreaser and flush the filter holder with warm water. Dry the filter holder with compressed air.
13. Install a new hydraulic oil filter in the filter holder.
14. Install the filter holder in the hydraulic oil tank.
15. Install the hydraulic oil filter cover.
16. Install the air filter.
17. Install the front cover and tighten the 4 screws.

## To replace the hydraulic oil filter (DXR 275, DXR 305, DXR 315)

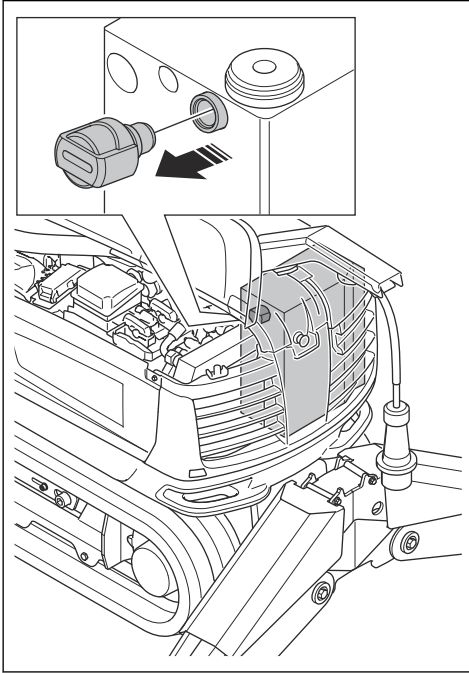


**WARNING:** Risk of burn injury. The hydraulic oil becomes hot during operation of the product. Let the product become cool before you replace the hydraulic oil filter.

1. Park the product on level ground.
2. Stop the product. Refer to *To stop the product (DXR 275, DXR 305, DXR 315)* on page 63.
3. Open the left hatch on the product.
4. Clean the area around the air filter.

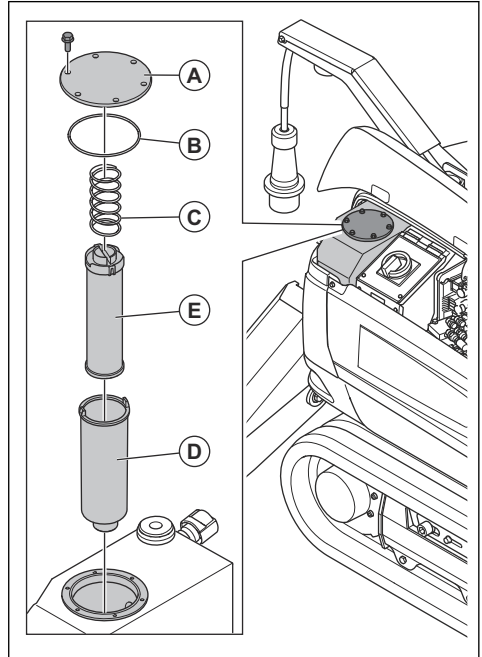


5. Remove the air filter to release the pressure in the hydraulic oil tank.



6. Open the right hatch on the product.

7. Clean the hydraulic oil filter cover (A) and the adjacent parts.



8. Remove the hydraulic oil filter cover.
9. Remove the sealing ring (B), the spring (C) and the filter holder (D).
10. Remove the hydraulic oil filter (E) from the filter holder.
11. Examine the filter holder for unwanted materials or particles. Unwanted materials or particles shows damage or contamination of the hydraulic system.
12. Clean the filter holder with a degreaser and flush the filter holder with warm water. Dry the filter holder with compressed air.
13. Install a new hydraulic oil filter in the filter holder.
14. Install the filter holder in the hydraulic oil tank.
15. Install a new sealing ring.
16. Install the spring.
17. Install the hydraulic oil filter cover.
18. Install the air filter.
19. Close the right and left hatches on the product.

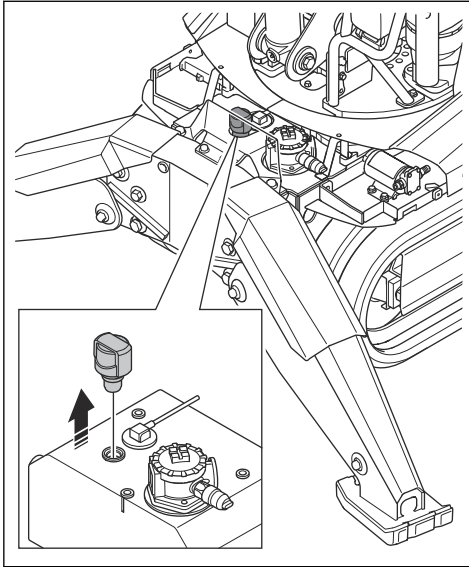
## To replace the air filter (DXR 145)



**WARNING:** Risk of burn injury. The hydraulic oil becomes hot during operation of the product. Let the product become cool before you replace the air filter.



1. Park the product on level ground.
2. Stop the product. Refer to *To stop the product (DXR 145) on page 63*.
3. Clean the external surface of the air filter and the adjacent parts.
4. Remove the air filter.



5. Install a new air filter.

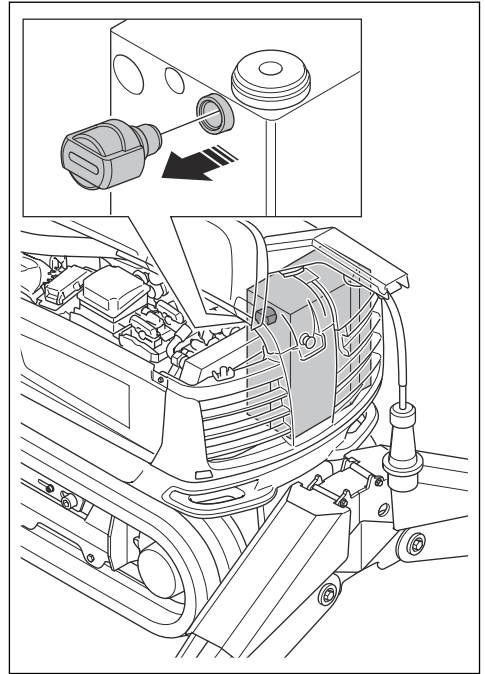
### To replace the air filter (DXR 275, DXR 305, DXR 315)



**WARNING:** Risk of burn injury. The hydraulic oil becomes hot during operation of the product. Let the product become cool before you replace the air filter.

1. Park the product on level ground.
2. Stop the product. Refer to *To stop the product (DXR 275, DXR 305, DXR 315) on page 63*.
3. Clean the external surface of the air filter and the adjacent parts.

4. Remove the air filter.

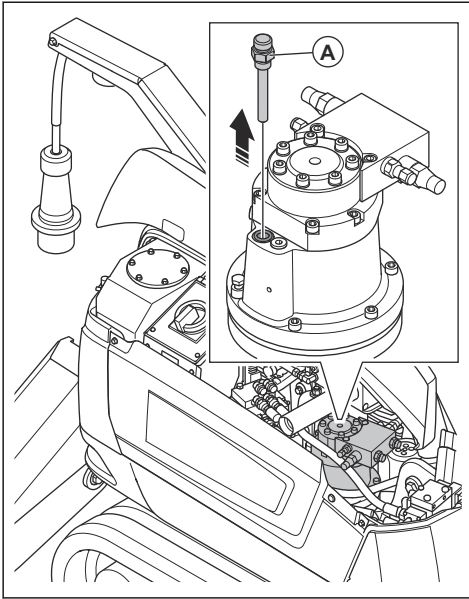


5. Install a new air filter.

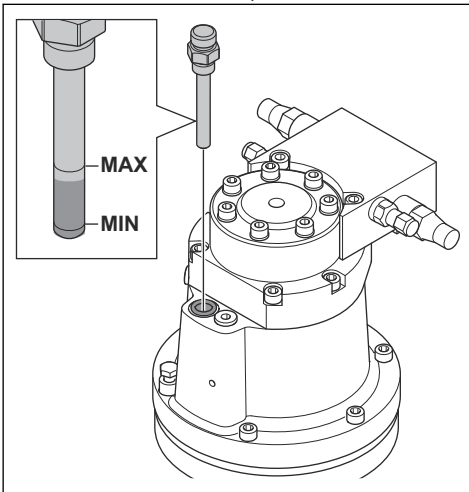
### To do a check of the oil level in the slew motor (DXR 275, DXR 305, DXR 315)

1. Park the product on level ground and stop the product. Refer to *To stop the product (DXR 275, DXR 305, DXR 315) on page 63*.
2. Clean the area around the dipstick for the slew motor to prevent contamination of the system.

3. Remove the dipstick (A).



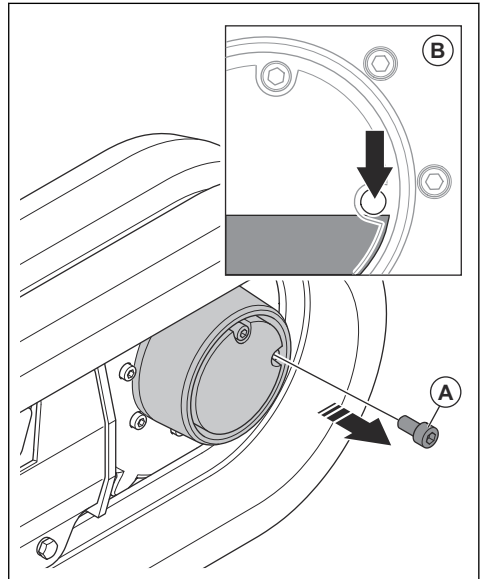
4. Clean the oil from the dipstick.
5. Put the dipstick back in and tighten it.
6. Remove the dipstick again and read the oil level.  
The oil level is correct when it is between the "Max." and "Min." marks on the dipstick.



7. If the oil level is low, fill the oil through the hole for the dipstick. Fill the oil slowly. Refer to *Technical data* on page 108.
8. Do a check of the oil level again.

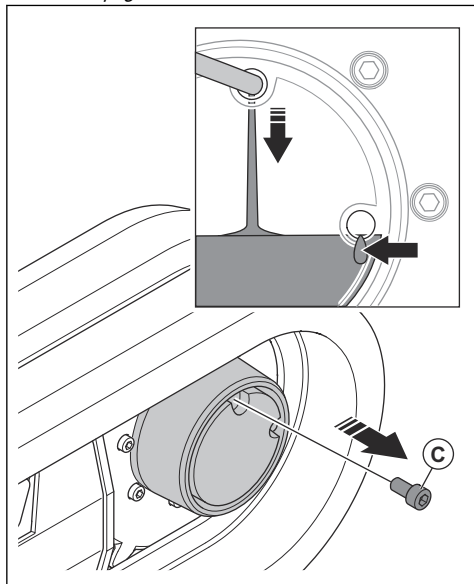
## To do a check of the oil level in the drive motor

1. Start the product. Refer to *To start the product (DXR 145)* on page 53 and *To start the product (DXR 275, DXR 305, DXR 315)* on page 54.
2. Operate the caterpillar tracks until 1 of the plugs is level with the center of the hub. The other plug is in the top position.
3. Park the product on level ground and stop the product. Refer to *To stop the product (DXR 145)* on page 63 and *To stop the product (DXR 275, DXR 305, DXR 315)* on page 63.
4. Clean the area around the plugs to prevent contamination of the drive motor system.
5. Remove the level plug (A).



6. Look in the level plug hole (B). The oil level is correct when the oil is at the edge of the level plug hole.

7. If the oil level is low, open the top plug (C) and fill the oil through the top plug hole. Fill the oil slowly until oil comes out from the level hole. Refer to *Technical data on page 108*.

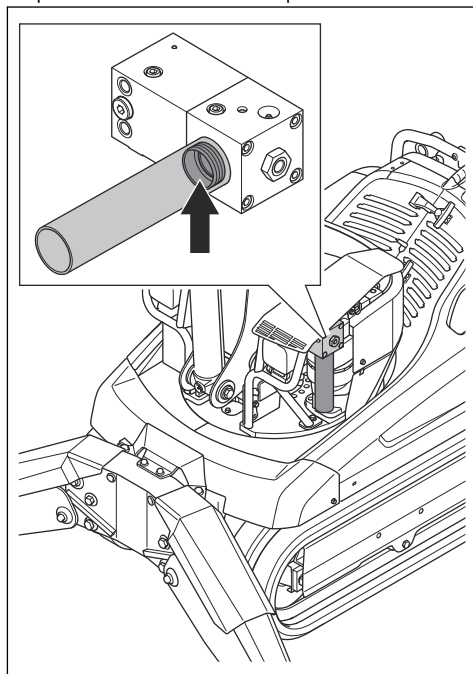


8. Install the level plug and the top plug.

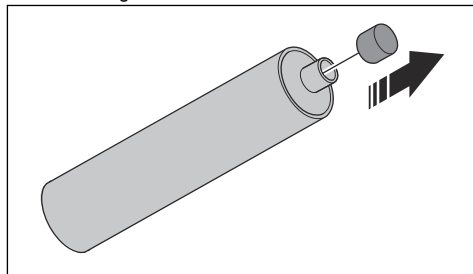
### To do a check of the quantity of grease in the grease cartridge in the breaker grease pump (DXR 145)

1. Park the product on level ground and stop the product. Refer to *To stop the product (DXR 145) on page 63*.

2. Examine the quantity of grease in the grease cartridge. The grease cartridge is empty when the plastic sleeve is at the end stop



3. If the grease cartridge is empty, do the procedure that follows.
  - a) Clean the area around the grease cartridge and the breaker grease pump. This prevents contamination of the breaker grease pump system.
  - b) Remove the grease cartridge from the breaker grease pump.
  - c) Cut the plastic cover from the new grease cartridge.

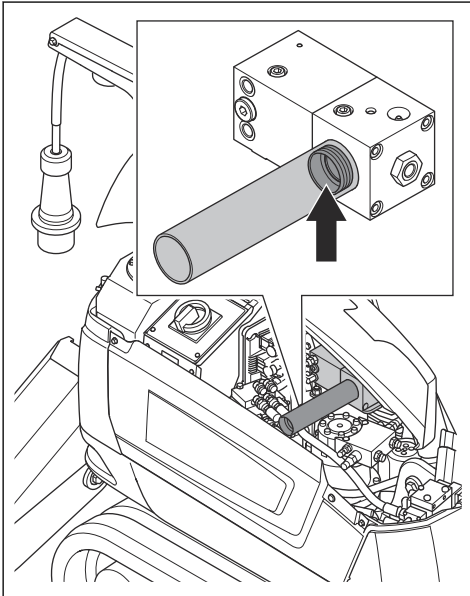


- d) Install a new grease cartridge in the breaker grease pump.

- e) Bleed the breaker grease pump if no grease comes from the new grease cartridge. Refer to *To bleed the breaker grease pump on page 80.*

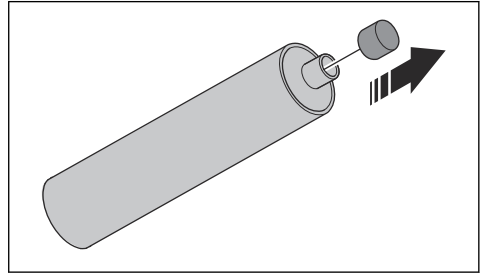
## To do a check of the quantity of grease in the grease cartridge in the breaker grease pump (DXR 275, DXR 305, DXR 315)

1. Park the product on level ground and stop the product. Refer to *To stop the product (DXR 275, DXR 305, DXR 315) on page 63.*
2. Examine the quantity of grease in the grease cartridge. The grease cartridge is empty when the plastic sleeve is at the end stop.



3. If the grease cartridge is empty, do the procedure that follows.
  - a) Clean the area around the grease cartridge and the breaker grease pump. This prevents contamination of the breaker grease pump system.
  - b) Remove the grease cartridge from the breaker grease pump.

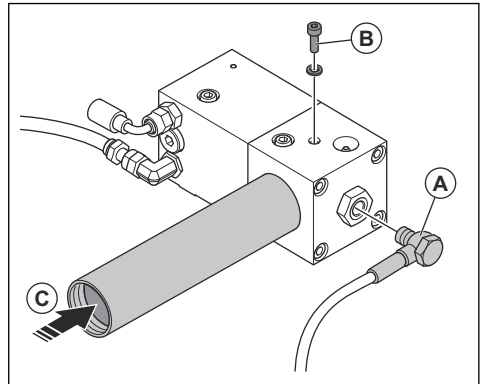
- c) Cut the plastic cover from the new grease cartridge.



- d) Install a new grease cartridge in the breaker grease pump.
- e) Bleed the breaker grease pump if no grease comes from the new grease cartridge. Refer to *To bleed the breaker grease pump on page 80.*

## To bleed the breaker grease pump

1. Remove the exit hose (A).



2. Remove the screw and the washer (B).
3. Carefully push the piston (C) into the grease cartridge until grease comes out of the screw hole. This releases the air in the breaker grease pump.
4. Install the screw and the washer.
5. Disconnect the hydraulic hoses from the installed tool.

**Note:** It is not necessary to remove the tool from the product.

6. Start the product. Refer to *To start the product (DXR 145) on page 53* and *To start the product (DXR 275, DXR 305, DXR 315) on page 54.*
7. Select "Breaker" in the "Tools" menu on the display.
8. Push the right or left top button on the left joystick for approximately 40 seconds to let the hydraulic pressure increase.

9. Make sure that grease comes out of the hole for the exit hose.
10. If grease does not come out, do steps 2 through 8 again.
11. Stop the product. Refer to *To stop the product (DXR 145)* on page 63 and *To stop the product (DXR 275, DXR 305, DXR 315)* on page 63.
12. Connect the exit hose.
13. Connect the hydraulic hoses to the installed tool.

## To examine the shafts and bushings for wear

- Replace the bushings in joints that are loose.
- Replace the shafts if they have wear damage. If there is wear damage on an expanding sleeve, it is not sufficiently tightened.
- Make sure that the pivot joints are lubricated. The lubrication prevents dirt and water in the pivot joints and decreases the wear on the shafts and the bushings.

## To examine the rubber components for wear

- Examine the caterpillar tracks. If you can see metal from the reinforcement cord, replace the caterpillar tracks.
- Examine the outrigger feet. If you can see the plate, replace the outrigger feet.

## To examine the hydraulic hoses for wear



**CAUTION:** Do not use hydraulic hoses that are twisted, worn or damaged.

- Replace a hydraulic hose if you can see the cords.
- Make sure that the hydraulic hoses do not rub against sharp edges.
- Make sure that the hydraulic hoses are not fully extended. Adjust the length of the hydraulic hoses if it is necessary.
- Make sure that the hydraulic hoses are not twisted.
- Make sure that the hydraulic hoses are not too bent.

## To examine the electric cables for wear



**WARNING:** Do the inspection with the motor stopped and the power plug disconnected.

- Examine the insulation of the electric cables for damage. Replace the electric cables if they are damaged.

## To do a check for leakage in the hydraulic system



**CAUTION:** There is an increased risk of mechanical failure if the product has leakage. Replace worn and damaged components.



**WARNING:** Risk of burn injury. The hydraulic oil becomes hot during operation of the product. Do not use your hand to do a check for leakage. Let the product become cool before you do a check for leakage.

- Clean the product regularly to make it easier to find leakage.
- Examine the ground below the product and the baseplate for the tower for hydraulic oil. If you find hydraulic oil, repair the leakage.
- Examine the hose connectors, the quick connections for the hydraulic hoses and the cylinders for hydraulic oil. If you find hydraulic oil, repair the leakage.
- Examine other hydraulic components for strips of dirt. Strips of dirt can identify a leakage.

## To examine the product for cracks

A clean product makes it easier to find cracks. There is an increased risk for cracks at weld seams, holes and sharp corners.

- Examine if there are cracks around the brackets of the outriggers and the bracket of the gear ring. Also examine the weld seams between the product chassis and the caterpillar track sides.
- Examine if there are cracks on the arm system joints, the cylinder brackets and the welds seams.

## To do welding work on the product



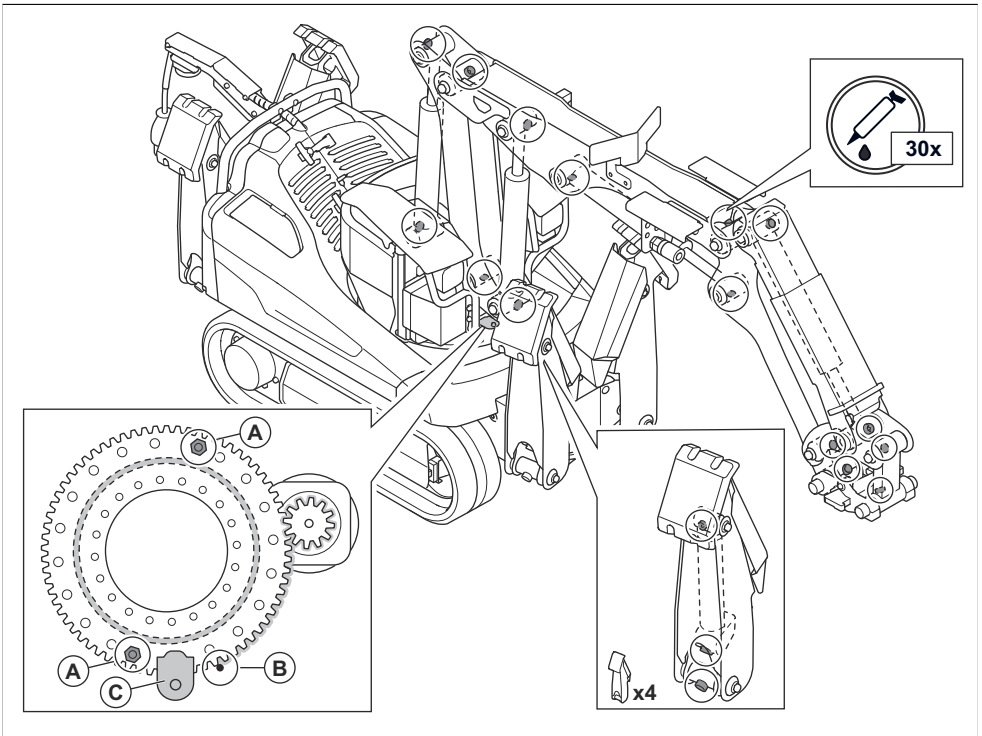
**CAUTION:** Only approved welders must do welding work on the product.

- Speak to an approved Husqvarna service agent.

## To lubricate the product (DXR 145)



**CAUTION:** If the procedure for lubrication is not followed, there is a high risk that the seals of the gear ring are pushed out. If the seals are pushed out, dirt can go into the ball bearing of the gear ring and cause damage. Damaged seals must be replaced.

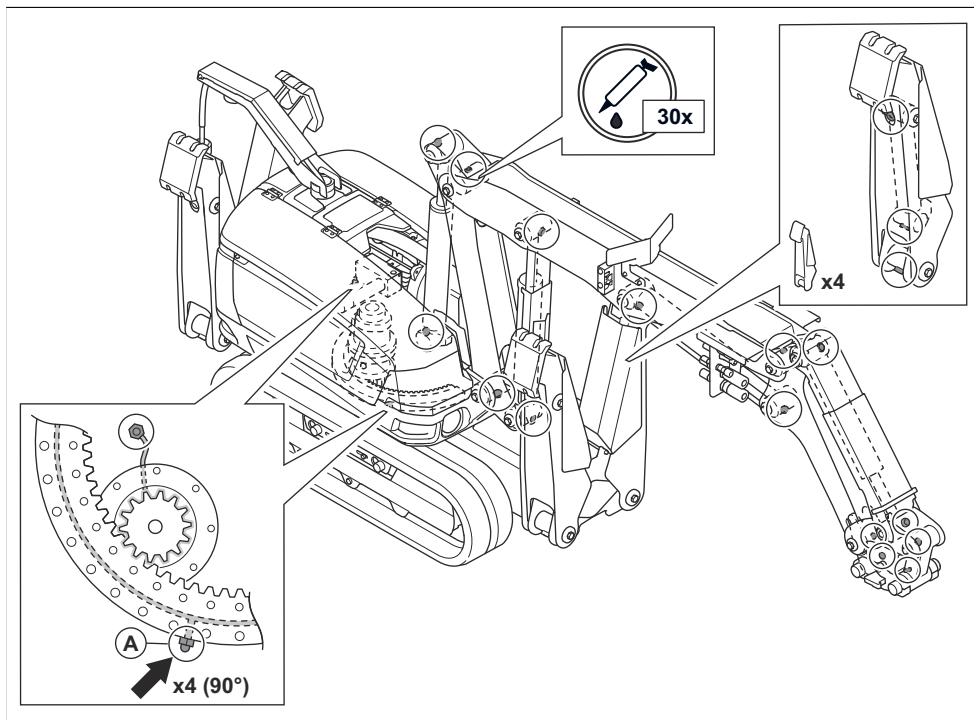


1. Move the product until you have access to all grease nipples. The grease nipples are shown in the illustration.
2. Stop the product and disconnect the power cord. Refer to *To stop the product (DXR 145)* on page 63.
3. Clean the grease nipples.
4. Replace broken or blocked grease nipples.
5. Lubricate the grease nipples with a grease gun. Push the grease gun 2–3 times or until grease can be seen at the edges. Refer to *Lubricants* on page 111.
6. Lubricate all joints and cylinder mountings in the outriggers.
7. Lubricate all joints and cylinder mountings in the arm system.
8. Lubricate the 2 grease nipples (A) on the gear ring bearing and the gears of the gear ring (B).
  - a) Extend the arm system until the arm system points straight forward.
  - b) Open the inspection door (C) on the tower to get access to the 2 grease nipples.
  - c) Lubricate the grease nipples with a grease gun. Push the grease gun 2–3 times.
  - d) Start the product. Make sure that you are at a safe distance. Refer to *To start the product (DXR 145)* on page 53.
  - e) Turn the tower 180°.
  - f) Stop the product and disconnect the power cord. Refer to *To stop the product (DXR 145)* on page 63.
  - g) Lubricate the grease nipples again with a grease gun. Push the grease gun 2–3 times.

### To lubricate the product (DXR 275, DXR 305, DXR 315)



**CAUTION:** If the procedure for lubrication is not followed, there is a high risk that the seals of the gear ring are pushed out. If the seals are pushed out, dirt can go into the ball bearing of the gear ring and cause damage. Damaged seals must be replaced.

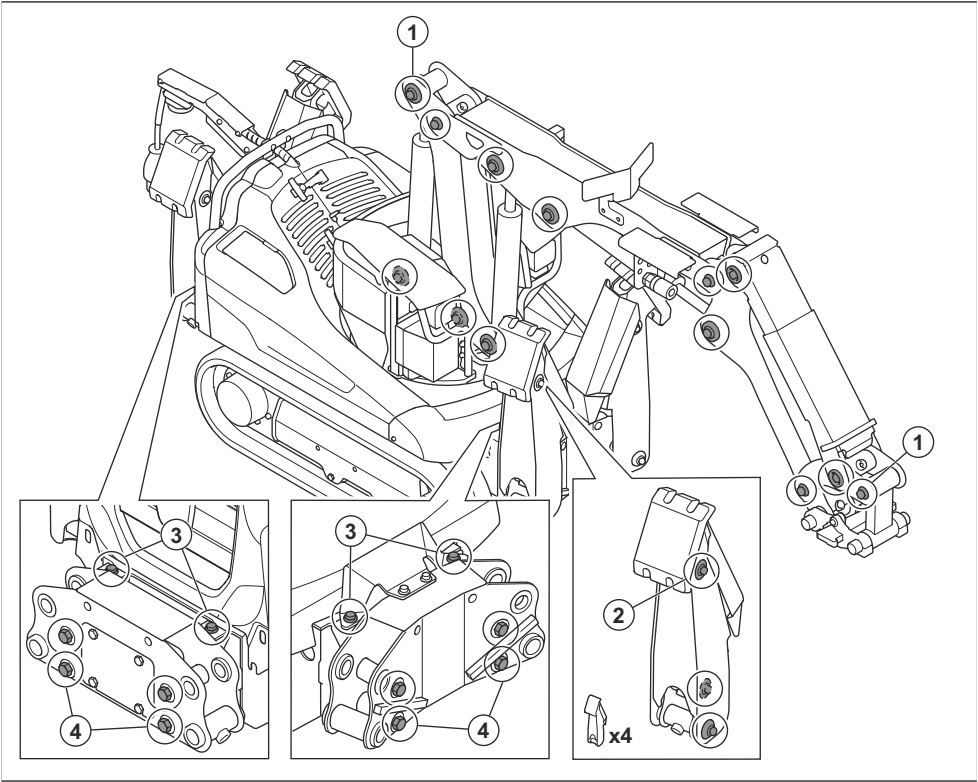


1. Move the product until you have access to all grease nipples. The grease nipples are shown in the illustration.
2. Stop the product and disconnect the power cord. Refer to *To stop the product (DXR 275, DXR 305, DXR 315) on page 63*.
3. Clean the grease nipples.
4. Replace broken or blocked grease nipples.
5. Lubricate the grease nipples with a grease gun. Push the grease gun 2–3 times or until grease can be seen at the edges. Refer to *Lubricants on page 111*.
6. Lubricate all joints and cylinder mountings in the outriggers.
7. Lubricate all joints and cylinder mountings in the arm system.
8. Lubricate the grease nipples (A) on the ball bearing of the gear ring.
  - a) Lubricate the grease nipples with a grease gun. Push the grease gun 2–3 times.
  - b) Start the product. Make sure that you are at a safe distance. Refer to *To start the product (DXR 275, DXR 305, DXR 315) on page 54*.
- c) Turn the tower 90°.
- d) Stop the product and disconnect the power cord. Refer to *To stop the product (DXR 275, DXR 305, DXR 315) on page 63*.
- e) Do this procedure 3 times. The ball bearings of the gear rings and the gears of the gear ring are then lubricated at 4 points.

## To do a check of the screw joints

- Make sure that all components are correctly attached and that there is no wear damage.
- Use a torque wrench to do a check of the torque of the expanding shafts. Torque the expanding shafts to the correct torque. Refer to *Tightening torques (DXR 145) on page 84* and *Tightening torques (DXR 275, DXR 305, DXR 315) on page 85*.
  - a) Tighten the expanding shafts regularly. After initial torque, operate the product through a full range of movements 2–3 times. Do a check of the torque after 8 hours and 40 hours.
  - b) If an expanding shaft has moved out of position, move it to the center. Then tighten the expanding shaft again.

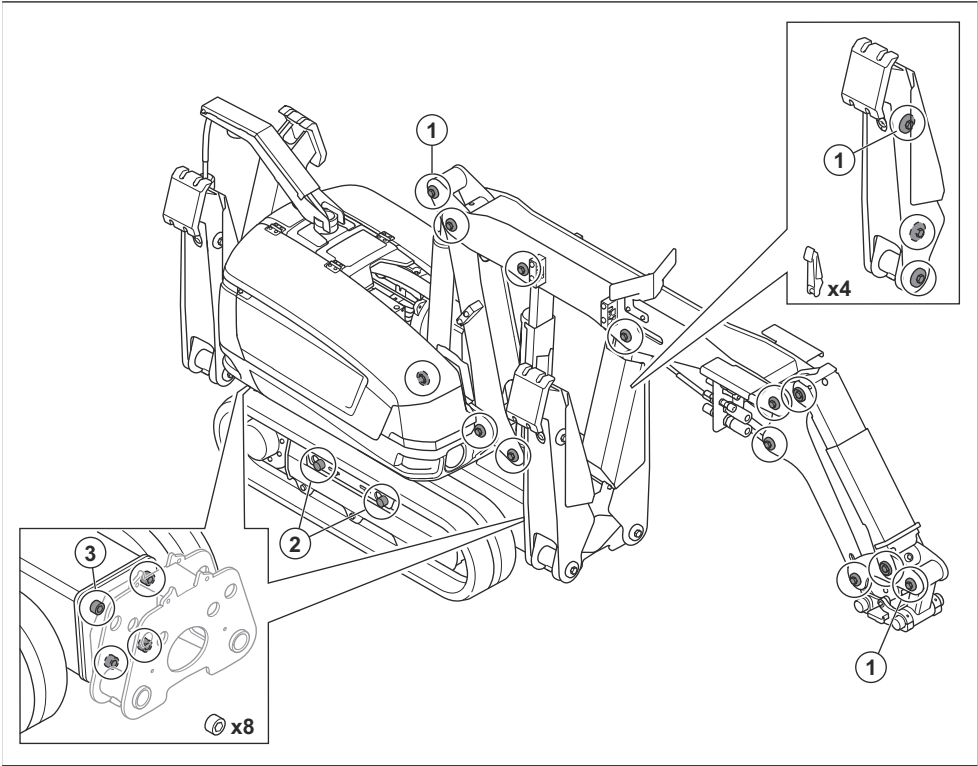
Tightening torques (DXR 145)



Position	Product part	Tightening torque, Nm
1	Shafts, arm system	204
2	Shafts, outrigger (M14)	128
3	Support leg bracket (M12)	81
4	Support leg bracket (M16)	197



Tightening torques (DXR 275, DXR 305, DXR 315)



Position	Product part	Tightening torque, Nm
1	Shafts, arm system and outriggers	204
2	Caterpillar track unit	500
3	Support leg bracket	650

To examine the brake functions



**WARNING:** Be careful when you examine the brake functions. Risk of injury.

1. Make sure that no persons are in the work area.

2. Make sure that you are above the product when you operate on a slope.

3. Start the product. Refer to *To start the product (DXR 145) on page 53* and *To start the product (DXR 275, DXR 305, DXR 315) on page 54*.
4. Do a check of the brake function for the drive motor. Do the procedure that follows.

a) Operate the product on a slope.

b) Release the joysticks.

c) Make sure that the product brakes and stays stationary.

5. Do a check of the brake function for the slew motor. Do the procedure that follows.

a) Operate the product on a slope.

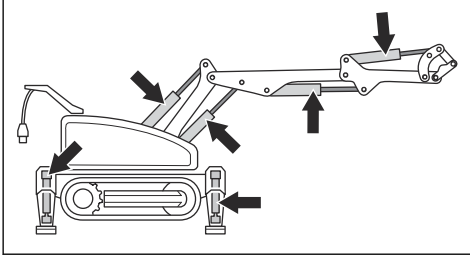
b) Turn the arm system.

c) Release the joysticks.

- d) Make sure that the arm system brakes and stops slowly.
6. Stop the product. Refer to *To stop the product (DXR 145) on page 63* and *To stop the product (DXR 275, DXR 305, DXR 315) on page 63*.

## To examine the cylinders

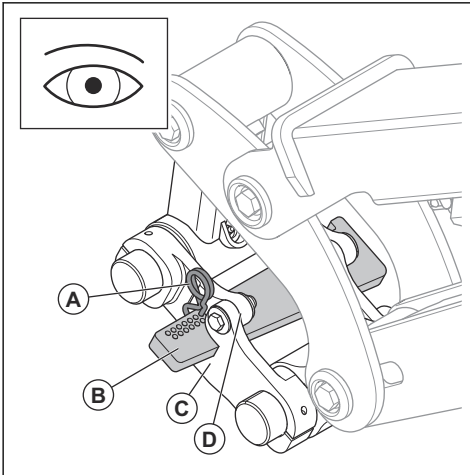
1. Extend the cylinders to the end position.



2. Examine the cylinder tubes. Replace damaged cylinder tubes immediately.
3. Examine the piston rods. Replace damaged and bent piston rods immediately.
4. Examine the scraper. Replace a damaged scraper immediately.

## To examine the tool hitch

1. Examine the pin (A) and the wedge (B) in the tool hitch for wear and damage. Replace the wedge if it is worn or damaged. Always use original spare parts.



2. Make sure that the tool hitch (C) is not damaged.
3. Make sure that the tool hitch is correctly attached to the product.
4. Make sure that the joint is not damaged (D).

## To do a check of the tool

- Make sure that there is no risk of injury for the operator or bystanders when the tool is used.
- Refer to the operator's manual for the tool for more information.

## Caterpillar track tension

Correct track tension is important for the servicing life of the caterpillar tracks.

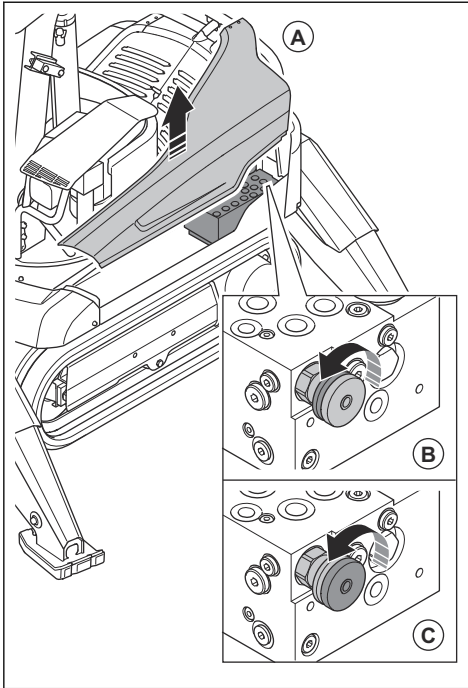
If demolition material goes into the caterpillar tracks during operation, a spring function in the caterpillar tracks prevents operation stop. The spring function has a hydraulic accumulator. If the spring function of the caterpillar tracks does not operate, the hydraulic accumulator can be defective.

The tension function of the caterpillar tracks has check valves. The tension of the caterpillar tracks can decrease if 1 of the check valves is blocked or damaged. For instructions on how to clean the check valves, refer to *To clean the check valves for the caterpillar track tension (DXR 145) on page 88* and *To clean the check valves for the caterpillar track tension (DXR 275, DXR 305, DXR 315) on page 89*.

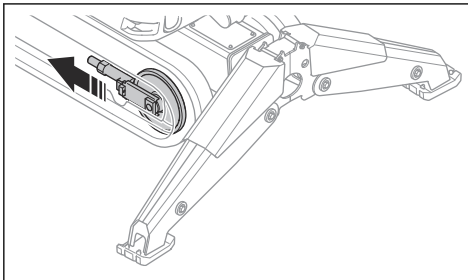
## To remove and install the caterpillar tracks (DXR 145)

1. Start the product. Refer to *To start the product (DXR 145) on page 53*.
2. Park the product on level ground.
3. Fully extend the outriggers. Refer to *To operate the outriggers on page 62*.
4. Stop the product. Refer to *To stop the product (DXR 145) on page 63*.

5. Remove the left side cover (A).



6. Turn the lock knob counterclockwise (B).
7. Turn the valve for caterpillar track tension (C) counterclockwise to the end position to open the valve. This releases the pressure.
8. Do the procedure that follows on each side of the product.
  - a) Push the tension wheel to the center.

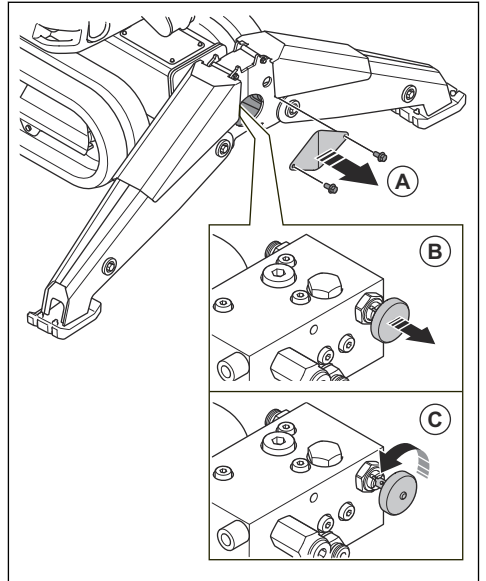


- b) Remove the caterpillar tracks.
  - c) Install new caterpillar tracks.
9. Turn the valve for caterpillar track tension clockwise to close the valve.
10. Turn the lock knob clockwise.
11. Install the left side cover.

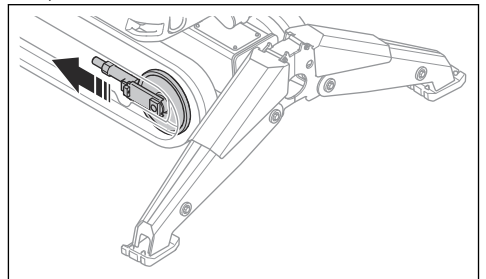
12. Start the product and do automatic caterpillar track tension. Refer to *To do automatic caterpillar track tension on page 88*.

### To remove and install the caterpillar tracks (DXR 275, DXR 305, DXR 315)

1. Start the product. Refer to *To start the product (DXR 275, DXR 305, DXR 315) on page 54*.
2. Park the product on level ground.
3. Fully extend the outriggers. Refer to *To operate the outriggers on page 62*.
4. Stop the product. Refer to *To stop the product (DXR 275, DXR 305, DXR 315) on page 63*.
5. Remove the inspection cover (A).



6. Pull out and turn the valve for caterpillar track tension  $\frac{1}{4}$  turn counterclockwise to lock it in an open position (B) and (C). This releases the pressure.
7. Do the procedure that follows on each side of the product.
  - a) Push the tension wheel to the center.

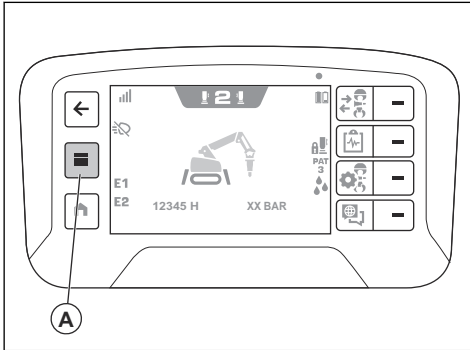


- b) Remove the caterpillar tracks.
  - c) Install new caterpillar tracks.
8. Pull out and turn the valve for caterpillar track tension clockwise and release it into closed position.
  9. Install the inspection cover.
  10. Start the product and do the automatic caterpillar track tension. Refer to *To do automatic caterpillar track tension on page 88*.

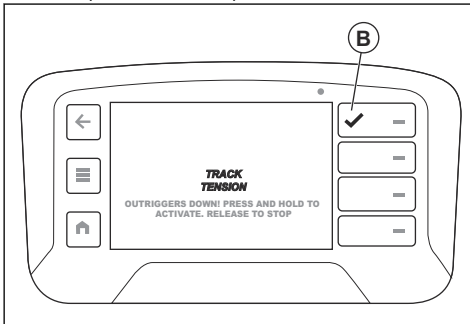
## To do automatic caterpillar track tension

Automatic caterpillar track tension can be done in 2 procedures.

- Automatic caterpillar track tension can be done in the display. Do the procedure that follows.
  - a) Press the menu button (A) on the remote control.



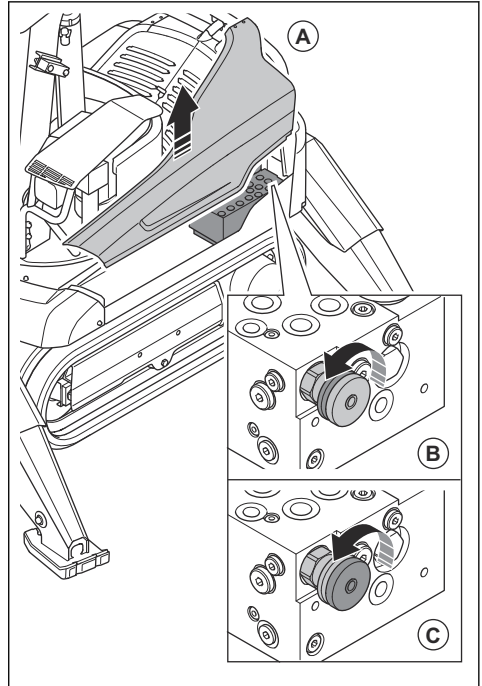
- b) Select "Track tension" in the "Functions" menu on the display.
- c) Press and hold the button (B) to start automatic caterpillar track tension. Release the button to stop automatic caterpillar track tension.



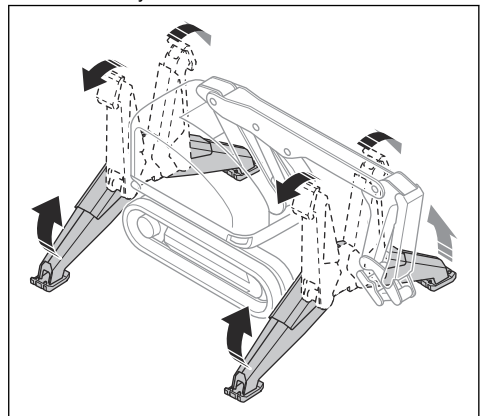
- Automatic caterpillar track tension can be done when you operate the outriggers. Do the procedure that follows.
  - a) Operate the outriggers up and then down. Refer to *To operate the outriggers on page 62*.

## To clean the check valves for the caterpillar track tension (DXR 145)

1. Remove the left side cover (A).



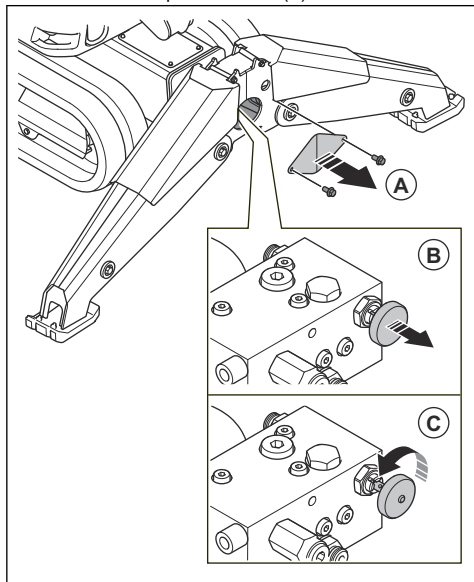
2. Turn the lock knob counterclockwise (B).
3. Turn the valve for caterpillar track tension (C) counterclockwise to the end position to open the valve. This releases the pressure.
4. Operate the outriggers up and down. Refer to *To operate the outriggers on page 62*. The hydraulic fluid in the system cleans the check valves.



5. Turn the valve for caterpillar track tension clockwise to close the valve.
6. Turn the lock knob clockwise.
7. Operate the outriggers up and down to do automatic caterpillar track tension.
8. Install the left side cover.

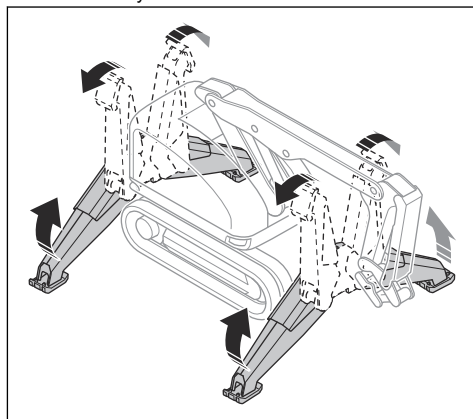
### To clean the check valves for the caterpillar track tension (DXR 275, DXR 305, DXR 315)

1. Remove the inspection cover (A).



2. Pull out and turn the valve for caterpillar track tension  $\frac{1}{4}$  turn counterclockwise to lock it in an open position (B) and (C). This releases the pressure.

3. Operate the outriggers up and down. Refer to *To operate the outriggers on page 62*. The hydraulic fluid in the system cleans the check valves.



4. Turn the valve for caterpillar track tension clockwise and release it into closed position.
5. Operate the outriggers up and down to do automatic caterpillar track tension.
6. Install the inspection cover.

### Remote control batteries

The remote control has 2 battery slots. Each battery has a state of charge symbol on the display and the information center display, refer to *Symbols in the top bar on the display on page 14* and *Information center display on page 52*. It is not possible to operate the remote control if the state of charge of the remote control batteries is too low.

The operation time for fully charged remote control batteries is approximately 12 hours. Cold weather can decrease the operation time. If the display is used frequently, the operation time can decrease.

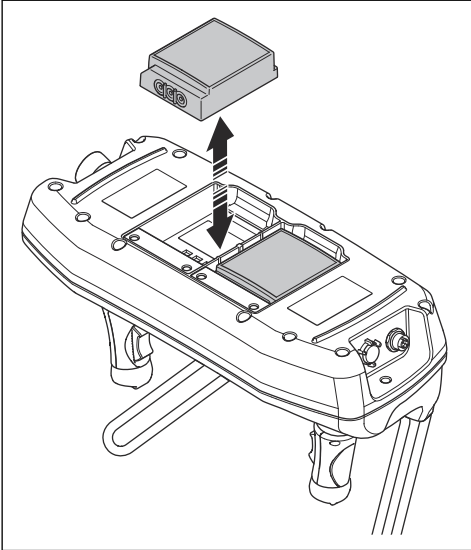
If the batteries do not operate for some days, the display for state of charge is red. They are in transportation mode to save energy and the remote control cannot start to operate. Before use, the batteries must be connected to a charger.

It is necessary to charge the batteries before you use the remote control for the first time.

### To remove and install the remote control batteries in the remote control

1. Turn the remote control to get access to the rear side where the batteries are.

2. Remove or install the remote control batteries.

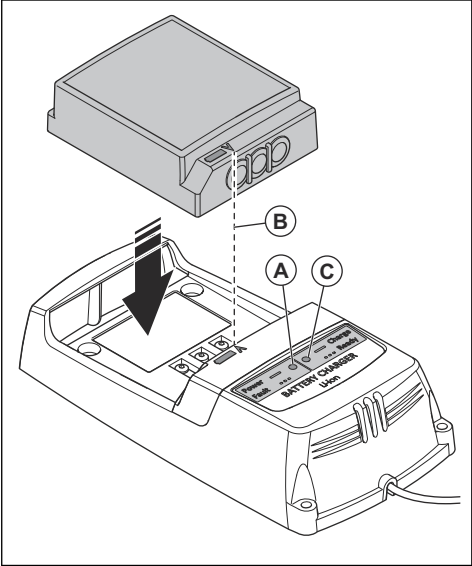


**To charge the remote control batteries with the battery charger**

Charging time for an empty remote control battery is approximately 3 hours with the battery charger. When you charge the remote control batteries, the temperature must be between 10°C/50°F and 45°C/113°F.

1. Remove the empty remote control battery from the remote control. Refer to *To remove and install the remote control batteries in the remote control on page 89.*

2. Connect the battery charger to a power outlet. The power indicator (A) for the battery becomes red. Refer to *Indicator for the battery status on page 90.*



3. Connect the remote control battery to the battery charger. Make sure that the arrows (B) on the remote control battery and the battery charger align. The indicator (C) for the battery status on the battery charger flashes green when the remote control battery charges.
4. When the remote control battery is fully charged, the indicator becomes green. Remove the remote control battery from the battery charger.
5. Disconnect the battery charger from the mains outlet.

**Indicator for the battery status**

The indicator for the battery status is 2 LEDs on the battery charger: Battery Power LED (red) and Battery Status LED (green).

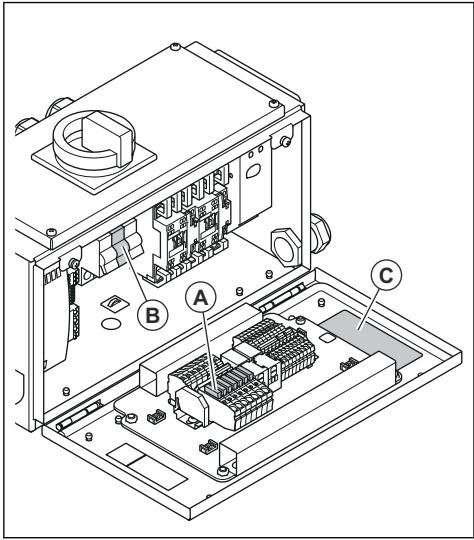
Power LED	Status LED	Indication
Red light	OFF	The charger is ON. No battery in the charger.
Red light	Green light	The charger is ON. The battery is fully charged.
Red light	Green light flash	The charger is ON. The battery charges.
Red light flash	OFF	Error on the battery charger, or temperature out of the charging span.

### To replace a fuse (DXR 145)



**WARNING:** Electricity can cause serious injury and death. Read the safety instructions in this manual carefully and make sure that you understand the instructions before you do servicing on the product.

1. Stop the product and disconnect the power cord. Refer to *To stop the product (DXR 145) on page 63*.
2. Open the cover of the electrical enclosure.
3. Replace blown fuses. Refer to the decal (C) and *Fuse overview on page 91*.



**Note:** (A) is Fuse F2-F8, (B) is Fuse F1.

4. Close the cover of the electrical enclosure.

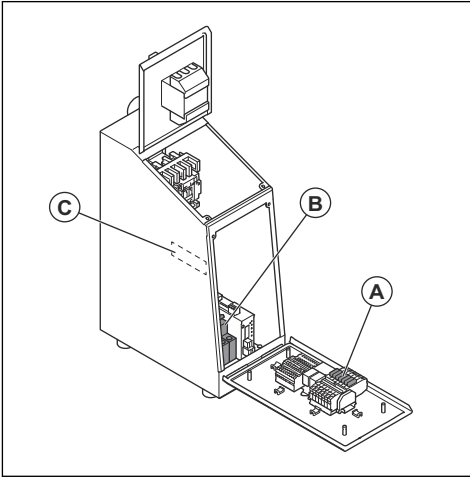
### To replace a fuse (DXR 275, DXR 305, DXR 315)



**WARNING:** Electricity can cause serious injury and death. Read the safety instructions in this manual carefully and make sure you understand the instructions you do servicing on the product.

1. Stop the product and disconnect the power cord. Refer to *To stop the product (DXR 275, DXR 305, DXR 315) on page 63*.
2. Open the cover of the electrical enclosure.

3. Replace blown fuses. Refer do the decal (C) and *Fuse overview on page 91*.



**Note:** (A) is Fuse F2-F8, (B) is Fuse F1.

4. Close the cover of the electrical enclosure.

### Fuse overview

Fuse	Cur- rent	Volt- age	Description of protected components
F1	4 A	400 VAC	T1:AC/DC, KE4: Power mo- tor
F2	15 A	24 VDC	M2: Cooling Fan
F3	10 A	24 VDC	M3: Oil filling pump
F4	10 A	24 VDC	KE1: PLC, Master
F5	10 A	24 VDC	KE2: PLC, 1/0 Slave 1
F6	10 A	24 VDC	KE3: PLC, 1/0 Slave 2
F7	1 A	24 VDC	KE4: Power meter
F8	3 A	24 VDC	KE5: Radio receiver

### Product software

Speak to your service agent if there is a problem with the product software or for updates that can be necessary.

## To do after maintenance

1. Do a test operation after maintenance is done.



**WARNING:** Risk of injury and damage. Incorrectly installed remote control, cables or hoses can have an

unwanted effect on the movements of the product.

2. If there is a fault, immediately stop the product. Refer to *To stop the product (DXR 145) on page 63* and *To stop the product (DXR 275, DXR 305, DXR 315) on page 63*.

## Troubleshooting

### Troubleshooting

Problem	Cause	Solution
The product does not start.	The main switch is off.	Do a check of the main switch.
	The extension cable is disconnected or damaged.	Connect the extension cable. Replace the extension cable if it is damaged.
	The emergency stop button on the product is engaged.	Turn the emergency stop button on the product clockwise to disengage.
	The machine stop button on the remote control is engaged.	Turn the machine stop button on the remote control clockwise to disengage.
	Too low mains voltage to the product.	Do a check of the power supply. Make sure that correct voltage is used.
	A mains fuse is blown.	Make sure that the mains voltage is compatible with the product and that the correct fuses are used.
		Do a check of the power cord.
	No radio communication between the product and the remote control.	Do a check of the radio signal. If there is no radio signal, examine if the batteries for the remote control are charged and correctly installed.
		Make sure that correct remote control is used.
		Make sure that the communication cable and the antenna cable on the product are correctly attached.
		Do a test operation of the product with a cable between the product and the remote control.
The fuses for the mains connection blow immediately after starting the product.	The fuse for the mains connection have too low rating value.	Make sure that the mains voltage is compatible with the product and that the correct fuses are used.
	The electric motor is defective.	Speak to an approved service agent.
	The power cord is defective.	Replace the power cord.
	The hydraulic pump is defective.	Speak to an approved service agent.



Problem	Cause	Solution
The motor operates but the hydraulic functions have no power or do not operate.	There is not sufficient hydraulic oil in the hydraulic oil tank. There is noise from the hydraulic pump.	Stop the product immediately. Do a check for leaks in the hydraulic system. Replace parts with new parts if it is necessary. Fill the hydraulic oil tank with hydraulic oil.
	The circulation valve is continuously open.	Do a check of the diode on the valve cap at the bottom of valve block 1. If the circulation valve is open, the diode does not light up. Do a check of the cable to the control module.
	The standby pressure is too low.	Speak to an approved service agent.
	There is a fault in the pump regulator.	Speak to an approved service agent.
The arm system movements and tool function operates slowly.	The knob for adjustment of the tool speed and/or the knob for adjustment of the product speed is turned counterclockwise.	Turn the knob for adjustment of the tool speed and/or the knob for adjustment of the product speed clockwise.
	The standby pressure is too low.	Start the remote control. Do not use the controls on the remote control. Do a check of the standby pressure on the remote control display. The pressure must be $20 \pm 1$ bar/ $290 \pm 14.5$ psi. If the pressure value is different, adjust the pressure.
A function on the product operates slowly.	There is internal leakage in the cylinder.	Extend the cylinder to its end position without load. Do a check of the pump pressure in the remote control display. The pump must operate at maximum pressure. If the pump does not operate at maximum pressure, speak to an approved service agent.
	The hydraulic hose is blocked.	Operate the cylinder without load. Do a check of the pump pressure in the remote control display. If you get maximum pressure but not full speed on the cylinder, the hydraulic hose is blocked. Replace the hydraulic hose.
	There is a fault in the pilot control valve.	Speak to an approved service agent.
A function on the product does not work.	A joystick is not in a neutral position when you start the remote control.	Start the remote control again with the joysticks in neutral position.
	There is a fault in the pilot control valve or the spool in the pilot control valve is blocked or damaged.	Speak to an approved service agent.
The product lowers on the outriggers.	There is leakage in the check valves in the outrigger cylinders.	Speak to an approved service agent.
The arm system makes an irregular movements.	The product/hydraulic oil is too cold.	Let the product become warm.
	There is air in the pilot control valve.	Operate the product with no load until the air and the oil are separated.
	The pilot control valve or the spool in the pilot control valve is defective because of contamination.	Speak to an approved service agent.
	There are broken O-rings in the pilot control valves.	Speak to an approved service agent.
	There is a fault in the pilot pressure circuit.	Speak to an approved service agent.

Problem	Cause	Solution
The cylinder lowers. <sup>1</sup>	There is a contamination in the hydraulic system.	Examine the hydraulic system for leaks. Change the hydraulic oil and the hydraulic oil filter if it is necessary.
	There is a leakage in the cylinder.	Find the leak and replace the defective components.
	There is a fault in the counterbalance valve.	Speak to an approved service agent.
	The pilot control valve or the spool in the pilot control valve is defective.	Speak to an approved service agent.
The hydraulic system is too hot.	The hydraulic oil cooler is blocked or clogged.	Clean the hydraulic oil cooler.
	The cooling fan do not rotate or is defective.	Do a check of the cooling fan in the electrical enclosure.  Do a check of the blades of the cooling fan. Replace the cooling fan if it is damaged.
	The ambient temperature is too high.	Use external equipment to cool the product.
	A hose or a quick coupling is defective.	Replace the damaged component.
	The maximum pressure or standby pressure in the pump is too high.	Speak to an approved service agent.
	The main pipe or the pipe to the tool is blocked.	Replace the damaged component.
	The power consumption is too high because of operation with defective or incorrect tool.	Make sure that the tool pressure and flow are compatible with the product.
	The hydraulic pump is defective.	Speak to an approved service agent.
There is noise in the hydraulic system.	Not sufficient hydraulic oil in the hydraulic oil tank.	Stop the product immediately. Examine the hydraulic system for leaks. Replace with new parts if it is necessary. Fill the hydraulic oil tank with hydraulic oil.
	There is air in the hydraulic oil.	Operate the product with no load until the air and the oil are separated.
	The hydraulic pump is defective.	Speak to an approved service agent.
The hydraulic oil has different color.	If the hydraulic oil is grey, there is water in the hydraulic system.	Examine where the water enters the hydraulic system. If it is necessary, replace damaged components. Replace the hydraulic oil and the hydraulic oil filter.
	If the hydraulic oil is black, there is carbon formation in the hydraulic system because of too high operation temperature.	Find the cause for the too hot operation temperature. Replace damaged components if it is necessary. Replace the hydraulic oil and the hydraulic oil filter.
The remote control does not start.	The remote control batteries are not charged.	Charge the remote control batteries.
	The batteries are in transportation mode. Refer to <i>Remote control batteries on page 89</i> .	Connect the batteries to a charger.

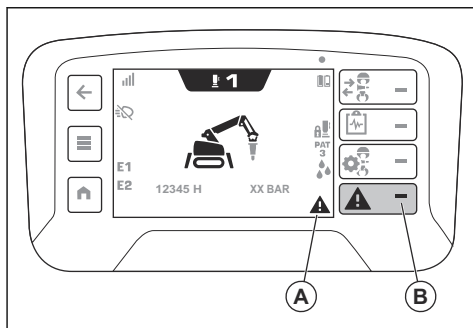
<sup>1</sup> Cylinder 3 and 4 do not have counterbalance valves. It is usual that cylinder 3 and 4 slowly lowers approximately 1 cm/min or 0.39 in/min.

Problem	Cause	Solution
The remote control is on but the control functions are off.	The radio communication receiver on the product is off.	Make sure that the radio communication receiver on the product is on.
	No pairing operation between the product and the remote control is done.	Do a pairing operation between the product and the remote control.
	The remote control is not in operation range. The remote control is too far from the product.	Make sure that the remote control is in the operation range.
	There is a fault in a component.	Connect the remote control and the product with a CAN bus cable.
	No radio communication between the remote control and the product because of radio communication interference.	Stop all other radio communication equipment that can cause interference.
	There is a fault in the antenna for the radio communication receiver.	Make sure that the antenna is correctly installed. The antenna must align vertically with the remote control and be in clear view from the remote control.
Some of the control functions on the remote control are off.	The joysticks and the buttons on the joysticks are not in the neutral position when you start the remote control.	Make sure that the joysticks and the buttons on the joysticks are in the neutral position when you start the remote control.
	There is a fault in the joysticks, the knobs and/or the switches.	In the display, do a check of the "Control diagnostics". Press the menu button on the remote control. Select "Control diagnostics" in the "Controls" menu on the display.
	The system is off because of safety risks.	In the display, do a check of the "Control diagnostics". Press the menu button on the remote control. Select "Control diagnostics" in the "Controls" menu on the display.
	There are damaged or loose cables between the radio communication receiver and the product.	Connect the cables. Replace the cables if the cables are damaged.
The information center display is red.	The system is off because of an error.	Do the troubleshooting procedure on error codes that starts with the numbers "11" or "81". Refer to <i>Fault codes and descriptions on page 96</i> .

## Messages on the display

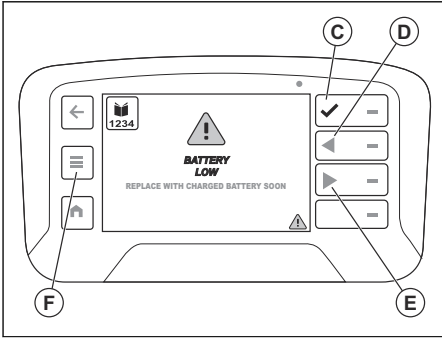
In the bottom bar (A) of the display you can see active messages or faults. To show the message push the

button adjacent to the quick action with the triangle symbol (B).



There are 4 different types of messages:

- Information messages help and give hints on how to operate the product. An information message is shown as an information symbol in the bottom bar.
- Caution messages show that something is not correct. A caution message is shown as a yellow triangle in the bottom bar.
- Warning messages show faults or safety defects that can cause mechanical damage. The product will stop in a short time. The warning is first shown in full screen with a red warning triangle and text. After you accepted (C) the warning message, the warning is shown as a red triangle symbol in the bottom bar (A).



- Error messages show when the product is stopped because of a fault or safety defect. The error message is shown in red with a white triangle and white text. When the fault is corrected you must restart the product, turn the OFF/ON/START switch to ON position. Then turn the OFF/ON/START switch to START position.

If there are more than 1 active message, the newest message is added from the right. Push the buttons adjacent to the arrows (D and E) to move between the messages in the display.

You can also find a fault list in the "Active faults" in "Machine status" in the menu button (F). Refer to "Machine status" menu on page 38.

### Fault codes and descriptions

The fault code numbers for the product are shown on the display. The fault code numbers for the remote control (fault code numbers from 1001) are shown on the information center display.

Fault code number	Message in the display	Cause	Solution
1	"Softstart error Start not possible"	General error in soft starter.	Speak to Husqvarna service.
2	"Softstart error Overload"	Softstart is overload. The input voltage is out of range.	Do a check of the input voltage. Let the product become cool. If the problem stays, speak to Husqvarna service.
3	"Wrong incoming voltage Phase lost"	Incorrect input voltage and phase loss.	Do a check of the input voltage and the cables.
5	"Wrong incoming voltage Grid frequency"	The grid frequency is out of range.	Do a check of the voltage source.
6	"Wrong incoming voltage Voltage too low"	The input voltage is too low.	Do a check of the input voltage and the cables.
7	"Wrong incoming voltage Voltage too high"	The input voltage is too high.	
10	"Grid frequency Out of range"	The grid frequency does not agree with the product frequency setting.	Speak to Husqvarna service.

Fault code number	Message in the display	Cause	Solution
11	"Oil temperature High"	The oil temperature is too high. The operation speed is decreased and the tool is disabled.	Operate the product in idle mode to cool down the oil. Clean the hydraulic oil cooler and do a check of the cooling fan.
12	"Oil temperature Low"	The oil temperature is too low. The operation speed is decreased and the tool is disabled.	<ol style="list-style-type: none"> <li>1. Operate the product in idle state.</li> <li>2. Extend the outriggers. First operate the caterpillar tracks slowly and the more quickly.</li> <li>3. Do a check of the settings for the adjustable temperature limit.</li> <li>4. Do a check of the temperature sensor (T4) and the cables to the sensor.</li> <li>5. Make sure that the hydraulic oil grade, ISO VG, agree with the operation temperature. Refer to <i>Hydraulic oil</i> on page 110.</li> </ol>
13	"Oil pressure Too high"	The oil pressure is too high.	Speak to Husqvarna service.
14	"Safety Error Idle valve"	-	Speak to Husqvarna service.
16	"Hydraulic oil level Low"	The hydraulic oil level is too low.	Fill the hydraulic oil tank with hydraulic oil.
17	"Oil filter Service needed"	The pressure of the hydraulic oil filter is too high.	Replace the hydraulic oil filter.
19	"Remote control Communication lost"	Lost communication to the remote control for more than 120s.	Do a new pairing operation between the remote control and the product. Refer to <i>To do a pairing operation between the remote control and the product (DXR 145)</i> on page 57 and <i>To do a pairing operation between the remote control and the product (DXR 275, DXR 305, DXR 315)</i> on page 58.
20	"Motor temperature Too high"	The motor temperature is too high. The operation speed is decreased and the tool is disabled.	Operate the product in idle mode.
34	"Machine type Not selected"	-	Speak to Husqvarna service.
36	"Remote control Impact detected"	The remote control has fallen on the ground. The product will ignore the signals from the joysticks.	Accept the warning message on the display. Make sure that the remote control is not damaged before you operate.
57	"Cable error Loss of function"	The cable to cylinder 1 valve is damaged.	Speak to Husqvarna service.

<b>Fault code number</b>	<b>Message in the display</b>	<b>Cause</b>	<b>Solution</b>
58	"Cable error Loss of function"	The cable to cylinder 1 valve is damaged.	Speak to Husqvarna service.
60	"Cable error Loss of function"	The cable to cylinder 2 valve is damaged.	Speak to Husqvarna service.
61	"Cable error Loss of function"	The cable to cylinder 2 valve is damaged.	Speak to Husqvarna service.
63	"Cable error Loss of function"	The cable to cylinder 3 valve is damaged.	Speak to Husqvarna service.
64	"Cable error Loss of function"	The cable to cylinder 3 valve is damaged.	Speak to Husqvarna service.
66	"Cable error Loss of function"	The cable to cylinder 4 valve is damaged.	Speak to Husqvarna service.
67	"Cable error Loss of function"	The cable to cylinder 4 valve is damaged.	Speak to Husqvarna service.
70	"Cable error Loss of function"	The cable to cylinder 5 valve is damaged.	Speak to Husqvarna service.
71	"Cable error Loss of function"	The cable to cylinder 5 valve is damaged.	Speak to Husqvarna service.
75	"Cable error Loss of function"	The cable for the custom tool is damaged. The hydraulic oil pressure is higher in port A than port B.	Speak to Husqvarna service.
76	"Cable error Loss of function"	The cable for the custom tool is damaged. The hydraulic oil pressure is higher in port B than port A.	Speak to Husqvarna service.
78	"Cable error Loss of function"	The cable for the Extra function 1 valve is damaged. The hydraulic oil pressure is higher in port A than port B.	Speak to Husqvarna service.
79	"Cable error Loss of function"	The cable for the Extra function 1 valve is damaged. The hydraulic oil pressure is higher in port B than port A.	Speak to Husqvarna service.
81	"Cable error Loss of function"	The cable for the Extra function 2 valve is damaged. The hydraulic oil pressure is higher in port A than port B.	Speak to Husqvarna service.
82	"Cable error Loss of function"	The cable for the Extra function 2 valve is damaged. The hydraulic oil pressure is higher in port B than port A.	Speak to Husqvarna service.
84	"Cable error Loss of function"	The cable to move the outrigger down is damaged.	Speak to Husqvarna service.
85	"Cable error Loss of function"	The cable to move the outrigger up is damaged.	Speak to Husqvarna service.

<b>Fault code number</b>	<b>Message in the display</b>	<b>Cause</b>	<b>Solution</b>
87	"Cable error Loss of function"	The cable to move the left caterpillar track forward is damaged.	Speak to Husqvarna service.
88	"Cable error Loss of function"	The cable to move left the caterpillar track rearward is damaged.	Speak to Husqvarna service.
90	"Cable error Loss of function"	The cable to move the right caterpillar track forward is damaged.	Speak to Husqvarna service.
91	"Cable error Loss of function"	The cable to move the right caterpillar track rearward is damaged.	Speak to Husqvarna service.
93	"Cable error Loss of function"	The cable for the front left outrigger valve is damaged.	Speak to Husqvarna service.
94	"Cable error Loss of function"	The cable for the valve of the grease pump is damaged.	Speak to Husqvarna service.
95	"Cable error Loss of function"	The cable for the water valve is damaged.	Speak to Husqvarna service.
96	"Cable error Loss of function"	The cable for the front right outrigger valve is damaged.	Speak to Husqvarna service.
99	"Cable error Loss of function"	The cable for the rear left outrigger valve is damaged.	Speak to Husqvarna service.
102	"Cable error Loss of function"	The cable for the rear right outrigger valve is damaged.	Speak to Husqvarna service.
114	"Cable error Loss of function"	The cable for the left headlight is damaged.	Speak to Husqvarna service.
115	"Cable error Loss of function"	The cable for the right headlight is damaged.	Speak to Husqvarna service.
117	"Cable error Loss of function"	The cable for the indicator light is damaged.	Speak to Husqvarna service.
120	"Cable error Loss of function"	The cable for the horn is damaged.	Speak to Husqvarna service.
121	"Cable error Loss of function"	The cable for the oil filter monitor is damaged.	Speak to Husqvarna service.
122	"Cable error Loss of function"	The cable for the motor temperature monitor is damaged.	Speak to Husqvarna service.
123	"Cable error Loss of function"	The cable for the oil level monitor is damaged.	Speak to Husqvarna service.
124	"Cable error Loss of function"	The oil temperature sensor is damaged.	Speak to Husqvarna service.
130	"Cable error Loss of function"	The cable for the circulation valve is damaged.	Speak to Husqvarna service.
131	"Cable error Loss of function"	The cable for the circulation valve is damaged.	Speak to Husqvarna service.
132	"Cable error Loss of function"	The cable for the pressure control valve is damaged.	Speak to Husqvarna service.

<b>Fault code number</b>	<b>Message in the display</b>	<b>Cause</b>	<b>Solution</b>
133	"Cable error Loss of function"	The cable for the pressure control valve is damaged.	Speak to Husqvarna service.
134	"Cable error Loss of function"	The cable for the tower rotate valve is damaged.	Speak to Husqvarna service.
135	"Cable error Loss of function"	The cable for the tower rotate valve is damaged.	Speak to Husqvarna service.
170	"Safety PLC error Safety Stop"	-	Turn the main switch to ON and then to OFF. If the problem stays, speak to Husqvarna service.
171	"Oil pressure sensor Safety Stop"	-	Turn the main switch to ON and then to OFF. If the problem stays, speak to Husqvarna service.
172	"Oil pressure sensor Safety Stop"	-	Turn the main switch to ON and then to OFF. If the problem stays, speak to Husqvarna service.
173	"System pressure Safety Stop"	-	Turn the main switch to ON and then to OFF. If the problem stays, speak to Husqvarna service.
174	"Contactor error Safety Stop"	-	Turn the main switch to ON and then to OFF. If the problem stays, speak to Husqvarna service.
175	"Contact error Safety Stop"	-	Turn the main switch to ON and then to OFF. If the problem stays, speak to Husqvarna service.
176	"Remote control error Safety Stop"	-	Turn the main switch to ON and then to OFF. If the problem stays, speak to Husqvarna service.
177	"Emergency STOP pressed Safety Stop"	Emergency STOP button is pushed.	Turn the emergency stop button clockwise to disengage.
178	"Emergency STOP error Safety stop"	The cable for the Emergency STOP button is damaged.	Turn the main switch to ON and then to OFF. If the problem stays, speak to Husqvarna service.
179	"Machine stop Safety Stop"	The machine stop button is pushed on the remote control.	Turn the emergency stop button on the remote control clockwise, to disengage the emergency stop.
180	"Remote control error Safety Stop"	-	Turn the main switch to ON and then to OFF. If the problem stays, speak to Husqvarna service.



<b>Fault code number</b>	<b>Message in the display</b>	<b>Cause</b>	<b>Solution</b>
181	"System pressure Safety Stop"	-	Turn the main switch to ON and then to OFF. If the problem stays, speak to Husqvarna service.
182	"System pressure Safety Stop"	-	Turn the main switch to ON and then to OFF. If the problem stays, speak to Husqvarna service.
183	"System pressure Safety Stop"	-	Turn the main switch to ON and then to OFF. If the problem stays, speak to Husqvarna service.
184	"System pressure Safety Stop"	-	Speak to Husqvarna service.
185	"System pressure Safety Stop"	-	Turn the main switch to ON and then to OFF. If the problem stays, speak to Husqvarna service.
301	"Oil Temperature Normal"	-	Accept the warning message on the display.
302	"Motor Temperature Normal"	-	Accept the warning message on the display.
304	"Auto Calibrate Failed"	-	Auto Calibrate again.
305	"Track Tension Failed"	The track tension can only be started when the electric motor is on.	Start the motor and start track tension again.
306	"Oil refill failed"	Oil refill is not possible when the electric motor is on.	Stop the electric motor and start oil refill again.
307	"Remote control Free fall detected"	The remote control has fallen on the ground. The product will ignore the signals from the joysticks.	Accept the warning message on the display. Make sure that the remote control is not damaged before you operate.
1101	"Left joystick X-axis disabled"	The left joystick is not in neutral position when you start the remote control.	Set the left joystick in neutral position and restart the remote control.
1102	"Left joystick Y-axis disabled"	The left joystick is not in neutral position when you start the remote control.	Set the left joystick in neutral position and restart the remote control.
1103	"Left joystick side rocker disabled"	The side switch on the left joystick is not in neutral position when you start the remote control.	Set the side switch on the left joystick in neutral position and restart the remote control.
1104	"Right joystick X-axis disabled"	The right joystick is not in neutral position when you start the remote control.	Set the right joystick in neutral position and restart the remote control.

<b>Fault code number</b>	<b>Message in the display</b>	<b>Cause</b>	<b>Solution</b>
1105	"Right joystick Y-axis disabled"	The right joystick is not in neutral position when you start the remote control.	Set the right joystick in neutral position and restart the remote control.
1106	"Right joystick side rocker disabled"	The side switch on the right joystick is not in neutral position when you start the remote control.	Set the side switch on the right joystick in neutral position and restart the remote control.
1109	"Left joystick top rocker disabled"	The left top button on the left joystick is pushed down.	Set the left top button on the left joystick in neutral position and restart the remote control.
1110	"Left joystick top rocker disabled"	The right top button on the left joystick is pushed down.	Set the right top button on the left joystick in neutral position and restart the remote control.
1111	"Right joystick top rocker disabled"	The left top button on the right joystick is pushed down.	Set the left top button on the right joystick in neutral position and restart the remote control.
1112	"Right joystick top rocker disabled"	The right top button on the right joystick is pushed down.	Set the right top button on the right joystick in neutral position and restart the remote control.

Fault code number	Message in the display	Cause	Solution
1001 1107-1108 1113-1116 1201-1216 1301-1316 1401-1416 1501-1504 1701-1702 1801-1816 1901-1916 2002-2030 2098-2099 2202-2230 2298-2299 3201-3204 9001-9002 9401-9499 9801-9899	"Remote control Faulty"	There is a fault in the remote control.	Speak to Husqvarna service.
2102-2123 2198-2199 2302-2323 2398-2399 3103 9101-9199 9301-9399 9501-9506	"Remote control receiver Faulty"	There is a fault in radio communication receiver on the product.	Speak to Husqvarna service.

Fault code number	Message in the display	Cause	Solution
8101-8107	"Receiver CAN interface communication not working"	There is an error with the CAN bus cable between the radio communication receiver and the product. It can also be an internal error.	Do a check of the product. If the problem stays, speak to Husqvarna service.

## Transportation, storage and disposal

### Transportation



**WARNING:** Be careful during transportation. The product is heavy and can cause injury or damage if it falls or moves during transportation.

The caterpillar tracks let you move the product shorter distances. For longer distances, put the product on a transportation vehicle.

- Use approved lifting equipment to attach and lift heavy product parts.
- Always use all lifting eyes on the product when you lift the product.
- Lift the product slowly and carefully. If the product starts to tilt, use an alternative lifting equipment or change the position of the arm system.
- Make sure that the parts of the product are not damaged when you lift the product.
- Make sure that the product does not hit adjacent objects when you lift the product.
- Use a flatbed truck or a trailer that is approved for the weight of the product. Refer to *Technical data on page 108*.
- Keep the remote control in the transportation vehicle during transportation.
- Attach the product during transportation. Make sure that it cannot move.
- Put some type of protection on the product during transportation. The protection keeps natural elements such as rain and snow away from the product.
- Do a check of applicable road traffic regulations before transportation of the product on public roads.
- During transportation, do regular checks to make sure that the product is correctly attached to the transportation vehicle.

### To move the product up and down a ramp



**WARNING:** Be very careful when you move the product up and down a ramp. The

product is heavy and there is a risk of injury if the product falls or moves too quickly.



**WARNING:** Do not walk or stay below the product. Do not stay in the product work area. Refer to *Work area safety on page 21*.



**WARNING:** Do not move the product up and down a ramp when the remote control batteries are in a low state of charge. Power failure can occur suddenly.

- Make sure that the ramp is not damaged and has the correct dimensions for the product.
- Make sure that there is no oil or dirt on the ramp.
- Make sure that the ramp is correctly attached to the transportation vehicle and the ground.
- Make sure that the transportation vehicle cannot move when you move the product up and down the ramp.

### To lift the product (DXR 145)



**WARNING:** The lifting equipment must have the correct specification to lift the product safely. The rating plate on the product shows the product weight. Refer to *Rating plate on page 19*.



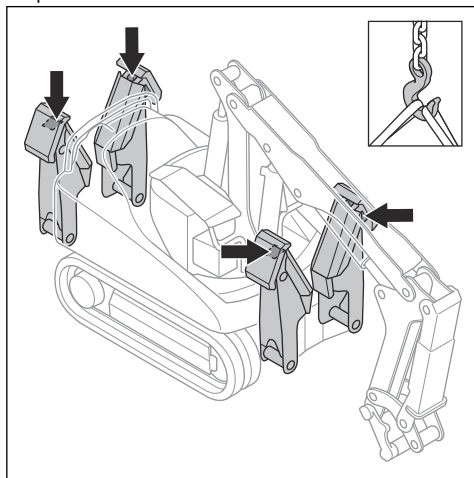
**WARNING:** Do not walk or stay below or near a lifted product. Keep bystanders away from the work area. Refer to *Work area safety on page 21*.



**WARNING:** Do not lift a damaged product. Make sure that the lifting eyes are correctly installed and not damaged.

1. Retract the arm system before you lift the product.

2. Attach the lifting equipment at the lifting eyes on the product.



### To lift the product (DXR 275, DXR 305, DXR 315)



**WARNING:** The lifting equipment must have the correct specification to lift the product safely. The rating plate on the product shows the product weight. Refer to *Rating plate on page 19*.



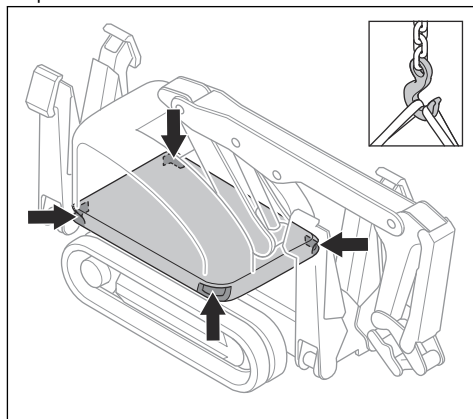
**WARNING:** Do not walk or stay below or near a lifted product. Keep bystanders away from the work area. Refer to *Work area safety on page 21*.



**WARNING:** Do not lift a damaged product. Make sure that the lifting eyes are correctly installed and not damaged.

1. Retract the arm system before you lift the product.

2. Attach the lifting equipment at the lifting eyes on the product.

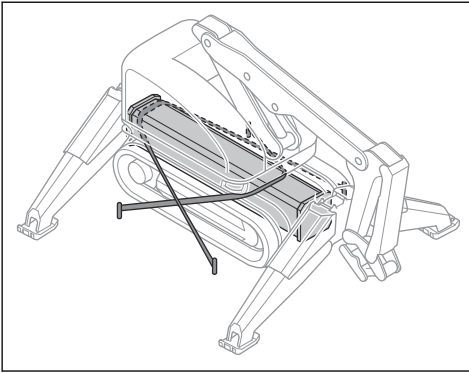


### To attach the product to a transportation vehicle

Attach the product during transportation to prevent accidents and damage to the equipment. Use tie-down straps to attach the product to the transportation vehicle. Use different tie-down straps for the tools and other equipment.

1. Put the product against the front edge of the transportation vehicle.
2. Start the product. Refer to *To start the product (DXR 145) on page 53* and *To start the product (DXR 275, DXR 305, DXR 315) on page 54*.
3. Move the arm system until it is against the floor of the transportation vehicle.
4. Extend the outriggers. Refer to *To operate the outriggers on page 62*. The product must stay on the floor of the transportation vehicle.
5. Stop the product. Refer to *To stop the product (DXR 145) on page 63* and *To stop the product (DXR 275, DXR 305, DXR 315) on page 63*.

6. Put 2 tie-down straps around the chassis.

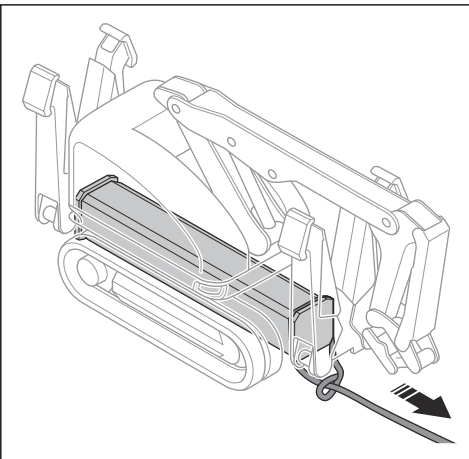


- a) Put 1 tie-down strap around the front part of the chassis and attach the strap to the vehicle.
- b) Put 1 tie-down strap around the rear part of the chassis and attach the strap to the vehicle.

## To tow the product

Only tow the product if the position of the product is a risk and there is no other solution. When the hydraulic system is empty, the parking brake of the drive motor is engaged. When the parking brake is engaged, the caterpillar tracks cannot move.

- If it is possible, retract the outriggers.
- Attach the tow equipment to the chassis of the product.



- Before you tow the product, clean the ground to decrease the load on the tow equipment and the mechanical components.
- If it is possible, tow in the direction of the caterpillar tracks.
- Only tow the product for short distances and at low speed.

- Only use approved tow equipment. The tow equipment must agree with the product specifications. Refer to *Technical data on page 108*.
- Make sure that no other persons are near the product when you tow the product.

## Storage



**CAUTION:** Outdoor storage can cause damage to the product. Always keep the product indoors when it is in storage.

- Remove the tools from the product.
- Retract the arm system.
- Lock the main switch on the product with a padlock.
- Keep the product and the tools in a locked area to prevent access for children or persons that are not approved.
- Make sure that the tools are put in a position where they cannot fall.
- If the tools are put high up, make sure that you attach them correctly.
- Keep the hydraulic couplings of the tools in an area with minimum risk of damage.
- Keep the product and the tools in a dry and frost-free area.
- Clean the product and do a complete servicing before you put the product in storage.
- Keep the battery charger in a dry and frost-free area.
- Remove the remote control batteries from the remote control when the product is in storage for more than 1 week.

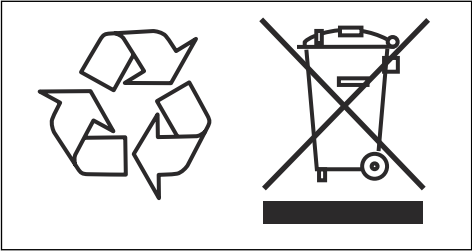
## Disposal

Symbols on the product or the packaging of the product indicate that this product cannot be handled as domestic waste. It must be submitted to an appropriate recycling station for the recovery of electrical and electronic equipment.

Make sure to disconnect the product from the supply mains and remove the batteries from the remote control before submitting to an appropriate recycling station. Make sure to inform the recycling station that the product contains a lithium ion battery inside. Submit the batteries to an appropriate recycling station.

By ensuring that this product is taken care of correctly, you can help to counteract the potential negative impact on the environment and people that can otherwise result through the incorrect waste management of this product. For more detailed information about recycling this product, contact your municipality, your domestic waste

service or the shop from where you purchased the product.



## Technical data

### Technical data

	DXR 145	DXR 275	DXR 305	DXR 315
<b>General</b>				
Rotation speed, rpm	6	6	6	6
Max. transport speed, km/h / mph	3/1.9	3/1.9	3/1.9	3/1.9
Max. slope angle, degrees	30	25	25	25
<b>Hydraulic system</b>				
Volume hydraulic system, l/gal	40/10	50/13	50/13	50/13
Pump type	Load sensing axial piston with variable displacement.			
Max. pump flow <sup>2</sup> , l/min or gal/min	0–52 or 0–14	0–75 or 0–20	0–85 or 0–22.5	0–85 or 0–22.5
Standard pressure, bar	200	200	200	200
Increased main pressure, bar	250	250	250	250
Pressure for caterpillar tracks tension and outriggers retracted, 2,900 psi	130	200	200	200
Breaker pressure, bar	160	150	160	160
Telescopic arm pressure, bar	N/A	N/A	N/A	180
<b>Motor</b>				
Motor power, kW/hp	18.5 (50 Hz)	24 (50 Hz)	27 (50 Hz)	27 (50 Hz)
	18.5 (60 Hz)	24 (60 Hz)	27 (60 Hz)	27 (60 Hz)
Speed, rpm	2885 (50 Hz)	1470 (50 Hz)	1470 (50 Hz)	1470 (50 Hz)
	3500 (60 Hz)	1775 (60 Hz)	1775 (60 Hz)	1775 (60 Hz)
Rated voltage, V	380–420 (50 Hz)	380–420 (50 Hz)	380–420 (50 Hz)	380–420 (50 Hz)
	440–480 (60 Hz)	440–480 (60 Hz)	440–480 (60 Hz)	440–480 (60 Hz)
Rated current, A	32 (50 Hz)	46 (50 Hz)	52 (50 Hz)	52 (50 Hz)
	30 (60 Hz)	39 (60 Hz)	44 (60 Hz)	44 (60 Hz)
<b>Weight</b>				
Product weight without tool, kg/lbs	985/2172	1750/3858	1960/4320	2020/4453
Max. recommended tool weight, kg/lbs <sup>3</sup>	200/441	310/683	310/683	310/683

<sup>2</sup> Maximum pump flow and system pressure cannot be used at the same time. It can cause overload of the motor. 60 Hz has limited displacement.

<sup>3</sup> Maximum recommended tool weight is the total weight of tool and maximum load.



	DXR 145	DXR 275	DXR 305	DXR 315
<b>Remote control</b>				
Battery specification	Nominal 7.2V, 5100 mAh			
Battery	2 x Li-ion batteries supplied with the product.			
Operation time, h	12			
Charge time, h	3			
Signal transmission	Radio signal transmission or cable.			
Radio frequency bands	2.4 GHz			
Max. radio frequency power transmitted, dBm	20 <sup>4</sup>			
Range, m	Up to 300			
Dimensions, mm/in.	400x216x291/15.7x8.5x11.5			
Weight, kg/lb	3.25/7.2			
Protection class	IP65			
Operating temperature	-20–60°C / -4–140°F			
Storage temperature with battery, °C/°F	Less than 1 month: -20–50°C / 4–122°F Less than 3 month: -20–40°C / 4–104°F Less than 1 year: -20–20°C / 4–68°F			
Storage temperature without battery, °C/°F	-40–80°C / -40–176°F			
Charging temperature, °C/°F	10–45°C / 50–113°F			

## Operating temperatures for the cooling kit (DXR 275, DXR 305, DXR 315)

maximum temperature for the compressed air is 30°C/ 86°F and the maximum pressure is 10 bar/145 PSI.

At increased ambient temperature it is necessary to cool down the air at the hydraulic system and the motor. The

	Ambient temperature less then 40°C / 104°F	Ambient temperature between 40-50°C / 104-122°F		Ambient temperature between 50-55°C / 122-131°F	
Standard	It is not necessary to cool down the air.	N/A		N/A	
Kit 1	It is not necessary to cool down the air.	N/A		N/A	
Kit 2	It is not necessary to cool down the air.	Pressure, bar/PSI	6/87	Pressure, bar/PSI	10/145
		Flow, l/min or cu ft/min	1350/47.7	Flow, l/min or cu ft/min	1650/58.3

	Ambient temperature less then 40°C / 104°F	Ambient temperature between 40-50°C / 104-122°F		Ambient temperature between 50-55°C / 122-131°F	
Kit 3	It is not necessary to cool down the air.	Pressure, bar/PSI	6/87	Pressure, bar/PSI	10/145
		Flow, l/min or cu ft/min	1700/60	Flow, l/min or cu ft/min	2100/74.2

The noise level for Kit 2 and 3 is 115 dB.

## Hydraulic system pressure

Type of pressure	DXR 145 Pressure, bar/PSI	DXR 275, DXR 305, DXR 315 Pressure, bar/PSI
Maximum pump pressure, tool/outriggers	250/3626	250/3626
Rotating function	180/2611	175/2466
Outriggers, down and up	250/3626 and 130/1885	250/3626 and 200/2901
Arm function  For DXR 275, DXR 305, DXR 315, the pressure for the arm function is lower when you operate with a steel shear. The pressure for steel shear is shown in brackets.	200/2901	200/2901 (150/2167)
DXR 315: Telescopic arm, in and out	N/A	200/2901 and 180/2611
Standby pressure <sup>5</sup>	20±1 or 290±14.5	20±1 or 290±14.5

## Hydraulic oil

Speak to the product manufacturer before you use a type of hydraulic oil that is not specified in this manual. The quality of the hydraulic oil that the product was supplied with is shown on the label on the product.



**CAUTION:** The product can be damaged if different types of hydraulic oil are mixed. Do a check of which quality of hydraulic oil the hydraulic system contains before you fill with hydraulic oil.

Grade	Min. start temperature, °C/°F	Max. temperature, °C/°F	Ideal operation temperature, °C/°F
Mineral oil ISO VG32	-20/-4	75/167	35-60/95-140
Mineral oil ISO VG46 (standard) <sup>6</sup>	-10/14	85/185	45-70/13-158
Mineral oil ISO VG68	-5/23	90/194	55-80/131-176

<sup>5</sup> The pressure that the pump supply when no function is in operation and the circulation valve is closed.

<sup>6</sup> DXR 275, DXR 305, DXR 315: Heat resistant products are filled with fire resistant hydraulic oil.

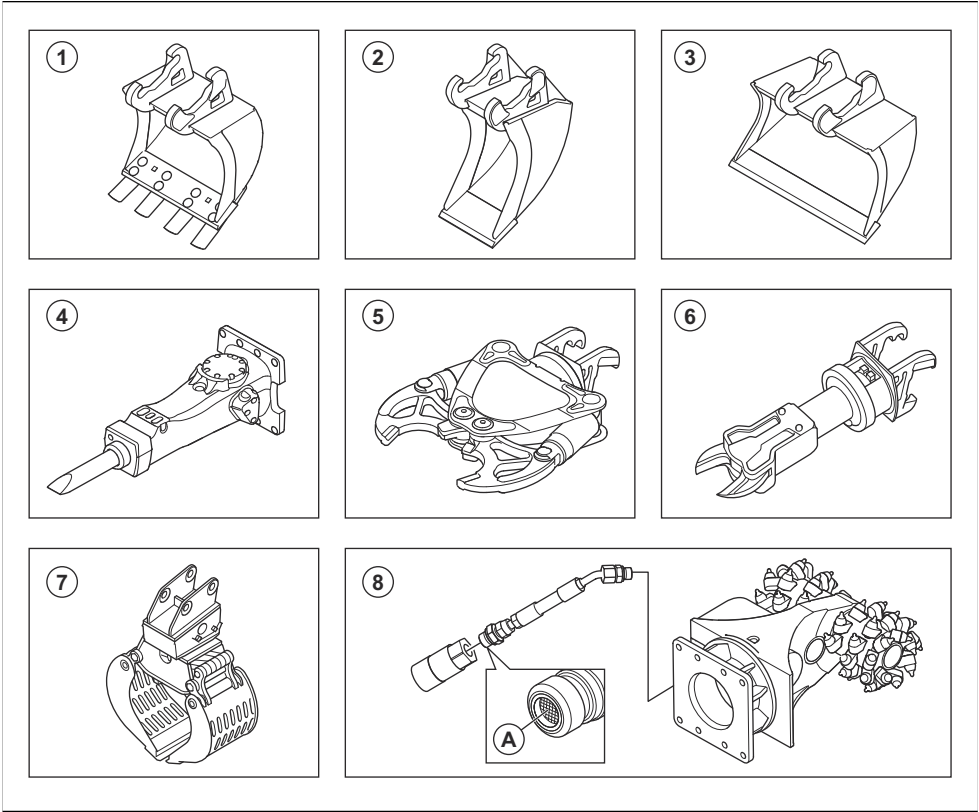
# Lubricants

Component	Grade	Standard
DXR 275, DXR 305, DXR 315: Slew motor gearbox oil	SAE 80W-90	API GL 5
Drive motor gearbox oil	SAE 80W-90	API GL 5
All lubrication points with grease nipples	NLGI	N/A
Breaker grease pump	Chisel paste (NLGI 2)	N/A

# Preset limit values

Description	Temperature °C/°F
Oil temperature too high	90/194
Oil temperature too low	0/32

# Tools overview



Position	Tool	Product	Use
1	Standard bucket, 55 L	DXR 145	To excavate and move materials.
	Standard bucket, 85 L	DXR 275, DXR 305, DXR 315	To excavate and move materials.
2	Narrow bucket, 40 L	DXR 145, DXR 275, DXR 305, DXR 315	To make tight trenches for pipes and move materials.
3	Wide bucket, 60 L	DXR 145	To excavate and move large masses of materials.
	Wide bucket, 105 L	DXR 275, DXR 305, DXR 315	
4	Breaker, SB 152	DXR 145	To break materials.
	Breaker, SB 202	DXR 275, DXR 305, DXR 315	
	Breaker, SB 302	DXR 305,DXR 315	
5	Concrete crusher, DCR 100	DXR 145	To crush and cut materials.
	Concrete crusher, DCR 300	DXR 275, DXR 305, DXR 315	

Position	Tool	Product	Use
6	Steel shears, DSS 200	DXR 145, DXR 275, DXR 305, DXR 315	<p>To cut metal objects.</p> <hr/> <p><b>Note:</b> The extra hydraulic function must be installed on the product to rotate the steel shears. Refer to <i>Extra hydraulic function (DXR 275, DXR 305, DXR 315) on page 35</i>.</p> <hr/>
7	Grapple, MG 100	DXR 145	<p>To demolish brick and wooden walls and sort and load materials.</p> <hr/> <p><b>Note:</b> The extra hydraulic function must be installed on the product to rotate the grapple. Refer to <i>Extra hydraulic function (DXR 275, DXR 305, DXR 315) on page 35</i>.</p> <hr/>
	Grapple, MG 200	DXR 275, DXR 305, DXR 315	
8	Drum cutter, ER 50	DXR 145, DXR 275, DXR 305, DXR 315	<p>To demolish and excavate with milling function.</p> <hr/> <p><b>Note:</b> A Tool Drain Kit must be installed on the product because of internal oil leakage in the drum cutter. The Tool Drain Kit has a filter (A) in the adapter between the tube and the quick connect fitting.</p> <hr/>

## Dust reduction data

Follow the water supply recommendation in table below. Use tap or external pump.

Typ	Tool					
	Breaker			Concrete crusher		Drum cutter
	SB152	SB202	SB302	DCR100	DCR300	ER50
Recommended water pressure, bar/PSI	4.0/58.0			2.0/29.0		2.0/29.0
Water consumption at 4 bar/58 PSI, l/min /gpm	≤5.0 / ≤1.3		<9.0 / ≤2.4	6.5/1.7		7.9/2.1

Typ		Tool		
Minimum requirements	Water pressure, bar/PSI	3.0/43.5	1.0/14.5	1.5/21.8
	Water consumption, l/min /gpm	5.0/1.3	3.0/0.8	4.1/1.1

## Guide values for connection to a mains socket

The mains socket must have the same amperage as the extension cable and the electrical socket on the product.

**Note:** The nominal power must have the same voltage +/- 10%.

DXR 145: Motor 18.5 kW

Nominal from power source, V	Cable area, AWG/mm <sup>2</sup>	Start current, A		Motor output, kW	Setting thermal overload relay, A	Max. cable length, m/ft
400	6/16	75	50 Hz	18.5	27.0	285/935
400	10/6	75		18.5	27.0	100/328
400	8/10	75		18.5	27.0	175/574
460	6/16	75	60 Hz	18.5	22.0	349/1145
460	10/6	75		18.5	22.0	130/427
460	8/10	75		18.5	22.0	218/715

DXR 275: Motor 24 kW

Nominal voltage from power source, V	Cable area, AWG/mm <sup>2</sup>	Start current, A		Motor output, kW	Setting thermal overload relay, A	Max. cable length, m/ft
400	7/10	99	50 Hz	24	35	345/1132
400	5/16	99		24	35	555/1821
460	7/10	99	60 Hz	24	34	355/1165
460	5/16	99		24	34	570/1870

DXR 305, DXR 315: Motor 27 kW

Nominal voltage from power source, V	Cable area, AWG/mm <sup>2</sup>	Start current, A		Motor output, kW	Setting thermal overload relay, A	Max. cable length, m/ft
400	7/10	99	50 Hz	27	41	296/971
400	5/16	99		27	41	473/1552

Nominal voltage from power source, V	Cable area, AWG/mm <sup>2</sup>	Start current, A		Motor output, kW	Setting thermal overload relay, A	Max. cable length, m/ft
460	7/10	99	60 Hz	27	39	311/1020
460	5/16	99		27	39	498/1634

## Sound levels

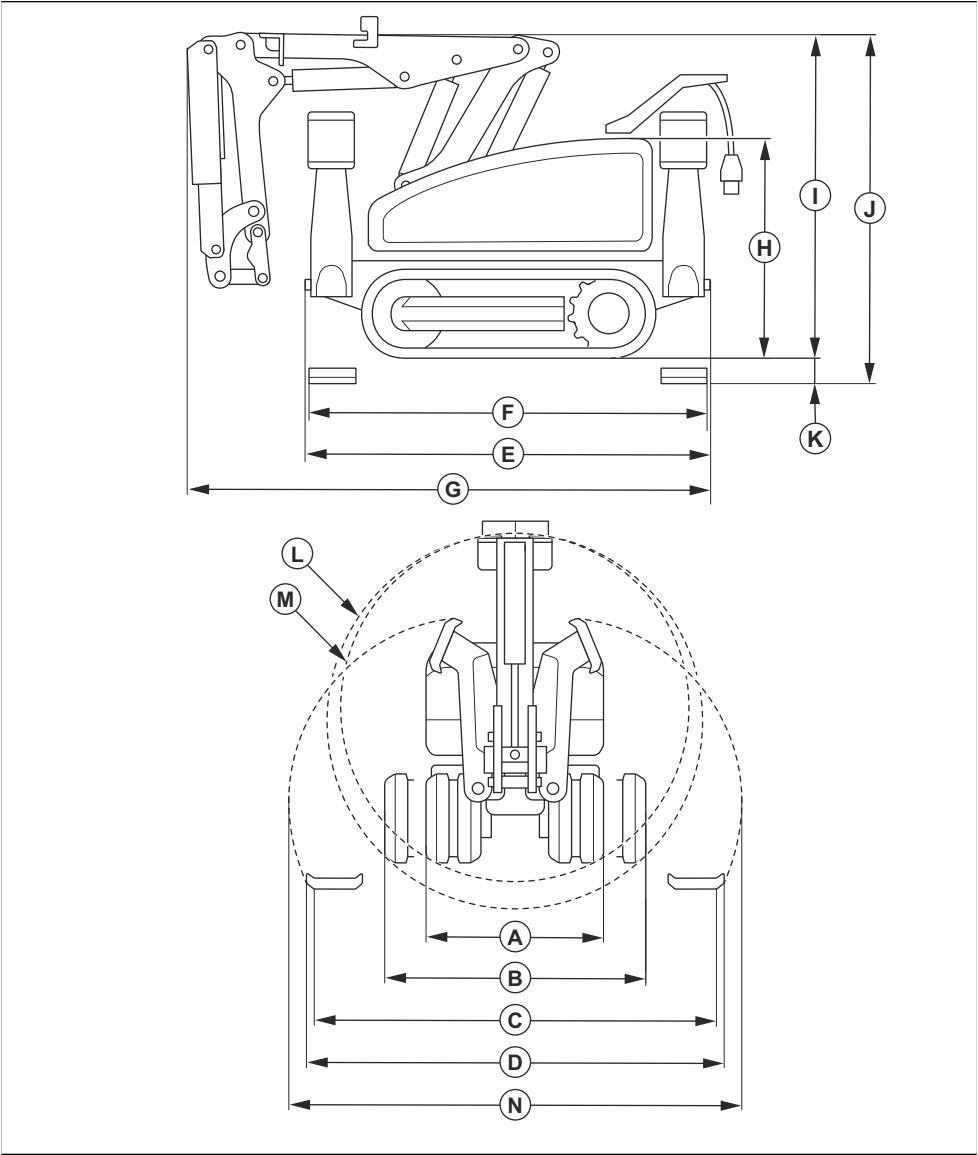
	DXR 145	DXR 275	DXR 305	DXR 315
<b>Noise emissions<sup>7</sup></b>				
Sound power level without tool, measured dB(A)	92	87	87	87
Sound power level without tool, guaranteed L <sub>W</sub>	93	95	95	95
Sound power level with tool (breaker, measured dB(A)	113	118	118	118
Sound power level with tool (breaker, guaranteed L <sub>W</sub>	114	118	118	118
<b>Sound levels<sup>8</sup></b>				
Sound pressure level, 10 m from the product tool <sup>9</sup> , dB (A)	87	90	90	90

<sup>7</sup> Noise emission in the environment measured as sound power according to EC directive 2000/14/EC. The difference between the guaranteed and the measured noise level is a measurement of dispersion and variations in the declared value.

<sup>8</sup> Sound pressure level according to EG directive 2000/14/EG. Expected measurement uncertainty 2 dB(A).

<sup>9</sup> The stated value refers to operation with a breaker. Other types of recommended tools create a considerably lower noise level.

Product dimensions

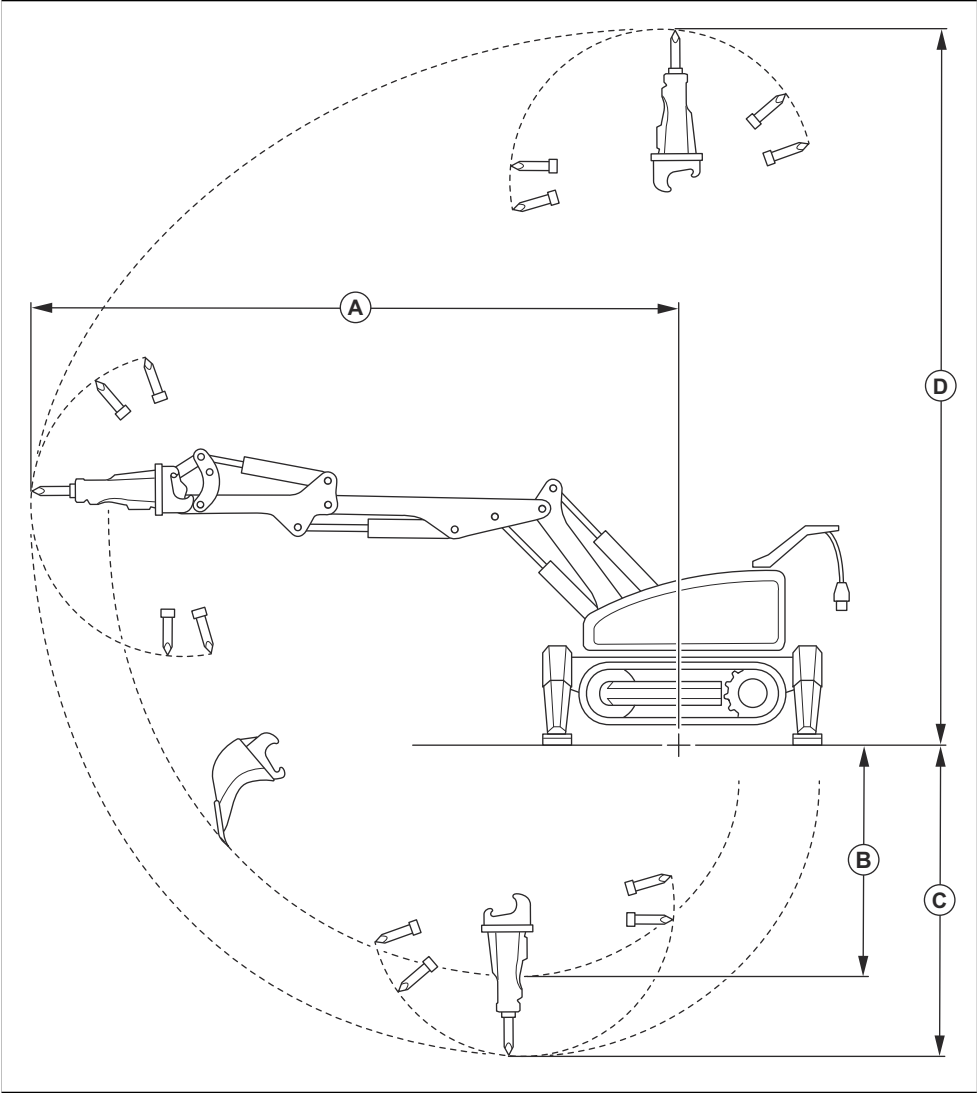


		DXR 145	DXR 275	DXR 305	DXR 315
A	Width without caterpillar track wideners, mm/in.	771/28	780/30.7	780/30.7	780/30.7



		<b>DXR 145</b>	<b>DXR 275</b>	<b>DXR 305</b>	<b>DXR 315</b>
<b>B</b>	Width with caterpillar track widen- ers, mm/in.	N/A	1110/43.7	1110/43.7	1110/43.7
<b>C</b>	Ground contact width with exten- ded outriggers, mm/in.	1548/61	1993/78.5	1993/78.5	1993/78.5
<b>D</b>	Width with extended outriggers, mm/in.	1625/64	2066/81.3	2066/81.3	2066/81.3
<b>E</b>	Length without arm system	1555/61.2	2057/81	2057/81	2057/81
<b>F</b>	Distance between extended out- riggers, mm/in.	1614/63.5	2079/81.9	2079/81.9	2079/81.9
<b>G</b>	Length with extended arm system, mm/in.	1932/76.1	2442/96.1	2591/102	2827/111.3
<b>H</b>	Height retracted outriggers and without arm system, mm/in.	854/33.6	1035/40.7	1035/40.7	1035/40.7
<b>I</b>	Height with retracted arm system and retracted outriggers, mm/in.	1215/47.8	1367/53.8	1367/53.8	1485/58.5
<b>J</b>	Height with retracted arm system and extended outriggers, mm/in.	1283/50.5	1509/59.4	1509/59.4	1627/64.1
<b>K</b>	Height between caterpillar track and extended outrigger, mm/in.	68/2.7	141/5.6	141/5.6	141/5.6
<b>L</b>	Product diameter with caterpillar track wideners, mm/in.	N/A	1598/62.9	1598/62.9	1680/66.1
<b>M</b>	Product diameter without caterpil- lar track wideners, mm/in.	1343/52.9	1489/58.6	1489/58.6	1576/62
<b>N</b>	Width when you extended the out- riggers, mm/in.	1770/69.7	2238/88.1	2238/88.1	2238/88.1

Range dimensions



		DXR 145	DXR 275	DXR 305		DXR 315
				SB202	SB302	
A	Max. range forward for arm system, mm/in.	3751/147.7	4513/177.7	4898/192.8	5128/201.9	5212/205.2

		<b>DXR 145</b>	<b>DXR 275</b>	<b>DXR 305</b>		<b>DXR 315</b>
<b>B</b>	Max. excavate depth with bucket, mm/in.	1252/49.3	1435/56.5	1818/71.6	1818/71.6	2129/83.8
<b>C</b>	Max. cut depth with breaker, mm/in.	1879/74	2016/79.4	2398/94.4	2628/103.5	2708/106.6
<b>D</b>	Max. range upwards for arm system, mm/in.	4421/174.1	4879/191.7	5261/207.1	5491/216.2	5579/219.6

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# Warranty

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## Warranty policy

All warranty claims will be determined after inspection at a designated facility. A Returned Goods Authorization is required for all warranty claims. Contact Husqvarna Customer Service Department at 800-845-1312 for an RGA. The customer must prepay the freight and absorb any labor expense required to return or replace a product submitted for warranty consideration. Husqvarna will pay return shipping expenses for repaired or approved replacement products.

## EQUIPMENT

Equipment manufactured by Husqvarna is warranted to be free from manufacturing defects in normal service for a period of two (2) years from date of purchase by the original consumer purchaser. Component manufacturers offer separate warranty periods. Call Technical Services at 800-288-5040 for complete information.

Our obligation under this warranty is expressly limited to the replacement or repair at Husqvarna Construction Products North America, Olathe, Kansas 66061, or at a service facility designated by us, of such part or parts as inspection shall disclose to have been defective.

This warranty does not apply to defects caused by damage, unreasonable use, faulty repairs made by others than an approved Husqvarna servicing dealer, or defects caused by failure to provide reasonable maintenance, while in the possession of the consumer. Further, the warranty is void if the product, or any of its components, are altered or modified by the consumer purchaser, or if the product is used in an inappropriate manner or with tools not recommended by the manufacturer.

**Exceptions:** Drill motors - 3 months, Wall saws - 1 year, Power cutters - 3 months, DM230 - 1 year, DM225 - 3 months, Gyro systems - 1 year, CD40 system - 1 year, DS160 C - 1 year, Smart box - 1 year, CS2515 - 1 year, PP455 E - 1 year, PP345 E - 1 year, HP40 - 1 year.

**Wear items:** Filters, spark plugs, bearings\*, belts, wheels\*\* and wear pads.

\*Except IntelliSeal™ system. \*\*Except delamination.

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# Federal Communication Commission Interference Statement

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## Federal Communication Commission Interference Statement

### For USA

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference; and (2) This device must accept any interference received, including interference that may cause undesired operation.

### For Canada

This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions:

- This device may not cause interference; and
- This device must accept any interference, including interference that may cause undesired operation of the device.







[www.husqvarnacp.com](http://www.husqvarnacp.com)

Original instructions

1142683-27



2021-10-20