

LUM12 HRF


Screwdriver

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Product Instructions

LUM12 HRF2	8431026931
LUM12 HRF3	8431026932
LUM12 HRF5	8431026933
LUM12 HRF8	8431026934

	⚠ WARNING
	Read all safety warnings and instructions
	Failure to follow the safety warnings and instructions may result in electric shock, fire and/or serious injury. Save all warnings and instructions for future reference

Atlas Copco

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Product Information

General Information

WARNING Risk of Property Damage or Severe Injury

Ensure that you read, understand and follow all instructions before operating the tool. Failure to follow all the instructions may result in electric shock, fire, property damage and/or severe bodily injury.

- ▶ Read all Safety Information delivered together with the different parts of the system.
- ▶ Read all Product Instructions for installation, operation and maintenance of the different parts of the system.
- ▶ Read all locally legislated safety regulations regarding the system and parts thereof.
- ▶ Save all Safety Information and instructions for future reference.

Safety Signal Words

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

DANGER	DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.
WARNING	WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.
CAUTION	CAUTION, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
NOTICE	NOTICE is used to address practices not related to personal injury.

Warranty

- Product warranty will expire 12+1 months after dispatch from Atlas Copco's Distribution Center.
- Normal wear and tear on parts is not included within the warranty.
 - Normal wear and tear is that which requires a part change or other adjustment/overhaul during standard tools maintenance typical for that period (expressed in time, operation hours or otherwise).
- The product warranty relies on the correct use, maintenance, and repair of the tool and its component parts.
- Damage to parts that occurs as a result of inadequate maintenance or performed by parties other than Atlas Copco or their Certified Service Partners during the warranty period is not covered by the warranty.
- To avoid damage or destruction of tool parts, service the tool according to the recommended maintenance schedules and follow the correct instructions.
- Warranty repairs are only performed in Atlas Copco workshops or by Certified Service Partners.

Atlas Copco offers extended warranty and state of the art preventive maintenance through its ToolCover contracts. For further information contact your local Service representative.

For electrical motors:

- Warranty will only apply when the electric motor has not been opened.

Website

Information concerning our Products, Accessories, Spare Parts and Published Matters can be found on the Atlas Copco website.

Please visit: www.atlascopco.com.

ServAid

ServAid is a portal that is continuously updated and contains Technical Information, such as:

- Regulatory and Safety Information
- Technical Data
- Installation, Operation and Service Instructions
- Spare Parts Lists
- Accessories
- Dimensional Drawings

Please visit: <https://servaid.atlascopco.com>.

For further Technical Information, please contact your local Atlas Copco representative.

Safety Data Sheets MSDS/SDS

The Safety Data Sheets describe the chemical products sold by Atlas Copco.

Please consult the Atlas Copco website for more information www.atlascopco.com/sds.

Country of Origin

For the Country of Origin, please refer to the information on the product label.

Dimensional Drawings

Dimensional Drawings can be found either in the Dimensional Drawings Archive, or on ServAid.

Please visit: <http://webbox.atlascopco.com/webbox/dimdrw> or <https://servaid.atlascopco.com>.

Overview

Technical Product Data

Technical Product Data can be found on either ServAid, or the Atlas Copco website.

Please visit: <https://servaid.atlascopco.com> or www.atlascopco.com.

Service Overview

Service Recommendations

Preventive maintenance is recommended at regular intervals. See the detailed information on preventive maintenance. If the product is not working properly, take it out of service and inspect it.

If no detailed information about preventive maintenance is included, follow these general guidelines:

- Clean appropriate parts accurately
- Replace any defective or worn parts

Installation

Installation Requirements

Air Quality

- For optimum performance and maximum product life we recommend the use of compressed air with a maximum dew point of +10°C (50°F). We also recommend to install an Atlas Copco refrigeration type air dryer.
- Use a separate air filter which removes solid particles larger than 30 microns and more than 90% of liquid water. Install the filter as close as possible to the product and prior to any other air preparation units to avoid pressure drop.
- i** For impulse/impact tools make sure to use lubricators adjusted for these tools. Regular lubricators will add too much oil and therefore decrease the tool performance due to too much oil in the motor.
- i** Make sure that the hose and couplings are clean and free from dust before connecting to the tool.
- i** Both lubricated and lubrication free products will benefit from a small quantity of oil supplied from a lubricator.

Air Lubrication Guide

Brand	Air lubrication
Atlas Copco	Optimizer (1 liter) 9090 0000 04
Q8	Chopin 46
Shell	Shell Air Tool Oil S2 A 320

Compressed Air Connection

⚠ WARNING Risk of severe injury

Air under pressure can cause injury.

- ▶ Always shut off the air supply when not in use or before any adjustments.
- ▶ Drain the hose of air pressure and disconnect the tool from air supply when not in use or before any adjustments.
- ▶ Always use the correct hose size and air pressure for the tool.

⚠ WARNING Compressed Air

High air pressure can cause severe damage and bodily injury.

- ▶ Do not exceed maximum air pressure.
- ▶ Make sure that there are no damaged or loose hoses or fittings.

For correct air pressure and hose size, see the Technical Product Data on - <https://servaid.atlascopco.com> or www.atlascopco.com.

- i** Make sure that the hose and couplings are clean and free from dust before connecting to the tool.

Operation

Ergonomic Guidelines

Consider your workstation as you read through this list of general ergonomic guidelines to identify areas for improvement in posture, component placement, or work environment.

- Take frequent breaks and change work positions frequently.
- Adapt the workstation area to your needs and the work task.
 - Adjust for a convenient reach range by determining where parts and tools need to be located to avoid static load.
 - Use workstation equipment such as tables and chairs appropriate for the work task.
- Avoid work positions above shoulder level or with static holding during assembly operations.
 - When working above shoulder level, reduce the load on the static muscles by lowering the weight of the tool, using for example torque arms, hose reels or weight balancers. You can also reduce the load on the static muscles by holding the tool close to the body.
 - Take frequent breaks.
 - Avoid extreme arm or wrist postures, particularly during operations requiring a degree of force.
- Adjust for a convenient field of vision that requires minimal eye and head movements.
- Use appropriate lighting for the work task.
- Select the appropriate tool for the work task.
- In noisy environments, use ear protection equipment.
- Use high-quality inserted tools and consumables to minimize exposure to excessive levels of vibration.
- Minimize exposure to reaction forces.
 - When cutting:

A cut-off wheel can get stuck if the cut-off wheel is bent or not guided properly. Use the correct flange for the cut-off wheel and avoid bending the cut-off wheel during operation.
 - When drilling:

The drill might stall when the drill bit breaks through. Use support handles if the stall torque is high. The safety standard ISO11148 part 3 recommends using a device to absorb a reaction torque above 10 Nm for pistol grip tools and 4 Nm for straight tools.
 - When using direct-driven screwdrivers or nutrunners:

Reaction forces depend on the tool settings and joint characteristics. Strength and posture determine the amount of reaction force that an operator can tolerate. Adapt the torque setting to the operator's strength and posture and use a torque arm or reaction bar if the torque is too high.
- In dusty environments, use a dust extraction system or wear a mouth protection mask.

Operating Instructions

Tightening Torque

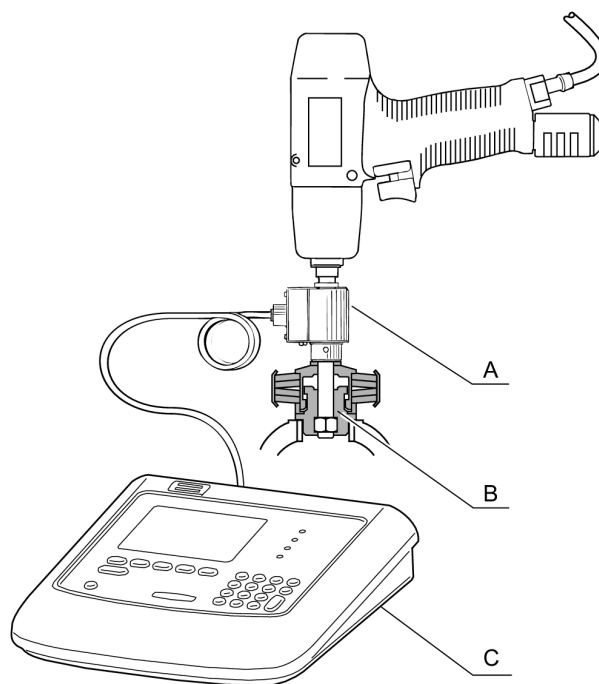
For accurate operation and safety, the tightening torque of the screwdriver must be adjusted correctly in relation to the screw joint. Check the torque specification for the actual joint.

The tightening torque is adjusted by altering the tension of the clutch spring. Turn the protection ring until the hole in the clutch housing is free. Then turn the out going spindle until you can see the keyhole in the adjustment washer. Turn the adjustment key clockwise to decrease and anticlockwise to increase the torque. After the adjustment, turn the protective ring back again.

Testing of Tightening Torque

Torque and Angle Testing Instrument

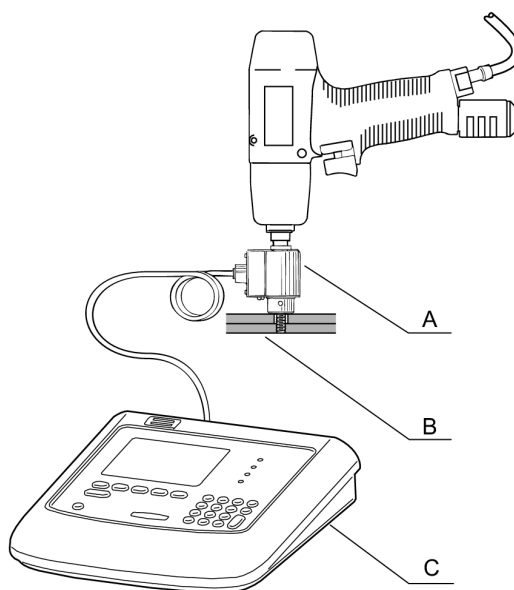
- In the workshop



17632545291

A	Torque transducer
B	Test joint
C	Torque and angle testing instrument

- At the assembly line



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A	Torque transducer
B	Actual joint
C	Torque and angle testing instrument

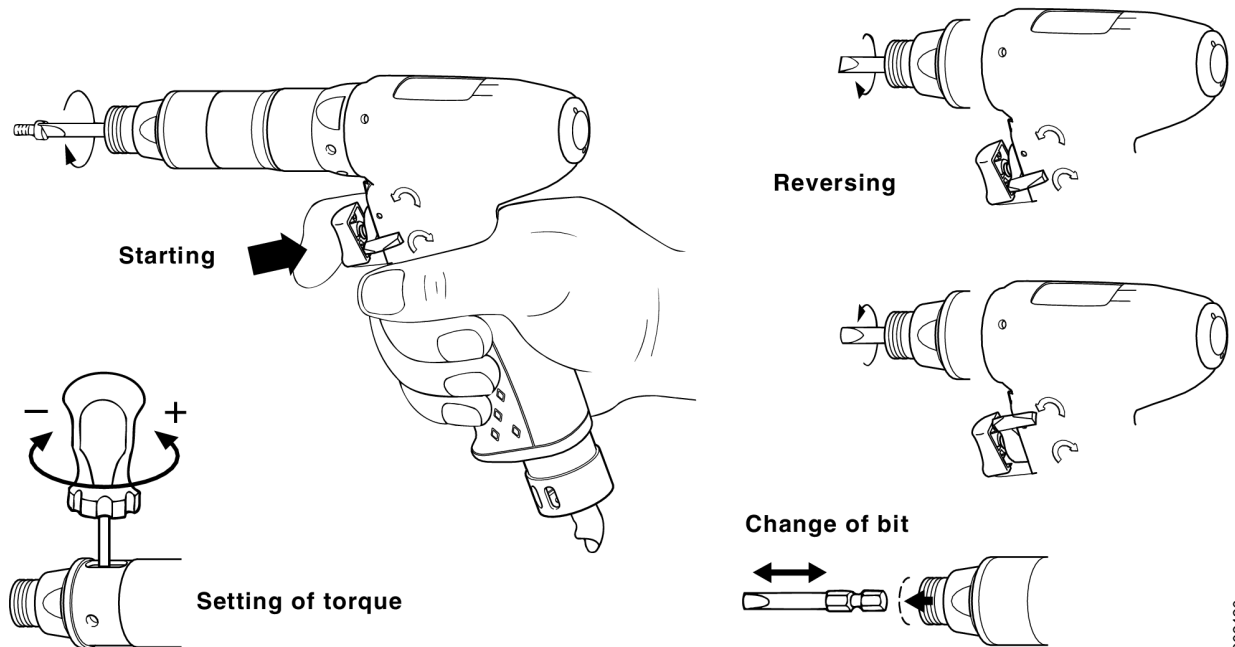
For further information, please refer to Atlas Copco main catalogue or separate leaflet.

Torque Range of the Clutch Springs

- i** Each clutch spring gives a certain torque range. Do not adjust the torque over the maximum recommendation as that might result in improper function and faster wear of the clutch.

Operating instructions

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Reporting, RE - Signal

Reporting (RE) machines supply an air signal that can be connected to a monitoring instrument that counts the number of approved tightening and detects premature shut-off and rehits and other irregularities.

Air Pressure Monitoring, RE-Signal S1

Reporting pneumatic assembly tools provide a pneumatic signal that indicates which part of the tightening cycle the tool has reached, by means of variations in air pressure.

In the RE-Controller box timers are triggered when certain pressure levels are reached.

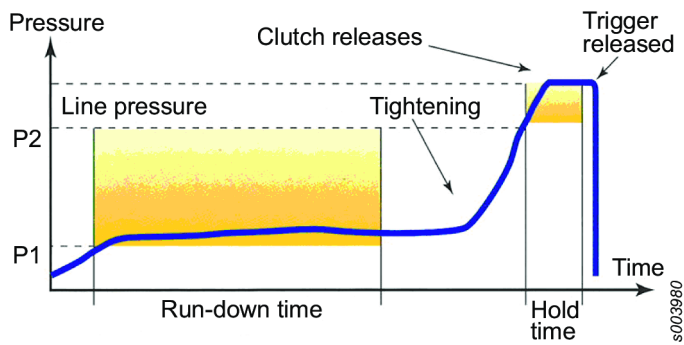
Pressure level 1 (P1) starts a timer that checks that the tightening cycle is not too short.

Pressure level 2 (P2) starts a timer that checks the time taken from when the clutch has been released to when the operator releases the trigger to ensure that it is not too short.

The controller measures the differential pressure over the motor.

It should be noted that the system does not measure torque! Regular check of installed torque/torque output of the tool must be done separately.

The RE-Controller checks the air-line pressure. One of the most common problems in air-line systems is pressure variations. If the pressure drops too much the tool might stall and/or the torque will not be correct. The RE-Controller will give a signal if the pressure drops too much.



The RE-Controller alerts the operator when it detects:

- Missed fasteners
- Premature tool shut-off
- Stripped threads
- Cross-threading
- Rehits
- Drop in air supply

The air pressure inside the tool is measured through a small hose (see Optional accessories - Kit RE-Signal) and converted into a digital signal. This signal is processed in the RE-Controller. The RE-Controller gives instant visual and audio feedback to the operator on whether the tightening was OK or not OK.

For further information, please see leaflet 9833 1358 01.

Service

Maintenance Instructions

Service Recommendations

Preventive maintenance is recommended at regular intervals. See the detailed information on preventive maintenance. If the product is not working properly, take it out of service and inspect it.

If no detailed information about preventive maintenance is included, follow these general guidelines:

- Clean appropriate parts accurately
- Replace any defective or worn parts

Service Instructions

Overhaul and preventive maintenance is recommended at regular intervals once per year or after maximum 250.000 tightening depending on which occurs sooner. More frequent overhaul may be needed, if used at high torque and long tightening times. If the machine not is working properly, it should immediately be taken away for inspection.

The strainer at the air inlet and the exhaust silencer should be cleaned frequently or replaced in order to prevent clogging, which decreases the capacity.

At the overhauls, all parts should be cleaned accurately and defective or worn parts (i.e. O-rings, vanes) should be replaced.

Cleaning

Clean all parts thoroughly in white spirit or similar cleaning agent. To prevent clogging and decreased power, it could be necessary to clean the strainer (if used) and the exhaust filter between the overhauls.

Inspection

After the cleaning, inspect all parts. Damaged and worn parts should be replaced.

Spare Parts

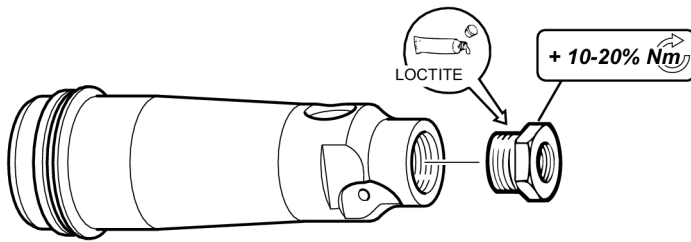
Parts without ordering number are for technical reasons not delivered separately. The use of other genuine Atlas Copco replacement parts may result in decreased tool performance and increased maintenance and may, at the company option, invalidate all warranties.

Tightening of Threaded Connections

The tightening torques indicated in the exploded views list in ServAid (see Spare parts section in <https://servaid.atlascopco.com>) are established to achieve the correct clamping force and prevent the parts from coming loose.

When servicing these parts, they must be able to open up without being destroyed. In special circumstances (depending on application and usage) the parts may however come loose after some time of operation. In such cases the torque can be increased by 10-20%. If necessary, a low or medium threadlocking fluid can also be applied.

Example



Lubrication Instructions

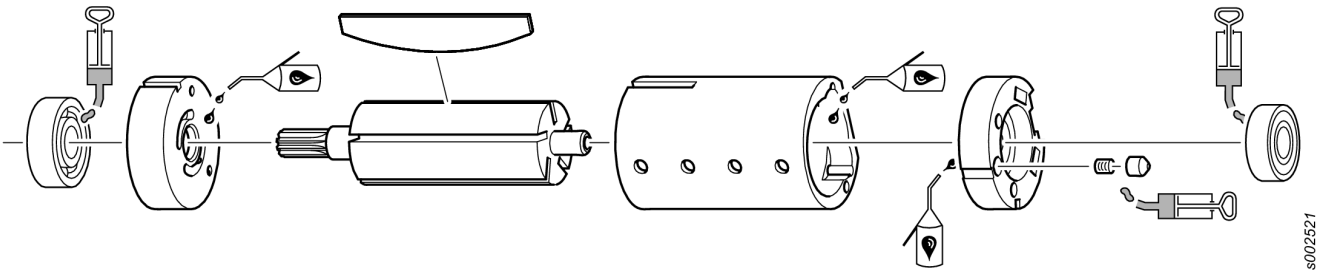
Rust Protection and Cleaning

Water in the compressed air can cause rust. To prevent rust we strongly recommend to install an air dryer.

Water and particles can cause sticking of vanes and valves. This can be prevented by installing an air filter close to the product to avoid pressure drop.

Before longer stand stills always protect your tool by adding a few drops of oil into the air inlet. Run the tool for 5–10 seconds and absorb any access oil at the air outlet in a cloth.

Lubrication of Motor Parts

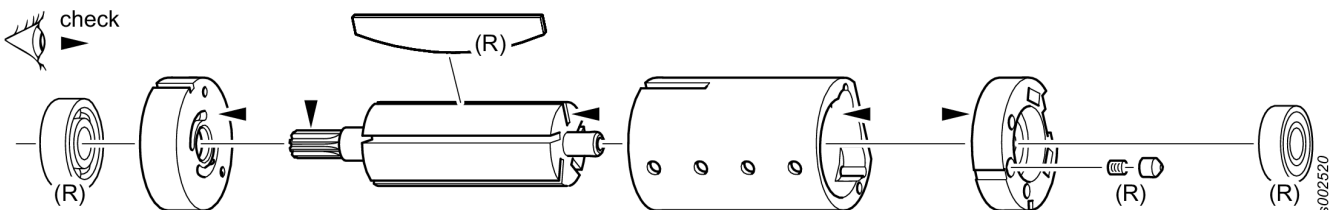


- i** ■ No grease is needed for protected Ball bearings.
- Apply a thin layer of air tool oil where needed.

Lubrication

Lubricate specially gears, valve and clutch with grease containing molybdenum disulphide (e.g. Molykote BR2 Plus). Lubricate o-rings and threaded connections with grease before assembling.

Inspection of Motor Parts



- **(R)** To be replaced (from Service kit Ordering No.) at every overhaul.
- **End plates:** Check that they not are scored or scratched. If these are shallow, polish with fine grinding paste against a face plate. Clean thoroughly.
- **Rotor:** Check that the end faces do not have any marks or burrs. Check that the splines are not worn or cracked.
- **Cylinder:** Check that the bore is not scored or scratched. If these are shallow, polish with a fine grinding cloth.

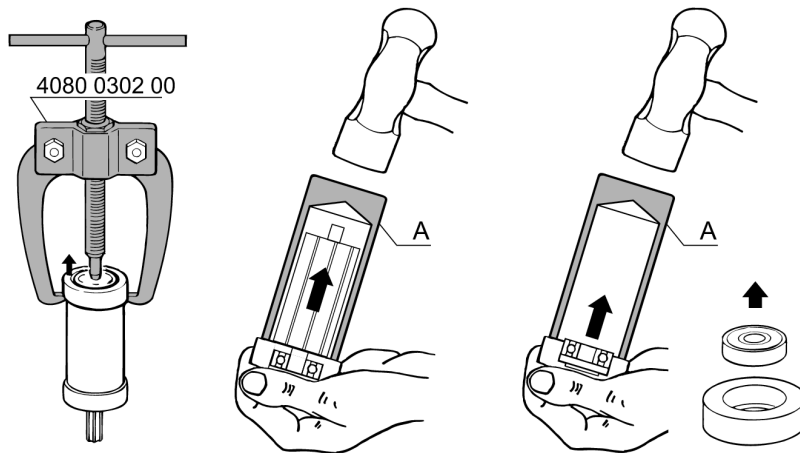
For Maximum Performance

At tough working conditions – soft joints and max. setting – lubrication of the air is recommended.

With extreme dry air the service life of vanes and machine performance might be reduced. A daily supply of 0.1 – 0.2 ml oil into the machine inlet will improve the machine performance. Alternatively consider an automatic lubricator device, Atlas Copco oil fog lubricator DIM, or single point lubricator DOS, which will improve the machine performance.

Dismantling/Assembling Instructions

Dismantling of Motor



Dismantling tool Mandrel A

Ordering No.	Ø D	Ø C
4080 0182 01	7	3.5
4080 0182 02	8	4.5
4080 0182 03	9	5.5
4080 0182 04	10	6.5
4080 0182 05	13	8.5
4080 0182 06	16	10.5
4080 0182 07	19	12.5
4080 0182 08	22	15.5
4080 0182 09	24	17.5
4080 0182 10	26	20.5
4080 0182 11	30	25.5
4080 0182 12	35	30.5
4080 0182 13	40	35.5
4080 0182 14	47	40.5

Service tools are also included in our Basic Service Tools Set.
For further information, please see Printed Matter No. 9835 5485 00

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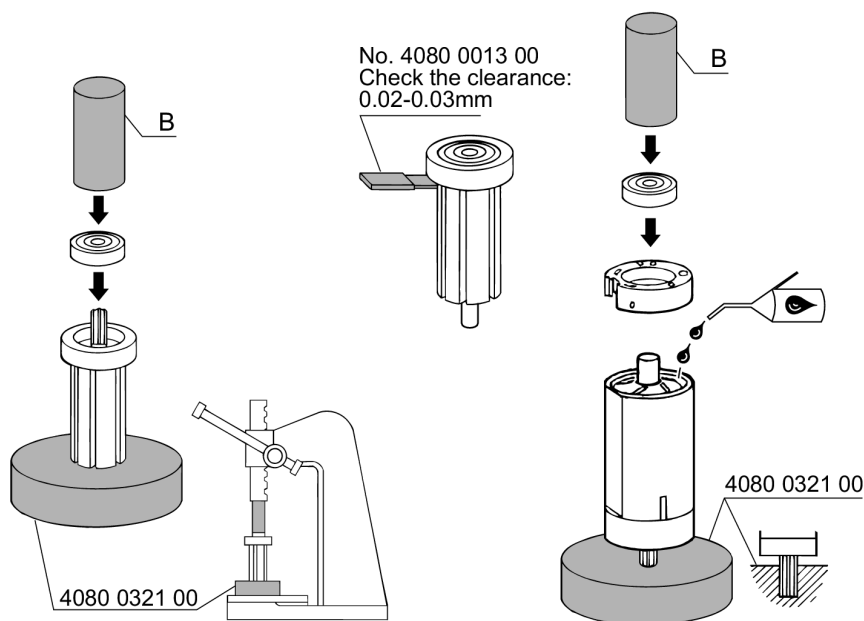
Disassembling/Assembling

It is important that the machines threaded connections are tightened properly; i.e. in accordance with the specifications on the exploded views.

Tightening of Threaded Connections

The tightening torque indicated in the exploded views (see Spare parts section in <https://servaid.atlascopco.com>) will give the right clamping force and prevent parts from loosening. It is important not to exceed the clamping force, these parts must be able to open up without being damaged at service. After some time of operation and in special circumstances, depending on application and usage, the parts may however loosen somewhat. The tightening torque can then be increased by 10-20% and some type of low or medium thread locking fluid can be applied.

Assembly of Motor



Assembly tool Mandrel B

Ordering No.	Ø D	Ø C
4080 0567 04	12.5	5.2
4080 0567 11	14.5	6.5
4080 0567 01	15.5	5.2
4080 0567 05	18.5	6.2
4080 0567 02	18.5	8.2
4080 0567 06	21.5	7.2
4080 0567 03	21.5	8.2
4080 0567 07	25.5	10.5
4080 0567 08	27.5	12.5
4080 0567 09	31.5	15.5
4080 0567 10	34.5	18.5

Service tools are also included in our Basic Service Tools Set. For further information, please see Printed Matter No. 9835 5485 00

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Free Speed and Air Consumption

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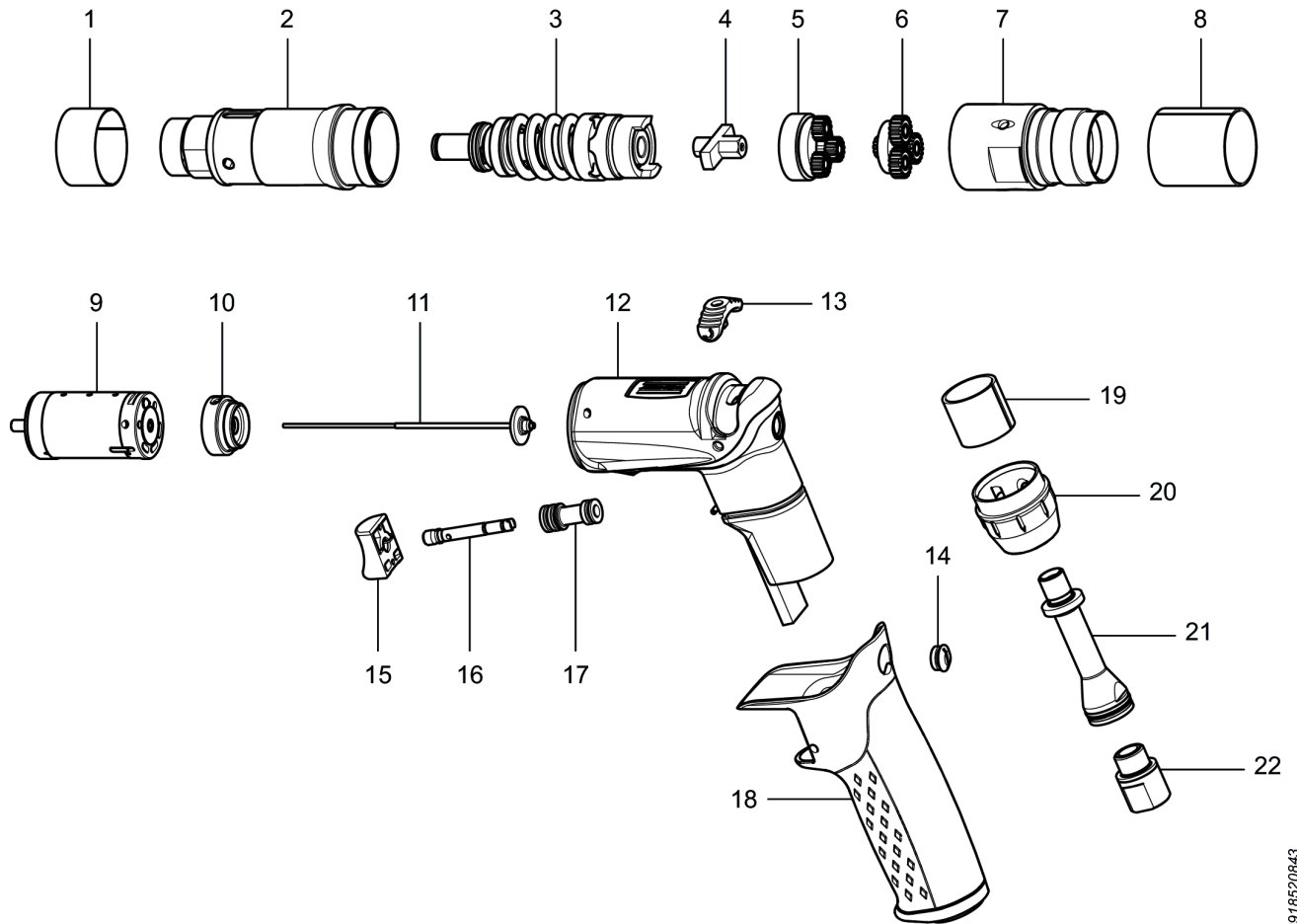
Recycling

Environmental Regulations

When a product has served its purpose it has to be recycled properly. Dismantle the product and recycle the components in accordance with local legislation.

Batteries shall be taken care of by your national battery recovery organization.

Recycling information



3918520843

	Part:	Recycle as:
1	Protection ring	Metal, Steel
2	Clutch housing	Metal, Steel
3	Clutch	Metal, Steel
4	Clutch jaw	Metal, Steel
5	Planetary gear	Metal, Steel
6	Planetary gear	Metal, Steel
7	Clutch housing	Metal, Steel
8	Gear rim	Metal, Steel
9	Vane motor	Metal, Steel
10	Valve seat	Metal, Steel

	Part:	Recycle as:
11	Valve rod	Metal, Steel and Plastics
12	Motor casing	Metal, Aluminum
13	Reverse knob	Plastics, PA66
14	Cover	Metal, Steel
15	Push button	Plastics, PA66
16	Valve pin	Metal, Steel
17	Liner	Plastics, PA66
18	Handle	Plastics, PP Plastics
19	Silencer	Plastics, Vyon
20	Exhaust deflector	Plastics, PA66 Plastics
21	Screw cap	Metal, Steel
22	Adapter	Metal, Steel

Original instructions



**Atlas Copco Industrial
Technique AB**
SE-10523 STOCKHOLM
Sweden
Telephone: +46 8 743 95 00
www.atlascopco.com

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