

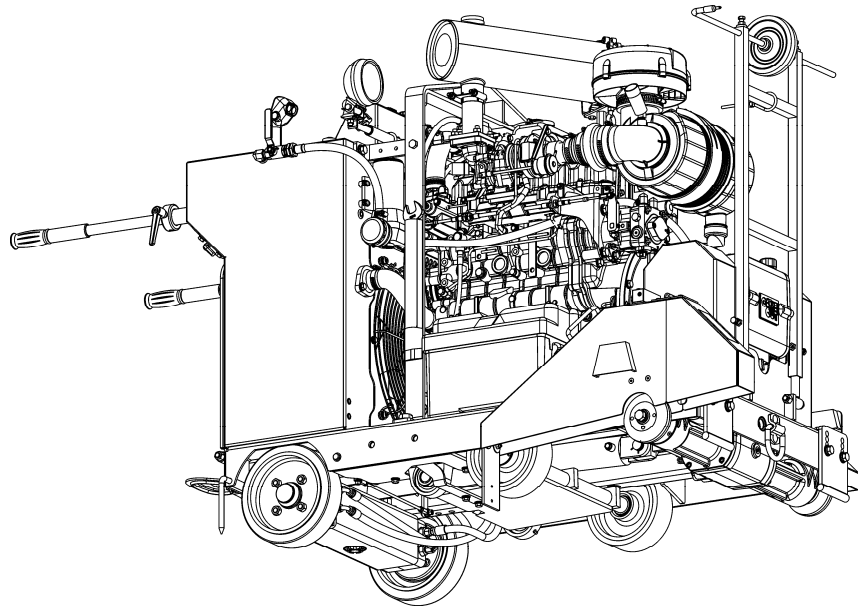
Operating Instructions

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.

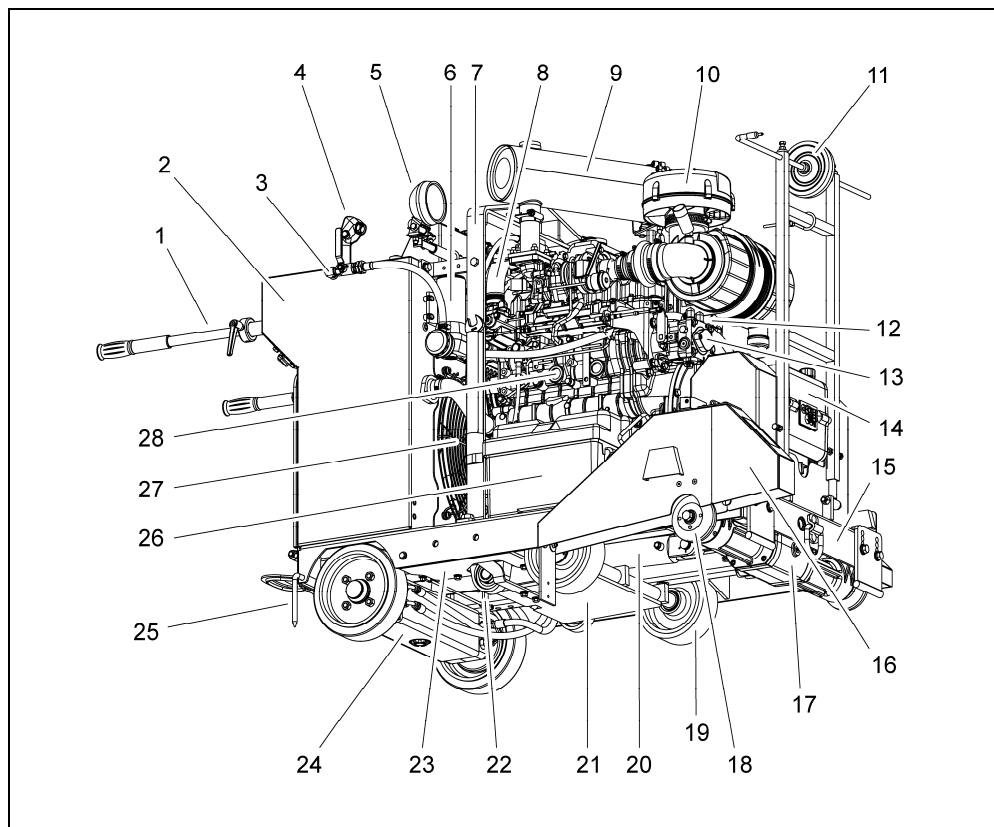


DANGER

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

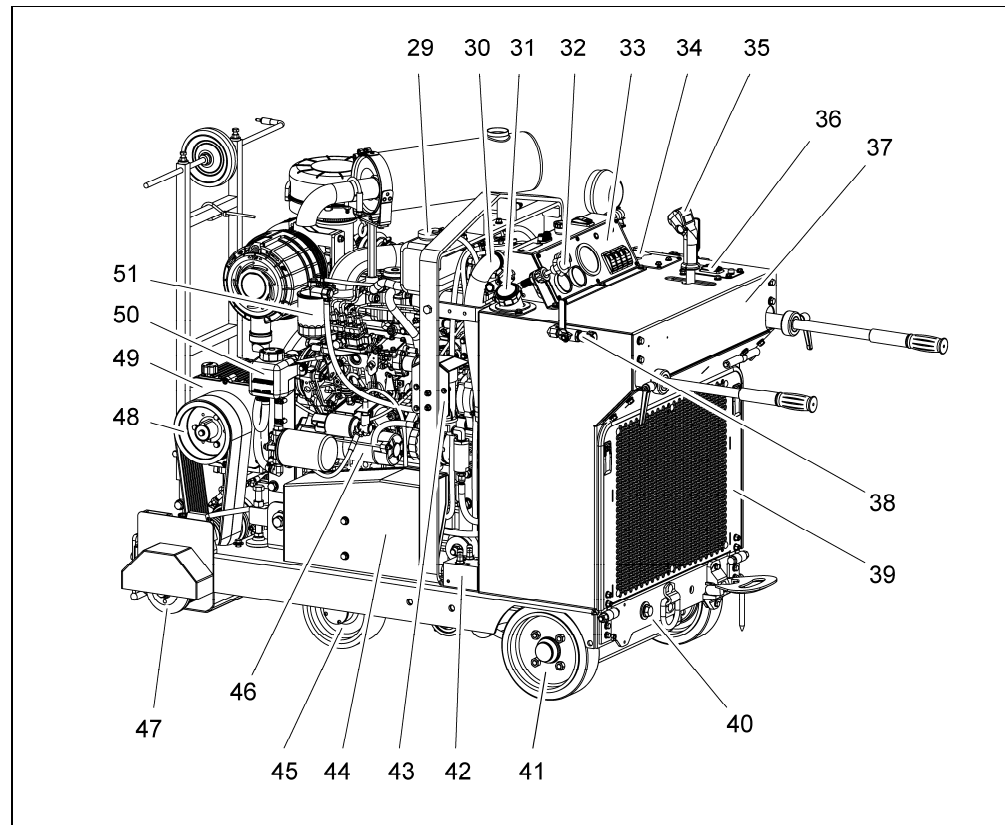
- ▶ Please ensure that the "Safety Manual / System Description for Floor saws" has been read and understood in full.

2 Design



Components

1	Grip	11	Cut indicator roller	21	Lifting chasis
2	Control unit	12	Water valve	22	Bearing lifting chasis
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		

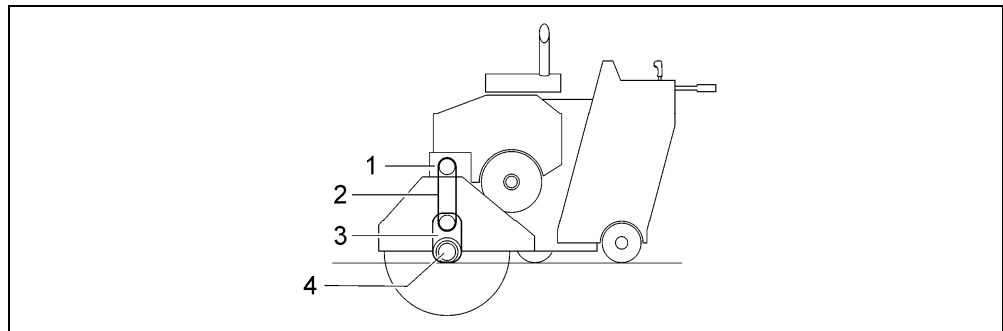


Components

- | | | | | | |
|----|--------------------------------|----|---------------------------------|----|--------------------------|
| 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

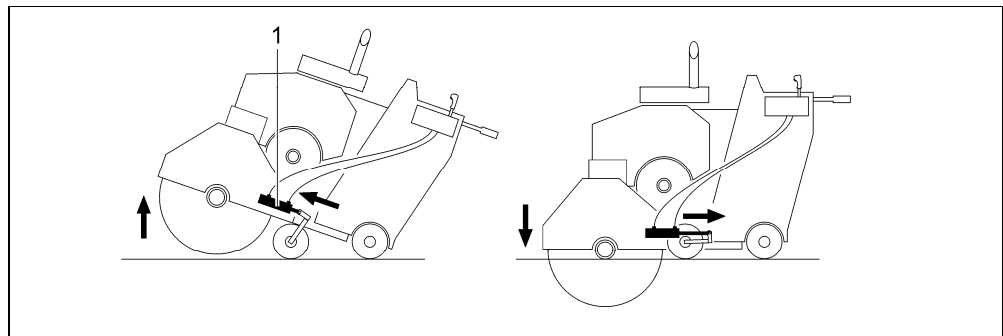
3.1 Saw blade drive



Saw blade drive (schematic)

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

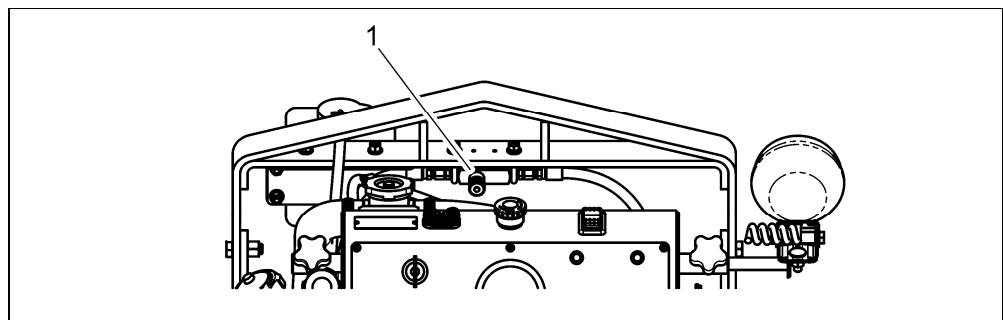
3.2 Lift drive



Lift drive (schematic)

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

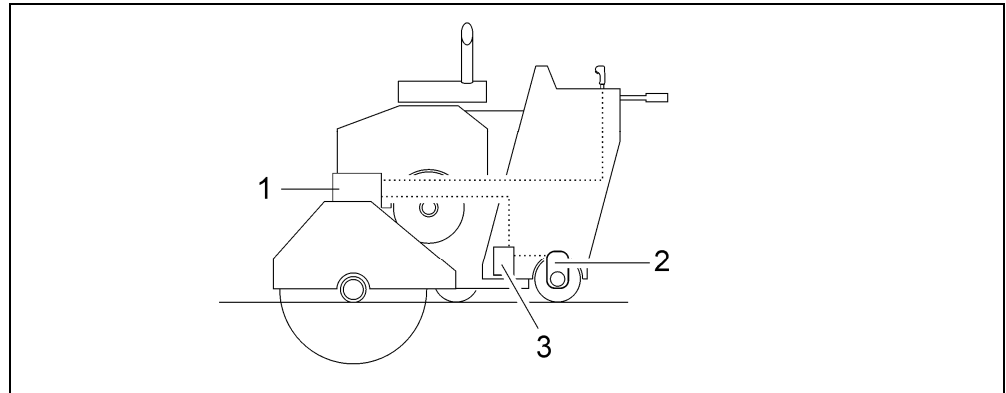
3.3 Saw blade lowering speed



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

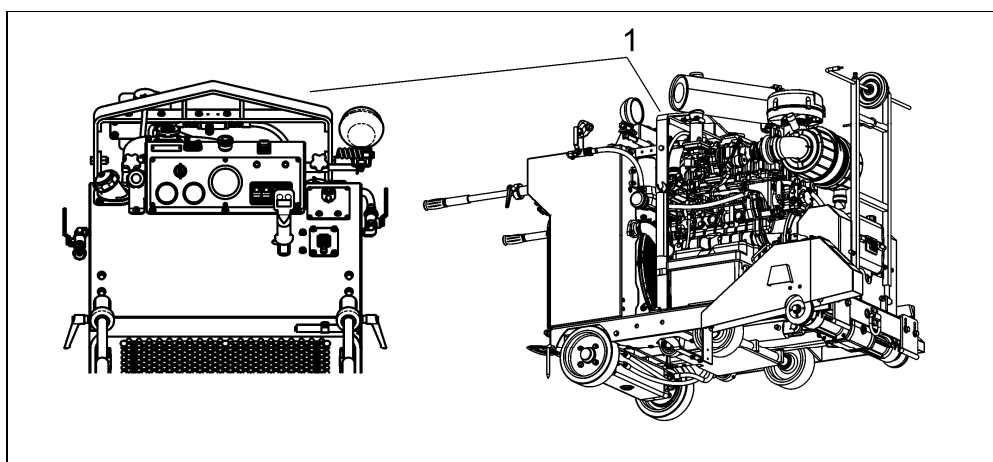


DANGER

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

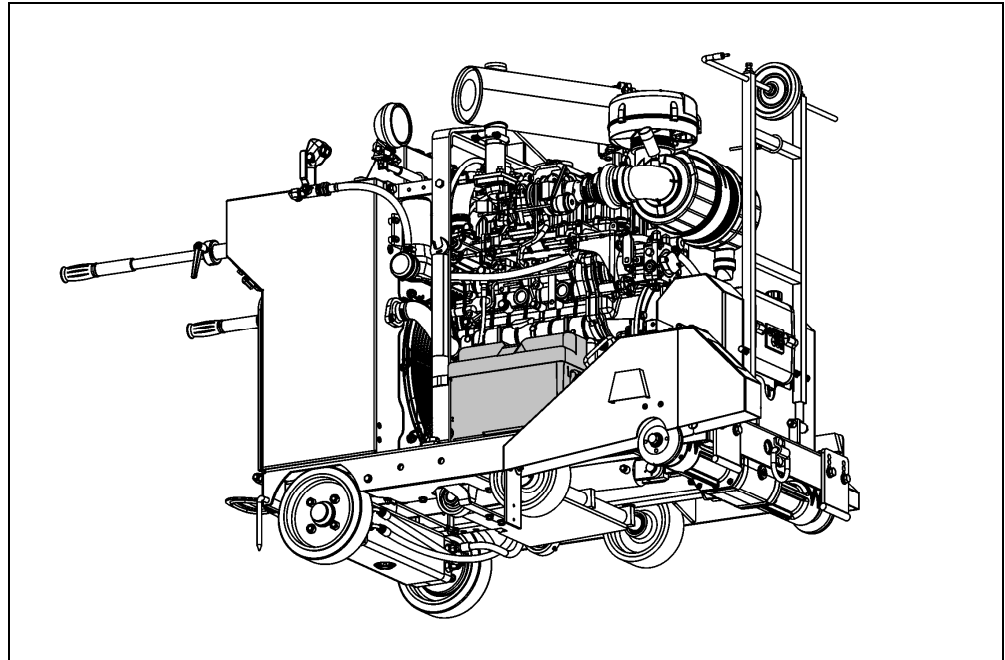


Hitching point

1 Crane hitching device

5 Initial start-up

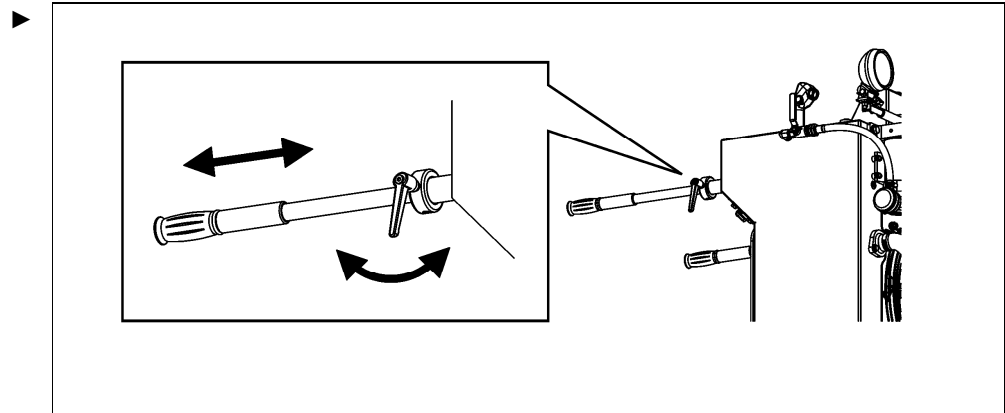
5.1 Fitting battery



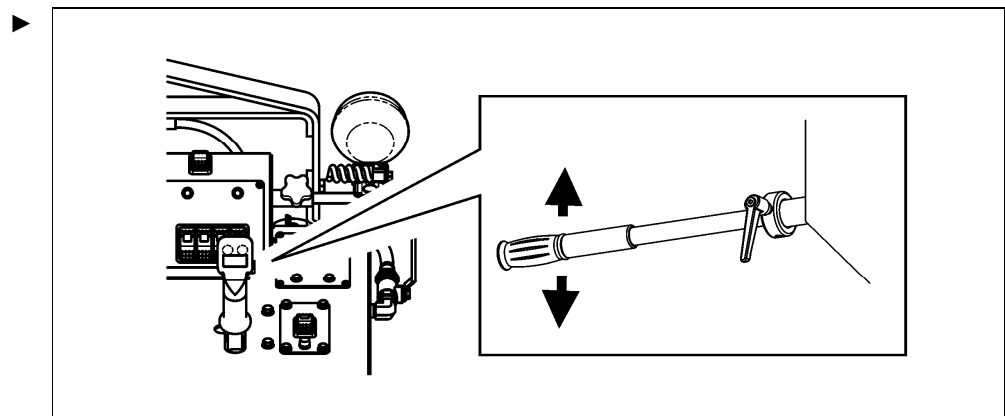
- ▶ Fit battery (for type see Technical Data).

6 Assembly / Set-up

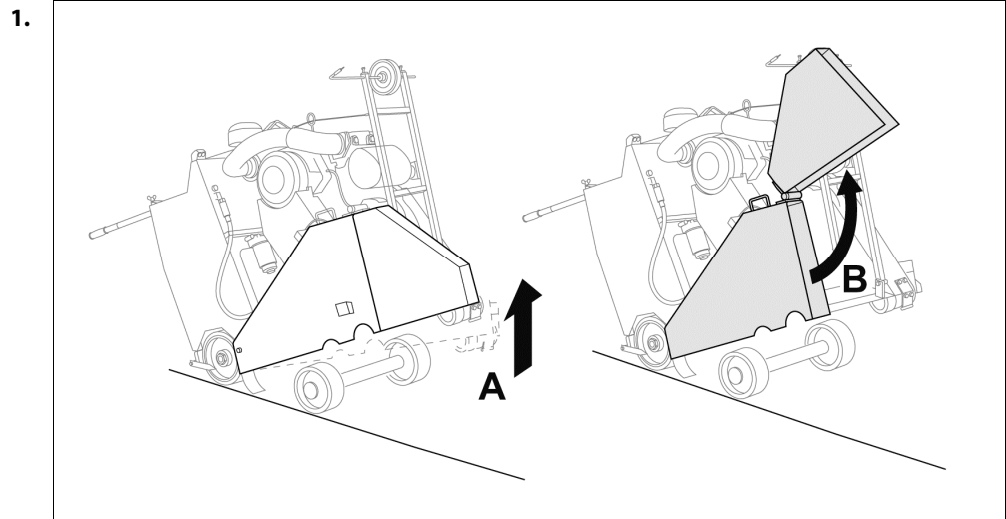
6.1 Mounting grip



6.2 Height adjustment handle



6.3 Mounting saw blade



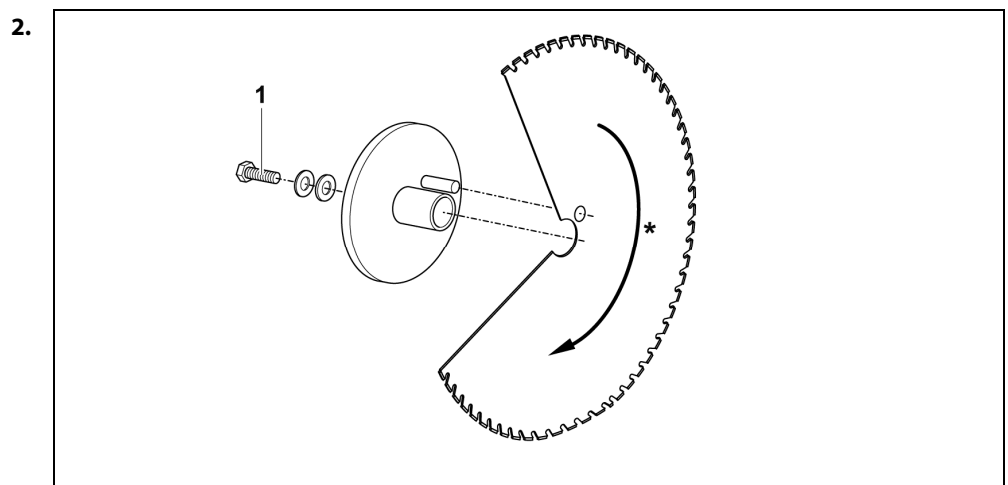
DANGER

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.

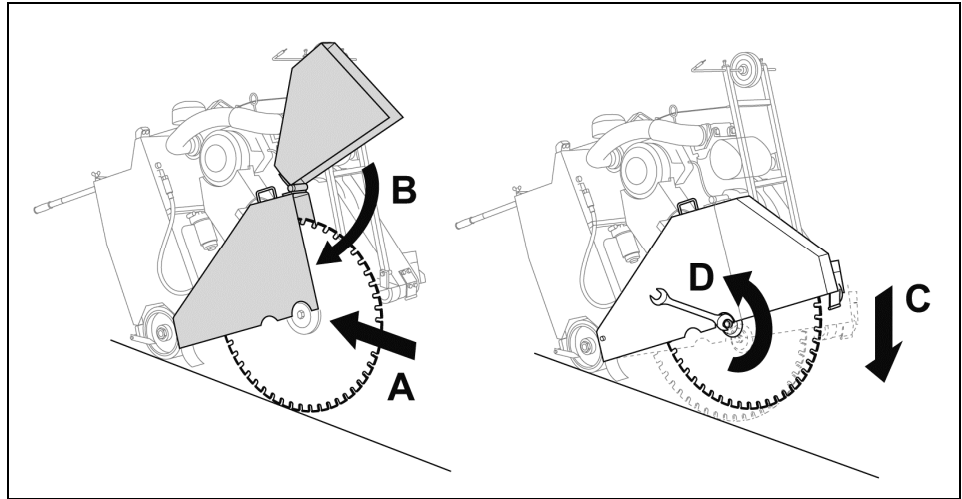


- ▶ Note the direction or rotation arrows on the saw blade.



- 1 Anchoring screw
*Note the direction of rotation

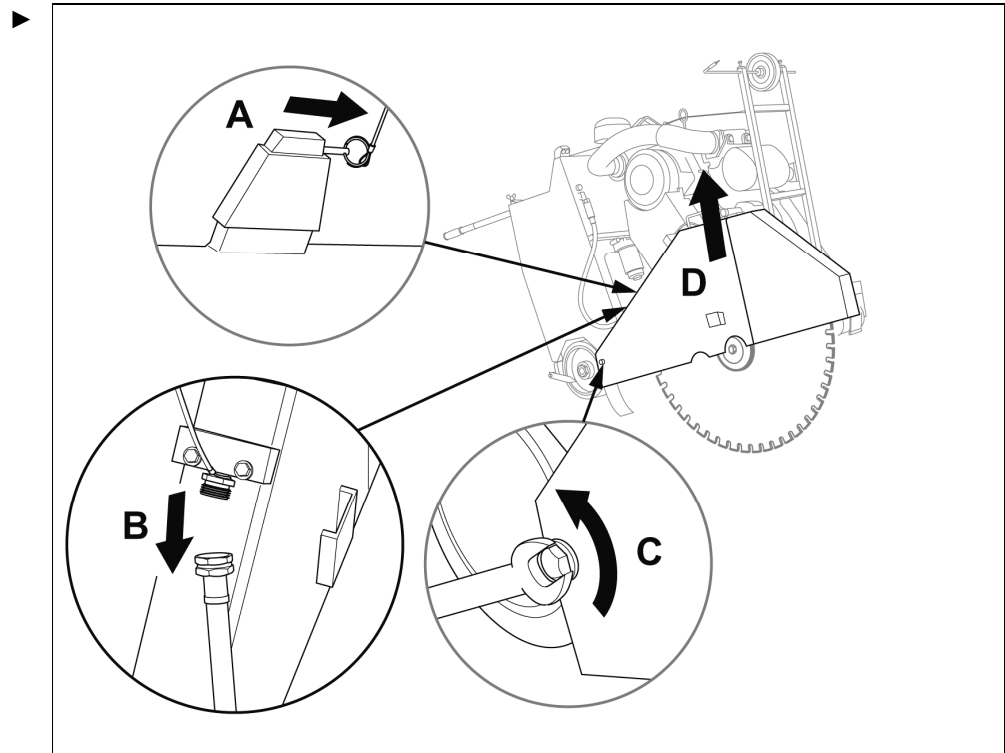
3.



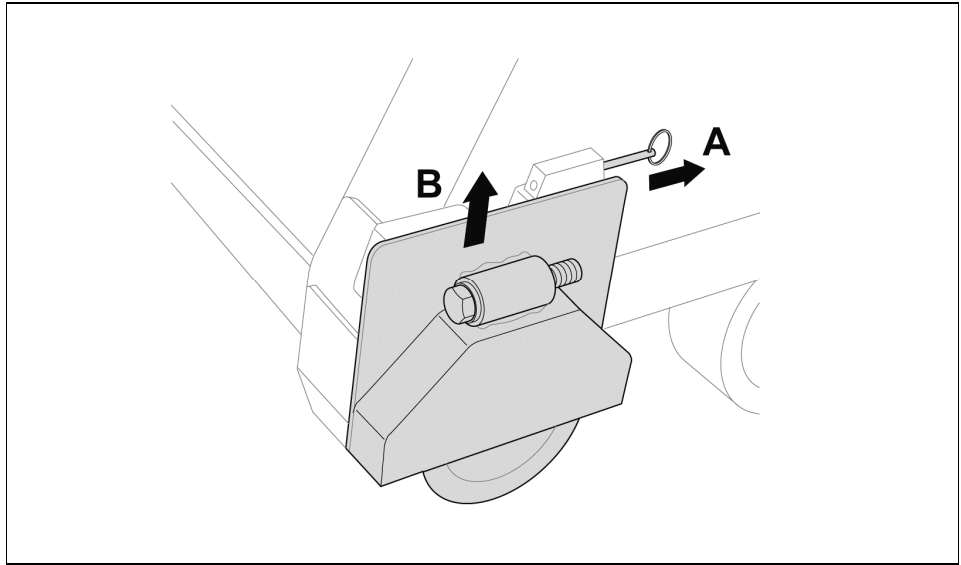
C: To prevent the saw blade rotating while being tightened, carefully place the saw blade on the floor.

6.4 Mounting saw blade on the other side

6.4.1 Disassemble the blade guard



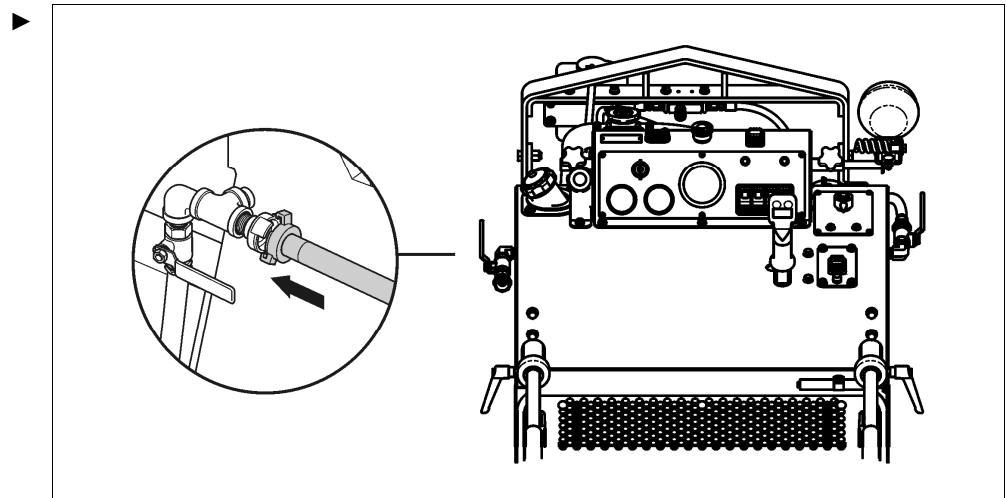
6.4.2 Disassemble the shaft cover



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

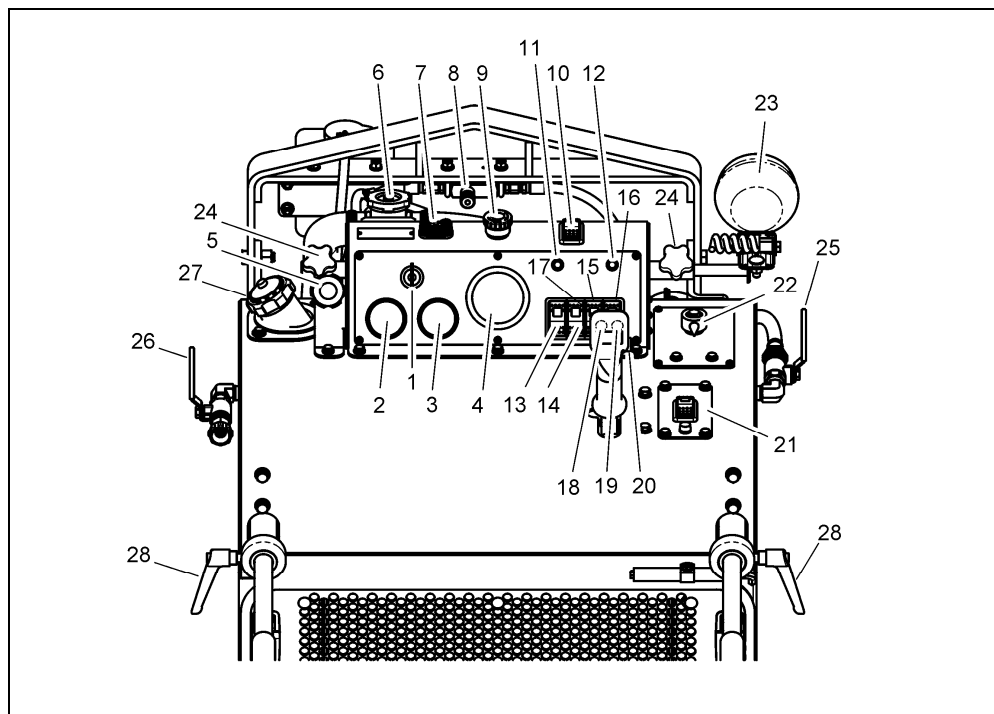
Assembly of the blade guard and the shaft cover is performed in the opposite order to disassembly.

6.5 Connecting water line



7 Operation

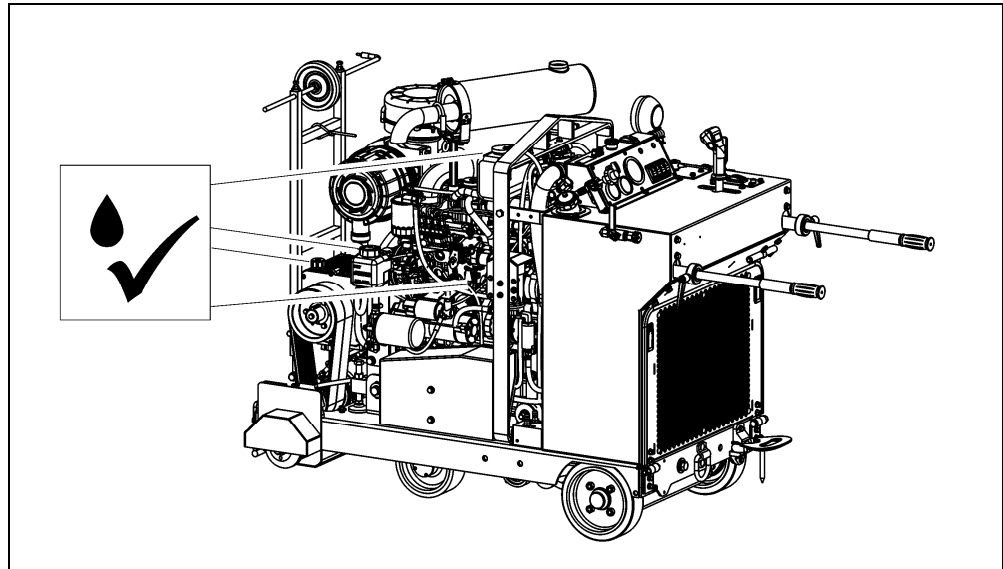
7.1 Overview of operating elements



Operating elements

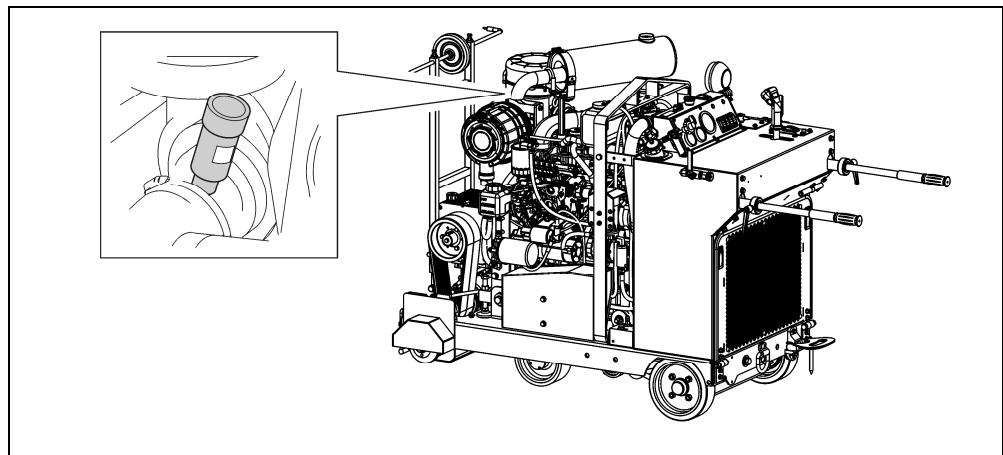
1	Ignition switch	11	Water ON / OFF indicator	21	Saw blade coupling switch
2	Coolant temperature display	12	Cut depth storage indicator	22	Cutting depth indicator
3	Engine warning light	13	Water ON / OFF switch	23	Floodlight unit
4	Blade speed indicator	14	Brake ON / OFF switch	24	Angle adjustment floodlight 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

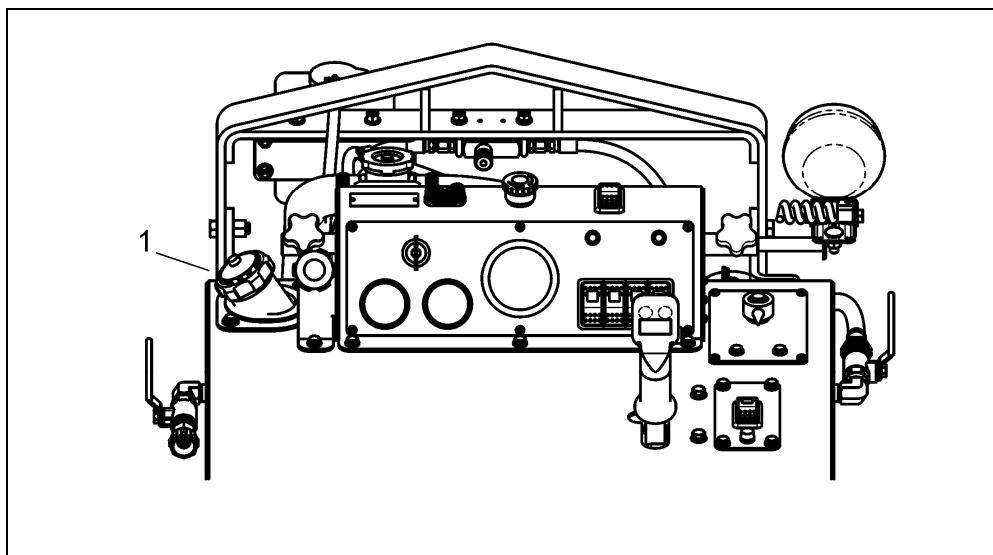


The display in the window has the following significance:

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

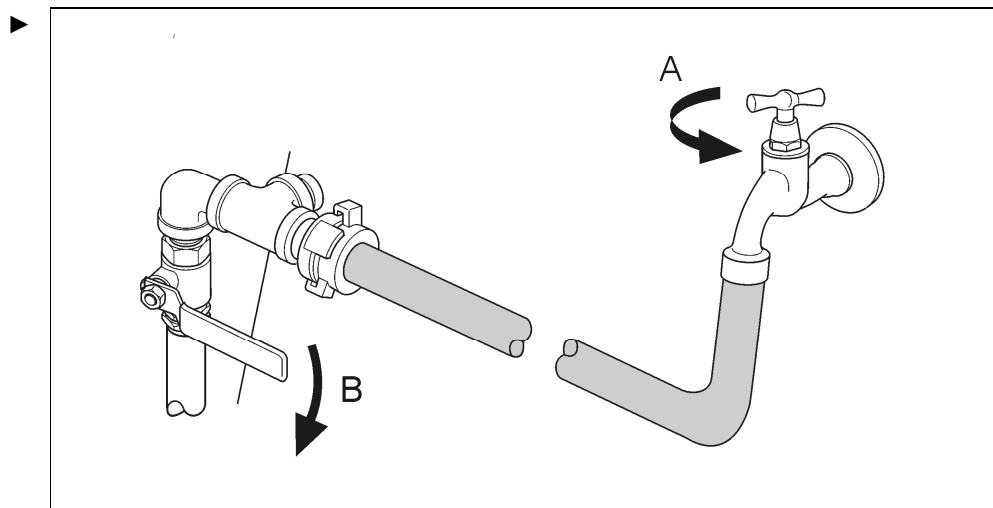


- ▶ Check the tank display (1) and top up with diesel as necessary.

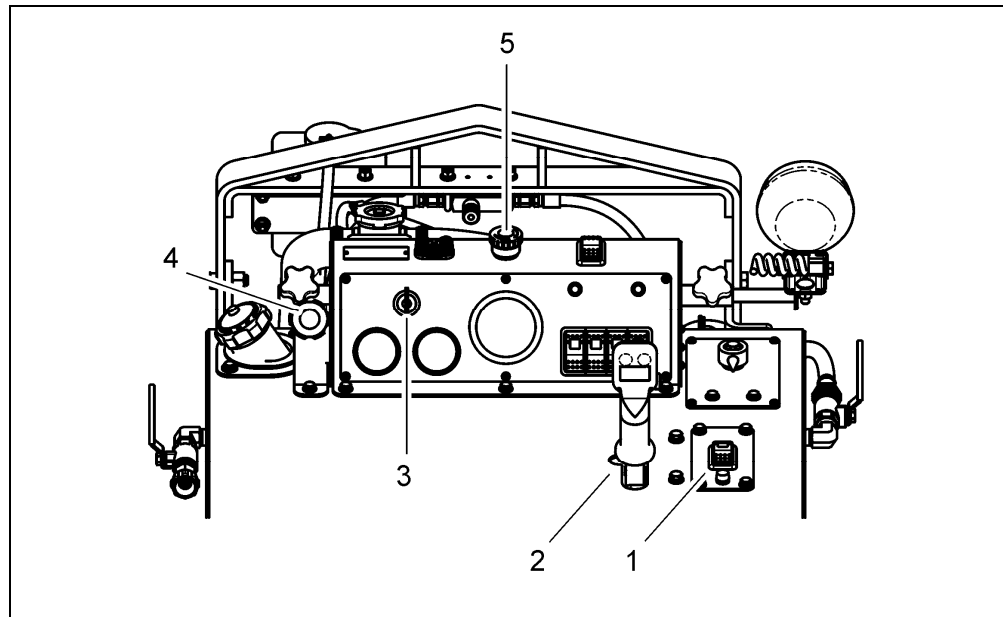
7.5 Positioning the floor saw

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



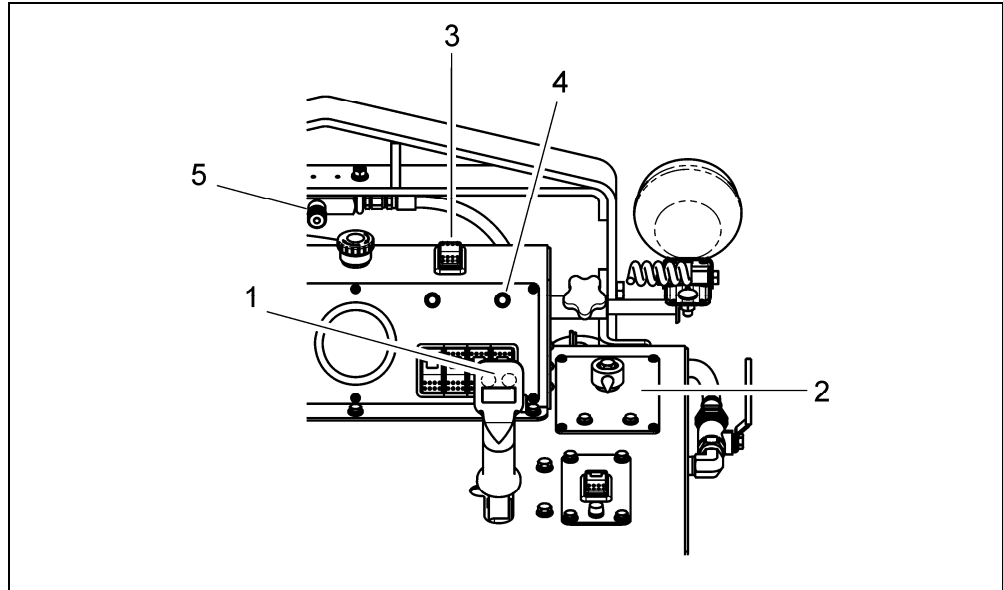
Symbol	Significance
	Coupling lever in coupled position
	Coupling lever in uncoupled position

- ✓ 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

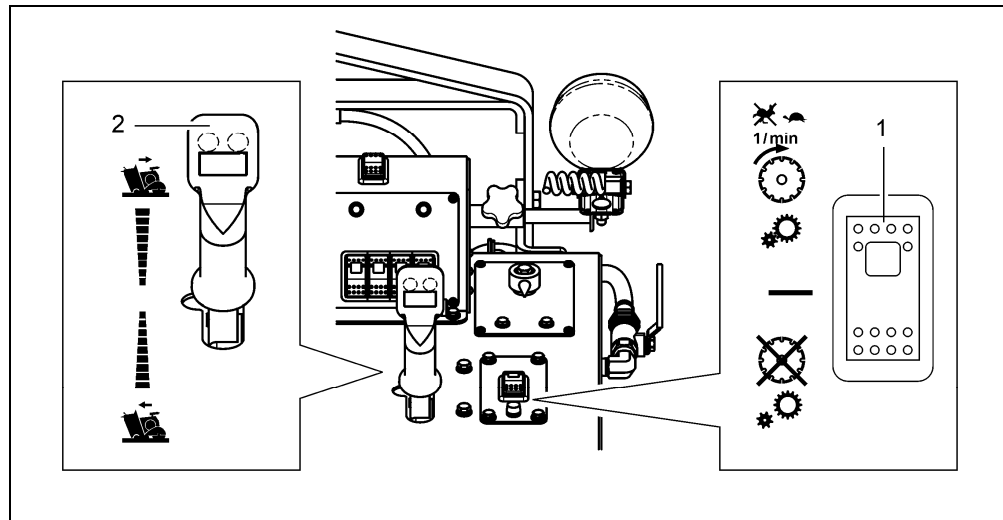
7.8.1 Lowering example



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

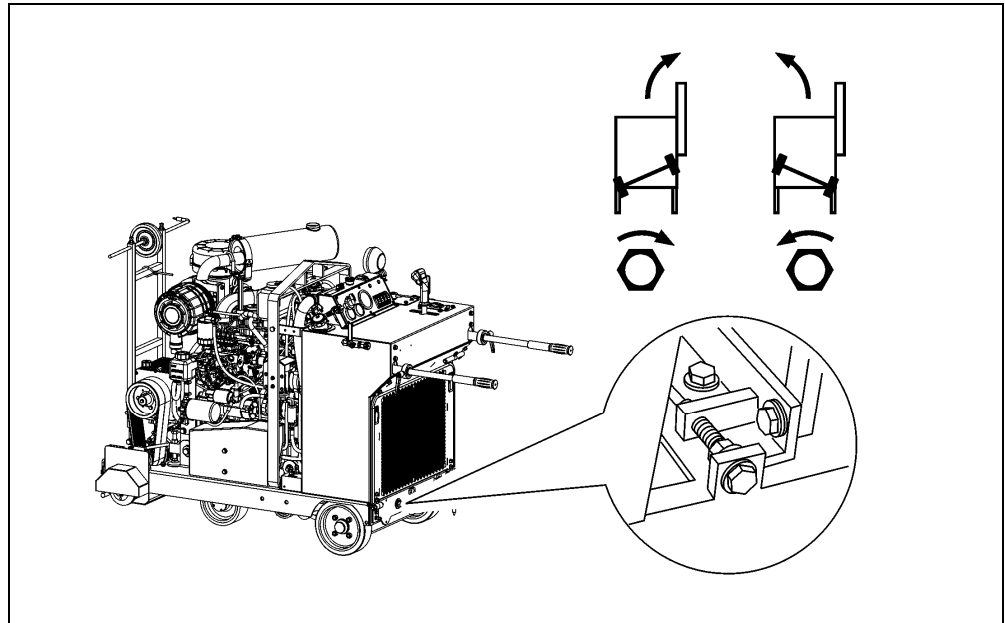


Symbol	Significance
	Coupling lever in coupled position
	Coupling lever in uncoupled position
	Feed adjuster in the forwards direction of travel
	Feed adjuster in the backwards direction of travel

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

1. Place coupling lever (1) in the coupled position.
Important: Only engage coupling at low engine speed (blade speed)
2. Using the feed adjuster (2). 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.

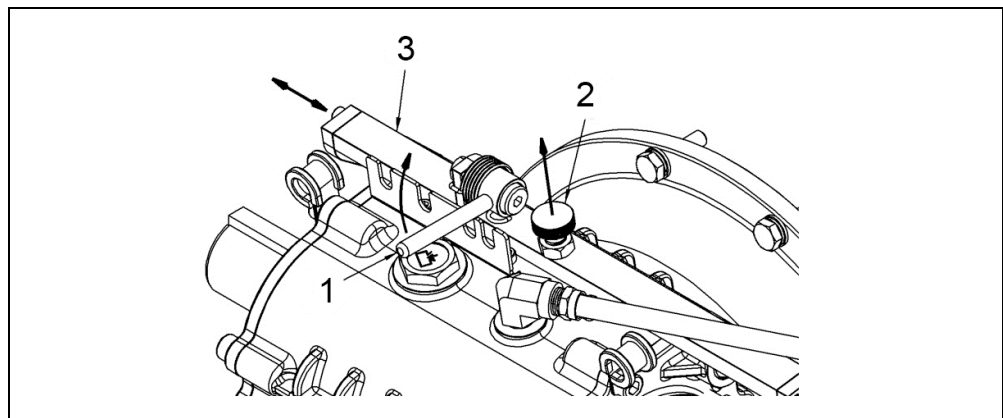
The gear can only be changed if the motor is stationary. Never tamper with the gear selection mechanism with the motor running.

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.

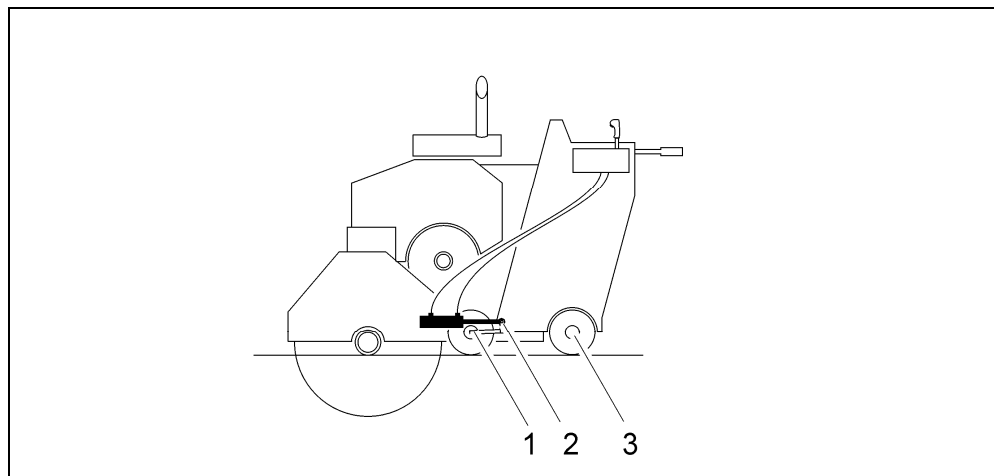
Gear position (designations)	
M = Medium	▶ Medium speed
L = Low	▶ Low speed
N = Neutral	▶ No gear engaged
H = High	▶ High speed

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	▶ 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	▶ 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

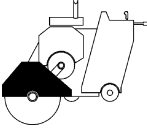
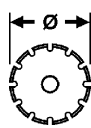
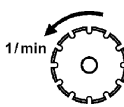


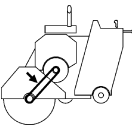

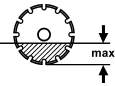
Parameter	Value	
	FSD1274★★★	FSD1274 3- Gang★★★
Noise level at workplace (L _{PA})	96,9 dB(A)*	91,3 dB(A)*
Sound power level in accordance with ISO 3744 (L _{WA})	116,9 dB(A)*	111,3 dB(A)*
Vibrations DIN EN ISO 5349-2	< 2,5 m/s ²	

*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

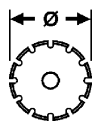

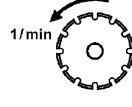

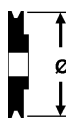
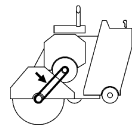

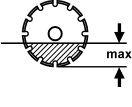

10.7 Cutting data FSD1274 ★★★

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