

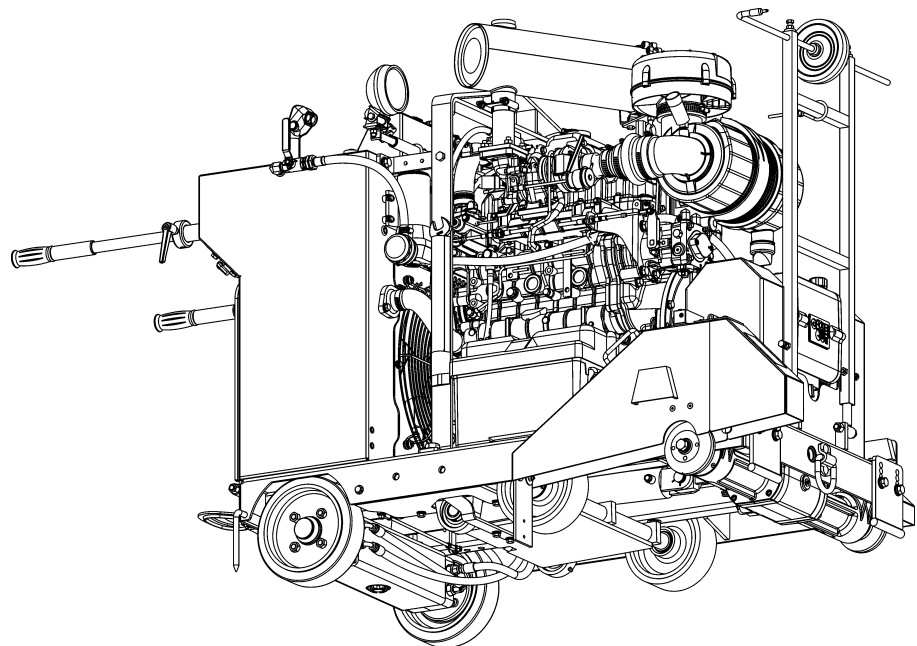
Operating Instructions

Floor Saw

FSD1274★★★

FSD1274★★★ 3-speed gearbox

Index 001



Congratulations!

You have decided to purchase a tried and tested TYROLIT-Hydrostress unit and have thus acquired a highly sophisticated and reliable state-of-the-art unit. The exclusive use of only TYROLIT Hydrostress spare parts ensures quality and interchangeability. If maintenance work is neglected or carried out inexpertly we will be unable to honour our warranty obligations. Any repair work must be carried out by trained personnel only. Should you need more details concerning your TYROLIT Hydrostress unit in order to keep it in perfect condition, please contact our after-sales service for further information. We hope that you enjoy untroubled and fault-free working with your TYROLIT unit.

TYROLIT Hydrostress

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1 Safety



These instructions are just one part of the documentation which is supplied together with the floor saw. These instructions go together with the "Safety Manual / System Description for Floor Saws" to form a complete set of documentation.

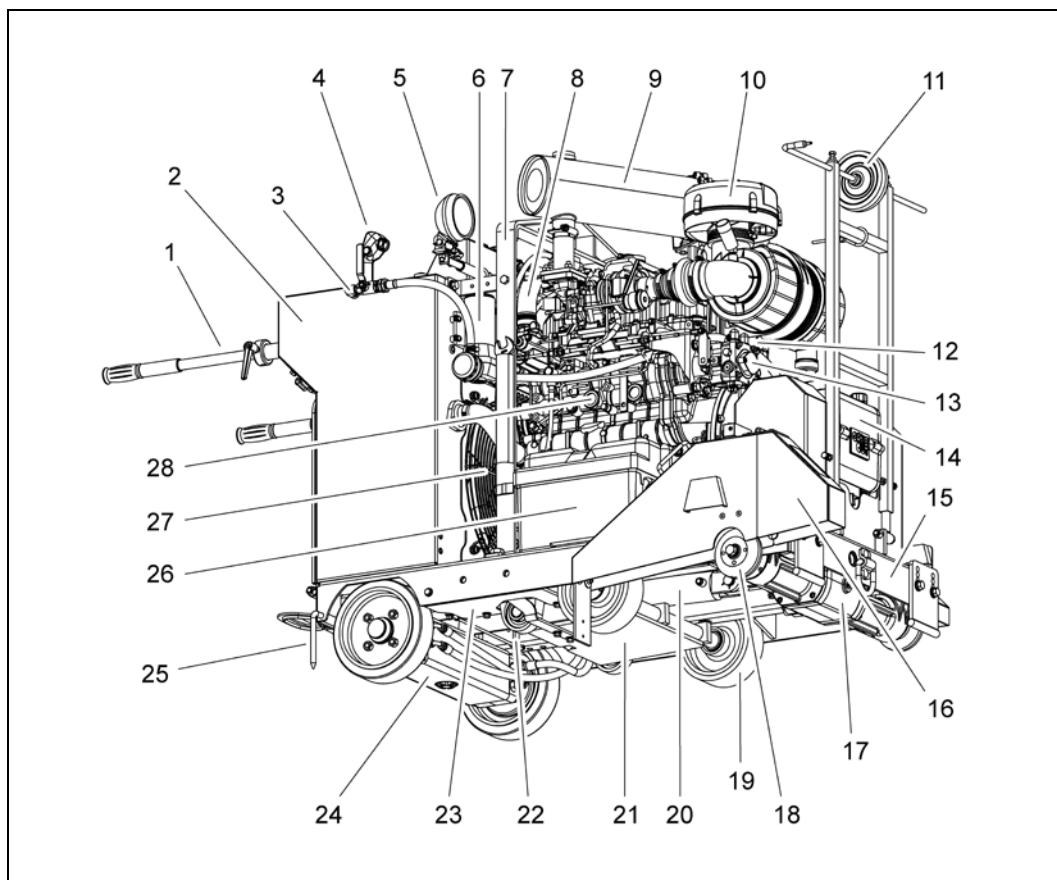


DANGER

Failure to comply with the safety instructions in the "Safety Manual / System Description" may result in serious injury or death.

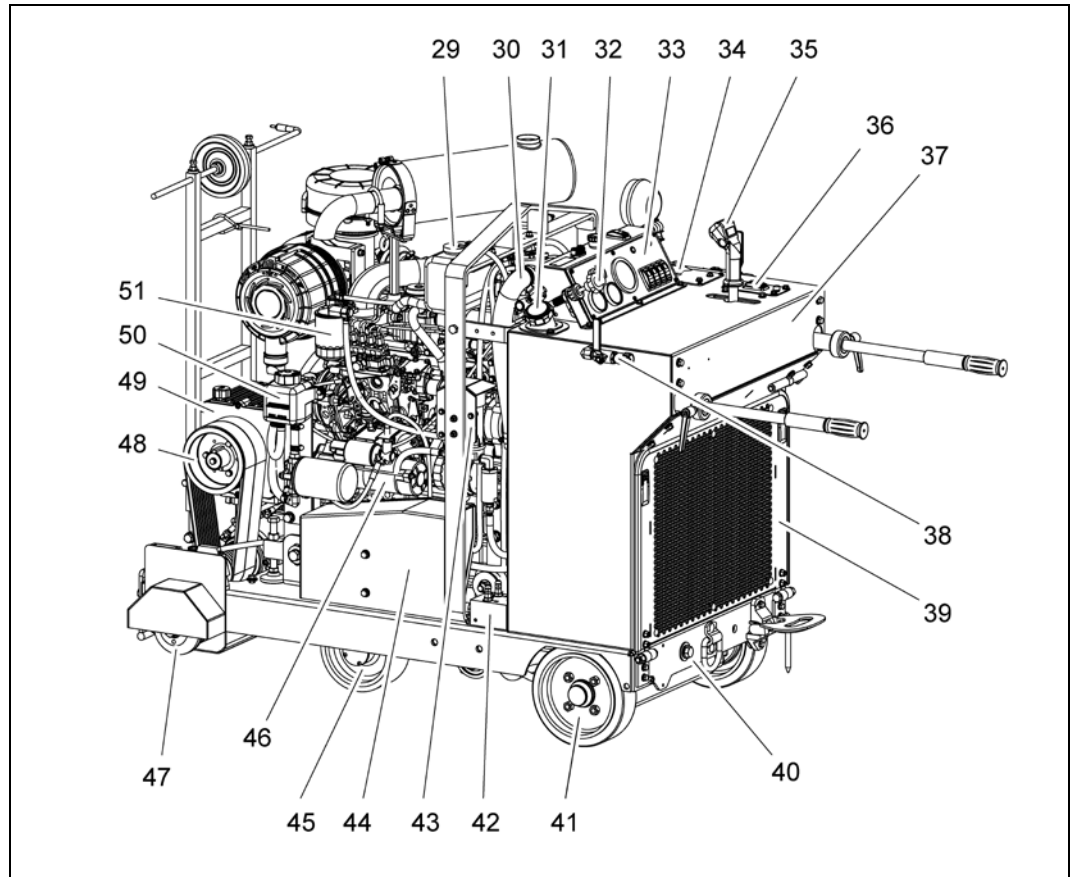
- ▶ Please ensure that the "Safety Manual / System Description for Floor saws" has been read and understood in full.

2 Design



Components

| | | | | | |
|----|-----------------------|----|--------------------------|----|-------------------------|
| 1 | Grip | 11 | Cut indicator roller | 21 | Lifting chassis |
| 2 | Control unit | 12 | Water valve | 22 | Bearing lifting chassis |
| 3 | Water valve | 13 | Hydrostatic motors | 23 | Base plate |
| 4 | Operating handle | 14 | Gear box saw blade drive | 24 | Travel drive |
| 5 | Floodlight | 15 | Chassis | 25 | Rear cut guide |
| 6 | Water pump | 16 | Blade guard | 26 | Battery |
| 7 | Crane hitching device | 17 | Intermediate drive | 27 | Cooler fan |
| 8 | Cooling water hose | 18 | Saw blade flange | 28 | Motor |
| 9 | Exhaust/ Silencer | 19 | Wheels | | |
| 10 | Air filter | 20 | Lifting cylinder | | |

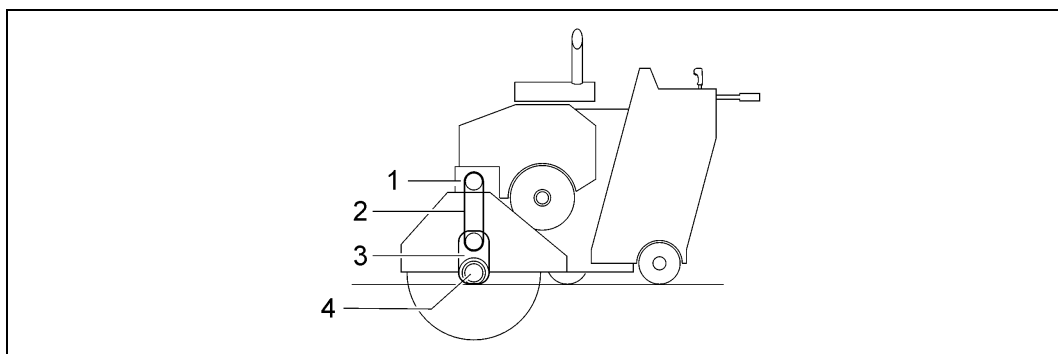


Components

| | | | | | |
|----|--------------------------------|----|---------------------------------|----|--------------------------|
| 29 | Cooling water expansion vessel | 37 | Chassis / Model label | 45 | Wheel |
| 30 | Cooling water hose | 38 | Water connection | 46 | Starter |
| 31 | Tank filler cap | 39 | Radiator cover | 47 | Saw blade flange |
| 32 | Gas flue | 40 | Track adjustment | 48 | Drive wheel |
| 33 | Control panel | 41 | Drive wheel | 49 | Gear box saw blade drive |
| 34 | Cut depth indicator | 42 | Valve block travel drive | 50 | Oil tank travel drive |
| 35 | Operating handle | 43 | Oil pump | 51 | Dieselfilter |
| 36 | Gear shift lever saw blade | 44 | Hydraulic pump lifting cylinder | | |

3 Function

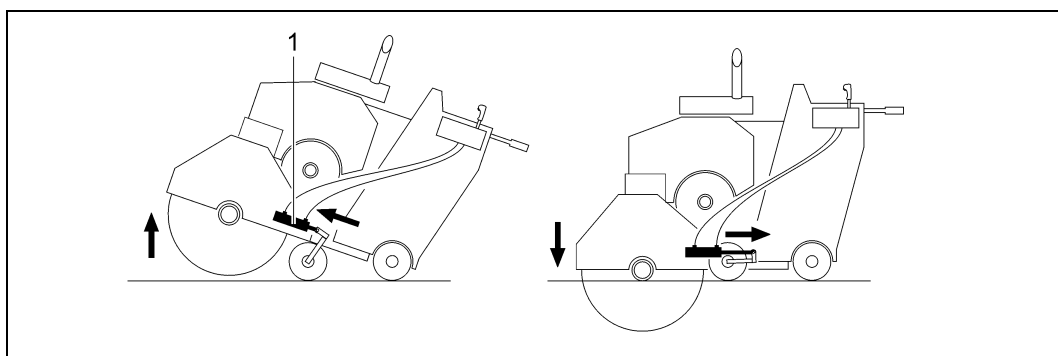
3.1 Saw blade drive



Saw blade drive (schematic)

- | | | | |
|---|------------|---|-----------------------|
| 1 | Mitre gear | 3 | Intermediate drive |
| 2 | Drive belt | 4 | Drive shaft saw blade |

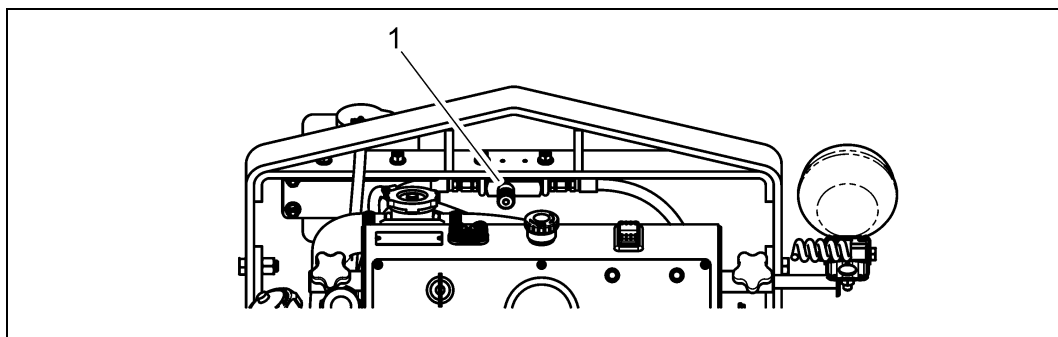
3.2 Lift drive



Lift drive (schematic)

- | | |
|---|--------------------|
| 1 | Hydraulic cylinder |
|---|--------------------|

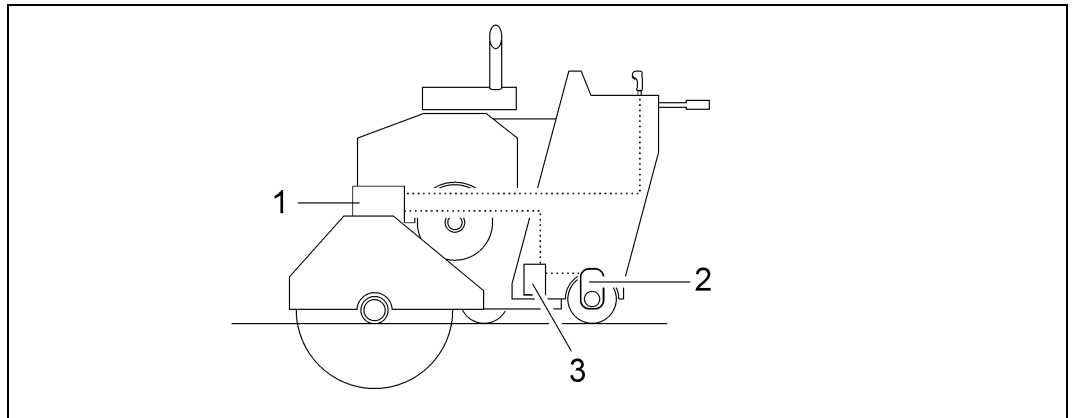
3.3 Saw blade lowering speed



Saw blade lowering speed

- | | |
|---|--------------------------------|
| 1 | Valve saw blade lowering speed |
|---|--------------------------------|

3.4 Travel drive



Travel drive (schematic)

- 1 Hydrostatic motors
- 2 Hydraulic motors
- 3 Valve block travel drive ON / OFF

4 Transport

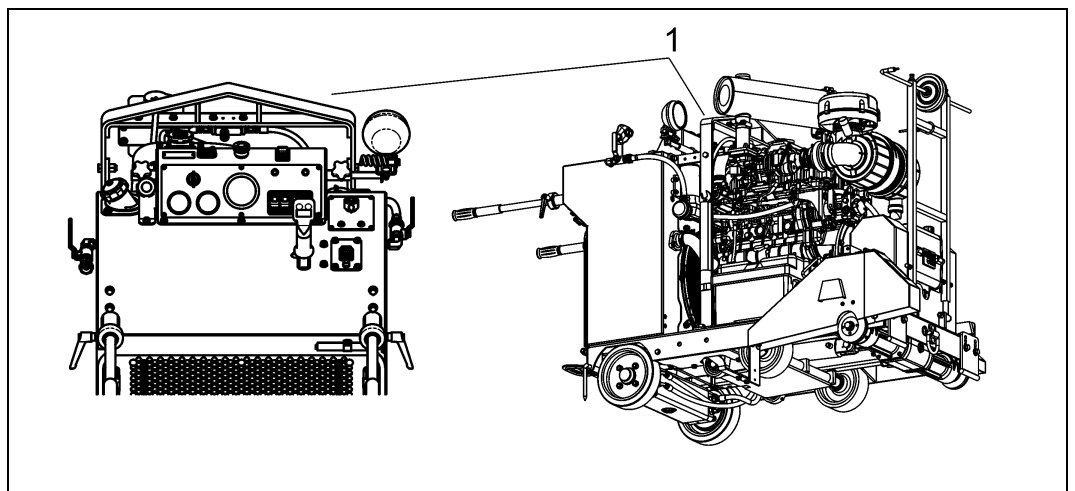


DANGER

Inexpert transport may result in death or serious injury.

- ▶ Floor saws must only be transported with the main motor switched off.
- ▶ Only transport vehicles, lifting tools and load suspension devices with sufficient load-bearing capacity must be used.
- ▶ Floor saws must only be hitched by the hitching points provided.
- ▶ Appoint an expert marshaller.
- ▶ When transporting by crane do not stand underneath suspended load.
- ▶ Always have the floor saw in your line of vision while it is being transported.

4.1 Hitching point

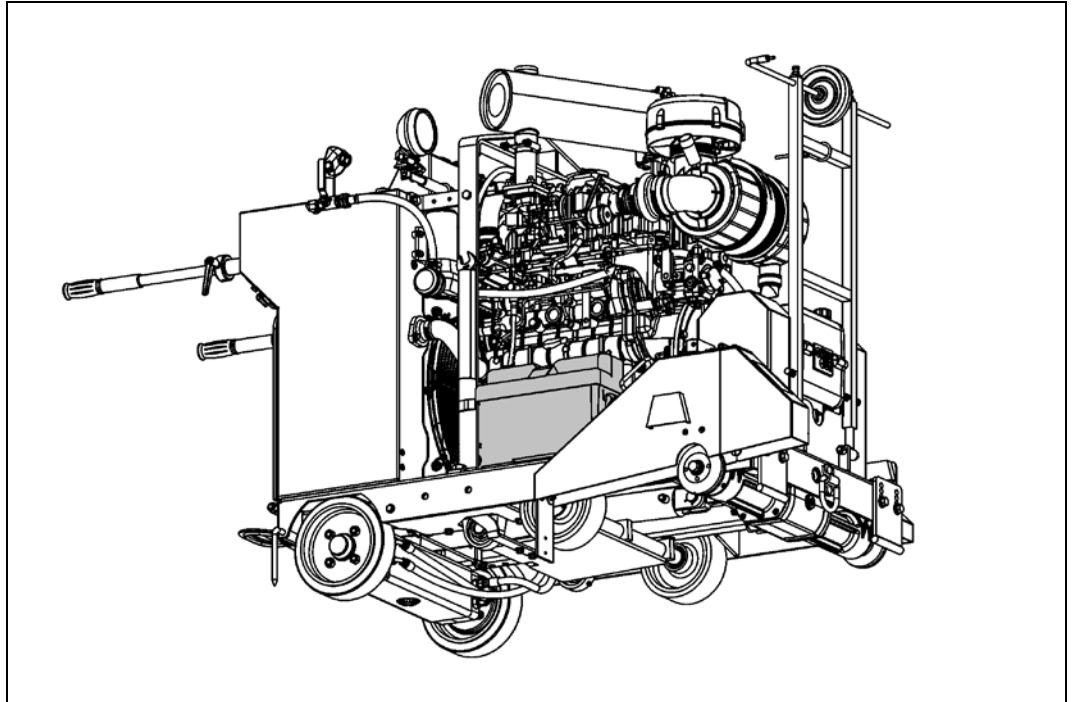


Hitching point

1 Crane hitching device

5 Initial start-up

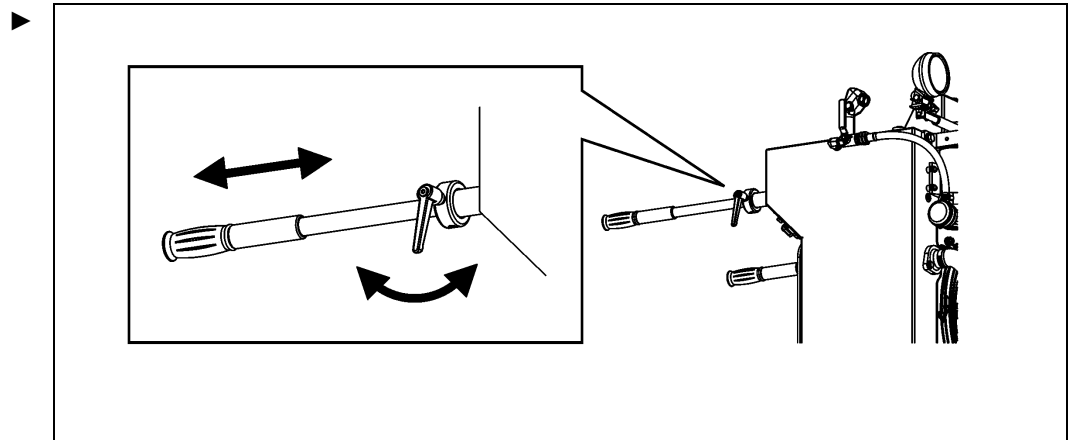
5.1 Fitting battery



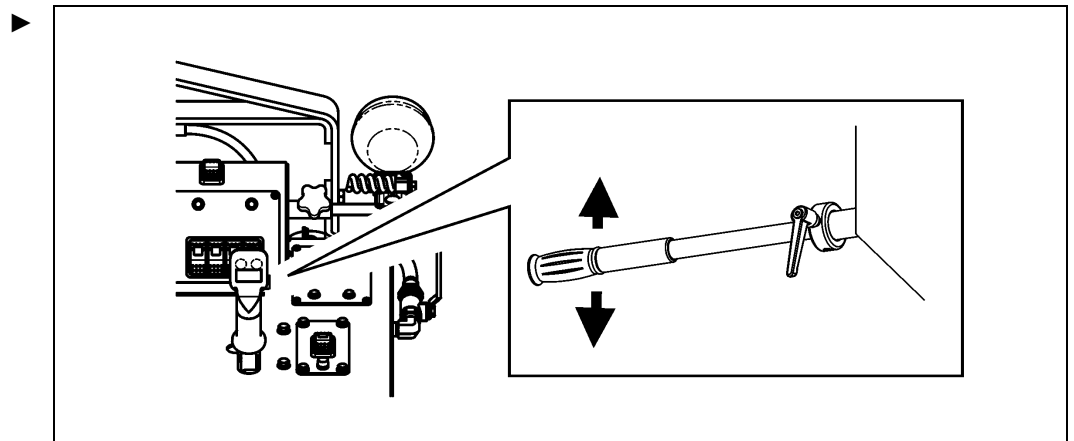
- Fit battery (for type see Technical Data).

6 Assembly / Set-up

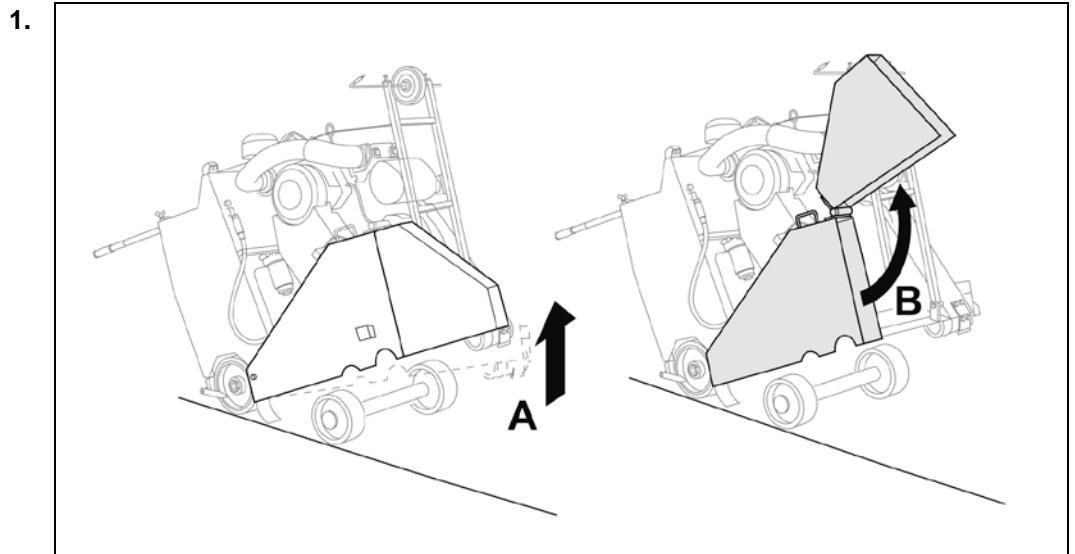
6.1 Mounting grip



6.2 Height adjustment handle



6.3 Mounting saw blade



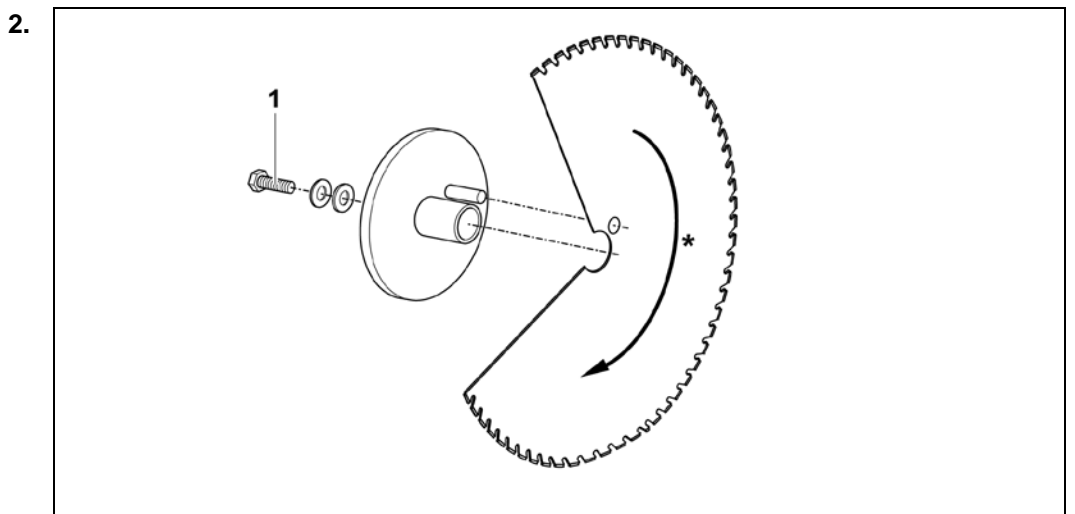
DANGER

Parts that fly off (segments, concrete splinters, saw blade, etc.) may cause serious injury or even death.

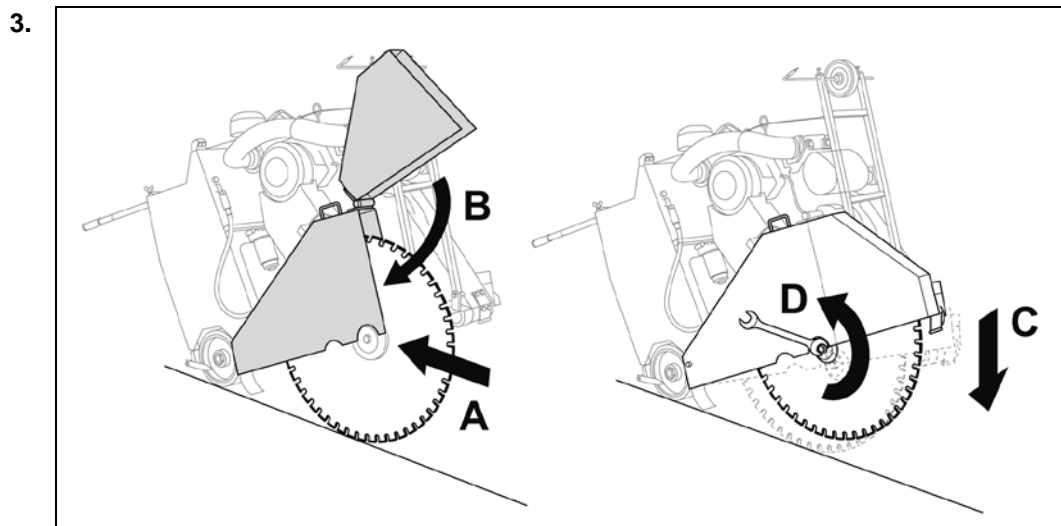
- ▶ Floor saws must only be operated with a blade guard.
- ▶ When assembling the saw blade on the right-hand side use the anchoring screw with the left-hand thread.
When assembling the saw blade on the left-hand side, use the anchoring screw with the right-hand thread.



- ▶ Note the direction or rotation arrows on the saw blade.



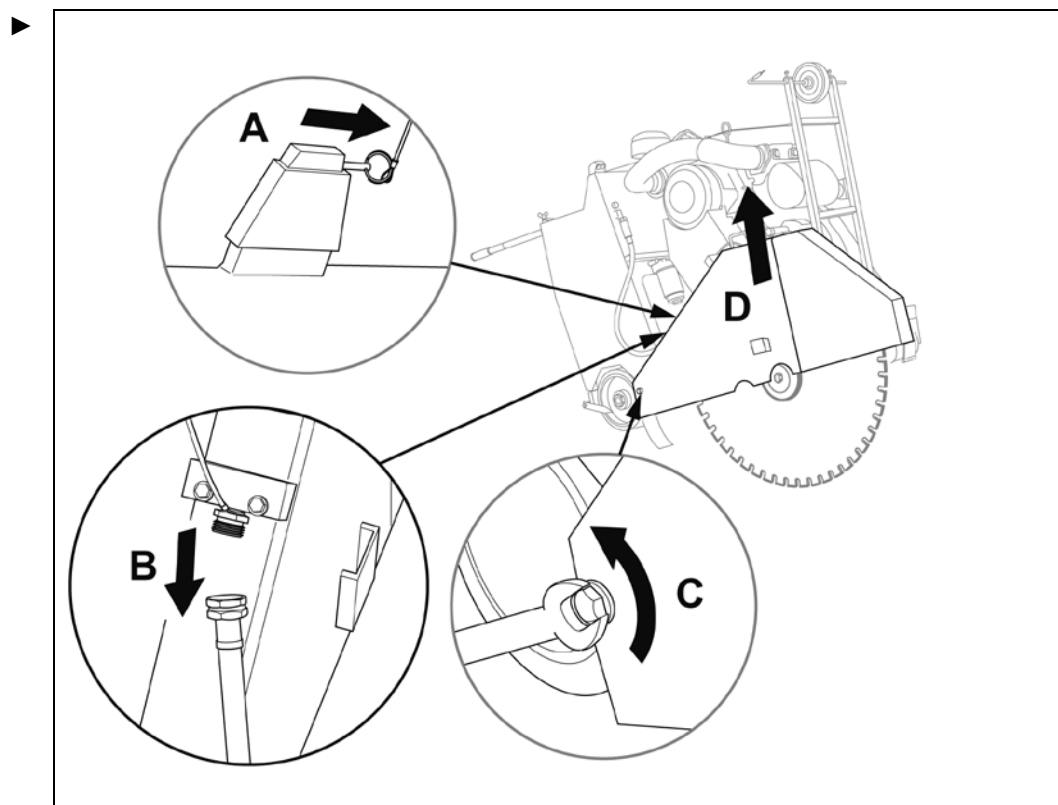
- 1 Anchoring screw
*Note the direction of rotation



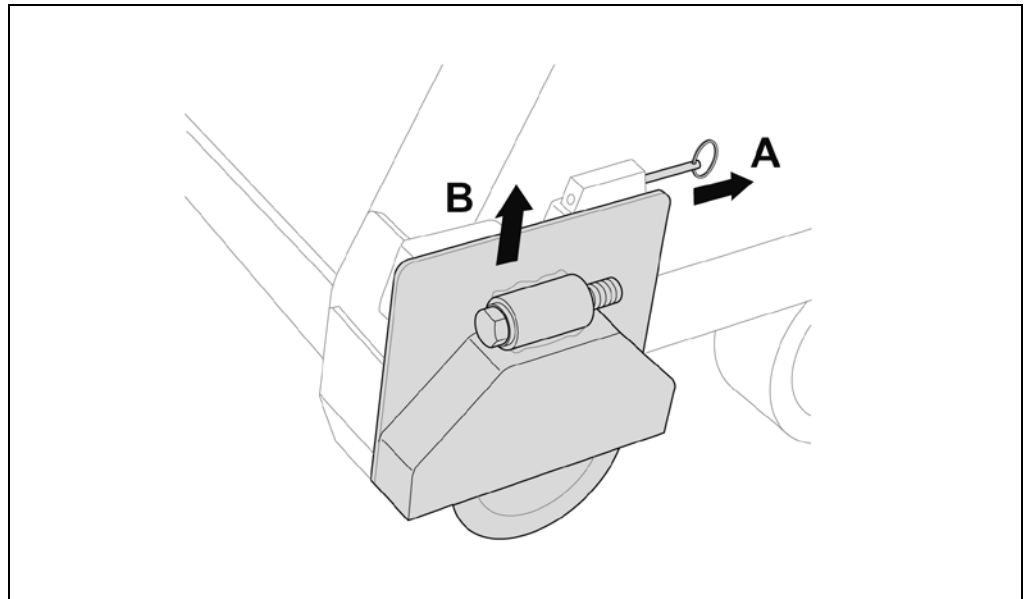
C: To prevent the saw blade rotating while being tightened, carefully place the saw blade on the floor.

6.4 Mounting saw blade on the other side

6.4.1 Disassemble the blade guard



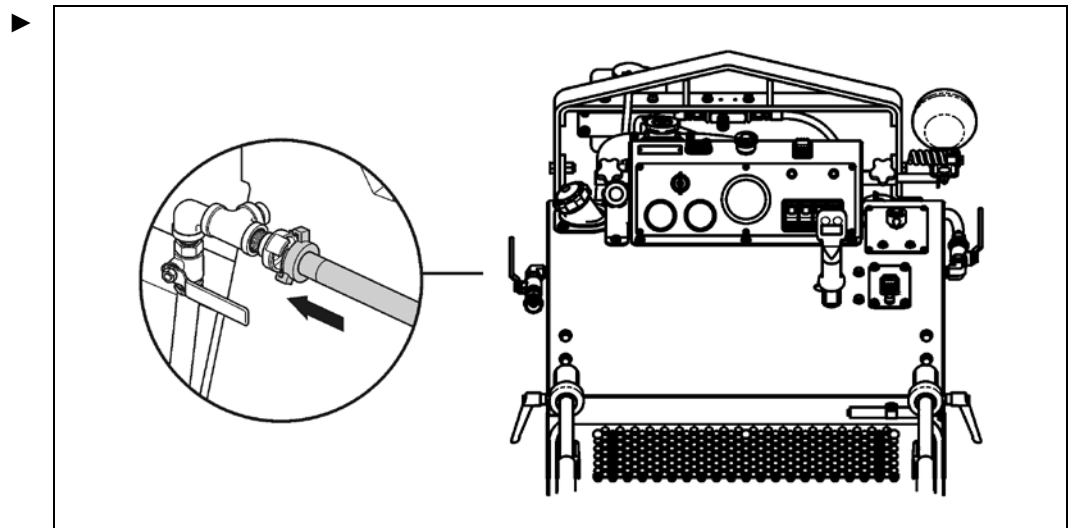
6.4.2 Disassemble the shaft cover



6.4.3 Assembling the blade guard and shaft cover on the other side

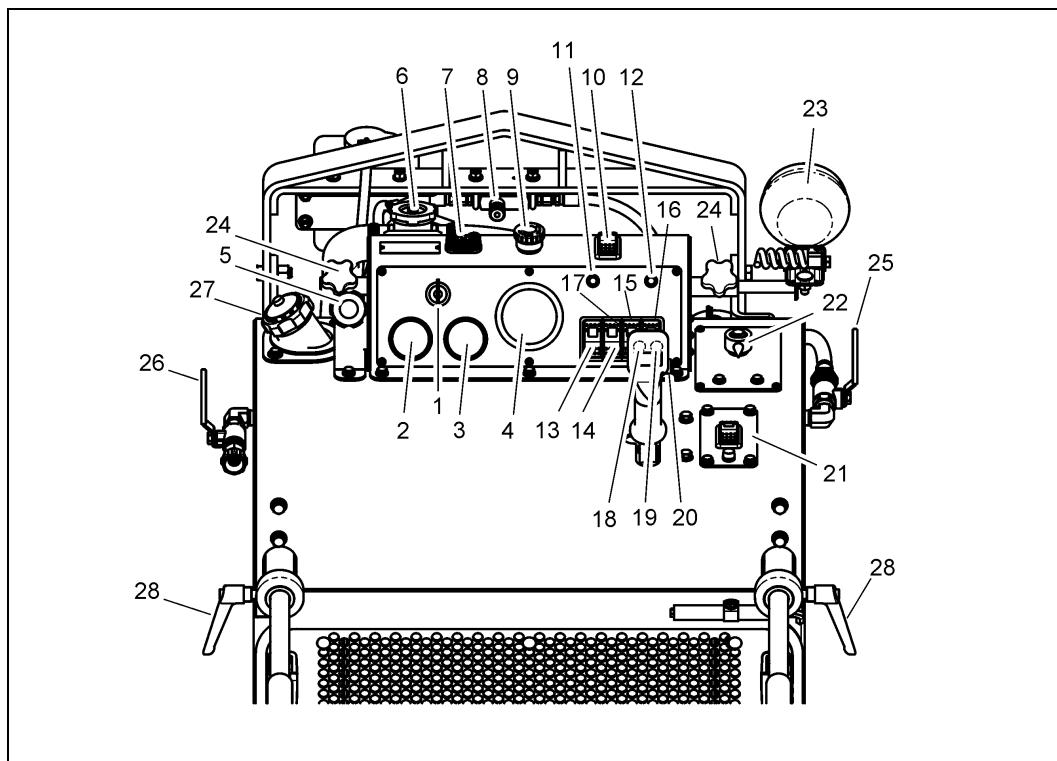
Assembly of the blade guard and the shaft cover is performed in the opposite order to disassembly.

6.5 Connecting water line



7 Operation

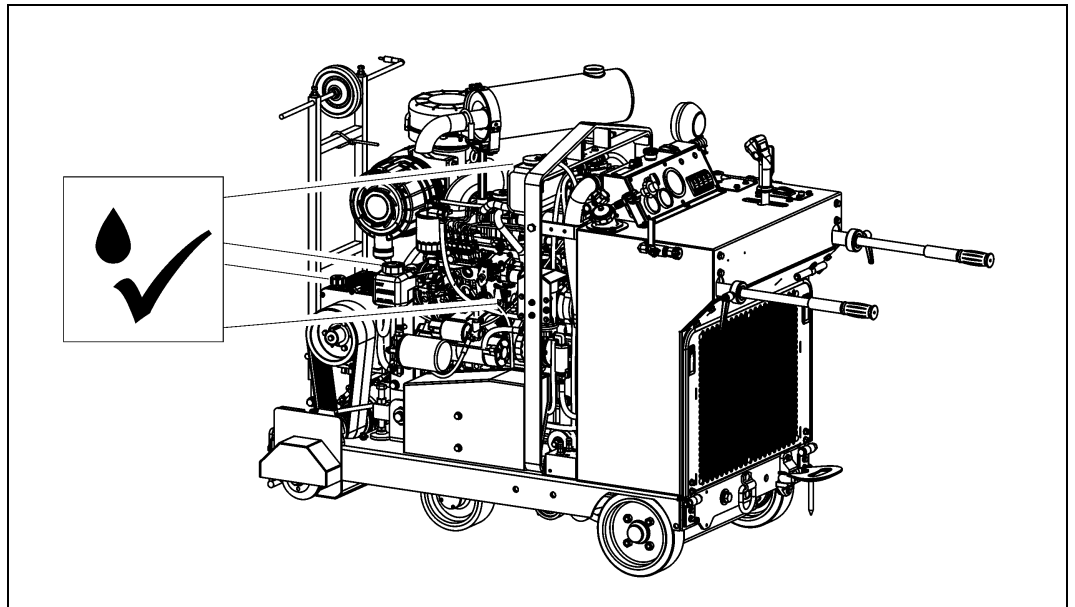
7.1 Overview of operating elements



Operating elements

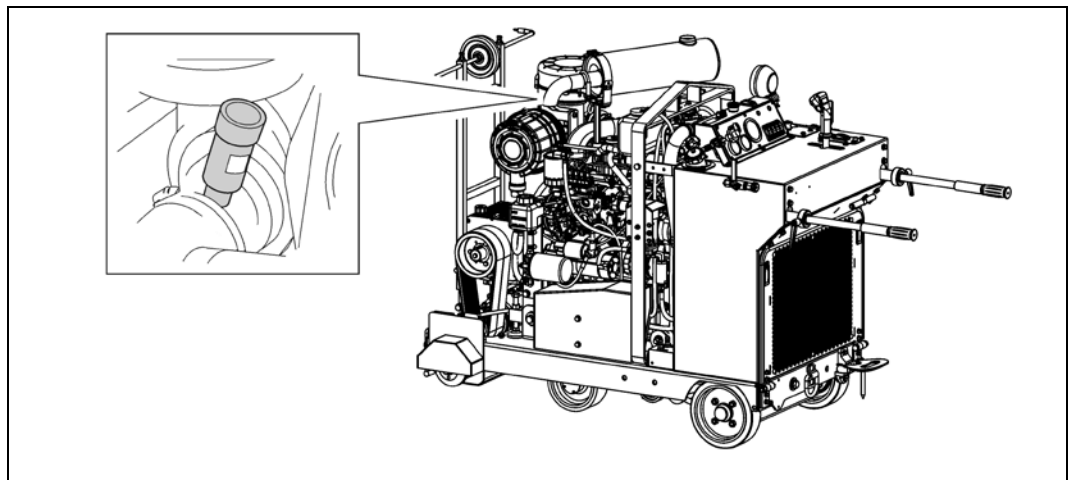
- | | | |
|---------------------------------|--------------------------------|-------------------------------------|
| 1 Ignition switch | 11 Water ON / OFF indicator | 21 Saw blade coupling switch |
| 2 Coolant temperature display | 12 Cut depth storage indicator | 22 Cutting depth indicator |
| 3 Engine warning light | 13 Water ON / OFF switch | 23 Floodlight unit |
| 4 Blade speed indicator | 14 Brake ON / OFF switch | 24 Angle adjustment floodlight unit |
| 5 Engine flue gas | 15 Floodlight switch | 25 Water regulation |
| 6 Cover for cooler | 16 Switch (optional) | 26 Water delivery ON / OFF |
| 7 Rope holder for cut indicator | 17 Travel speed lever | 27 Fuel filler cap |
| 8 Control valve | 18 Switch "raise" | 28 Locking handle |
| 9 Emergency Stop | 19 Switch "lower" | |
| 10 Cut depth storage switch | 20 Height adjustment handle | |

7.2 Check oil and cooling water levels



► Note the details from the motor manufacturer.

7.3 Checking the air filter

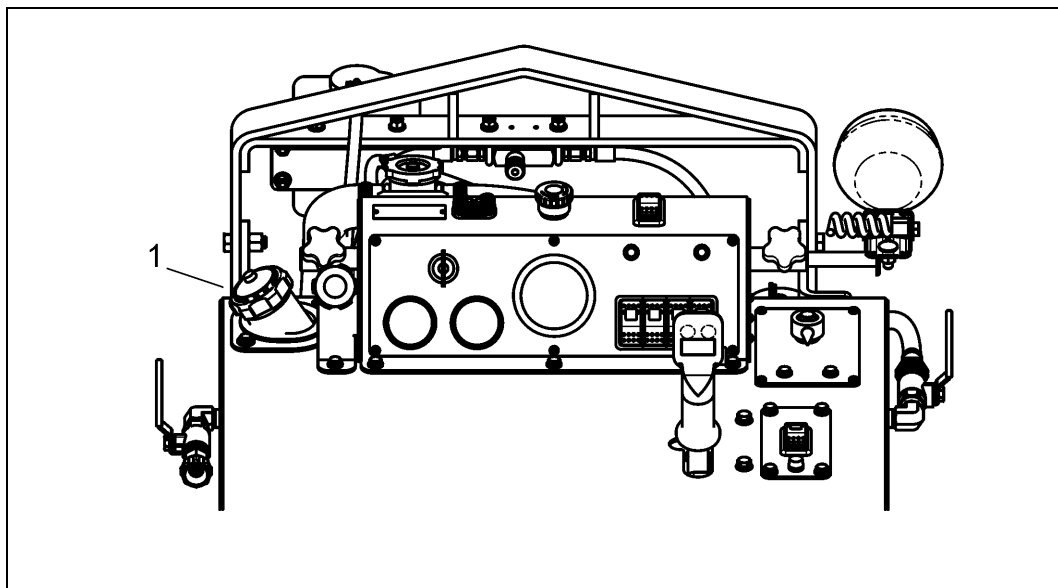


The display in the window has the following significance:

| Display colour | Significance |
|----------------|--------------------------|
| Yellow | Air filter in good order |
| Red | Air filter blocked |

► If the air filter is blocked, it must be changed.

7.4 Checking the fuel level

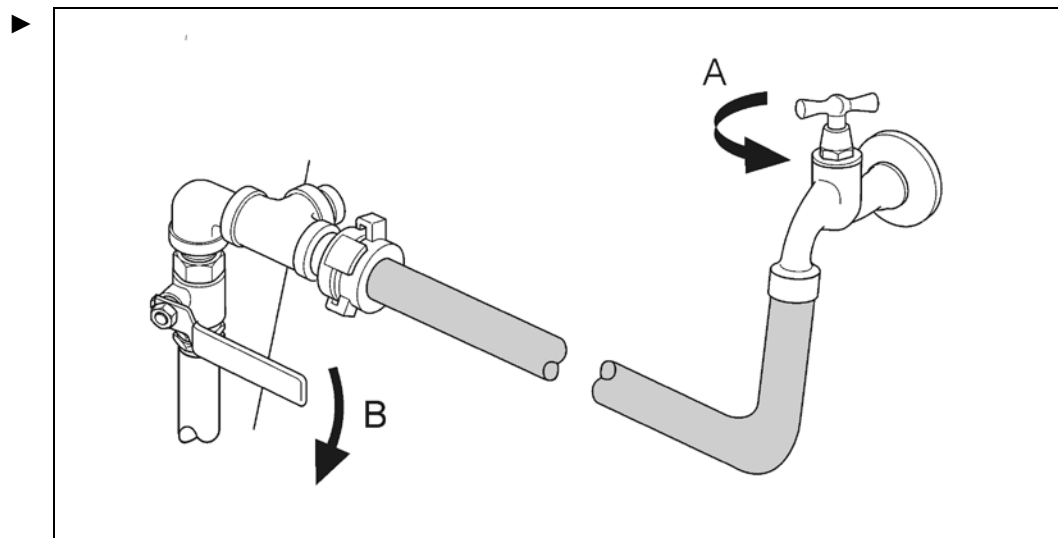


- ▶ Check the tank display (1) and top up with diesel as necessary.

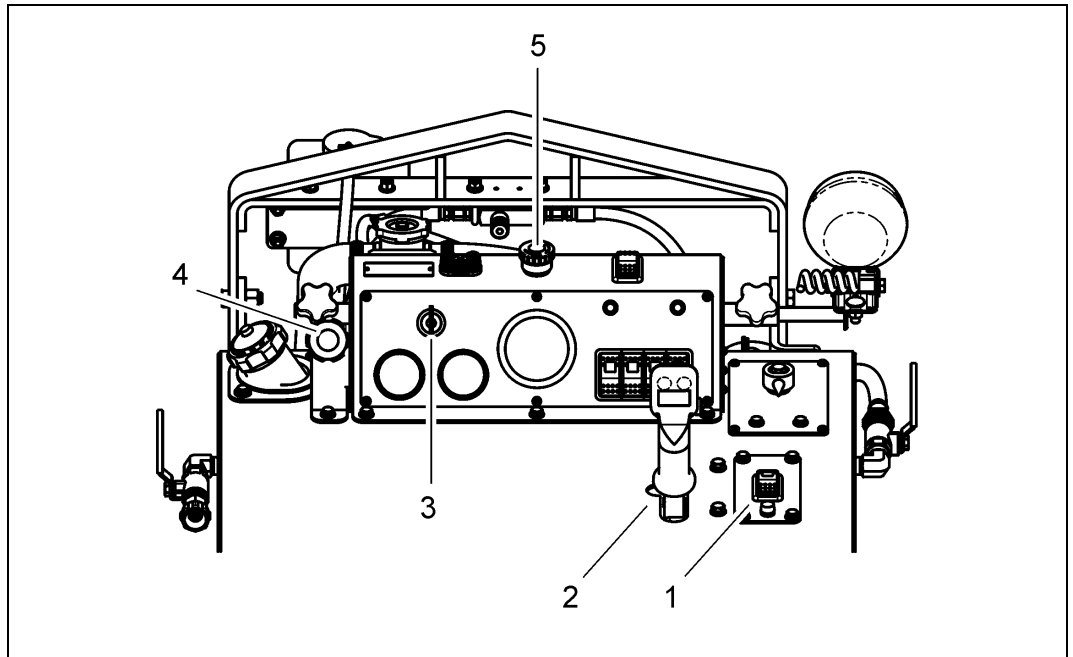
7.5 Positioning the floor saw

1. Slide floor saw into the working position.
2. Fit the cutting guides to the floor saw.

7.6 Connecting the water supply



7.7 Switch on motor



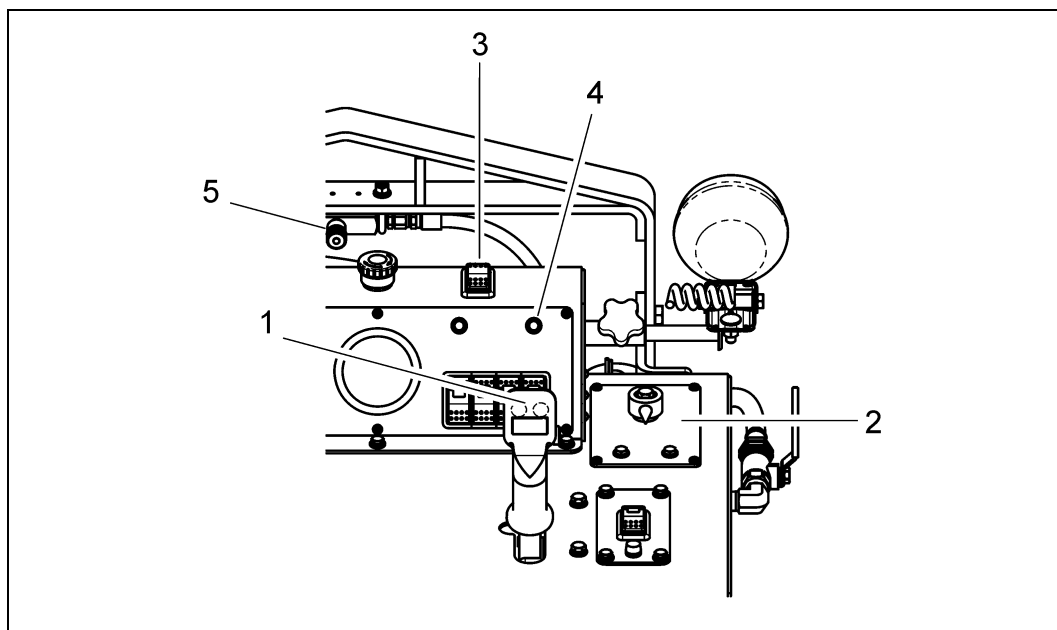
| Symbol | Significance |
|--------|--------------------------------------|
| | Coupling lever in coupled position |
| | Coupling lever in uncoupled position |

- ✓ Operating handle (2) engaged in **0** position
- ✓ Coupling lever (1) is in the uncoupled position
- ✓ **EMERGENCY STOP** switch (5) has been released

1. Turn ignition key (3) to the preheat position in order to preheat the motor.
2. Turn ignition key further to the right in order to start.
Battery and oil pressure displays light during starting and then go out.
3. With engine speed controller (4) set optimum blade speed.

7.8 Lowering / raising saw blade

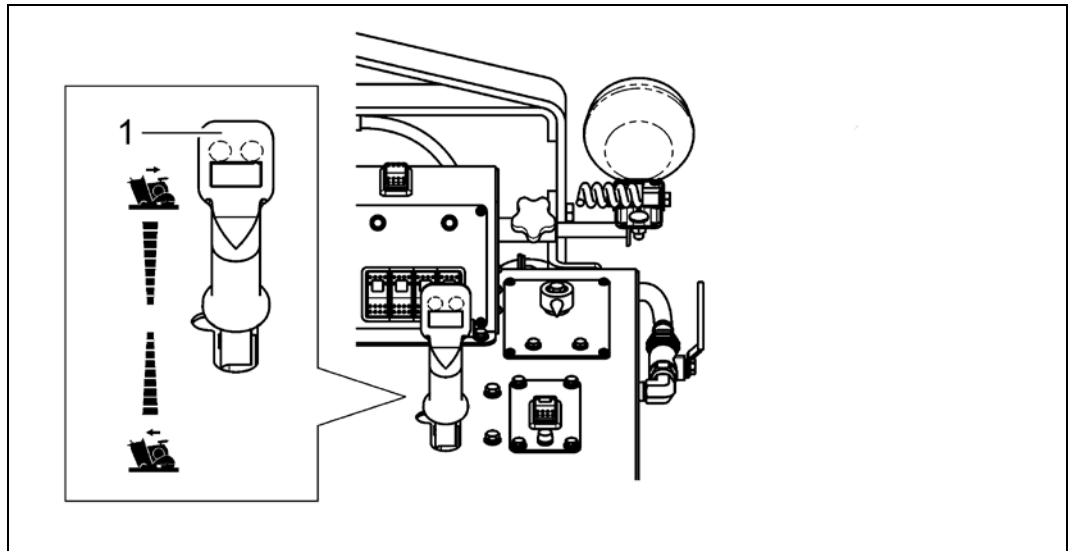
7.8.1 Lowering example





1. Press the **Lower** button (1) until the saw blade touches the material to be cut.
2. Set the cutting depth indicator (2) in the **0** position.
3. Using the **Lower** key, lower the saw blade to the desired cutting depth.
4. Button depth stop (3) min. press forward for 3 seconds. Light (4) comes on.
5. The lowering speed can be controlled using the control valve (5).

In order to deactivate the stored cutting depths, gently raised the saw blade and move back flip switch (3).

7.9 Adjusting the feed

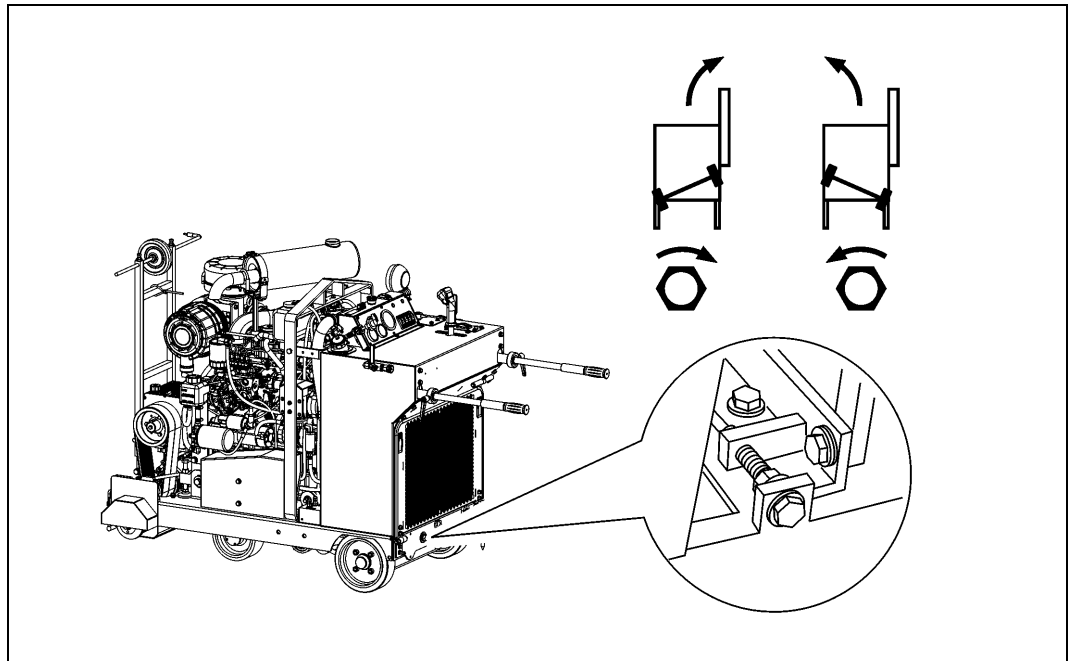


| Symbol | Significance |
|---|--|
|  | Feed adjuster in the forwards direction of travel |
|  | Feed adjuster in the backwards direction of travel |

- ✓ Feed adjuster is in the neutral position
- ✓ Brake is released

Using the feed adjuster (1). Set the direction of travel and speed.

7.10 Correcting the tracking



Correcting the tracking

- ▶ If the saw blade drifts, adjust the rear axle with the adjusting screw.

7.11 Gear selection procedure for 3-speed gearbox



DANGER

Failure to follow instructions can result in death or serious injury.

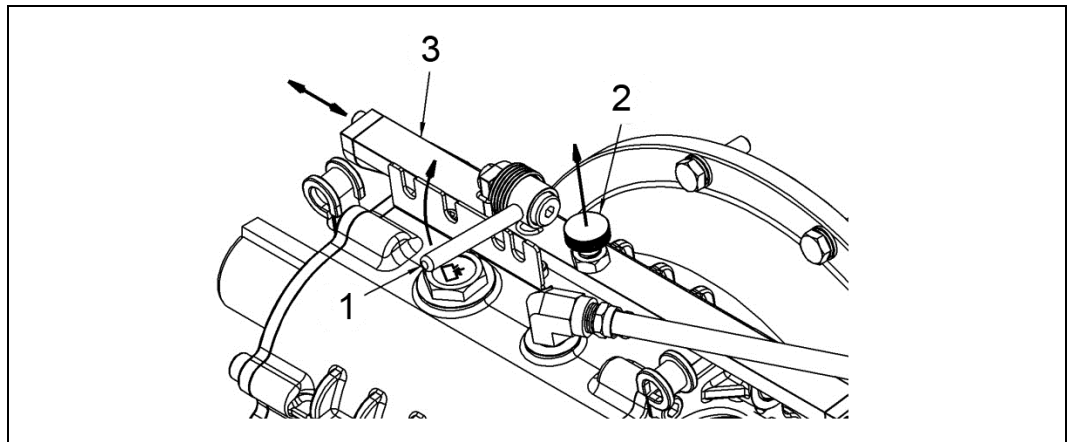
The gear can only be changed if the motor is stationary. Never tamper with the gear selection mechanism with the motor running.

7.11.1 Gear selection procedure



INFORMATION

No tools are required for the entire selection procedure.



1. Stop the motor.
2. Open the motor cover.
3. Push the gear selection lever (1) upwards and release the locking mechanism (2).
4. Slide the gear selection lever to the desired gear position.

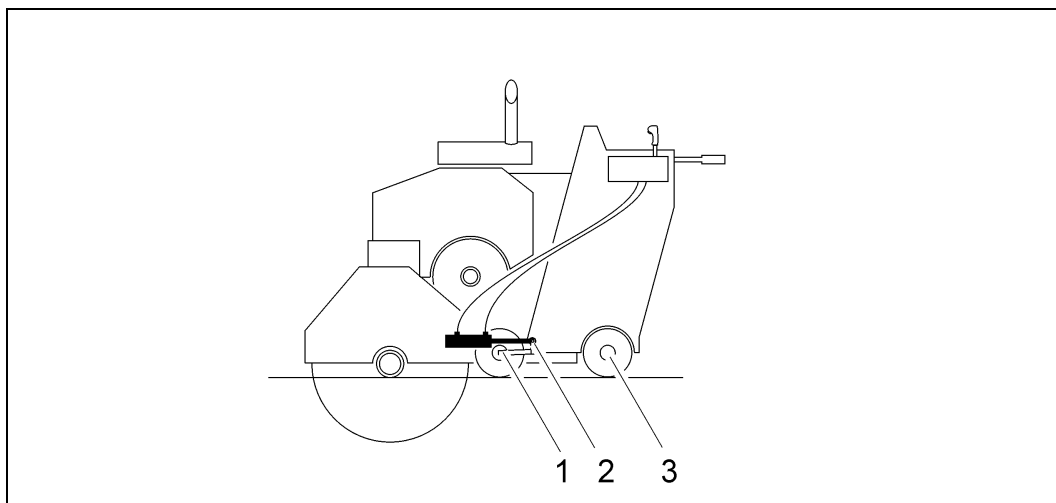
| Gear position (designations) | |
|------------------------------|-------------------|
| M = Medium | ▶ Medium speed |
| L = Low | ▶ Low speed |
| N = Neutral | ▶ No gear engaged |
| H = High | ▶ High speed |

5. Push the gear selection lever (1) into the recess for the required gear position.
6. Secure the gear position using the locking element (2).

8 Maintenance

| When? | What? |
|--|---|
| Daily | <ul style="list-style-type: none"> ▶ Check oil level. ▶ Perform a visual check for damage. |
| Weekly | <ul style="list-style-type: none"> ▶ Check belt tension and adjust if necessary. |
| Every 50 hours of operation | <ul style="list-style-type: none"> ▶ Lubricate grease nipples. |
| Annually or every 100 operating hours | <ul style="list-style-type: none"> ▶ Arrange a major service by TYROLIT Hydrostress AG or an authorised representative. |
| According to the information from the motor manufacturer | <ul style="list-style-type: none"> ▶ Carry out all necessary measures in accordance with the operating instructions of the motor manufacturer. |

8.1 Grease nipples



Position of grease nipples

- 1 Bearing lifting shaft
- 2 Cylinder eye
- 3 Bearing wheel drive

9 Malfunctions

| Malfunction | Possible cause | Solution |
|--|--|---|
| Floor saw does not operate | EMERGENCY STOP switch has been pressed. | ▶ Release EMERGENCY STOP switch. |
| Saw blade jammed | Saw blade is jammed in the cutting material | <ul style="list-style-type: none"> ▶ Reverse the floor saw. ▶ If necessary release the saw blade by rocking. ▶ If necessary stop the motor, disassemble the saw blade and release this individually from the cutting material. |
| Saw blade does not rotate even though the motor is running | Belt tension too slack | ▶ Tension or replace belt. |
| | Pulling pin on the anchoring flange has sheared off | ▶ Mount new anchoring flange. |
| Feed not working | Operation of the control rods impaired | ▶ Check control rods and repair as necessary. |
| | Defective hydrostat | ▶ Check hydrostat and if necessary have this repaired by a TYROLIT Hydrostress engineer. |
| Motor running off centre | Wrong fuel | ▶ Switch off motor immediately and change fuel. |
| | Diesel filter blocked | ▶ Have diesel filter changed. |
| Battery display lights | Defective contacts on the connection between battery and generator | ▶ Check contacts and re-establish these as necessary. |
| | Inadequate battery charging | ▶ Charge or change battery. |
| | Battery is over charged | ▶ Check alternator |
| Oil temperature display lights | Oil temperature too high | ▶ Allow floor saw to run under no load until temperature display goes off. |
| | Too little oil | ▶ Top up oil. |
| Oil pressure display lights | Defective oil pump | ▶ Have oil pump changed. |
| Motor temperature display pointer in red zone | Motor overloaded | <ul style="list-style-type: none"> ▶ Allow motor to run under no load for a few minutes. ▶ Check coolant level |

10 Technical data

10.1 Dimensions

| Parameter | Value |
|--|---|
| Weight | 987 kg |
| Cutting depth (max.) | 500 mm |
| Blade uptake diameter | 25.4 mm |
| Max. saw blade diameter | 1,200 mm |
| Dimensions (transport dimensions with blade guard folded up) | L: 1,615 mm W: 930 mm H: 1,335 mm |

10.2 Motor

| Parameter | Value |
|--------------|---|
| Type | KUBOTA |
| Power | 74 PS |
| Rated speed | According to operating instructions from motor manufacturer |
| Oil content | According to operating instructions from motor manufacturer |
| Tank content | 34 l |
| Fuel | Diesel |
| Cooling | Water cooling / Air cooling |

10.3 Lift drive

| Parameter | Value |
|------------|-------------------|
| Drive type | Electro-hydraulic |
| Oil grade | ATF Dexron II D |

10.4 Travel drive

| Parameter | Value |
|------------|-----------------|
| Drive type | Hydraulic |
| Oil grade | ATF Dexron II D |
| Cooling | Air cooling |

10.5 Noise level and vibrations

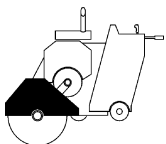

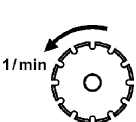
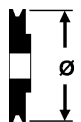
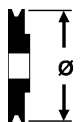
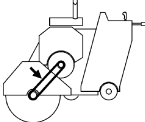
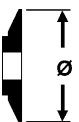
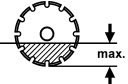
| Parameter | Value | |
|--|------------------------|--------------------|
| | FSD1274 ★★★ | FSD1274 3-Gang ★★★ |
| Noise level at workplace (L _{PA}) | 96,9 dB(A)* | 91,3 dB(A)* |
| Sound power level in accordance with ISO 3744 (L _{WA}) | 116,9 dB(A)* | 111,3 dB(A)* |
| Vibrations DIN EN ISO 5349-2 | < 2,5 m/s ² | |

*Value applies under the following condition: Travel drive is switched off and the saw blade is not engaged. The measurement is performed with the motor under full load with the saw blade dia. 900 mm. Higher noise levels may be generated in cutting operation.

10.6 Battery

| Parameter | Value |
|--------------------------|-------------------------------|
| Description | Battery 12-Volt Group Size 24 |
| DP battery part number | EODP 2800465 |
| Length | 260 mm |
| Width | 173 mm |
| Height | 225 mm |
| Capacity | 70 Ah |
| Manufacturer's reference | P7029 |

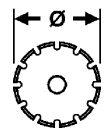

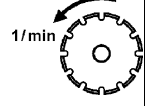
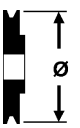
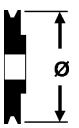
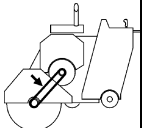
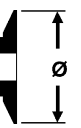
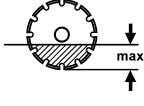

10.7 Cutting data FSD1274★★★

| Blade guard | Blade Ø | Blade rpm | Belt pulley diameter bottom | Belt pulley diameter top | Belt size | Flange diameter Blade uptake | Cut depth |
|---|---|---|---|---|--|---|---|
| 20" / 500 mm | 500 mm | 2,475 | 3.65" | 6.5" | 3VX530 | 5" / 127 mm | 185 |
| 26" / 600 mm | 600 mm | 2,075 | 4" | 6" | 3VX530 | 5" / 127 mm | 235 |
| 30" / 700 mm | 700 mm | 1,725 | 4.5" | 5.6" | 3VX530 | 5" / 127 mm | 285 |
| 36" / 900 mm | 900 mm | 1,475 | 4.75" | 5" | 3VX530 | 6" / 152 mm | 370 |
| 42" / 1,000 mm | 1,000 mm | 1,175 | 4.75" | 4" | 3VX355 | 7" / 178 mm | 410 |
| 48" / 1,200 mm | 1,200 mm | 1,050 | 4.75" | 4" | 3VX355 | 8" / 203 mm | 500 |
|  |  |  |  |  |  |  |  |



The belt pulley should only be changed by an engineer from TYROLIT Hydrostress or a trained worker.

10.8 Cutting data FSD1274★★★ 3-speed gearbox

| Blade Ø | operation | Blade rpm | Belt pulley diameter bottom | Belt pulley diameter bottom | Belt size | Flange diameter Blade uptake | Cut depth | Motors rpm |
|---|---|---|---|---|--|---|---|---|
| 700 mm | H (High) | 1700 | 4.75" | 4.75" | 3VX450 | 8" / 203 mm | 285 | 2800 |
| 1000 mm | M (Medium) | 1250 | 4.75" | 4.75" | 3VX450 | 8" / 203 mm | 410 | 2800 |
| 1200 mm | L (Low) | 975 | 4.75" | 4.75" | 3VX450 | 8" / 203 mm | 500 | 2800 |
|  |  |  |  |  |  |  |  |  |



The gear may only be changed if the motor is stationary. Never tamper with the gear selection mechanism with the motor running.

EC declaration of conformity

| | |
|----------------------|---|
| Description | Floor Saw |
| Type designation | Floor Saw FSD1274★★★ / FSD1274★★★ 3-Speed gearbox |
| Year of construction | 2010 |
| Manufacturer | TYROLIT Hydrostress AG |

We declare under our own liability that this product complies with the following directives and standards:

Directive applied

| | |
|--------------------|------------|
| Machine Directive | 2006/42/EC |
| Noise Emission | 2000/14/EC |
| Exhaust Directives | 2004/26/EC |

Standards

| | |
|-------------|---|
| EN 12100 | Safety of machinery – Basic concepts, general design principles. |
| EN 13862 | Floor cutting-off machines. Safety. |
| EN 982 | Safety of machinery Safety requirements for safety systems and their components – Hydraulics. |
| EN ISO 3744 | Acoustics – Determination of sound power levels of noise sources using sound pressure |