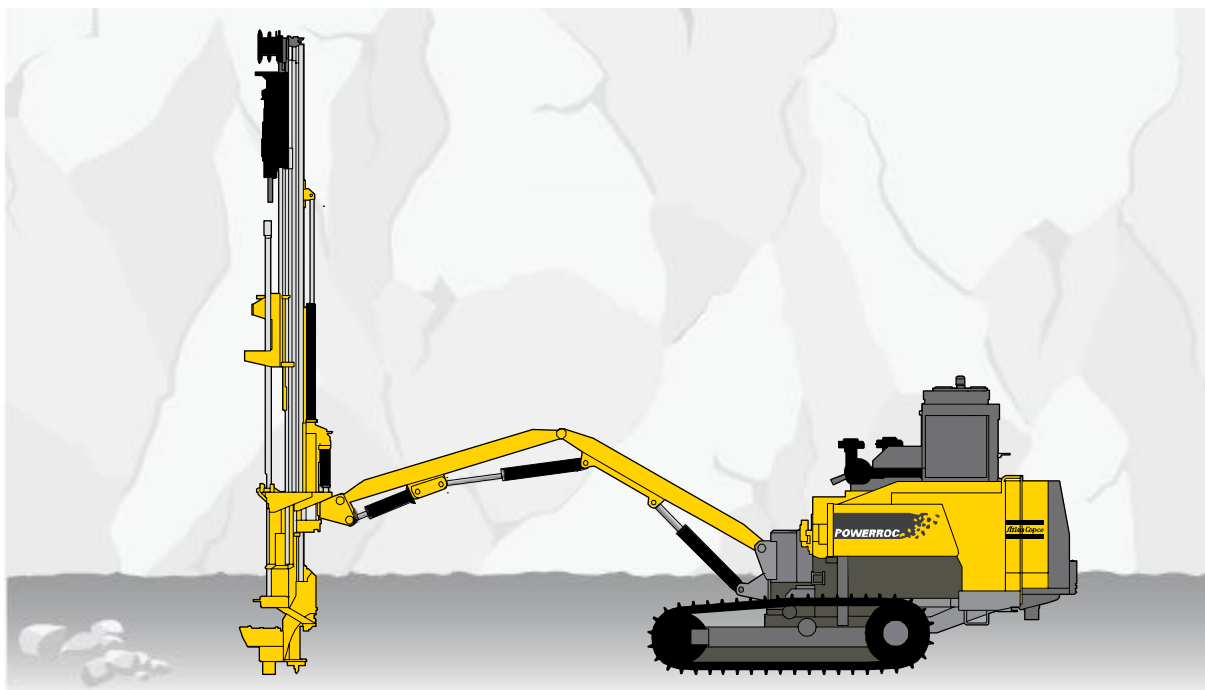


Atlas Copco

PowerROC T30 E Tier 4 Maintenance schedules



SAFETY INSTRUCTIONS

- **Before starting, read all instructions carefully.**
- **Special attention must be paid to information alongside this symbol.**
- **Only use genuine Atlas Copco parts.**



1250 0071 04

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Translation of original instructions.

**Atlas Copco Rock Drills AB
SE-70191 Örebro, Sweden**

Safety

Reference..... 5

Safety

Reference

Note

Always read the information in the Safety document before starting to use the rig or starting maintenance work.



1250 0099 89

Safety

Maintenance schedules

1. Maintenance intervals	9
Foreword.....	9
Every 4 percussion hours.....	10
Drill steel support PowerROC T30 E -01 - Every 4 percussion hours	10
Every 20 percussion hours.....	11
Feeder PowerROC T30 E -01 - Every 20 percussion hours	11
Rod handling system, RHS (optional equipment) - Every 20 percussion hours.....	12
Rod handling system, RAS (optional equipment) - Every 20 percussion hours.....	12
Drill steel support - Every 20th percussion hour	13
Every 100 percussion hours.....	14
Feeder PowerROC T30 E -01 - Every 100 percussion hours	14
Drill steel support PowerROC T30 E -01 - Every 100 percussion hours	15
Rod handling system, RHS (optional equipment) - Every 100 percussion hours.....	16
Rod handling system, RAS (optional equipment) - Every 100 percussion hours.....	17
Every 200 percussion hours.....	18
Drill steel support PowerROC T30 E -01 - Every 200 percussion hours	18
Every 10 engine hours	19
Diesel engine - Every 10th engine hour	19
Compressor - Every 10th engine hour	20
Hydraulic system - Every 10th engine hour	21
Lubricating oil tank - Every 10th engine hour.....	22
Winch - every 10th engine hour.....	23
Electrical system - every 10th engine hour.....	24
Every 50th engine hour	25
Frame, boom and feeder - Every 50 engine hours.....	25
Track frames - every 50th engine hour	26
Radiator - every 50th engine hour	27
Hydraulic system - Every 50 engine hours.....	28
Winch - every 50th engine hour.....	28
Every 250 engine hours.....	29
Frame, boom and feeder - Every 250 engine hours.....	29
Electrical system - every 250th engine hour.....	30
Track frames - Every 250th engine hour	31
Lubricating oil tank - Every 250 engine hours	32
Dust collector (DCT) - Every 250th engine hour	33
Diesel engine - every 250th engine hour	34
Compressor tank - every 250 engine hours	35
Every 500th engine hour	36
Track frames - every 500th engine hour	36
Diesel engine - every 500th engine hour	37
Air filter - every 500 engine hours	38
Hydraulic jacks - Every 500th engine hour (Option)	39
Winch - every 500th engine hour.....	40
Every 1000th engine hour	40
Hydraulic system - every 1000th engine hour.....	40

Maintenance schedules

Compressor - every 1000th engine hour 41

1. Maintenance intervals

Foreword

This instruction manual is part of the complete delivery of the hydraulic drill rig. It provides information on the design and operation of the drill rig and contains advice and the measures necessary to keep the rig operational. This instruction manual is no replacement for thorough training on the drill rig. The documentation consists of the following:

- **Part 1 - Maintenance intervals Percussion hours (feeder and rock drill).**
 - 4 hours
 - 20 hours
 - 100 hours
 - 200 hours
- **Part 2 - Maintenance intervals Engine hours.**
 - Every 10 hours
 - Every 50th hour
 - Every 250 Hours
 - Every 500 Hours
 - Every 1000 Hours
 - (Every 1500 hours)

This instruction manual should be read in advance by all persons who are to operate or repair the drill rig or carry out maintenance on it.

How to use these maintenance instructions

- We recommend that you make copies of all maintenance intervals and keep a record of each point checked.
- The owner of the equipment is recommended to compile a filing system for each maintenance interval.
- Carefully read all the instructions and study the drawings of the machine so that maintenance work will be performed safely and correctly.

Genuine Atlas Copco spare parts

- To ensure the safety and functionality of the drill rig, always use genuine Atlas Copco spare parts.

Environmental aspects

- Avoid the use of detergents and other cleaning agents containing solvents (e.g. carbon tetrachloride). Use alternative agents that are less harmful to health and the environment. Be sure to dispose of waste oil from the machine.

Maintenance schedules

1. Maintenance intervals

Note

The illustrations only show examples of grease nipples; check all attachments and bearings appartenant to relevant systems so you can find the existing grease nipples.

Every 4 percussion hours

Drill steel support PowerROC T30 E -01 - Every 4 percussion hours

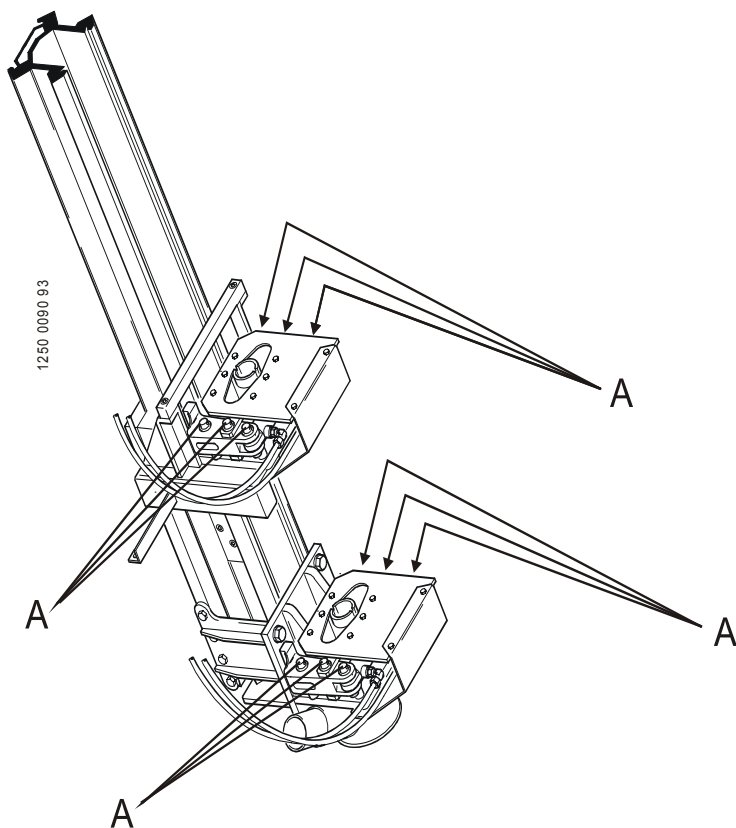


Figure: Drill support

Table: Drill support

Check point	Control object	Action
A	Grease nipples	Pump grease into 12 grease nipples

Every 20 percussion hours

Feeder PowerROC T30 E -01 - Every 20 percussion hours

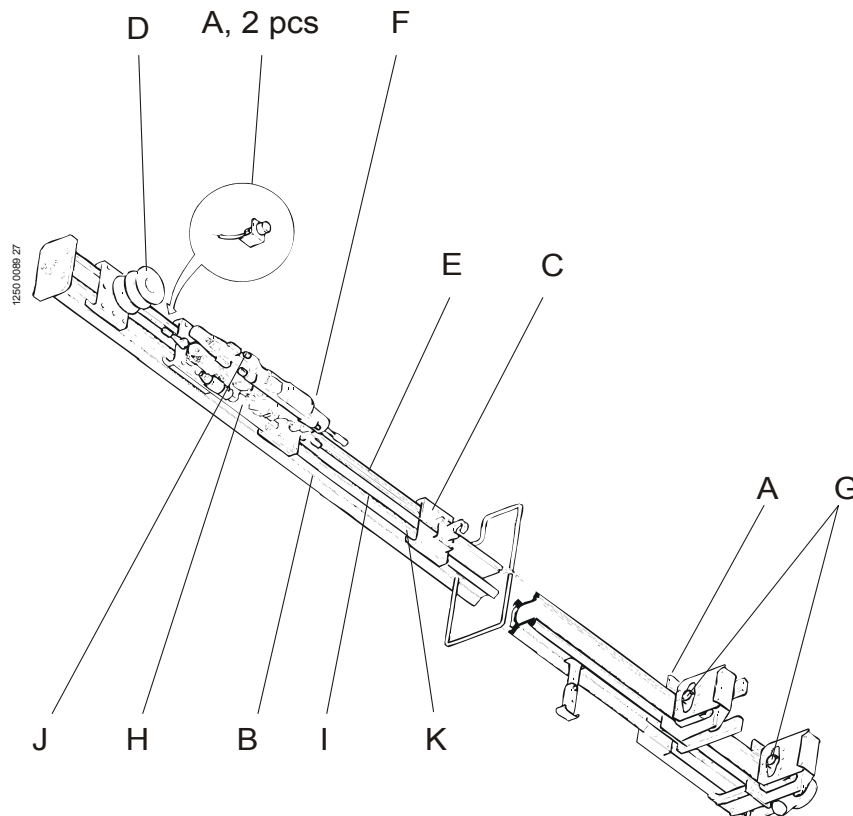


Figure: Feeder

Table: Feeder

Check point	Control object	Action
A	Limit valve switches	Attaching, function
B	Pull and return rope	Adjust haul and return rope tension
C	Intermediate drill steel support	Lubrication
C	Intermediate drill steel support bearing	Check for wear, replace as necessary
D	Water-hose drum	Check wear and lubrication
E	Pull and return rope	Inspect lubrication and wear
F	Hydraulic hoses	Check wear, tension and lubrication
G	Drill steel support halves	Check for wear
H	Cradle	Mounting, play, wear, damage
I	Feed cylinder	Check for leaks
J	Rock drill	Attachment, check tightness of bolted joints
K	Feed beam	Check for damage, wear

Maintenance schedules

1. Maintenance intervals

Rod handling system, RHS (optional equipment) - Every 20 percussion hours

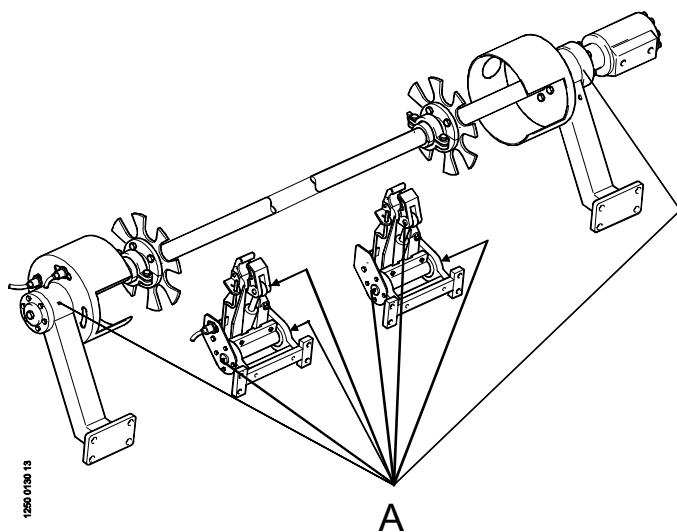


Figure: RHS (Rod handling equipment)

Table: RHS (Rod handling equipment)

Check point	Control object	Action
A	Grease nipples	Pump grease into 14 grease nipples

Rod handling system, RAS (optional equipment) - Every 20 percussion hours

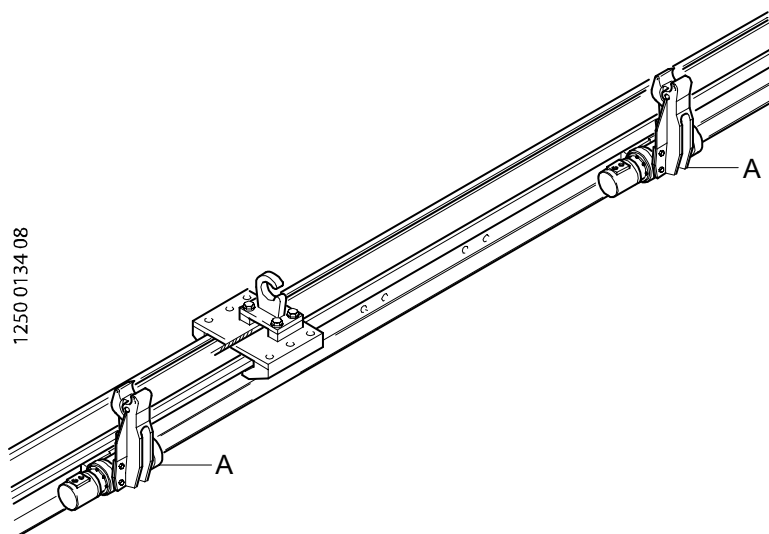


Figure: RAS (rod handling equipment)

Maintenance schedules

1. Maintenance intervals

Table: RAS (rod handling equipment)

Check point	Control object	Action
A	Grease nipples	Pump grease into 2*4 grease nipples

Drill steel support - Every 20th percussion hour

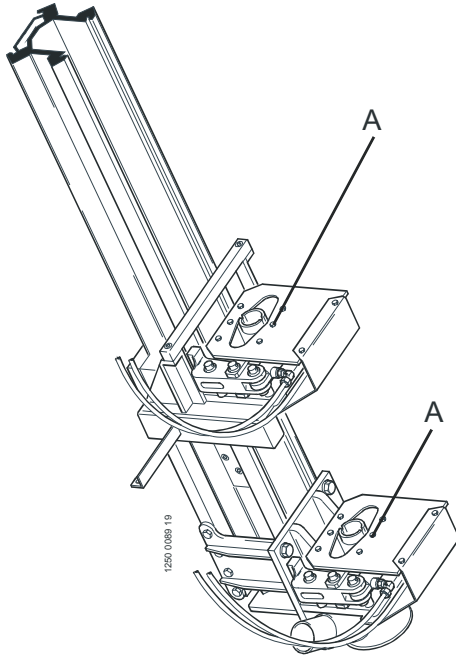


Figure: Drill support

Table: Drill support

Check point	Control object	Action
A	Bolted joints	Tightening Note <i>Rigs without RHS only have one drill steel support.</i>

Maintenance schedules

1. Maintenance intervals

Every 100 percussion hours

Feeder PowerROC T30 E -01 - Every 100 percussion hours

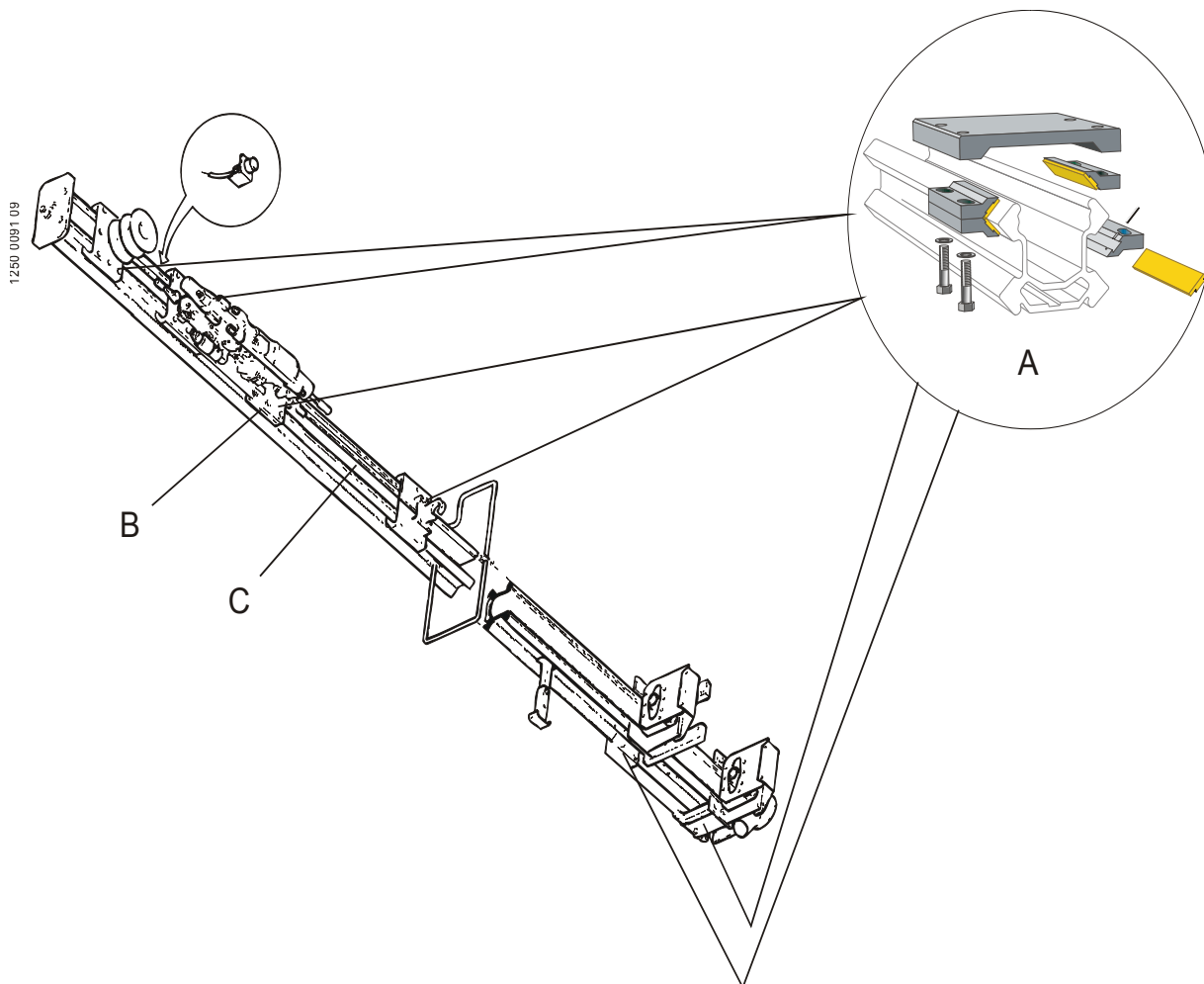


Figure: Feeder

Table: Feeder

Check point	Control object	Action
A	Cradle	Check clearance, mounting, damage tightening torque 185 Nm (185 Nm (136 lbf ft)). Max clearance 2 - 4 mm. See also maintenance instructions for adjustment directions.
B	Slide pieces	Check wear. Min. thickness 4 mm
C	Feed cylinder	Check mounting, damage

Drill steel support PowerROC T30 E -01 - Every 100 percussion hours

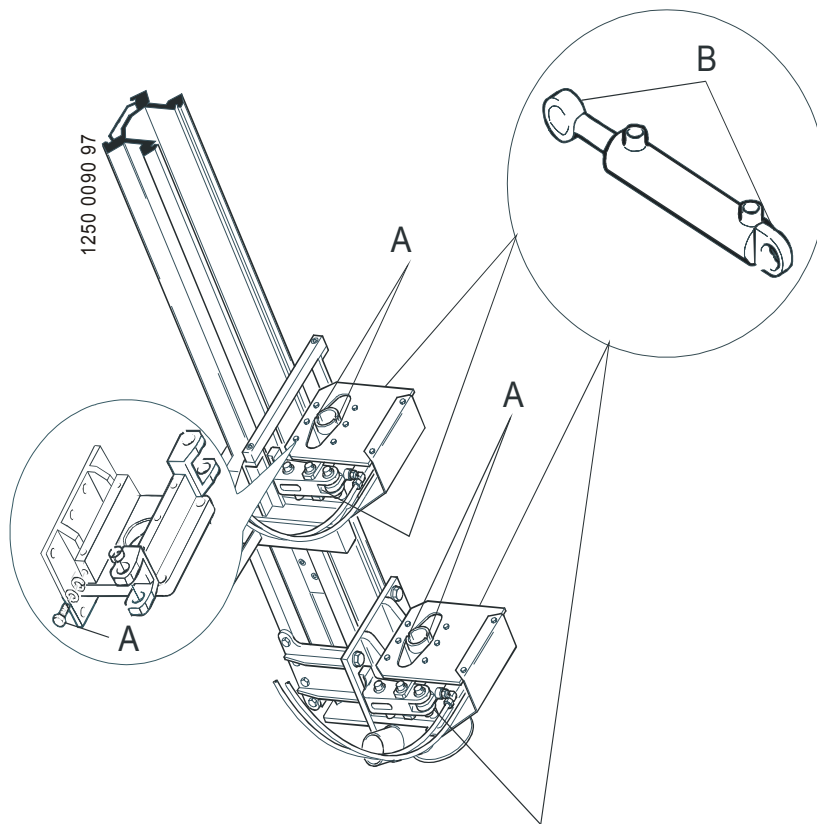


Figure: Drill support

Table: Drill support

Check point	Control object	Action
A	Drill steel support halves	Adjustment, wear, cracks
B	Ball bearings in cylinder lugs	Check clearance, Max. 0.5 mm

Maintenance schedules

1. Maintenance intervals

Rod handling system, RHS (optional equipment) - Every 100 percussion hours

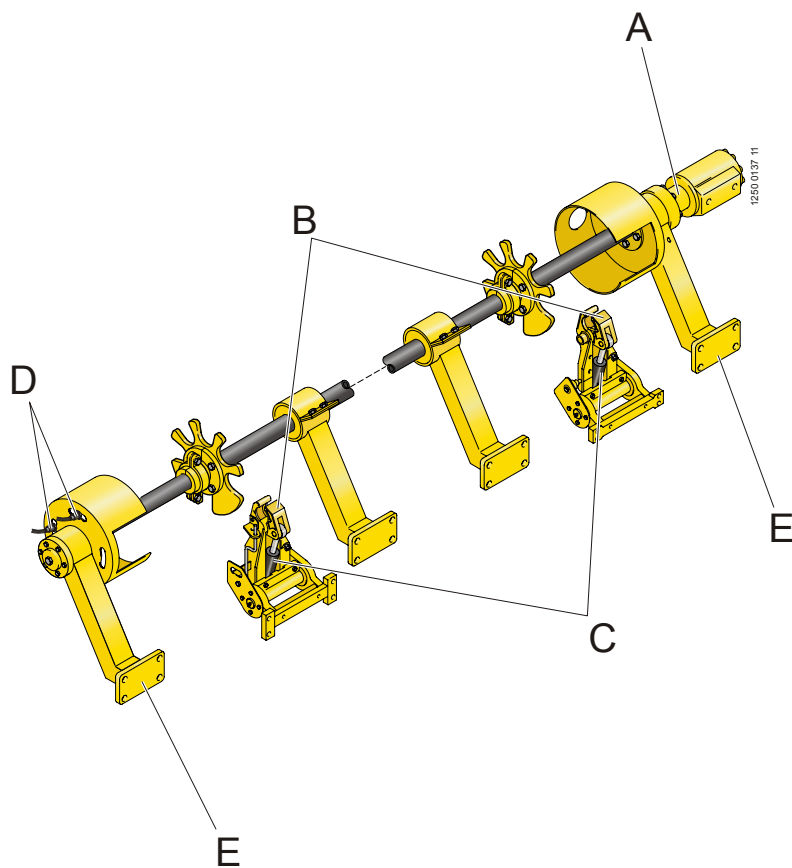


Figure: Rod handling equipment

Table: Rod handling equipment

Check point	Control object	Action
A (Applies only to rigs equipped with RHS)	Hydraulic motor	Check mounting
B	Bushing halves	Check for wear, cracks
C	Hydraulic cylinders	Check mounting
D (Applies only to rigs equipped with RHS)	Sensors	Check mounting, functionality
E (Applies only to rigs equipped with RHS)	Bracket	Check attachment, cracks

Rod handling system, RAS (optional equipment) - Every 100 percussion hours

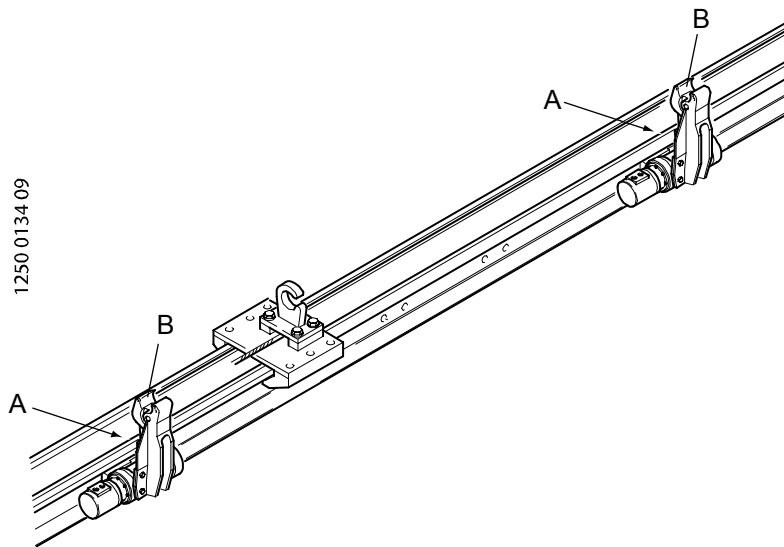


Figure: RAS (rod handling equipment)

Table: RAS (rod handling equipment)

Check point	Control object	Action
A	Hydraulic cylinders	Check mounting
B	Bushing halves	Check for wear, cracks

Maintenance schedules

1. Maintenance intervals

Every 200 percussion hours

Drill steel support PowerROC T30 E -01 - Every 200 percussion hours

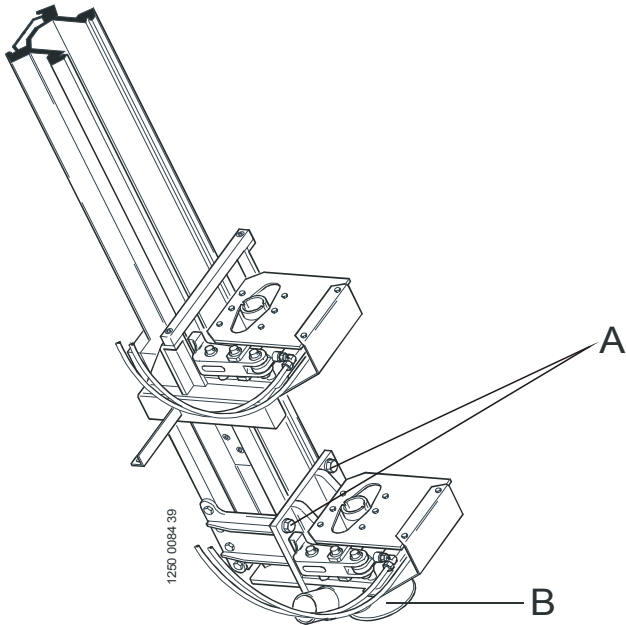


Figure: Drill support

Table: Drill support

Check point	Control object	Action
A	Attachment	Check mounting, inclination. Tightening torque 185 Nm (136 lbf.ft) 12 bolts
B	Bolted joints	Tightening

Every 10 engine hours

Diesel engine - Every 10th engine hour

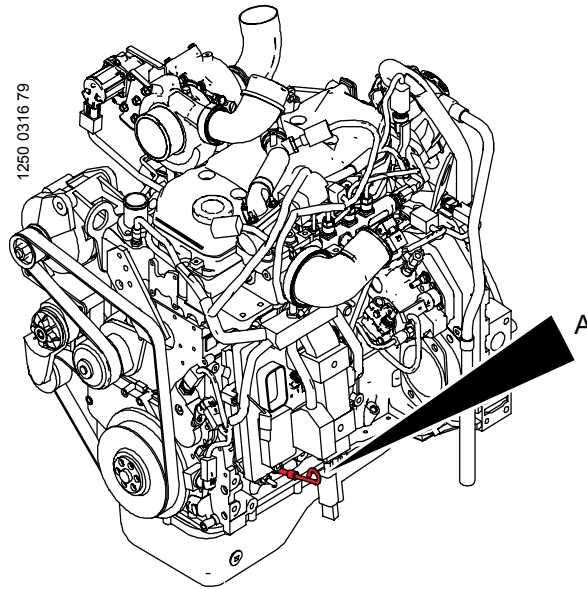


Table: Diesel engine

Check point	Control object	Action
A	Check the oil level	The oil should be between the two marks on the dipstick.
-	Engine	Leakage

Maintenance schedules

1. Maintenance intervals

Compressor - Every 10th engine hour

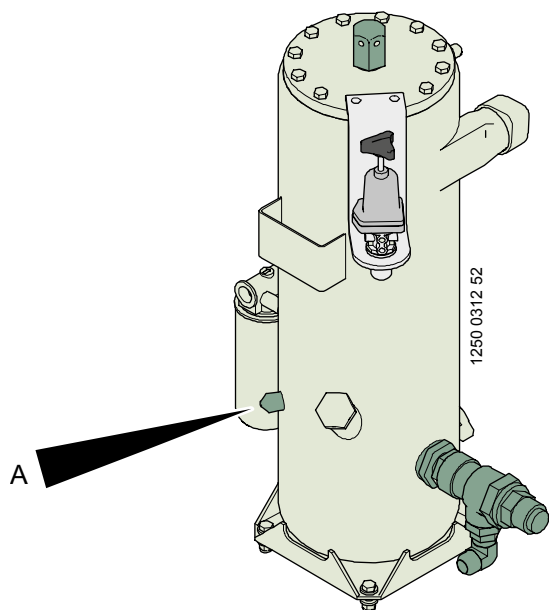


Figure: Compressor

Table: Compressor

Check point	Control object	Action
A	Oil level	Level control.

Hydraulic system - Every 10th engine hour

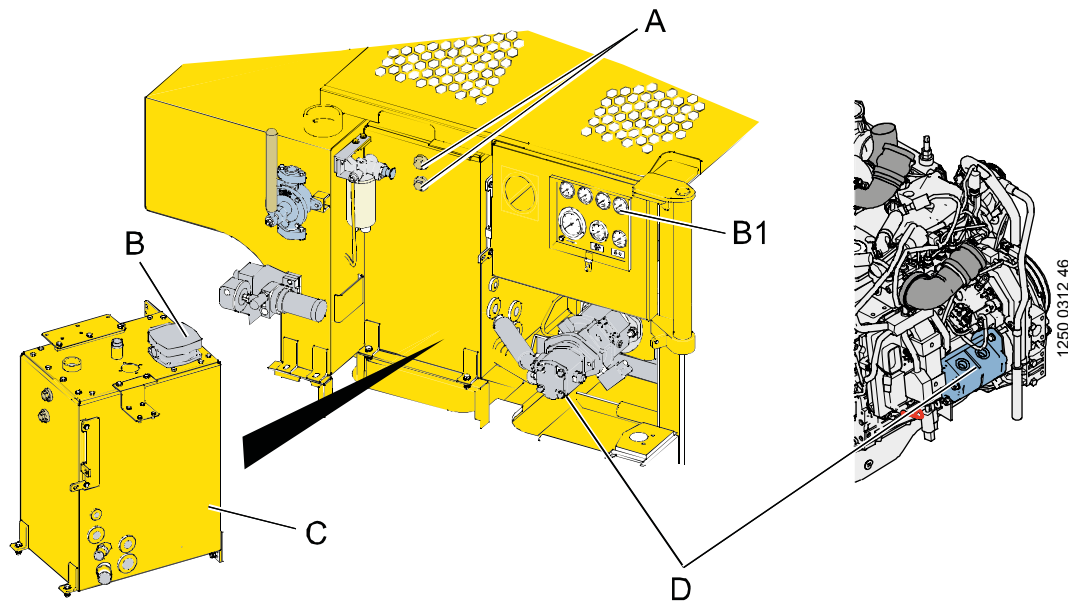


Figure: Hydraulic system

Table: Hydraulic system

Check point	Control object	Action
A	Oil level	The oil level should cover the lower sight glass completely and half the upper sight glass. The drill rig must be in a horizontal position
B	Hydraulic oil filter	Replace the filters if the return oil filter pressure gauge needle (B1) is in the red zone. The oil temperature should be 40 °C
C	Hydraulic oil tank	Check connections and look for signs of leakage
D	Hydraulic pumps	Check for signs of leakage

Maintenance schedules

1. Maintenance intervals

Lubricating oil tank - Every 10th engine hour

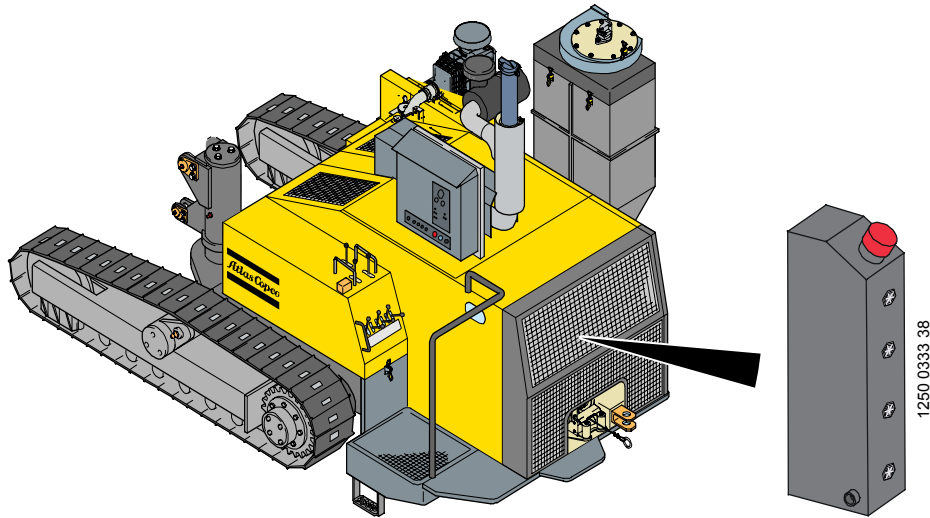


Figure: Lubricating oil tank

Table: Lubricating oil tank

Check point	Control object	Action
-	Lubricating oil tank	Fill up to the high level mark. If all the oil in the lubricating system has been used up, bleeding of the system will be necessary.

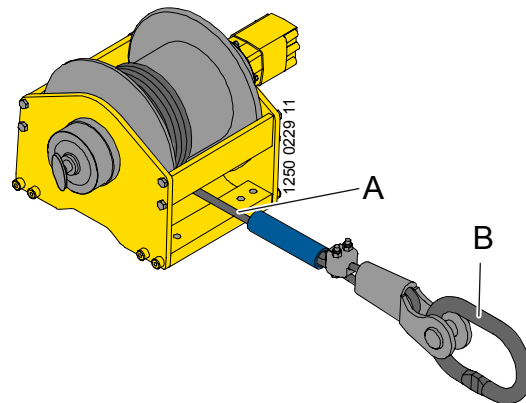
Winch - every 10th engine hour

Figure: Winch

Table: Winch

Check point	Control object	Action
A	Winch wire rope	Check for damage, unwinding, wear and corrosion
B	Hook	Check damage, cracks, wear and mounting

Maintenance schedules

1. Maintenance intervals

Electrical system - every 10th engine hour

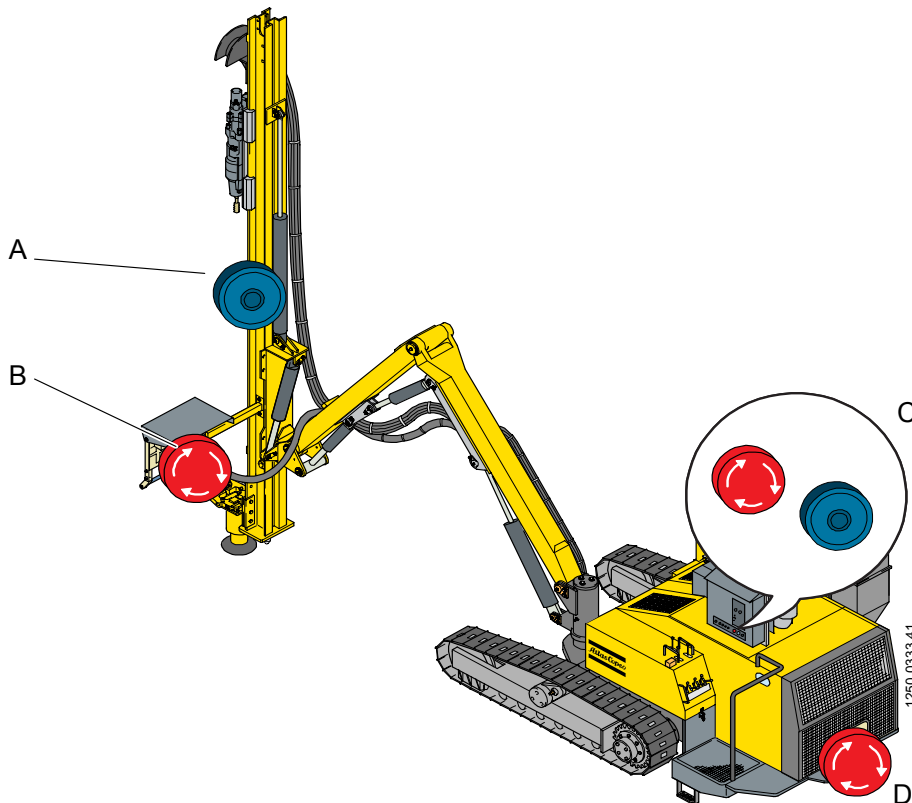


Figure: Electrical system/emergency stop buttons

Table: Electrical system/emergency stop buttons

Check point	Control object	Action
A	Emergency stop cable, feeder	Check functionality.
B	Emergency stop button, front control panel	Check function
C	Emergency stop button, diesel panel	Check function
C	Lamp test, diesel panel	Carry out a lamp test on the diesel panel. See the operator's instructions
D	Emergency stop button, winch	Check function
-	Working lights	Check function

Note

Check each emergency stop individually. The engine must stop. Before checking the next emergency stop the previous one must be reset before restarting.

Every 50th engine hour

Frame, boom and feeder - Every 50 engine hours

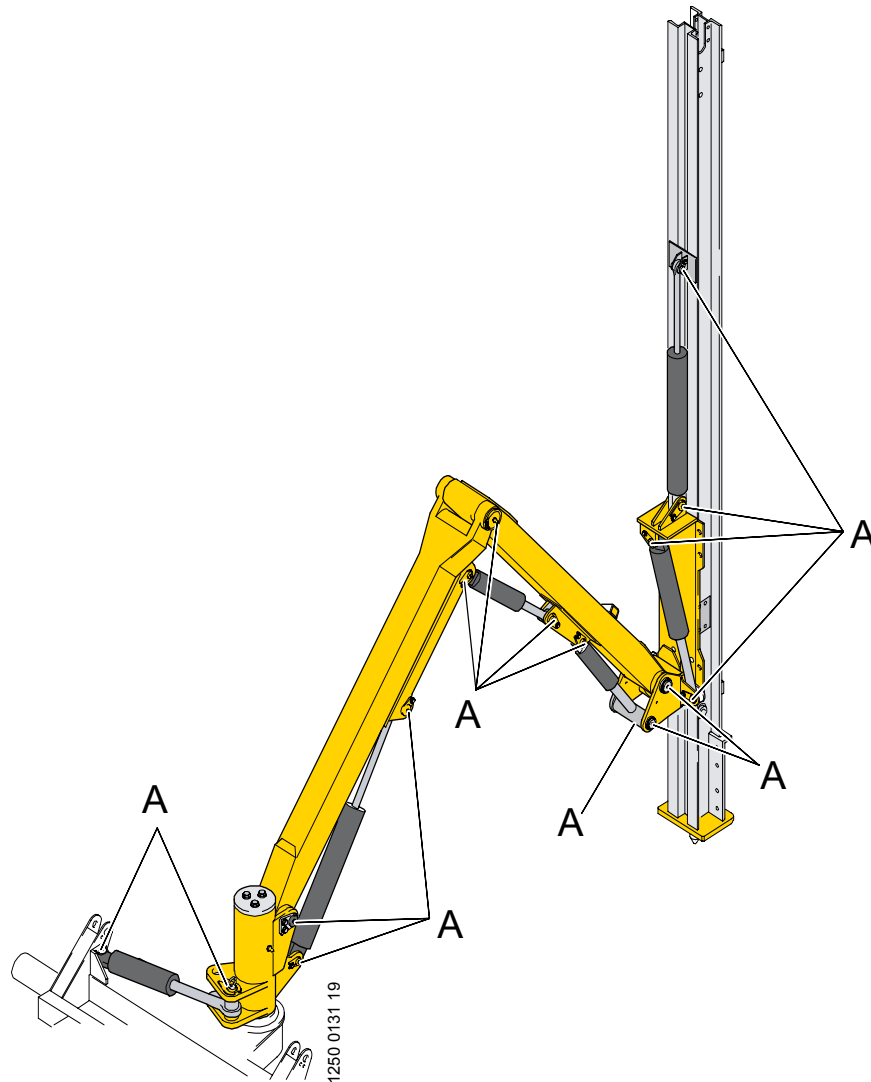


Figure: Frame, boom and feeder

Table: Frame, boom and feeder

Check point	Control object	Action
A	Grease nipples	Fill with grease

Maintenance schedules

1. Maintenance intervals

Track frames - every 50th engine hour

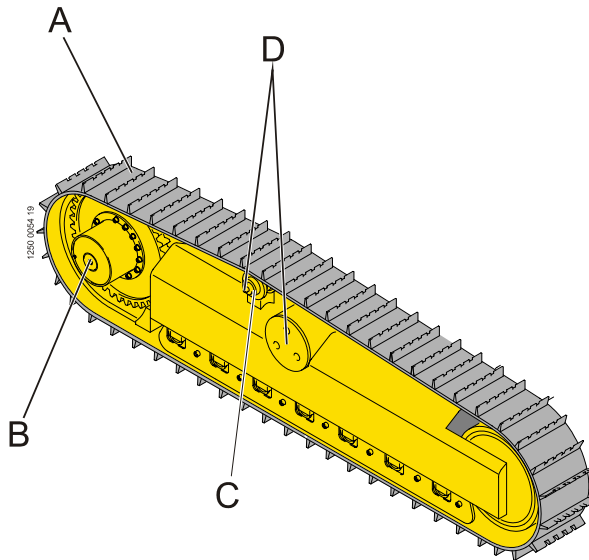


Figure: Track frames

Table: Track frames

Check point	Control object	Action
A	Traction motors	Check for signs of leakage
B	Traction gears	Check for leaks. First oil change after 150 engine hours , clean the gears with flushing oil before filling with new. The level plug must be placed just above the centre of the tramming gear.
C	Support roller	Check for wear and leaks.
D	Grease nipples	Pump grease into two grease nipples.
E	Mountings	Retighten all mountings after 100 engine hours acc. chapter Track frame - Every 250 engine hours . Then every 250 engine hours.

Radiator - every 50th engine hour

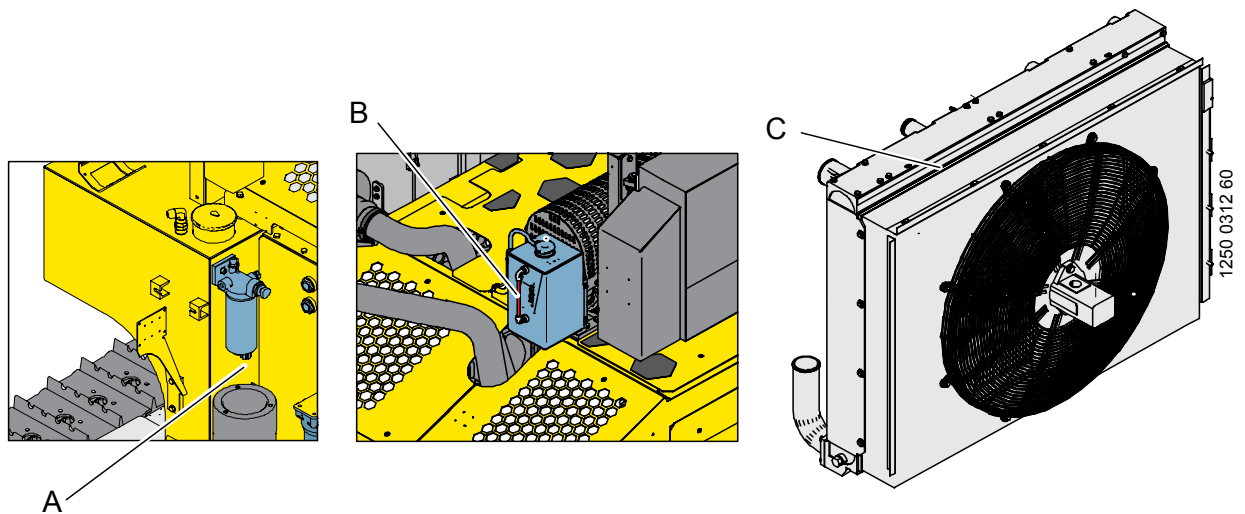


Figure: Radiator

Table: Radiator

Check point	Control object	Action
A	Prefilter water separator	Drain off the water
B	Radiator	Check coolant level, antifreeze. See maintenance instructions
C	Radiator	Check to see whether the radiators are clogged. Clean with compressed air.

Maintenance schedules

1. Maintenance intervals

Hydraulic system - Every 50 engine hours

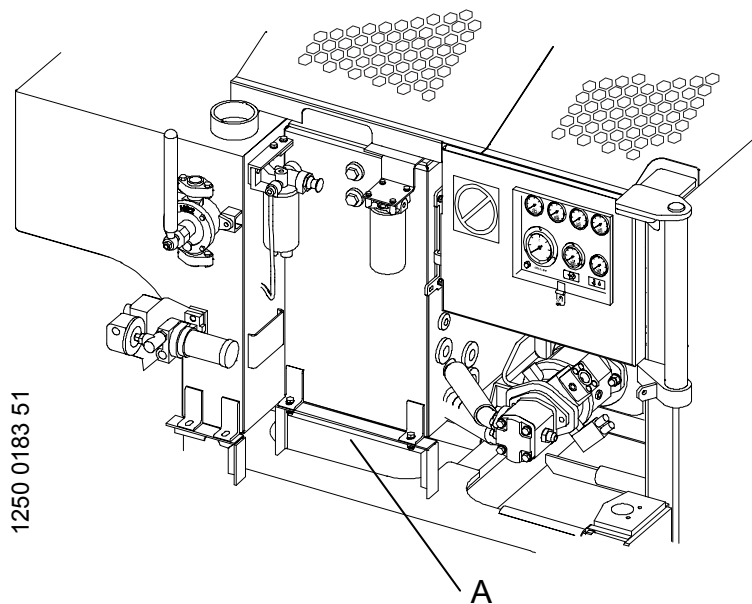


Figure: Hydraulic oil reservoir

Table: Hydraulic systems

Check point	Control object	Action
A	Hydraulic oil reservoir	Drain off the water. The drill rig must have been standing still for eight hours before the water can be drained.

Winch - every 50th engine hour

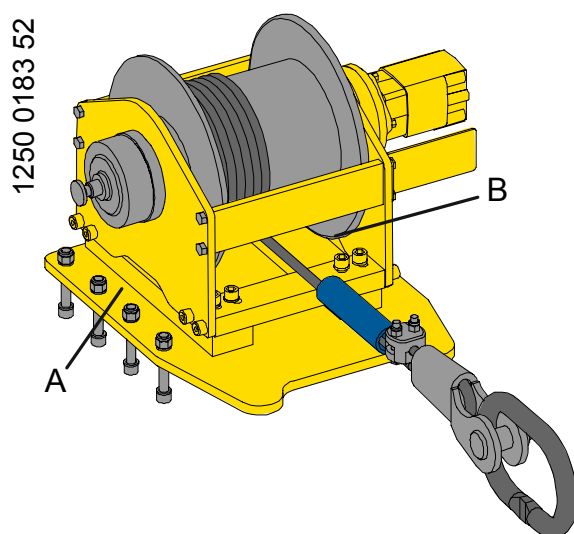


Figure: Winch

Table: Winch

Check point	Control object	Action
A	Attachment	Tightening torque 315 Nm
B	Grease nipples	Fill with grease

Every 250 engine hours

Frame, boom and feeder - Every 250 engine hours

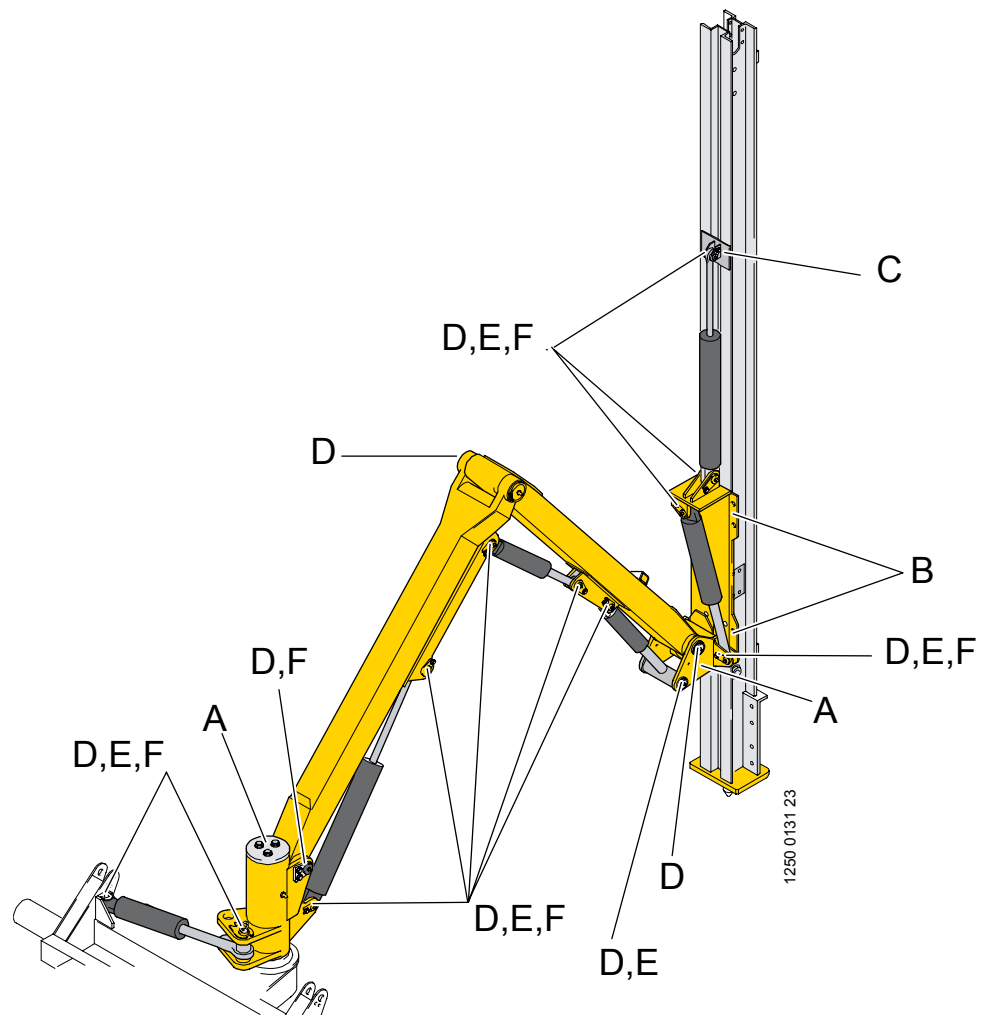


Figure: Frame, boom and feeder

Table: Frame, boom and feeder

Check point	Control object	Action
A	Boom head and boom bracket	Check mounting, tightening torque 73 Nm (54 lbf ft) M12

Maintenance schedules

1. Maintenance intervals

Check point	Control object	Action
B	Feed bracket	Check clearance between feed and feed bracket 2 - 4 mm
B	Feed bracket	Mounting, tightening torque 185 Nm (136 lbf.ft)
C	Attachment of feed extension cylinder	Check mounting. Tightening torque 90 Nm.
D	All axles	Check for play between bushes, shaft and holder. Replace with new bushes as necessary and change the shaft if needed.
E	Bearings in cylinder lugs/	Max. clearance 1 mm
F	Locking plates for axles	Check mounting, damage. 11 plates. Tightening torque 73 Nm (54 lbf.ft)

Electrical system - every 250th engine hour

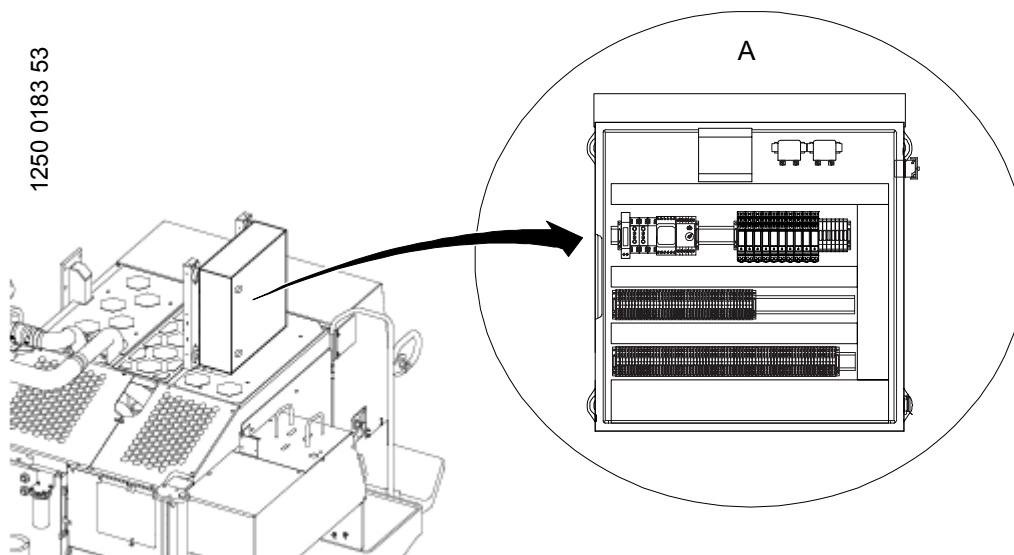


Figure: Electrical system

Table: Electrical system

Check point	Control object	Action
A	Electric cabinet	Check sealing strip damage.
-	Connection blocks	Corrosion, tightening.

Track frames - Every 250th engine hour

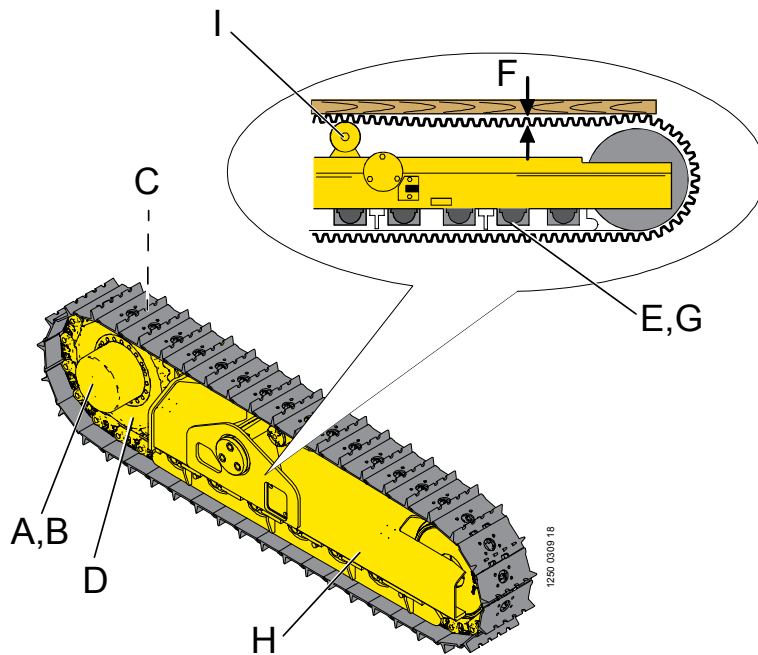


Figure: Track frames

Table: Track frames

Check point	Control object	Action
A	Traction gear	Check for leaks
B	Traction gear	Check oil level. Level plug and filler plug must be in horizontal position.
C	Traction motors	Check mounting. Tightening torque 315 Nm
D	Track wheels	Check mounting. Tightening torque 315 Nm
E	Support rollers	Check leakage, wear. Mounting 73 Nm
F	Tracks	Tensioning, see maintenance instructions. Do not overtension!
G	Track control	Check mounting. Tightening torque 289 Nm
H	Track frames	Check mounting. Tightening torque 73 Nm 2x3 bolts
I	Support roller	Check level. The rollers should be half full. Check through the level plug.

Maintenance schedules

1. Maintenance intervals

Lubricating oil tank - Every 250 engine hours

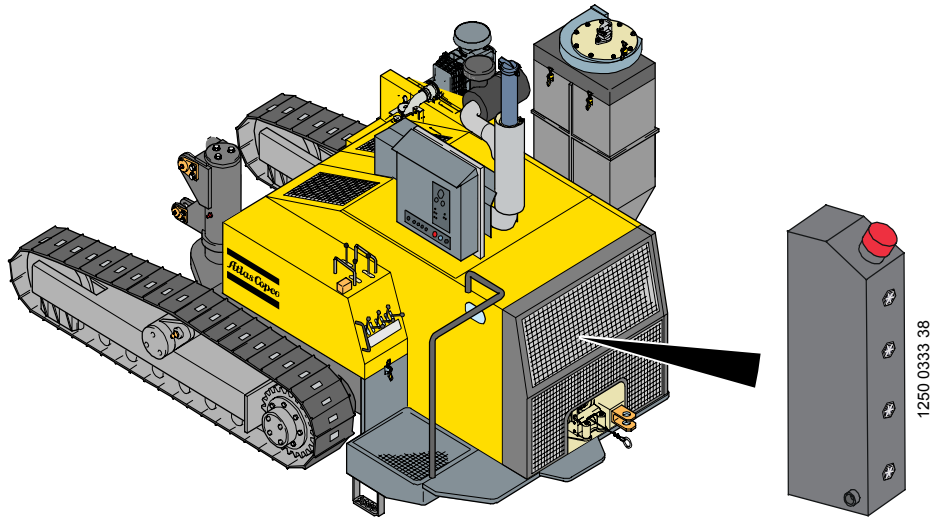


Figure: Lubricating oil tank

Table: Lubricating oil tank

Check point	Control object	Action
-	Lubricating oil tank	Drain off water

Dust collector (DCT) - Every 250th engine hour

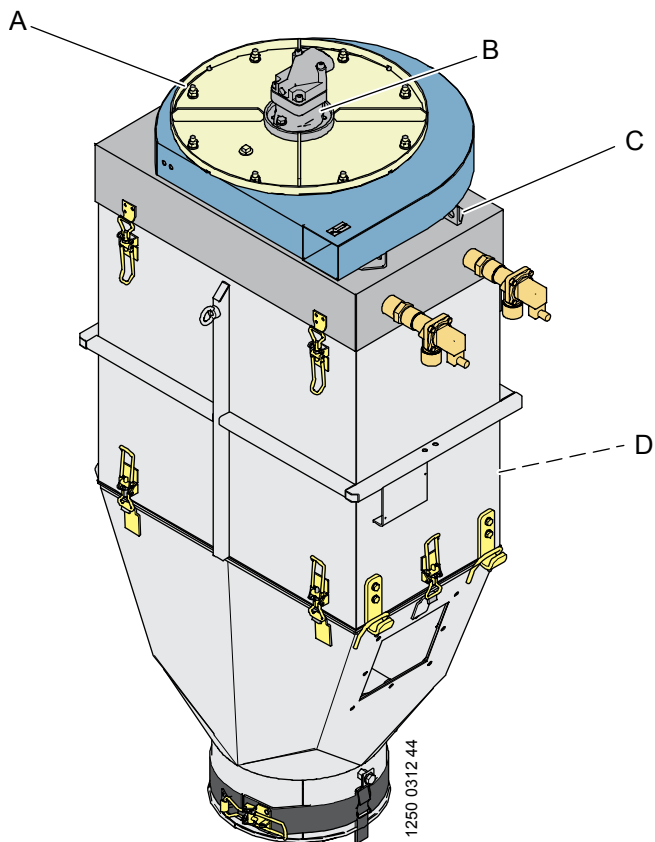


Figure: DCT

Table: DCT

Check point	Control object	Action
A	Engine plate	Mounting 8 bolts 41 Nm
B	Engine	Mounting 2 bolts 41 Nm
C	Fan housing	Mounting 8 bolts 73 Nm
D	Dust collector	Mounting 6 bolts 185 Nm

Maintenance schedules

1. Maintenance intervals

Diesel engine - every 250th engine hour

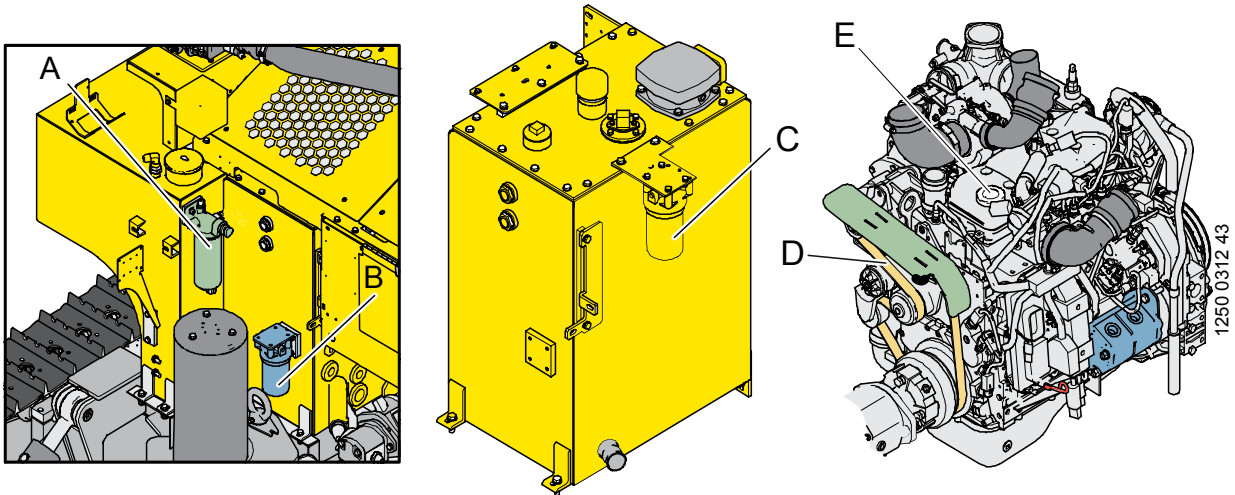


Table: Diesel engine

Check point	Control object	Action
A	Prefilter, fuel	Change filter element
B	Oil filter	Replace the filter cartridge
C	Fine filter	Change filter element
D	Alternator belts	Check tension, wear and cracks
E	Engine	Changing oil
-	Battery	Check the electrolyte level, terminals and connections.

Compressor tank - every 250 engine hours

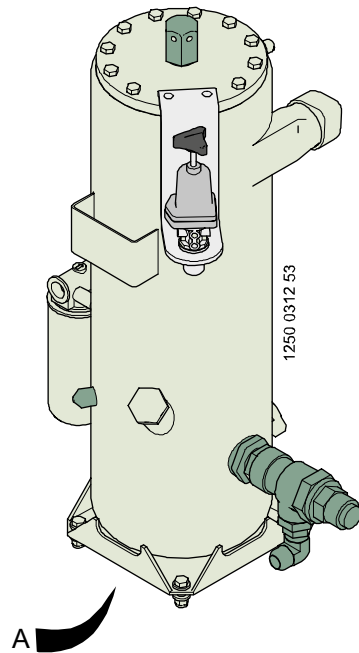


Figure: Compressor tank

Table: Compressor tank

Check point	Control object	Action
A	Drain water from the air receiver	Open valve A on the compressor tank

Maintenance schedules

1. Maintenance intervals

Every 500th engine hour

Track frames - every 500th engine hour

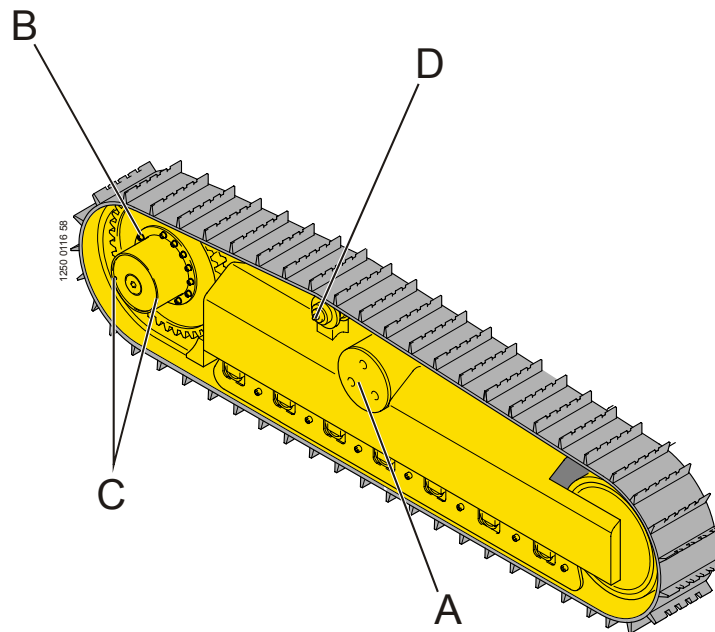


Figure: Track frames

Table: Track frames

Check point	Control object	Action
A	Track frames	Check mounting, Tightening torque 73 Nm (57 lbf ft). 2 x 3 bolts.
B	Track wheels	Check mounting. Tightening torque 185 Nm (136 lbf ft).
C	Traction gear	Oil change. Clean the gears with flushing oil before new oil is filled. Level plug and filler plug must be horizontally positioned. First oil change after approx. 200 hours.
D	Support roller	Level check. The rollers should be half full. Check via oil level plug.

Diesel engine - every 500th engine hour

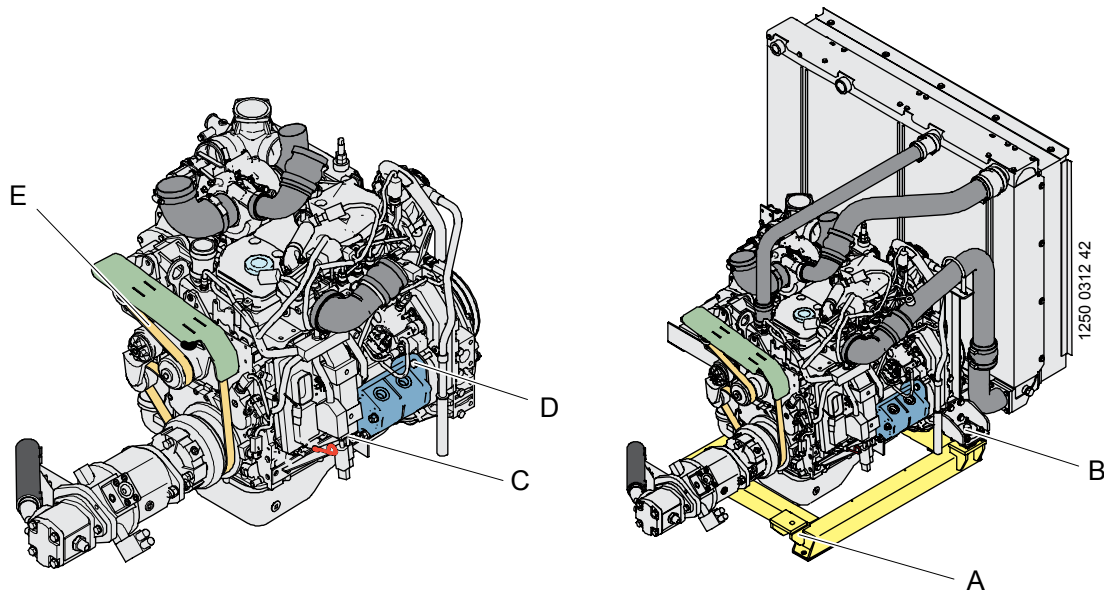


Figure: Diesel engine

Table: Diesel engine

Check point	Control object	Action
A	Power frame, mounting	M16: Tightening torque 185 Nm.
B	Engine, mounting	M10: Tightening torque 41 Nm. M12: Tightening torque 73 Nm. M16: Tightening torque 185 Nm.
C	Hydraulic pump, mounting	M12: Tightening torque 73 Nm.
D	Hydraulic pump, mounting	M12: Tightening torque 73 Nm.
E	Alternator belt	Check wear and tension. Max. play 10 mm.

Maintenance schedules

1. Maintenance intervals

Air filter - every 500 engine hours

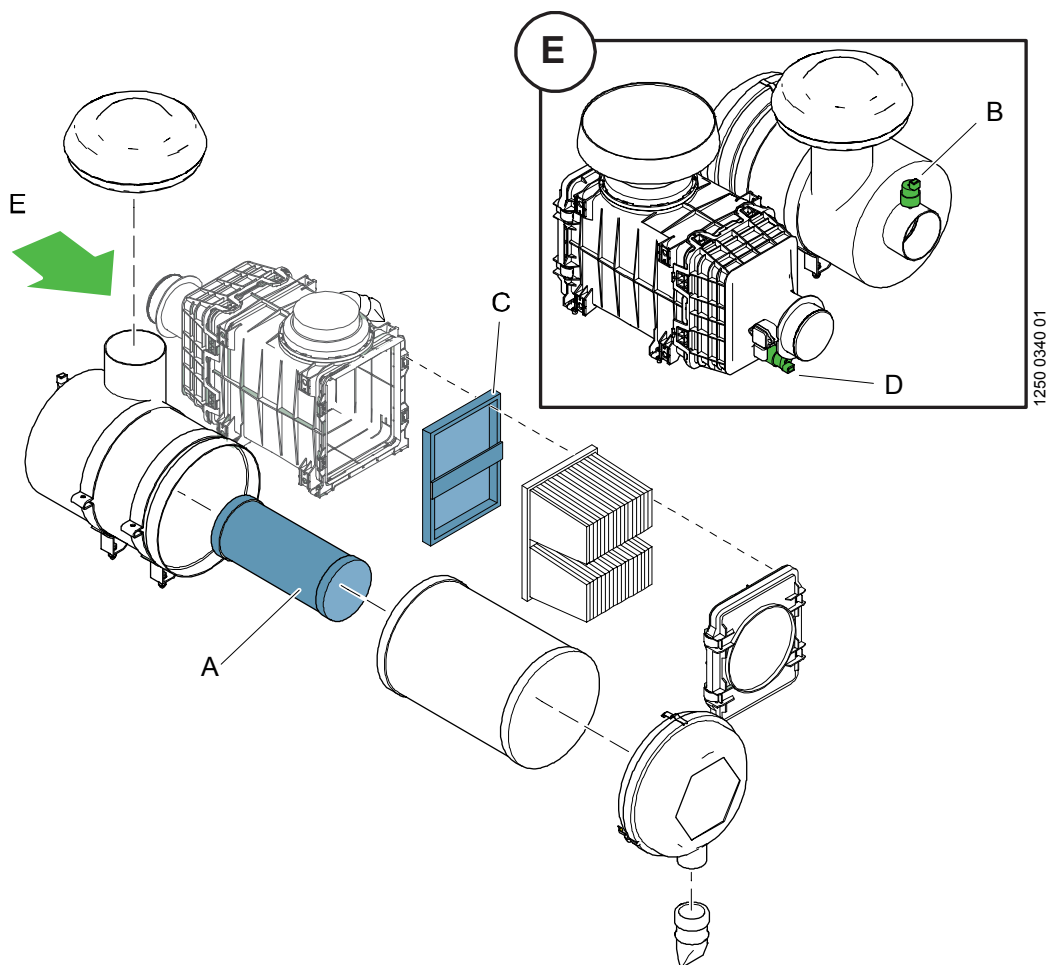


Figure: Air filter

Table: Air filter

Check point	Control object	Action
A	Compressor air filter	Replace the safety filter every 10th time the filter element is replaced or if the filter element's indicator (B) still gives an indication.
C	Engine air filter	Replace the safety filter every 3rd time the filter element is replaced or if the filter element's indicator (D) still gives an indication.

Note

Both the air filter and safety filter must be replaced at least once per year.

Hydraulic jacks - Every 500th engine hour (Option)

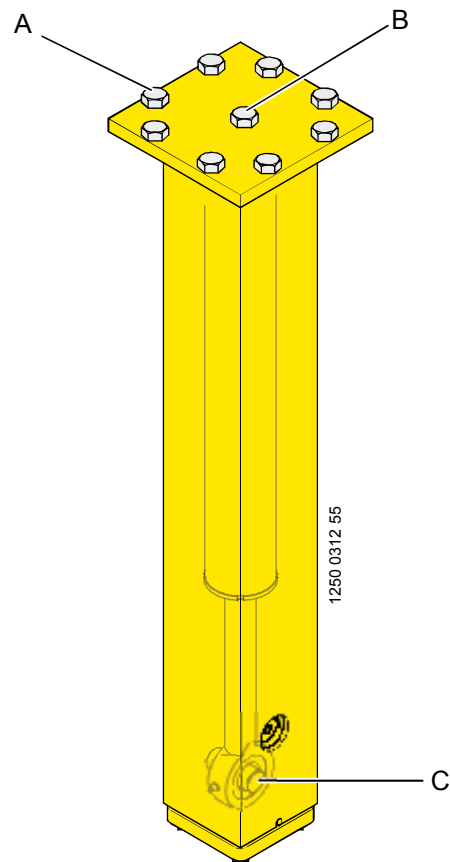


Figure: Hydraulic jack

Table: Hydraulic jack

Check point	Control object	Action
A	Hydraulic jack	Tightening torque 73 Nm
B	Hydraulic jack	Tightening torque 185 Nm
C	Hydraulic jack	Tightening torque 120 Nm

Maintenance schedules

1. Maintenance intervals

Winch - every 500th engine hour

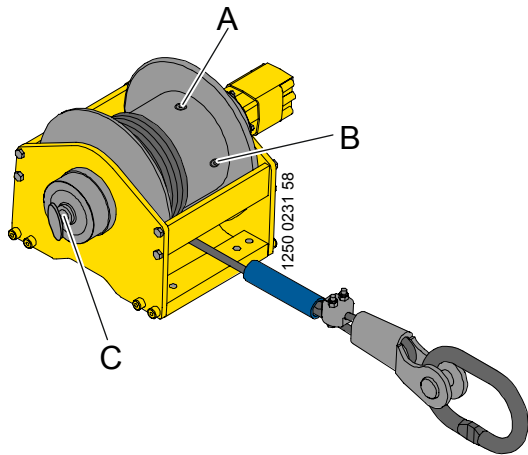


Table: Winch

Check point	Control object	Action
A	Winch gear	Change the oil for the first time after 500 engine hours. Thereafter once per year.
C	Disengagement of the drum brake	Lubricate with oil if it does not rotate freely

Every 1000th engine hour

Hydraulic system - every 1000th engine hour

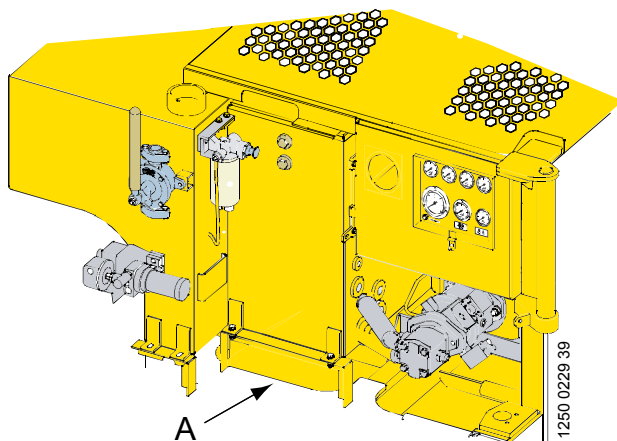


Table: Hydraulic systems

Check point	Control object	Action
A	Hydraulic oil reservoir	Oil change see maintenance instructions. The machine must be positioned horizontally

Compressor - every 1000th engine hour

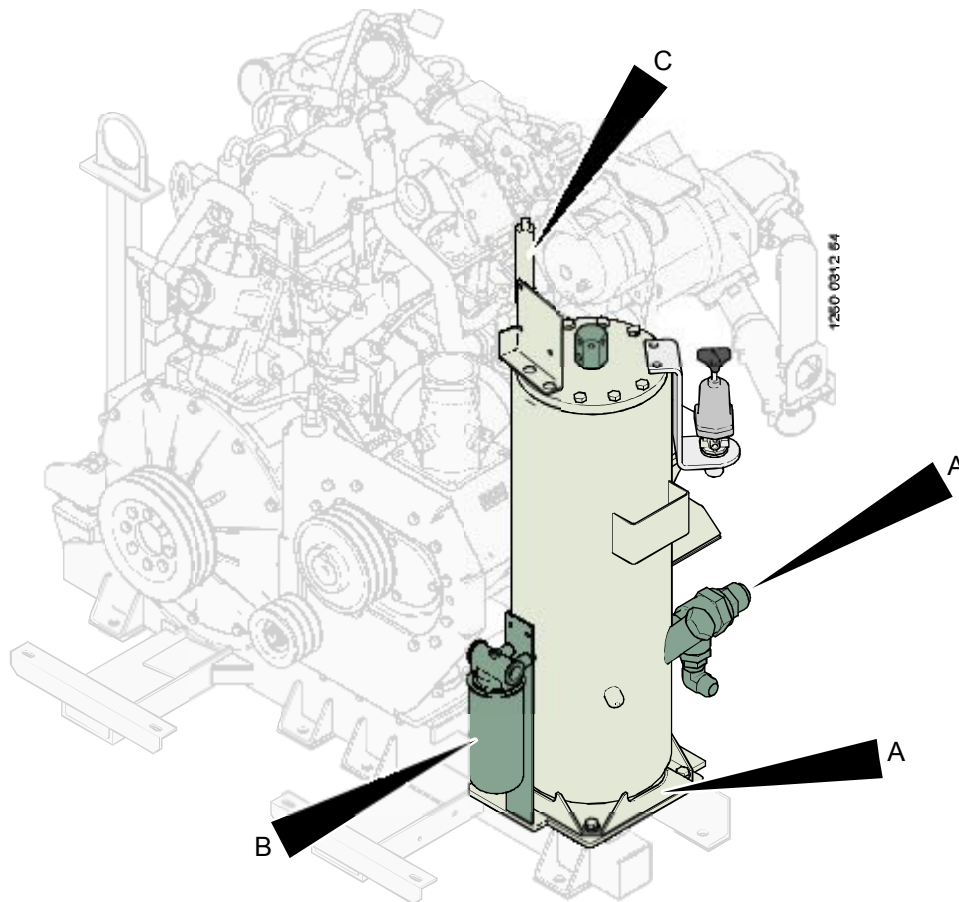


Figure: Compressor

Table: Compressor

Check point	Control object	Action
A	Compressor	Changing oil
B	Oil filter	Change cartridge
C	Safety valve	15 bar pressure test