Atlas Copco

Instruction Manual

Instruction Manual
for Portable Compressors
English

XAXS 600 Cud Export PNE | Engine 6CTA 8.3

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Engine 6CTA 8.3

ATLAS COPCO - PORTABLE ENERGY DIVISION
www.atlascopco.com

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Warranty and Liability Limitation

Use only authorized parts.
Any damage or malfunction caused by the use of unauthorized parts is not covered by Warranty or Product Liability.
The manufacturer does not accept any liability for any damage arising for modifications, additions or conversions made without the manufacturer's approval in writing.

Preface

Please read the following instructions carefully before starting to use your compressor.

It is a solid, safe and reliable machine, built according to the latest technology. Follow the instructions in this booklet and we guarantee you years of troublefree operation.

Always keep the manual available near the machine.

In all correspondence always mention the compressor type and serial number, shown on the data plate.

The company reserves the right to make changes without prior notice.

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Safety precautions

☞ **To be read attentively and acted accordingly before towing, lifting, operating, performing maintenance or repairing the compressor.**

INTRODUCTION

The policy of Atlas Copco is to provide the users of their equipment with safe, reliable and efficient products. Factors taken into account are among others:

- the intended and predictable future use of the products, and the environments in which they are expected to operate,
- applicable rules, codes and regulations,
- the expected useful product life, assuming proper service and maintenance,
- providing the manual with up-to-date information.

Before handling any product, take time to read the relevant instruction manual. Besides giving detailed operating instructions, it also gives specific information about safety, preventive maintenance, etc.

Keep the manual always at the unit location, easy accessible to the operating personnel.

See also the safety precautions of the engine and possible other equipment, which are separately sent along or are mentioned on the equipment or parts of the unit.

These safety precautions are general and some statements will therefore not always apply to a particular unit.

Only people that have the right skills should be allowed to operate, adjust, perform, maintenance or repair on Atlas Copco equipment.

It is the responsibility of management to appoint operators with the appropriate training and skill for each category of job.

Skill level 1: Operator

An operator is trained in all aspects of operating the unit with the push-buttons and is trained to know the safety aspects.

Skill level 2: Mechanical technician

A mechanical technician is trained to operate the unit the same as the operator. In addition, the mechanical technician is also trained to perform maintenance and repair, as described in the instruction manual and is allowed to change settings of the control and safety system. A mechanical technician does not work on live electrical components.

Skill level 3: Electrical technician

An electrical technician is trained and has the same qualifications as both the operator and the mechanical technician. In addition, the electrical technician may carry out electrical repairs within the various enclosures of the unit. This includes work on live electrical components.

Skill level 4: Specialist from the manufacturer

This is a skilled specialist sent by the manufacturer or its agent to perform complex repairs or modifications to the equipment.

In general it is recommended that not more than two people operate the unit, more operators could lead to unsafe operating conditions.

Take necessary steps to keep unauthorized persons away from the unit and eliminate all possible sources of danger at the unit.

When handling, operating, overhauling and/or performing maintenance or repair on Atlas Copco equipment, the mechanics are expected to use safe engineering practices and to observe all relevant local safety requirements and ordinances. The following list is a reminder of special safety directives and precautions mainly applicable to Atlas Copco equipment.

These safety precautions apply to machinery processing or consuming air. Processing of any other gas requires additional safety precautions typical to the application and are not included herein.

Neglecting the safety precautions may endanger people as well as environment and machinery:

- endanger people due to electrical, mechanical or chemical influences,
- endanger the environment due to leakage of oil, solvents or other substances,
- endanger the machinery due to function failures.

All responsibility for any damage or injury resulting from neglecting these precautions or by non-observance of ordinary caution and not taken due care required in handling, operating, maintenance or repair, also if not expressly mentioned in this instruction manual, is disclaimed by Atlas Copco.

The manufacturer does not accept any liability for any damage arising from the use of non-original parts and for modifications, additions or conversions made without the manufacturer's approval in writing.

If any statement in this manual does not comply with local legislation, the stricter of the two shall be applied.

Statements in these safety precautions should not be interpreted as suggestions, recommendations or inducements that it should be used in violation of any applicable laws or regulations.

GENERAL SAFETY PRECAUTIONS

1 The owner is responsible for maintaining the unit in a safe operating condition. Unit parts and accessories must be replaced if missing or unsuitable for safe operation.

2 The supervisor, or the responsible person, shall at all times make sure that all instructions regarding machinery and equipment operation and maintenance are strictly followed and that the machines with all accessories and safety devices, as well as the consuming devices, are in good repair, free of abnormal wear or abuse, and are not tampered with.

3 Whenever there is an indication or any suspicion that an internal part of a machine is overheated, the machine shall be stopped but no inspection covers shall be opened before sufficient cooling time has elapsed; this to avoid the risk of spontaneous ignition of oil vapour when air is admitted.

4 Normal ratings (pressures, temperatures, speeds, etc.) shall be durably marked.

5 Operate the unit only for the intended purpose and within its rated limits (pressure, temperature, speeds, etc.).

6 The machinery and equipment shall be kept clean, i.e. as free as possible from

oil, dust or other deposits.

7 To prevent an increase in working temperature, inspect and clean heat transfer surfaces (cooler fins, intercoolers, water jackets, etc.) regularly. See the **Preventive maintenance schedule for the compressor**.

8 All regulating and safety devices shall be maintained with due care to ensure that they function properly. They may not be put out of action.

9 Care shall be taken to avoid damage to safety valves and other pressure-relief devices, especially to avoid plugging by paint, oil coke or dirt accumulation, which could interfere with the functioning of the device.

10 Pressure and temperature gauges shall be checked regularly with regard to their accuracy. They shall be replaced whenever outside acceptable tolerances.

11 Safety devices shall be tested as described in the maintenance schedule of the instruction manual to determine that they are in good operating condition. See the **Preventive maintenance schedule for the compressor**.

12 Mind the markings and information labels on the unit.

13 In the event the safety labels are damaged or destroyed, they must be replaced to ensure operator safety.

14 Keep the work area neet. Lack of order will increase the risk of accidents.

15 When working on the unit, Depending on the kind of activities wear safety clothing as: safety glasses, ear protection, safety helmet (including visor), safety gloves, protective clothing, safety shoes. Protect long hair with a hairnet. Do not wear loose clothing or jewelry.

16 Take precautions against fire. Handle fuel, oil and anti-freeze with care because they are inflammable substances. Do not smoke or approach with naked flame when handling such substances. Keep a fire-extinguisher in the vicinity.

SAFETY DURING TRANSPORT AND INSTALLATION

Transport of the unit has to be done by authorized/experienced people.

When towing, lifting or transporting the compressor in any way, the battery switch must always be in the “OFF” position!

To lift the unit, all loose or pivoting parts, e.g. doors and towbar, shall first be securely fastened.

Do not attach cables, chains or ropes directly to the lifting eye; apply a crane hook or lifting shackle meeting local safety regulations. Never allow sharp bends in lifting cables, chains or ropes.

Helicopter lifting is not allowed.

It is strictly forbidden to dwell or stay in the risk zone under a lifted load. Never lift the unit over people or residential areas. Lifting acceleration and retardation shall be kept within safe limits.

1 Before towing the unit:
- ascertain that the pressure vessel(s) is (are) depressurized,
- check the towbar, the brake system and the towing eye. Also check the coupling of the towing vehicle,
- check the towing and brake capability of the towing vehicle,

- check that the towbar, jockey wheel or stand leg is safely locked in the raised position,
- ascertain that the towing eye can swivel freely on the hook,
- check that the wheels are secure and that the tyres are in good condition and inflated correctly,
- connect the signalisation cable, check all lights and connect the pneumatic brake couplers, if applicable.
- attach the safety break-away cable or safety chain to the towing vehicle,
- remove wheel chocks, if applied, and disengage the parking brake,
- check whether springs on wheelchocks are missing or broken.

2 To tow a unit use a towing vehicle of ample capacity. Refer to the documentation of the towing vehicle.

3 If the unit is to be backed up by the towing vehicle, disengage the overrun brake mechanism (if it is not an automatic mechanism).

4 Never exceed the maximum towing speed of the unit (mind the local regulations).

5 Place the unit on level ground and apply the parking brake before disconnecting the unit from the towing vehicle. Unclip the safety break-away cable or safety chain. If the unit has no parking brake or jockey wheel, immobilize the unit by placing chocks in front of and/or behind the wheels. When the towbar can be positioned vertically, the locking device must be applied and kept in good order. The unit must always be used/ parked/stored in a non publicly accessible area, locked away from access by unauthorized persons.

6 To lift heavy parts, a hoist of ample capacity, tested and approved according to local safety regulations, shall be used.

7 Lifting hooks, eyes, shackles, etc., shall never be bent and shall only have stress in line with their design load axis. The capacity of a lifting device diminishes when the lifting force is applied at an angle to its load axis.

8 For maximum safety and efficiency of the lifting apparatus all lifting members shall be applied as near to perpendicular as possible. If required, a lifting beam shall be applied between hoist and load.

9 Never leave a load hanging on a hoist.

10 A hoist has to be installed in such a way that the object will be lifted perpendicular. If that is not possible, the necessary precautions must be taken to prevent load-swinging, e.g. by using two hoists, each at approximately the same angle not exceeding 30° from the vertical.

11 Locate the unit away from walls. Take all precautions to ensure that hot air exhausted from the engine and driven machine cooling systems cannot be recirculated. If such hot air is taken in by the engine or driven machine cooling fan, this may cause overheating of the unit; if taken in for combustion, the engine power will be reduced.

12 Before moving the compressor, switch it off.

13 If the warning light on the ABS module or in the vehicle lights up, please contact Atlas Copco.

SAFETY DURING USE AND OPERATION

1 When the unit has to operate in a fire-hazardous environment, each engine exhaust has to be provided with a spark arrestor to trap incendiary sparks.

2 The exhaust contains carbon monoxide which is a lethal gas. When the unit is used in a confined space, conduct the engine exhaust to the outside atmosphere by a pipe of sufficient diameter; do this in such a way that no extra back pressure is created for the engine. If necessary, install an

extractor. Observe any existing local regulations. Make sure that the unit has sufficient air intake for operation. If necessary, install extra air intake ducts.

3 When operating in a dust-laden atmosphere, place the unit so that dust is not carried towards it by the wind. Operation in clean surroundings considerably extends the intervals for cleaning the air intake filters and the cores of the coolers.

4 Close the compressor air outlet valve before connecting or disconnecting a hose. Ascertain that a hose is fully depressurized before disconnecting it. Before blowing compressed air through a hose or air line, ensure that the open end is held securely, so that it cannot whip and cause injury.

5 The air line end connected to the outlet valve must be safeguarded with a safety cable, attached next to the valve.

6 No external force may be exerted on the air outlet valves, e.g. by pulling on hoses or by installing auxiliary equipment directly to a valve, e.g. a water separator, a lubricator, etc. Do not step on the air outlet valves.

7 Never move a unit when external lines or hoses are connected to the outlet valves, to avoid damage to valves, manifold and hoses.

8 Do not use compressed air from any type of compressor without taking extra measures for breathing purposes as this may result in injury or death. For quality breathing air, the compressed air must be adequately purified according to local legislation and standards. Breathing air must always be supplied at stable, suitable pressure.

9 Distribution pipework and air hoses must be of correct diameter and suitable for the working pressure. Never use frayed, damaged or deteriorated hoses. Replace hoses and flexibles before the lifetime expires. Use only the correct type and size of hose end fittings and connections.

10 If the compressor is to be used for sand-blasting or will be connected to a common compressed-air system, fit an appropriate non-return valve (check valve) between compressor outlet and the connected sand-blasting or compressed-air system. Observe the right mounting position/direction.

11 Before removing the oil filler plug, ensure that the pressure is released by opening an air outlet valve.

12 Never remove a filler cap of the cooling water system of a hot engine. Wait until the engine has sufficiently cooled down.

13 Never refill fuel while the unit is running, unless otherwise stated in the Atlas Copco Instruction Book (AIB). Keep fuel away from hot parts such as air outlet pipes or the engine exhaust. Do not smoke when fuelling. When fuelling from an automatic pump, an earthing cable should be connected to the unit to discharge static electricity. Never spill nor leave oil, fuel, coolant or cleansing agent in or around the unit.

14 All doors shall be shut during operation so as not to disturb the cooling air flow inside the bodywork and/or render the silencing less effective. A door should be kept open for a short period only e.g. for inspection or adjustment.

15 Periodically carry out maintenance works according to the maintenance schedule.

16 Stationary housing guards are provided on all rotating or reciprocating parts not otherwise protected and which may be hazardous to personnel. Machinery shall never be put into operation, when such guards have been removed, before the guards are securely reinstalled.

17 Noise, even at reasonable levels, can cause irritation and disturbance which, over a long period of time, may cause severe injuries to the nervous system of human beings. When the sound pressure level, at any point where personnel normally has to attend, is:
   - below 70 dB(A): no action needs to be taken,
   - above 70 dB(A): noise-protective devices should be provided for people continuously being present in the room,
   - below 85 dB(A): no action needs to be taken for occasional visitors staying a limited time only,
   - above 85 dB(A): room to be classified as a noise-hazardous area and an obvious warning shall be placed permanently at each entrance to alert people entering the room, for even relatively short times, about the need to wear ear protectors,
   - above 95 dB(A): the warning(s) at the entrance(s) shall be completed with the recommendation that also occasional visitors shall wear ear protectors,
   - above 105 dB(A): special ear protectors that are adequate for this noise level and the spectral composition of the noise shall be provided and a special warning to that effect shall be placed at each entrance.

18 The unit has parts, which may be accidentally touched by personnel, of which the temperature can be in exess of 80 °C (176 °F). The insulation or safety guard, protecting these parts shall not be removed before the parts have cooled down to room temperature.

19 Never operate the unit in surroundings where there is a possibility of taking in flammable or toxic fumes.

20 If the working process produces fumes, dust or vibration hazards, etc., take the necessary steps to eliminate the risk of personnel injury.

21 When using compressed air or inert gas to clean down equipment, do so with caution and use the appropriate protection, at least safety glasses, for the operator as well as for any bystander. Do not apply compressed air or inert gas to your skin or direct an air or gas stream at people. Never use it to clean dirt from your clothes.

22 When washing parts in or with a cleaning solvent, provide the required ventilation and use appropriate protection such as a breathing filter, safety glasses, rubber apron and gloves, etc.

23 Safety shoes should be compulsory in any workshop and if there is a risk, however small, of falling objects, wearing of a safety helmet should be included.

24 If there is a risk of inhaling hazardous gases, fumes or dust, the respiratory organs must be protected and depending on the nature of the hazard, so must the eyes and skin.

25 Remember that where there is visible dust, the finer, invisible particles will almost certainly be present too; but the fact that no dust can be seen is not a reliable indication that dangerous, invisible dust is not present in the air.

26 Never operate the unit at pressures or speeds below or in excess of its limits as indicated in the technical specifications.

SAFETY DURING MAINTENANCE AND REPAIR

Maintenance, overhaul and repair work shall only be carried out by adequately trained personnel; if required, under supervision of someone qualified for the job.

1 Use only the correct tools for maintenance and repair work, and only tools which are in good condition.

2 Parts shall only be replaced by genuine Atlas Copco replacement parts.

3 All maintenance work, other than routine attention, shall only be undertaken when the unit is stopped. Steps shall be taken to prevent inadvertent starting. In addition, a warning sign bearing a legend such as ”work in progress; do not start” shall be attached to the starting equipment. On engine-driven units the battery shall be disconnected and removed or the terminals covered by insulating caps. On electrically driven units the main switch shall be locked in open position and the fuses shall be taken out. A warning sign bearing a legend such as ”work in progress; do not supply voltage” shall be attached to the fuse box or main switch.

4 Before dismantling any pressurized component, the compressor or equipment shall be effectively isolated from all sources of pressure and the entire system shall be relieved of pressure. Do not rely on non-return valves (check valves) to isolate pressure systems. In addition, a warning sign bearing a legend such as ”work in progress; do not open” shall be attached to each of the outlet valves.

5 Prior to stripping an engine or other machine or undertaking major overhaul on it, prevent all movable parts from rolling over or moving.

6 Make sure that no tools, loose parts or rags are left in or on the machine. Never leave rags or loose clothing near the engine air intake.

7 Never use flammable solvents for cleaning (fire-risk).

8 Take safety precautions against toxic vapours of cleaning liquids.

9 Never use machine parts as a climbing aid.

10 Observe scrupulous cleanliness during maintenance and repair. Keep away dirt, cover the parts and exposed openings with a clean cloth, paper or tape.

11 Never weld on or perform any operation involving heat near the fuel or oil systems. Fuel and oil tanks must be completely purged, e.g. by steam-cleaning, before carrying out such operations. Never weld on, or in any way modify, pressure vessels. Disconnect the alternator cables during arc welding on the unit.

12 Support the towbar and the axle(s) securely if working underneath the unit or when removing a wheel. Do not rely on jacks.

13 Do not remove any of, or tamper with, the sound-damping material. Keep the material free of dirt and liquids such as fuel, oil and cleansing agents. If any sound-damping material is damaged, replace it to prevent the sound pressure level from increasing.

14 Use only lubricating oils and greases recommended or approved by Atlas Copco or the machine manufacturer. Ascertain that the selected lubricants comply with all applicable safety regulations, especially with regard to explosion or fire-risk and the possibility of decomposition or generation of hazardous gases. Never mix synthetic with mineral oil.

15 Protect the engine, alternator, air intake filter, electrical and regulating components, etc., to prevent moisture ingress, e.g. when steam-cleaning.

16 When performing any operation involving heat, flames or sparks on a machine, the surrounding components shall first be screened with non-flammable material.

17 Never use a light source with open flame for inspecting the interior of a machine.

18 Disconnect –battery-clamp before starting electrical servicing or welding (or turn battery-switch in "off" position).

19 When repair has been completed, the machine shall be barred over at least one revolution for reciprocating machines, several revolutions for rotary ones to ensure that there is no mechanical interference within the machine or driver. Check the direction of rotation of electric motors when starting up the machine initially and after any alteration to the electrical connection(s) or switch gear, to check that the oil pump and the fan function properly.

20 Maintenance and repair work should be recorded in an operator's logbook for all machinery. Frequency and nature of repairs can reveal unsafe conditions.

21 When hot parts have to be handled, e.g. shrink fitting, special heat-resistant gloves shall be used and, if required, other body protection shall be applied.

22 When using cartridge type breathing filter equipment, ascertain that the correct type of cartridge is used and that its useful service life is not surpassed.

23 Make sure that oil, solvents and other substances likely to pollute the environment are properly disposed of.

24 Before clearing the unit for use after maintenance or overhaul, check that operating pressures, temperatures and speeds are correct and that the control and shutdown devices function correctly.

TOOL APPLICATIONS SAFETY

Apply the proper tool for each job. With the knowledge of correct tool use and knowing the limitations of tools, along with some common sense, many accidents can be prevented.

Special service tools are available for specific jobs and should be used when recommended. The use of these tools will save time and prevent damage to parts.

SPECIFIC SAFETY PRECAUTIONS

Batteries

When servicing batteries, always wear protecting clothing and glasses.

1 The electrolyte in batteries is a sulphuric acid solution which is fatal if it hits your eyes, and which can cause burns if it contacts your skin. Therefore, be careful when handling batteries, e.g. when checking the charge condition.

2 Install a sign prohibiting fire, open flame and smoking at the post where batteries are being charged.

3 When batteries are being charged, an explosive gas mixture forms in the cells and might escape through the vent holes in the plugs. Thus an explosive atmosphere may form around the battery if ventilation is poor, and can remain in and around the battery for several hours after it has been charged. Therefore:
   - never smoke near batteries being or having recently been, charged,
   - never break live circuits at battery terminals, because a spark usually occurs.

4 When connecting an auxiliary battery (AB) in parallel to the unit battery (CB) with booster cables: connect the + pole of AB to the + pole of CB, then connect the - pole of CB to the mass of the unit. Disconnect in the reverse order.

Pressure vessels

Maintenance/installation requirements:

1 The vessel can be used as pressure vessel or as separator and is designed to hold compressed air for the following application:
   - pressure vessel for compressor,
   - medium AIR/OIL,
   - and operates as detailed on the data plate of the vessel:
   - the maximum working pressure ps in bar (psi),
   - the maximum working temperature Tmax in °C (°F),
   - the minimum working temperature Tmin in °C (°F),
   - the capacity of the vessel V in l (US gal, Imp gal, cu.ft).

2 The pressure vessel is only to be used for the applications as specified above and in accordance with the technical specifications. Safety reasons prohibit any other applications.

3 National legislation requirements with respect to re-inspection must be complied with.

4 No welding or heat treatment of any kind is permitted to those vessel walls which are exposed to pressure.

5 The vessel is provided and may only be used with the required safety equipment such as manometer, overpressure control devices, safety valve, etc.

6 Draining of condensate shall be performed daily when vessel is in use.

7 Installation, design and connections should not be changed.

8 Bolts of cover and flanges may not be used for extra fixation.

9 (Pressure) vessel maintenance is to be performed by Atlas Copco.

Safety valves

Operating & Maintenance

Only trained and technically competent personnel should consider overhaul, re-set or performance testing of safety valves.

The safety valve is supplied with either a lead security seal or crimped cover to deter unauthorised access to the pressure regulation device.
Under no circumstances should the set pressure of the safety valve be altered to a different pressure than that stamped on the valve without the permission of the installation designer.
If the set pressure must be altered then use only correct parts supplied by manufacturer and in accordance with the instructions available for the valve type.

Safety valves must be frequently tested and regularly maintained.

The set pressure should be periodically checked for accuracy.

When fitted, the lifting device should be operated at pressures not less than 75% of the set pressure to ensure free and easy movement of internal parts.
The frequency of tests is influenced by factors such as the severity of the operating environment and aggressiveness of the pressurised medium.
Soft seals and springs should be replaced as part of the maintenance procedure.

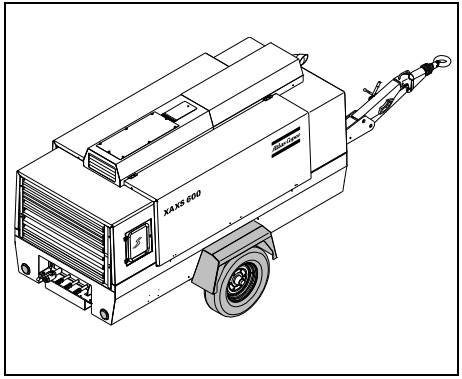
Do not paint or coat the installed safety valve (see also **Preventive maintenance schedule for the compressor**).

Leading particulars

DESCRIPTION OF SAFETY PICTOGRAMS USED IN THIS MANUAL

This symbol draws your attention to dangerous situations. The operation concerned may endanger persons and cause injuries.

This symbol is followed by supplementary information.



GENERAL DESCRIPTION

The compressor XAXS 600 is silenced, single-stage, oil-injected screw compressor, built for a nominal effective working pressure of 17 bar (247 psi). (see section **Technical specifications**)

Engine

The compressor is driven by a liquid-cooled diesel engine.

The engine's power is transmitted to the compressor element through a heavy-duty coupling.

Compressor

The compressor casing houses two screw-type rotors, mounted on ball and roller bearings. The male rotor, driven by the engine, drives the female rotor. The element delivers pulsation-free air.

Injected oil is used for sealing, cooling and lubricating purposes.

Compressor oil system

The oil is boosted by air pressure. The system has no oil pump.

The oil is removed from the air, in the air/oil vessel at first by centrifugal force, secondly through the oil separator element.

The vessel is provided with an oil level indicator.

Regulation

The compressor is provided with a continuous regulating system and a blow-off valve which is integrated in the unloader assembly. The valve is closed during operation by air receiver pressure and opens by air receiver pressure via the compressor element when the compressor is stopped.

When the air consumption increases, the air receiver pressure will decrease and vice versa.

This receiver pressure variation is sensed by the regulating valve which, by means of control air to the unloader and engine speed regulator, matches the air output to the air consumption. The air receiver pressure is maintained between the pre-selected working pressure and the corresponding unloading pressure.

Cooling system

The engine is provided with a liquid-cooler and the compressor is provided with an oil cooler.

The cooling air is generated by a fan, driven by the engine.

Safety devices

A thermal shut-down sensor protects the compressor against overheating. The air receiver is provided with a safety valve.

The engine is equipped with low oil pressure and high coolant temperature shut-down sensors.

The electric system is equipped with a 12V main switch.

Frame and axles

The compressor/engine unit is supported by rubber buffers in the frame.

The standard compressor unit has a fixed towbar with parking brakes.

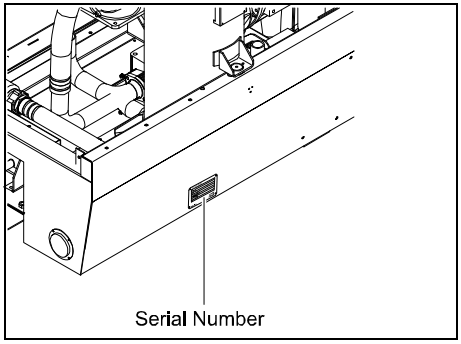
Bodywork

The bodywork has openings at the rear of unit for the intake and outlet of cooling air and hinged doors for maintenance and service operations. The bodywork is internally lined with sound-absorbing material.

Lifting beam

A Lifting Beam Hook is accessible from top of roof.

Serial number



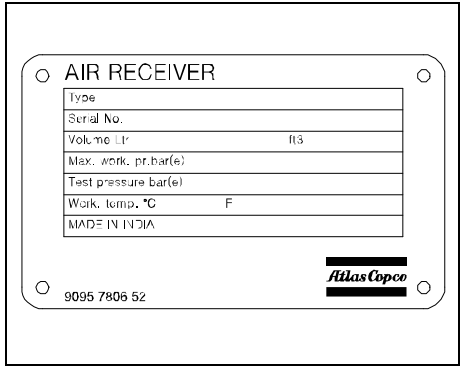
The serial number is mentioned on the data plate.

Control panel

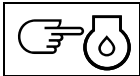
The control panel grouping the air pressure gauge, control switch etc., is placed at the front side.

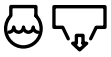
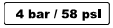
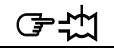
Data plate

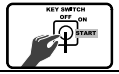
The compressor is furnished with a data plate showing the product code, the unit serial number and the working pressure.



MARKINGS AND INFORMATION LABELS

	Check oil level in engine and vessels
	Check coolant level in radiator
	Check diesel in the fueltank
	Read the instruction manual before filling oil
	Dangerous outlet gases.
	Danger, hot surface.
	Use diesel fuel only.
	Atlas Copco mineral Paroil Sxtreme
	Manual.
	Read the instruction manual before working on the battery.
	Drain oil from vessel, cooler and compressor element.

	coolant drain
	Engine oil drain
	Drain condensate daily from vessel
	Prohibition to open air valves without connected hoses.
	Rotation direction.
	Run the compressor for 2 min on unload
	Service point.
	Read the instruction manual before starting.
	Tyre pressure.
	Warning! Part under pressure.
	Do not stand on outlet valves.
	Close air outlet valves

	Do not run the compressor with open doors.
	Lifting permitted.
	Read the instruction manual before lifting.
	Start button
	Key switch
	Loading valve
	Door opening, closing.
	Do not tow with support in rest position.

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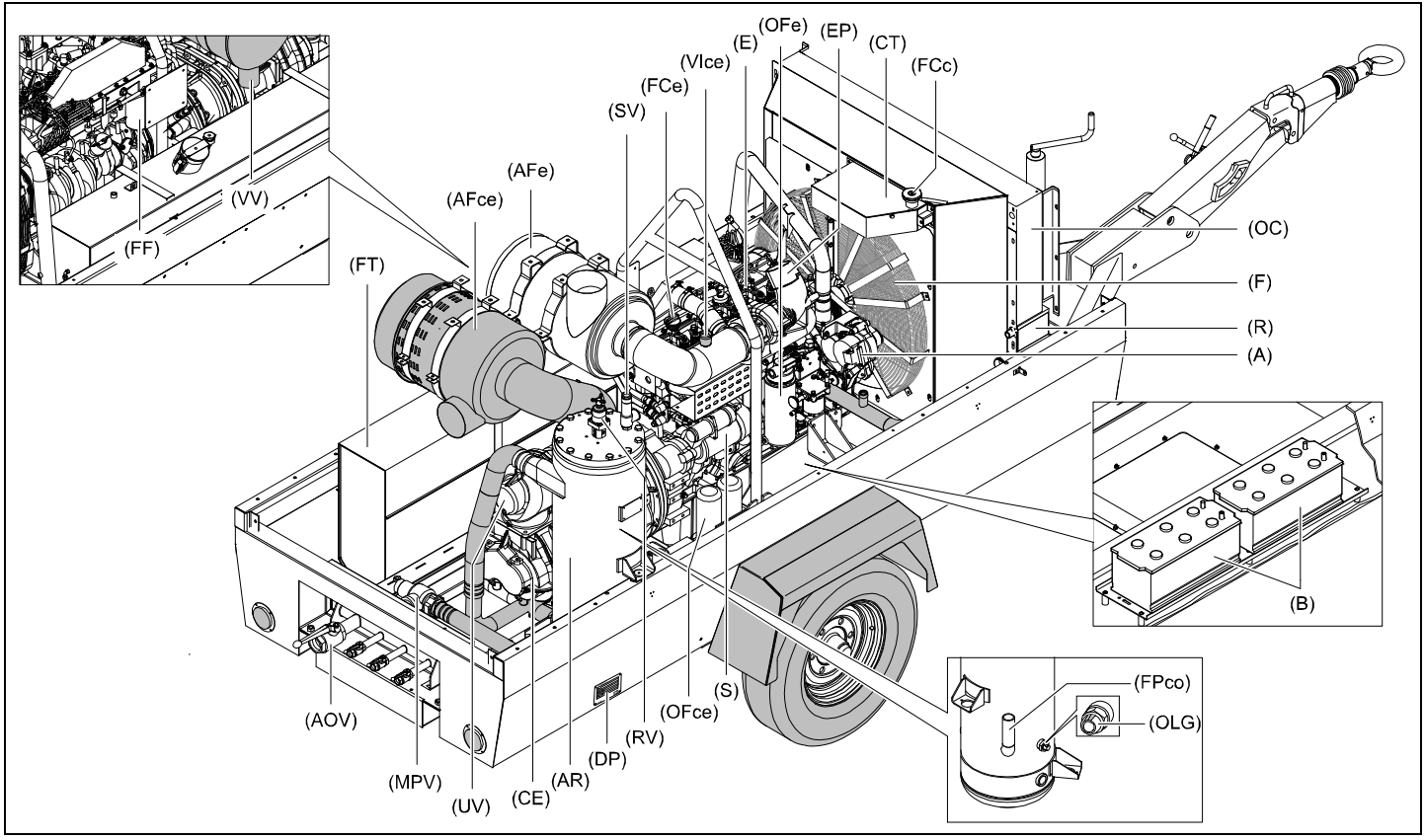
Main parts

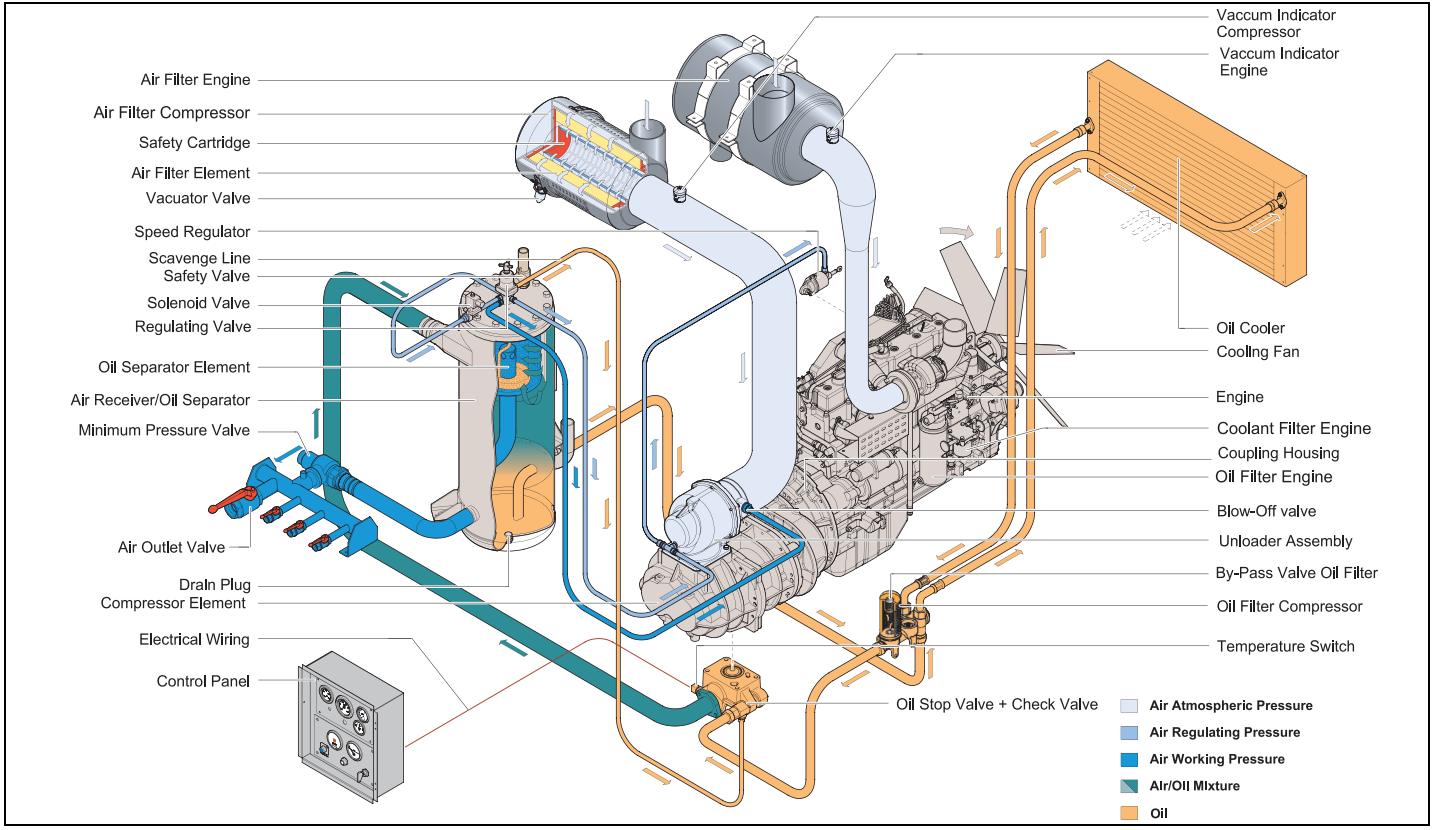

(VV)
(FF)
(OFe)
(EP)
(E)
(CT)
(VIce)
(FCe)
(FCc)
(SV)
(AFe)
(AFce)
(FT)
(OC)
(F)
(R)
(A)
(B)
(FPco)
(OLG)
(S)
(OFce)
(RV)
(DP)
(AR)
(CE)
(UV)
(MPV)
(AOV)

Reference	Name
A	Alternator
AFce	Air Filter (compressor element)
AFe	Air Filter (engine)
AOV	Air Outlet Valves
AR	Air Receiver
B	Battery
CE	Compressor Element
CT	Coolant Tank
DP	Data Plate
E	Engine
EP	Exhaust Pipe
F	Fan
FCc	Filler Cap (coolant)
FCe	Filler Cap (engine oil)
FCt	Filler Cap (fuel tank)
FF	Fuel Filter
FPco	Filter Plug (compressor oil)
FT	Fuel Tank
MPV	Minimum Pressure Valve
OC	Oil Cooler
OFce	Oil Filter (compressor element)
OFe	Oil Filter (engine)

Reference	Name
OLG	Oil Level Gauge
R	Radiator
RV	Regulating Valve
S	Starting Motor
SV	Safety Valve
UV	Unloading Valve
VIce	Vacuum Indicator (compr. element)
VV	Vacuator Valve

REGULATING SYSTEM

OVERVIEW



AIR FLOW

Air drawn through the airfilter (AFce) into the compressor element (CE) is compressed. At the element outlet, compressed air and oil pass into the air receiver/oil separator (AR/OS).

The check valve (CV) prevents blow-back of compressed air when the compressor is stopped. In the air receiver/oil separator (AR/OS), most of the oil is removed from the air/oil mixture.

The oil collects in the receiver and on the bottom of the separator element.

The air leaves the receiver via a minimum pressure valve (MPV) which prevents the receiver pressure from dropping below the minimum working pressure, even when the air outlet valves are open (specified in section **Limitations**). This ensures adequate oil injection and prevents oil consumption. The minimum pressure valve (MPV) also functions as a check valve.

The system comprises temperature switch (TS).

OIL SYSTEM

The lower part of the air receiver (AR) serves as oil tank.

Air pressure forces the oil from the air receiver/oil separator (AR/OS) through the oil cooler (OC), the oil filters (OF) and the oil stop valve (OSV) to the compressor element (CE).

When the compressor is stopped, check valve incorporated in the unloader valve prevents the oil from flowing back from compressor element to air filter.

The compressor element has an oil gallery in the bottom of its casing. The oil for rotor lubrication, cooling and sealing is injected through holes in the gallery.

Lubrication of the bearings is ensured by oil injected into the bearing housings.

The injected oil, mixed with the compressed air, leaves the compressor element and re-enters the air receiver, where it is separated from the air as described in section **Air flow**. The oil that collects in the bottom of the oil separator element is returned to the system through a scavenging line (SL), which is provided with a flow restrictor (FR).

The oil filter by-pass valve opens when the pressure drop over the filter is above normal because of a clogged filter. The oil then by-passes the filter without being filtered. For this reason, the oil filter must be replaced at regular intervals (see section **Preventive maintenance schedule for the compressor**).

Compressor does not have Thermostat so do not operate Compressor in environment below 0 °C temperature.

CONTINUOUS REGULATING SYSTEM

The compressor is provided with a continuous regulating system and a blow-off valve (BOV) which is integrated in the unloader assembly (UA). The valve is closed during operation by outlet pressure of the compressor element and opens by air receiver pressure when the compressor is stopped.

When the air consumption increases, the air receiver pressure will decrease and vice versa. This receiver pressure variation is sensed by the regulating valve (RV) which, by means of control air to the unloader assembly (UA), matches the air output to the air consumption. The air receiver pressure is maintained between the pre-selected working pressure and the corresponding unloading pressure.

When starting the compressor, the throttle valve (TV) is kept closed via receiver pressure. The compressor element (CE) takes in air and pressure builds up in the receiver (AR). The throttle valve (TV) is closed. The air output is controlled from maximum output (100%) to no output (0%) by:

1. Speed control of the engine between maximum load speed and unloading speed (the output of a screw compressor is proportional to the rotating speed).
2. Air inlet throttling.

If the air consumption is equal to or exceeds the maximum air output, the engine speed is held at maximum load speed and the throttle valve (TV) is fully open.

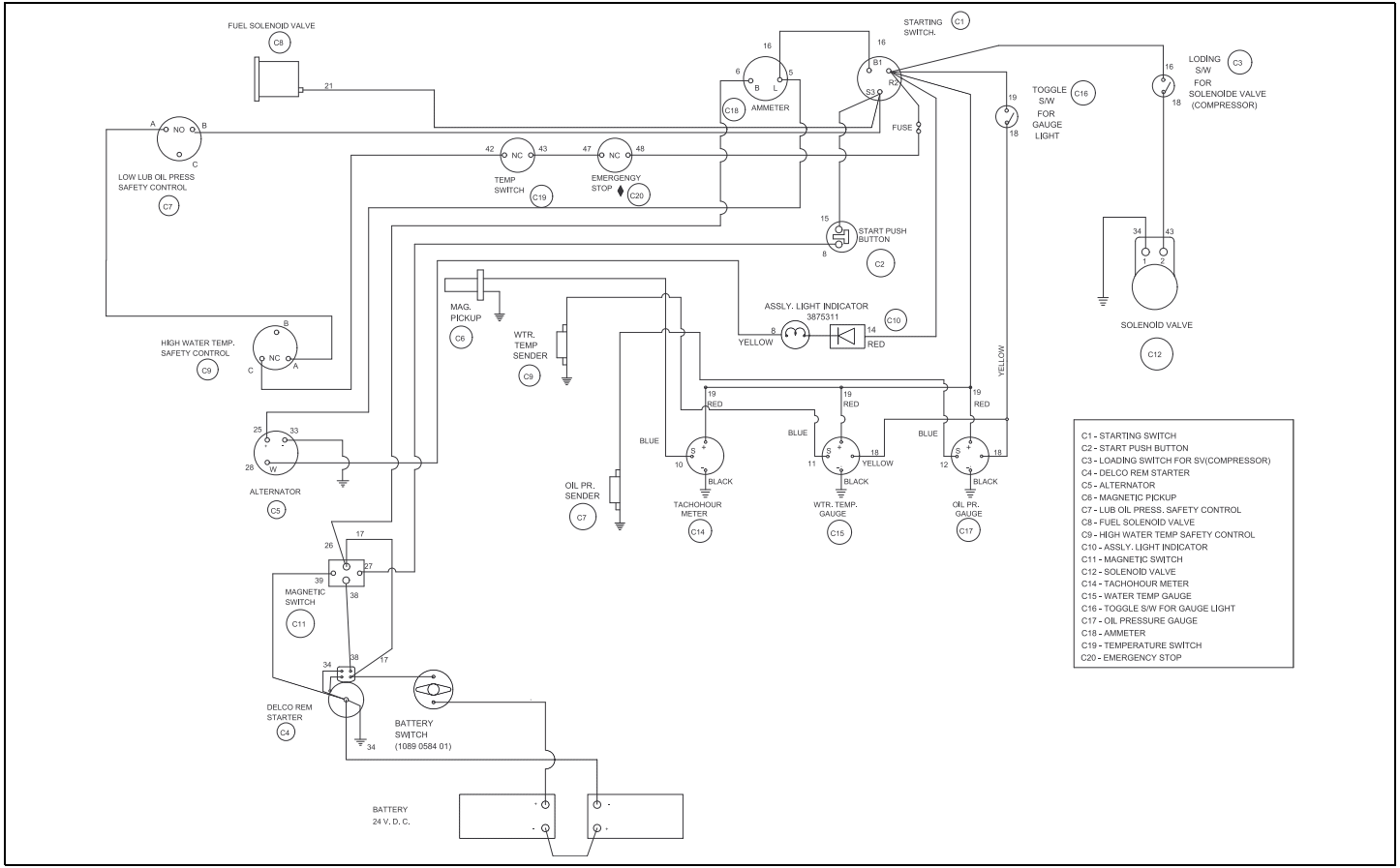
If the air consumption is less than the maximum air output, air receiver pressure increases and the regulating valve supplies control air to throttle valve (TV) to reduce the air output and holds air receiver pressure between the normal working pressure and the corresponding unloading pressure. Unloading pressure = normal working pressure + 1 bar (14.5 psi).

When the air consumption is resumed, the blow off valve (BOV) closes and the throttle valve (TV) gradually opens the air intake and the electronic speed regulator increases the engine speed.

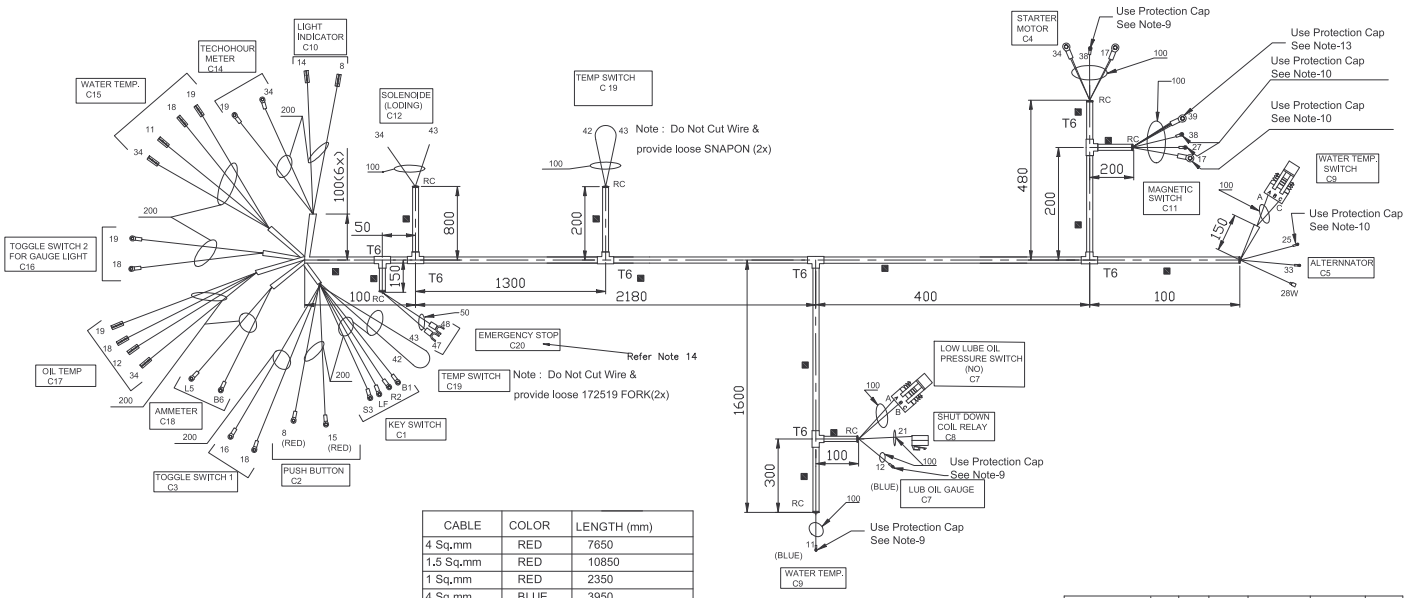
The construction of the regulating valve (RV) is such that any increase (decrease) of the air receiver pressure above the pre-set valve opening pressure results in a proportional increase (decrease) of the control pressure to the throttle valve and the electronic speed regulator.

Part of the control air is vented to atmosphere, and any condensate discharged, through the vent holes.

ELECTRIC SYSTEM - CIRCUIT DIAGRAM - 9097 3811 00_00



WIRE HARNESS DIAGRAM - 9097 3812 01_00



CABLE	COLOR	LENGTH (mm)
4 Sq.mm	RED	7650
1.5 Sq.mm	RED	10850
1 Sq.mm	RED	2350
4 Sq.mm	BLUE	3950
1.5 Sq.mm	BLUE	5050
4 Sq.mm	GREEN	2050
1.5 Sq.mm	GREEN	4200
1.5 Sq.mm	GRAY	4300
1.5 Sq.mm	YELLOW	5150
1 Sq.mm	WHITE	2550
1 Sq.mm	BLACK	4900

NAME	MARK	MAT.	COLOUR	SIZE IN mm	MAKE	QTY.
'T' CONNECTION	T6	PVC	BLACK	20x20x20	-	06 No.
FLEX PIPE	■	PVC	BLACK	20	ALOK/EQVT.	12 Nos.
RUBBER CAP	RC	PVC	BLACK	-	ALOK/EQVT.	07 Nos.

	FROM					TO							LENGTH (mm)
	DESIG.	CAVITY POS.	END TYPE CONN.	SUPPLIER	LUGS SIZE	DESIG.	CAVITY POS.	END TYPE CONN.	SUPPLIER	LUGS SIZE	WIRE COLOUR	WIRE SIZE	
1	C1	B1	LUGS	DOWEL	M5	C18	L5	LUGS	DOWEL	M5	RED	4mm2	600
2	C11	17	LUGS	DOWEL	M8	C4	17	LUGS	DOWEL	M12	RED	4mm2	1000
3	C11	17	LUGS	DOWEL	M8	C18	B6	LUGS	DOWEL	M5	RED	4mm2	3300
4	C5	25	LUGS	DOWEL	M8	C18	L5	LUGS	DOWEL	M5	BLUE	4mm2	3950
5	C5	33	LUGS	DOWEL	M6	C4	34	LUGS	DOWEL	M12	GREEN	4mm2	1050
6	C4	34	LUGS	DOWEL	M12	C11	39	LUGS	DOWEL	M5	GREEN	4mm2	1000
7	C4	38	LUGS	DOWEL	M5	C11	38	LUGS	DOWEL	M8	GRAY	1.5mm2	1000
8	C2	8	LUGS	DOWEL	M5	C11	27	LUGS	DOWEL	M5	GRAY	1.5mm2	3300
9	C5	W28	LUGS	TYCO	SEE NOTE 8	C10	8	LUGS	Wago	224-101	YELLOW	1.5mm2	3950
10	C2	15	LUGS	DOWEL	M5	C1	S3	LUGS	DOWEL	M5	RED	1.5mm2	500
11	C1	R2	LUGS	DOWEL	M5	C10	14	LUGS	Wago	224-101	RED	1.5mm2	600
12	C1	R2	LUGS	DOWEL	M5	C3	16	LUGS	DOWEL	M5	RED	1.5mm2	600
13	C3	18	LUGS	DOWEL	M5	C12	43	-	-	-	RED	1.5mm2	1300
14	C12	34	-	-	-	C4	34	LUGS	DOWEL	M12	GREEN	1.5mm2	4200
15	C1	S3	LUGS	DOWEL	M5	C7	B	LUGS	CUMMINS P/N	4963674	WHITE	1mm2	2550
16	C7	ALUGS		CUMMINS P/N	4963674	C9	A	LUGS	CUMMINS P/N	4963674	RED	1mm2	2350
17	C19	43	LUGS	JAINSON	See Note	C20	47	LUGS	DOWEL	172519	RED	1.5mm2	650
18	C1	LF	LUGS	DOWEL	M5	C20	48	LUGS	DOWEL	172519	RED	1.5mm2	650
19	C1	S3	LUGS	DOWEL	M5	C8	21	LUGS	DOWEL	8347 WITH CAP	RED	4mm2	2850
20	C14	34	LUGS	DOWEL	M5	C4	34	LUGS	DOWEL	M12	BLACK	1.5mm2	3700

	FROM					TO							
	DESIG.	CAVITY POS.	END TYPE CONN.	SUPPLIER	LUGS SIZE	DESIG.	CAVITY POS.	END TYPE CONN.	SUPPLIER	LUGS SIZE	WIRE COLOUR	WIRE SIZE	LENGTH (mm)
21	C14	34	LUGS	DOWEL	M5	C15	34	LUGS	Wago	224-101	BLACK	1.5mm2	600
22	C14	34	LUGS	DOWEL	M5	C17	34	LUGS	Wago	224-101	BLACK	1.5mm2	600
23	C14	19	LUGS	DOWEL	M5	C15	19	LUGS	Wago	224-101	RED	1.5mm2	600
24	C14	19	LUGS	DOWEL	M5	C16	19	LUGS	DOWEL	M5	RED	1.5mm2	600
25	C14	19	LUGS	DOWEL	M5	C17	19	LUGS	Wago	224-101	RED	1.5mm2	600
26	C1	R2	LUGS	DOWEL	M5	C14	19	LUGS	DOWEL	M5	RED	1.5mm2	600
27	C1	R2	LUGS	DOWEL	M5	C16	19	LUGS	DOWEL	M5	RED	1.5mm2	600
28	C16	18	LUGS	DOWEL	M5	C15	18	LUGS	Wago	224-101	YELLOW	1.5mm2	600
29	C16	18	LUGS	DOWEL	M5	C17	18	LUGS	Wago	224-101	YELLOW	1.5mm2	600
30	C15	11	LUGS	Wago	224-101	C9	11	LUGS	DOWELM5		BLUE	1.5mm2	2800
31	C17	12	LUGS	Wago	224-101	C7	12	LUGS	DOWEL	M5	BLUE	1.5mm2	2650
32	C19	42	LUGS	JAINSON	172519 FORK	C9	C	LUGS	CUMMINS P/N	4963674	RED	1.5mm2	2650

NOTE :

1. ALL WIRES SHOULD BE FINOLEX / POLYCAB MAKE OR AS
2. USE PVC BLACK SLEEVE TO COVER THE WIRES OUTSIDE
3. ALL FLEXIBEL PIPE ENDS TO HAVE RUBBER CAP.
4. HARNESS TO BE CHECK FOR THEIR SIZES & CONTINUITY
5. TOLERANCE FOR WIRES & FLEXIBAL PIPE LENGTH TO BE
6. USE PVC WHITE PRINTED FERRULE.
7. FERRULE NO. SHOULD BE ASSEMBLED FOR EACH WIRE.
8. Use SNAPON lug (Lockable receptacle) of TYCO make, part number-170454-2 for 0.75-1.5Sqmm,170456-2 for
9. PDRC-5 RED Id LUG
10. PDRC-32 RED (4-6-6 Id LUG)
11. PDRC-32 BLACK (4-6-6 Id LUG)
12. Protection cap Make : - Uni-Tech Automation or equ
13. PDRC-5 BLACK

Operating instructions

PARKING, TOWING AND LIFTING INSTRUCTIONS

Safety precautions

The operator is expected to apply all relevant Safety precautions.

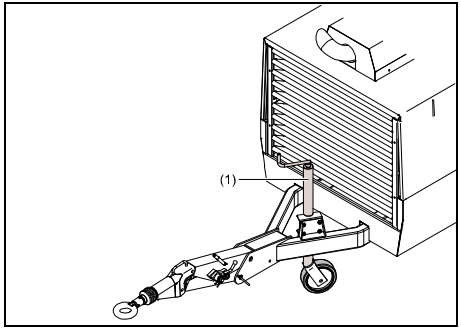
Attention

Before putting the compressor in to use, check the brake system.

After the first 100 km travel:

Check and retighten the wheel nuts and towbar bolts to the specified torque. See section Torque values.

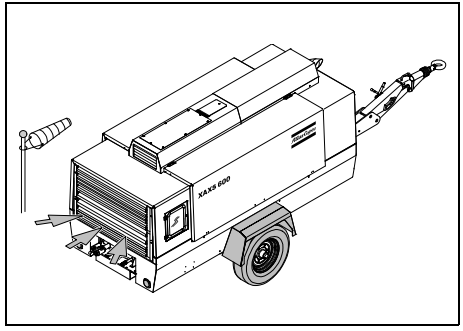
PARKING INSTRUCTIONS



Uncouple vehicle.

Secure support leg(1) to support the compressor in a level position.

Place the compressor as level as possible; however, it can be operated temporarily in an out-of-level position not exceeding 15°. If the compressor is parked on sloping ground, immobilize the compressor by placing wheel chocks in front of or behind the wheels.



Locate the unit away from restriction surfaces such as walls.

Locate the rear-end of the compressor upwind, away from contaminated wind-streams and walls.The minimum distance from nearest wall or obstruction should be 1 metre & machine should be parallel with ground for proper air flow in front & rear.

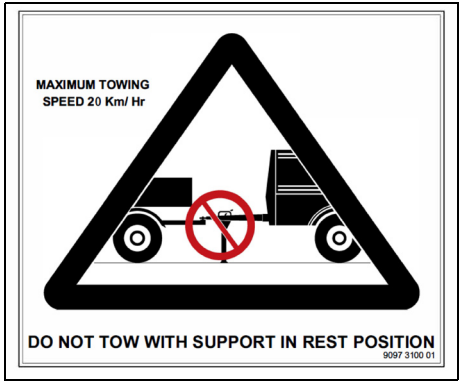
Avoid recirculation of exhaust air from the engine. This can cause overheating and engine power decrease.

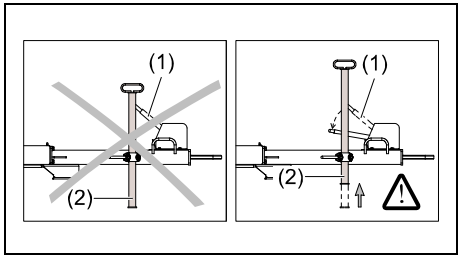
Before moving the compressor, switch it OFF.

TOWING INSTRUCTIONS

Before towing the compressor, ensure that the towing equipment of the vehicle matches the towing eye.

The towbar should be as level as possible and the compressor and towing eye in a level position.





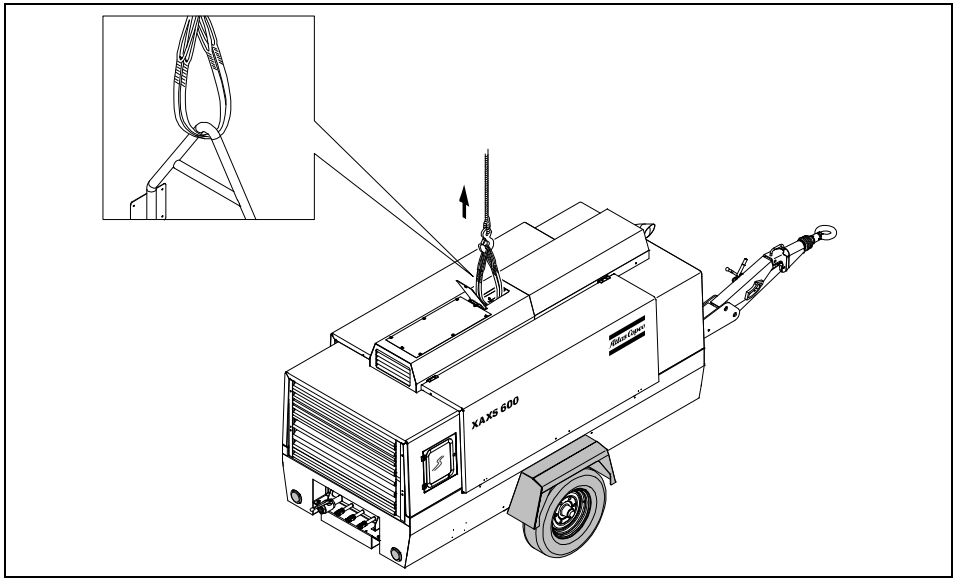
The towbar should be as level as possible and the compressor and towing eye end in a level position.

1. Attach the compressor to the towing vehicle.
2. Move hand brake lever (1) in the direction of the arrow till stop.
3. Secure the support leg (2) in the highest possible position.

Switch of the compressor, before moving.

Never move the compressor with air hoses connected to the air outlet valves.

LIFTING INSTRUCTIONS



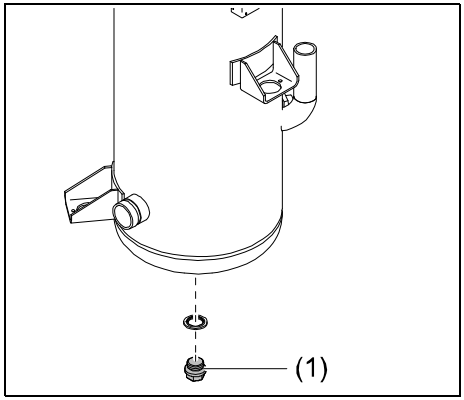
To lift the compressor, use a lift truck or crane with sufficient capacity.

See to it that the compressor will be lifted vertically and remains level

Lifting acceleration and retardation must be kept within safe limits (max. 2xg).

Helicopter lifting is not allowed.

Lifting is not allowed when the unit is running.



1. Before initial start-up, prepare battery for operation if not already done. See section **Recharging a battery**.
2. With the compressor standing level, check the level of the engine oil. Add oil, if necessary, to the upper mark on dipstick. Also check the engine coolant level. Consult the Engine Operation Manual for the type of coolant and type and viscosity grade of the engine oil.
3. Remove the drain plug(1), (see figure) to drain possible condensate. Reinstall the drain plug when oil comes out . The interval between draining operations may be determined by experience, as the amount of condensate depends on the operating condition.

Before draining, ensure that the pressure is released.

4. Check the level of the compressor oil. See section **Check compressor oil level (daily after running the compressor)**. The pointer of oil level gauge (OLG) should register in the green range. Add oil if necessary. See section **Mineral compressor oil Paroil S Xtreme** for the oil to be used.

Before removing oil filler plug (FP), ensure that the pressure is released by opening an air outlet valve.

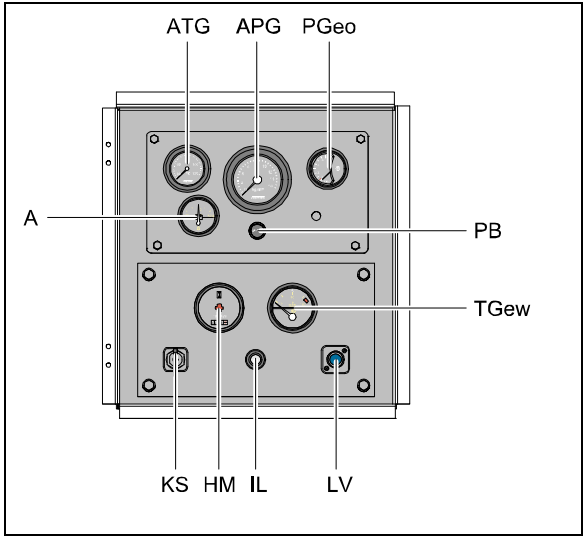
5. Check that the fuel tank contains sufficient fuel. Top up, if necessary. Consult the Engine Operation Manual for the type of fuel.
6. Drain any water and sediment from the fuel filters until clean fuel flows from the drain cock.See section **Priming instructions**.
7. Empty the dust trap of each air filter (AF). See section **Cleaning the dust trap**.
8. Check the air filter vacuum indicators. If the yellow piston reaches the red marked service range, replace the filter element. Reset the indicator by pushing the reset button.
9. Check coolant level in engine coolant top tank integrated in radiator. Top up, if necessary. Consult the Engine Operation Manual for coolant specifications.
10. Attach the air line(s) to the closed air outlet valve(s).

No external force may be applied to the air outlet valves. e.g. by pulling hoses or by connecting equipment directly to the valves.

11. Use hoses with suitable pressure rating and fit for the environmental conditions. Inspect hoses and connections daily.
12. Check connections on the hour meter. Do not reverse polarity. Reversing polarity will lead to damage of the meter.

STARTING / STOPPING

CONTROL PANEL



A	Ammeter		KS	Key Switch
APG	Air Pressure Gauge		LV	Loading valve
ATG	Air Temperature Gauge		PGeo	Pressure Guage Engine Oil
HM	Hour Meter/RPM		PB	Push Button
IL	Indicator Lamp		TGew	Temperature Gauge Engine Water

Safety precautions

Never push the start button when the engine is running.

When the compressor is put in operation for the first time and after running out of fuel or changing the fuel filter, follow the specific start procedure as described in section Specific start procedure.

Make sure the fuel tank is filled up.

1. Before starting, check oil level in engine & vessel, check coolant level in radiator & diesel in fuel tank.
2. Close all air outlet valves
3. Turn the key switch (KS) to “ON” position.
4. Check indicator lamp (IL) is turned on.
5. Push the start button (S) & hold, then turn the key switch (KS) to “START” position to crank the engine. Starter motor will set the engine in motion at no load to warm up the maximum allowed starter motor is running continuously for 30 seconds.
6. Release the start button (S) & key switch (KS) to “ON” position when engine tires.
7. Run the compressor for two minutes on unload
8. Push the loading valve (LV) button to load the compressor.
9. For stopping the compressor, deactivate the loading switch (LS). Compressor will run in unload condition.
10. Turn the key switch to ‘OFF’ position.

Control panel additionally indicates Air pressure, Air temparature, engine oil Pressure engine coolant temprature, total running hours.

Fault situations and protective devices (Also refer to chapter 6.Problem Solving):

- The starter motor is protected against prolonged starting.(max. cranking time: 20 sec.

OPERATIONS OVERVIEW

During operation

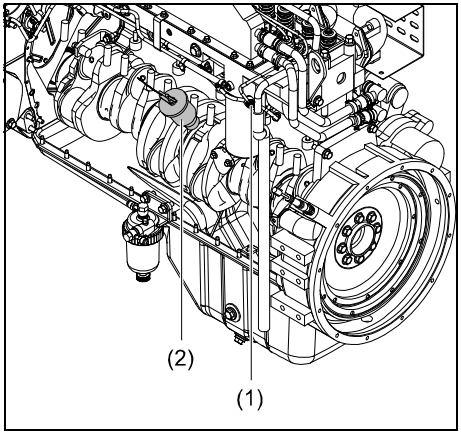
When the engine is running, the air outlet valves (ball valves) must always be put in fully opened or fully closed position.

The doors must be closed during operation and may be opened for short periods for inspection and adjustments only.

Regularly carry out following checks:

1. That the regulating valve (RV) is correctly adjusted, i.e. starts decreasing the engine speed when reaching the preset working pressure in the receiver.
2. Check the air outlet temperature of the compressor element.
3. Check the engine oil pressure, the coolant temperature and display of control panel.
4. Avoid the engine running out of fuel. Nevertheless, if this happens, fill the fuel tank and prime the fuel system to speed up starting (see section **Priming instructions**).

SPECIFIC START PROCEDURE



Follow this start procedure when the compressor is put in operation for the first time and after running out of fuel or changing the fuel filter.

Make sure the fuel tank is filled up.

- Loosen the nut (1) on the Engine.
- Operate the hand pump (2) until fuel comes out of the bore from the nut (1), and air is completely removed from the fuel system.
- Fasten the nut (1).
- Switch the "ON/OFF" switch to position "ON". The instrument panel will now perform a brief selftest.
- Push the start button and the starter motor will automatically try to start the engine.

After cleaning /draining the fuel tanks, the system is filled with air.

Before starting the engine operate the fuelpump on the fuelfilter to fill the fuelsystem.

When under pressure the engine will start after approximately 10 seconds. If the system is not under pressure, it will take a few minutes untill the engine will start.

Maintenance

LIABILITY

The manufacturer does not accept any liability for any damage arising from the use of non-original parts and for modifications, additions or conversions made without the manufacturer's approval in writing.

SERVICE PACKS

A Service Pak is a collection of parts to be used for a specific maintenance task, e.g. after 1000 and after 2000 running hours.

It guarantees that all necessary parts are replaced at the same time keeping down time to a minimum.

The order number of the Service packs are listed in the Atlas Copco Parts List (ASL).

Use of service packs

Service packs include all genuine parts needed for normal maintenance of both compressor and engine.

Service packs minimize downtime and keep your maintenance budget low.

Order Service packs at your local Atlas Copco dealer.

SERVICE KITS

A service kit is a collection of parts to fit a specific repair or rebuilding task.

It guarantees that all necessary parts are replaced at the same time which improves the uptime of the unit.

The order numbers of the Service Kits are listed in the Atlas Copco Parts List (ASL).

☞ **Contact Atlas Copco.**

STORAGE

Run the compressor regularly, e.g. twice a week, until warm.

Load and unload the compressor a few times to operate the unloading and regulating components. Close the air outlet valves after stopping.

☞ **If the compressor is going to be stored without running from time to time, protective measures must be taken.**

SAFETY PRECAUTIONS

⚠ **Always observe the applicable safety precautions. See section Safety during maintenance and repair.**

PREVENTIVE MAINTENANCE SCHEDULE FOR THE COMPRESSOR

Unauthorised modofications can result in injuries or machine damage.

Always keep the machine tidy to prevent fire hazard.

Poor maintenance can void any warranty claims.

The schedule contains a summary of the maintenance instructions. Read the respective section before taking maintenance measures.

When servicing, replace all disengaged packings, e.g. gaskets, O-rings, washers.

For engine maintenance refer to Engine Operation Manual.

The maintenance schedule has to be seen as a guideline for compressors operating in a dusty environment typical to compressor applications. Maintenance schedule can be adapted depending on application, environment and quality of maintenance.

To determine the maintenance intervals, use service hours, or calendar time, whichever occurs first.				
Service hours			**1000 hours**	**2000 hours**
Calendarial	**Daily**	**Weekly**		
Service packs			4153 1367 13	4153 1367 15
For the most important subassemblies, Atlas Copco has developed service kits that combine all wear parts. These service kits offer you the benefits of genuine parts, save on administration costs and are offered at reduced price, compared to the loose components. Refer to the parts list for more information on the contents of the service kits.				
Vessel Condensate (10)	Drain			
Compressor oil level	Check			
Air filter evacuator valve/dust trap	Empty			
Air intake engine/compressor vaccum indicator	Check (During operation)			
(*to be continued on page 37*)				

Maintenance schedule			**1000 hours**	**2000 hours**
(continuation of page 36)	**Daily**	**Weekly**		
Air filter Primary (1) (14)			Replace	Replace
Air filter Safety			Replace	Replace
Fuel filter water / sediment	Drain			
Alternator charge lamp	Check (During starting)			Charge if necessary
Electrolyte level and terminals of battery		Check	Charge if necessary	
Leaks in air-, oil- or fuel system (11)		Inspect		
Ball joints and pivots of Speed regulator/ Actuating Cylinder		Lubricate		Clean externally
Oil cooler			Clean externally, internally also if necessary	Clean externally, internally also if necessary
Radiator			Clean externally	Clean externally, internally also if necessary
Safety valve (9)				Grease
Door hinges			Grease	Test Functioning
Safety switches				Replace
Bleeder Valve				Replace
(to be continued on page 38)				

Maintenance schedule			**1000 hours**	**2000 hours**
(continuation of page 37)	**Daily**	**Weekly**		
Valve Unloader kit				Replace
Minimum Pressure Valve Kit				Replace
Oil stop/Check valve kit				Replace
Thermostatic Valve				Replace
Regulating Valve Kit				Replace
Wiper of Actuating Cylinder				Replace
Piston Seal of Actuating Cylinder				Replace
Rubber flexible (11)				Check
Oil separator element (2)			Replace	Replace
Fan V-belts (3)			Adjust	Adjust
Compressor oil (7)			Change	Change
Compressor oil filter (5)			Change	Change
Engine Oil level	Check			
Coolant level	Check			
Coolant (8) (4)			Analyze	Change
Engine Air filter element (1)			Change	Change
Engine oil (3) (7)(12)	Refer Engine manual			
(to be continued on page 39)				

Maintenance schedule *(continuation of page 38)*	**Daily**	**Weekly**	**1000 hours**	**2000 hours**
Engine oil filter (3) (12)	Refer Engine manual			Check
Brake system			Check	
Tyre Pressure		Check		Check
Wheel nut tightness			Check	Grease
Under carriage components			Check & Grease	
Fuel moisture Separator bowl assembly		Clean		
Fuel filter & Water separator (3)(6)(13)	Refer Engine manual			Clean
Fuel tank			Clean	
Inspection by Atlas Copco Service Technician (15)			Inspection	
Engine service hours			**250 hours / Every 6 months**	**1500 hours / Every 1 year**
Engine service kit			4153 1367 31	4153 1367 32

Notes

1. More frequently when operating in a dusty environment.
2. Replace the Seperator element after 1000 Hrs or when the pressure drop (delta P) exceeds 0.8 bar (11.6 psi). Whichever is earlier.
3. Refer to the engine operation manual.
4. Check coolant.
5. Use Atlas Copco oil filters, with by-pass valve, as specified in the parts list.
6. Replace the fuel filters regularly. Gummed or clogged filters mean fuel starvation and reduced engine performance. The quality of the fuel determines the frequency of renewal.
7. See section **Oil specifications**.
8. The following part numbers can be ordered from Atlas Copco to check on inhibitors and freezing point:
   - 2913 0028 00 refractometer
   - 2913 0029 00 pH meter.
9. See section **Safety valve**.
10. See section **Before starting**.
11. Replace all rubber flexibles each 6 years, according to DIN 20066.
12. Engine oil & Oil filter should be replaced after every 250hrs of operation.
13. Fuel filter and Water separator should be replaced after every 250hrs of operation.
14. Check operation of valves and safeties. Check pressure drop over oil separator.

Keep the bolts of the housing, the lifting beam, towbar and axles securely tightened. For torque values see section Technical specifications.

OIL SPECIFICATIONS

It is strongly recommended to use Atlas copco "paroil". This is a special oil for screw compressor which keeps the compressor in excellent condition.

Only use mineral compressor oil.

High-quality, mineral, hydraulic or synthesized hydrocarbon oil with rust and oxidation inhibitors anti-foam and anti-wear properties is recommended.

The viscosity grade should be selected according to the prevailing ambient temperature.

Never mix mineral with synthetic oil.

Remark:

When changing from mineral to synthetic oil (or the other way around), you will need to do an extra rinse:

After doing the complete change procedure to mineral oil, run the unit for a few minutes to allow good and complete circulation of the synthetic oil.

Then drain the mineral oil again and fill again with new mineral oil. To set correct oil levels, proceed as in normal instruction.

Mineral compressor oil Paroil S Xtreme

	Liter	Cu.ft	Order number
Can	20	0.7	1630 0180 00
Barrel	210	7.35	1630 0181 00

OIL LEVEL CHECK

Never mix oils of different brands or types.

Use only non- toxic oils where there is a risk of inhaling delivered air.

If you want to use another brand of oil, consult Atlas Copco.

CHECK ENGINE OIL LEVEL

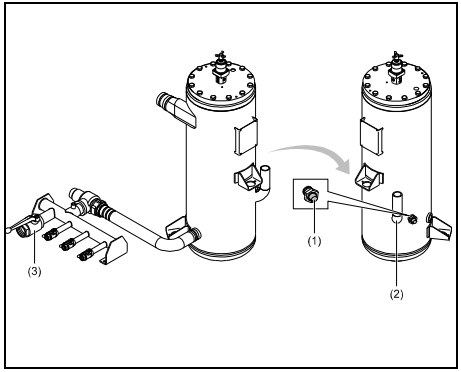
Consult the Engine Operation Manual for the oil specifications, viscosity recommendations and oil change intervals.

For intervals, see **Preventive maintenance schedule for the compressor**.

Check engine oil level according to the instructions in the Engine Operation Manual and if necessary top up with oil.

CHECK COMPRESSOR OIL LEVEL (DAILY AFTER RUNNING THE COMPRESSOR)

The compressor oil level needs to be checked with the compressor in a horizontal position after running the compressor to warm up so that the thermostatic valve is open



1. Stop the compressor with closed air outlet valve (3) and let it rest for a short period, to allow the system to relief pressure inside the vessel and settle down the oil.
2. Check the oil level via the pointer of the oil level gauge (1). The pointer must register in the green area.
3. If the oil level is too low, add oil by removing the oil filler plug (2)

   Before removing the oil filler plug, ensure that the pressure is released by opening the air outlet valve (3) and checking the vessel pressure on the controller or the pressure gauge..
4. Top up with oil until the pointer of the oil level gauge is in the upper part of the green area.
5. Reinstall and tighten the filler plug.

CHECKING COMPRESSOR OIL LEVEL AFTER A LONGER PERIOD WITHOUT RUNNING THE COMPRESSOR

1. Check the oil level via the pointer of the oil level gauge (1). The pointer must register in the green area.
2. If the oil level is too low, remove the oil filler plug (2) and check if there is still oil in the vessel

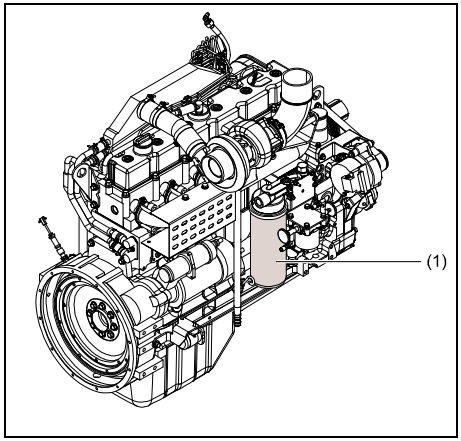
- **No oil in the vessel:** Top up the compressor with oil until the pointer of the oil level gauge is in the upper part of the green area and follow the steps described above.
- **Oil in the vessel:** Start up the unit to warm up and give time for the thermostatic valve to open. Stop the compressor with closed outlet valve (3) and follow the steps described above.

At temperatures below 0°C, you have to load the compressor to be sure that the compressor thermostat will be open.

OIL AND OIL FILTER CHANGE

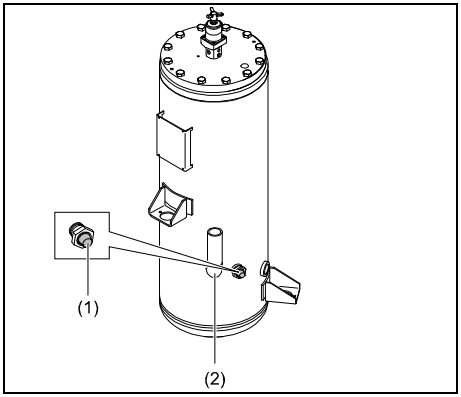
ENGINE OIL AND OIL FILTER CHANGE

For replacing the engine oil filter (1),



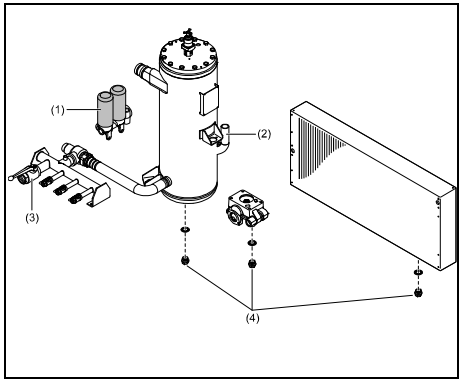
See section **Preventive maintenance schedule for the compressor**.

TOPPING UP THE COMPRESSOR OIL



1. Stop the compressor. Wait a few minutes until the pressure is released through the automatic blow-down valve. Make sure that all pressure is released by loosening the filler plug (2) one turn.
2. Wait a few minutes until the oil level is constant.
3. Remove the filler plug (2) and top up with oil until the pointer of the oil level gauge (1) is in the upper part of the green area.
4. Reinstall and tighten the filler plug (2).

COMPRESSOR OIL AND OIL FILTER CHANGE



The quality and the temperature of the oil determine the oil change interval.

The prescribed interval is based on normal operating conditions and an oil temperature of up to 100 °C (212 °F) (see section **Preventive maintenance schedule for the compressor**).

When operating in high ambient temperatures, in very dusty or high humidity conditions, it is recommended to change the oil more frequently.

In this case, contact Atlas Copco.

1. Run the compressor until warm. Close the outlet valve(s) (3) and stop the compressor. Wait until the pressure is released through the automatic blow-down valve. Unscrew the oil filler plug (2) one turn. This uncovers a vent hole, which permits any pressure in the system to escape.
2. Drain the compressor oil by removing all relevant drain plugs (4). Catch the oil in a drain pan. Screw out the filler plug (2) to speed up draining. After draining, place and tighten the drain plugs (4).
3. Remove the oil filter (1), e.g. by means of a special tool. Catch the oil in a drain pan.
4. Clean the filter seat on the manifold, taking care that no dirt drops into the system. Oil the gasket of the new filter element. Screw it into place until the gasket contacts its seat, then tighten one half turn only.
5. Fill the air receiver until the pointer of the oil level gauge is in the upper part of the green area. Be sure that no dirt gets into the system. Reinstall and tighten the filler plug.
6. Start the compressor and let it run unloaded for a few minutes.
7. Stop the compressor, wait a few minutes and top up with oil until the pointer of the oil level gauge is in the upper part of the green area.

Never add more oil. Overfilling results in oil consumption.

COMPRESSOR OIL FLUSHING PROCEDURE

Not respecting compressor oil changing intervals according to the maintenance schedule, can lead to serious problems, including fire hazard! The manufacturer does not accept any liability for damage arising from not following the maintenance schedule or not using genuine parts.

To avoid problems when changing over to a new type of oil (see table) a special Compressor Oil Flushing Procedure has to be followed. The table is only valid in case the replaced oil has not exceeded its lifetime. For more information consult Atlas Copco Service dept.

Aged oil can be recognized best by using an oil sampling analysis program. Indicators for aged oil are strong smell, or contamination like sludge and varnish

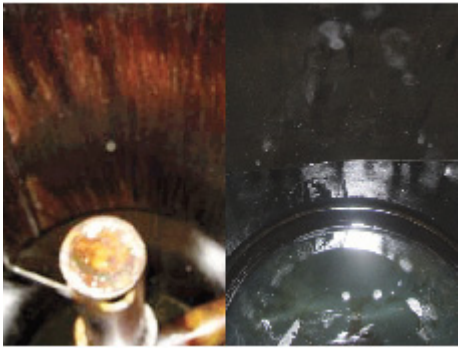
inside the oil vessel and oil stop valve or a brownish colour of the oil.

Whenever aged oil is discovered, eg. when changing the oil separator, contact Atlas Copco Service dept. to have your compressor cleaned and flushed.

1. First thoroughly drain the system when the oil is warm, leaving as little oil in the system as feasible especially in dead areas, if possible blow out remaining oil by pressurising the oil system. Check the instruction manual for detailed description.
2. Remove the compressor oil filter(s).
3. Open the oil vessel and remove the oil separator element.
4. Check the interior of the oil vessel (see pictures). If varnish deposits are discovered, contact Atlas Copco Service dept. and do not continue.
5. Put in a new oil separator, screw on new compressor oil filter(s) and close the oil vessel according to the instructions.
6. Fill the oil vessel with the minimum amount of replacement oil, run the compressor under light load conditions for 30 minutes.
7. Thoroughly drain the system when the oil is warm, leaving as little oil in the system as feasible, especially in dead areas, if possible blow out remaining oil by pressurising the oil.
8. Fill the system with the final oil charge.
9. Run the compressor under light load conditions for 15 minutes and check for leakage.
10. Check the oil level and top up if necessary.
11. Collect all waste lubricant used during the flushing process and dispose of it in accordance with the applicable procedures for managing waste lubricant.

Instructions on replacing the oil separator element are available from Atlas Copco Service dept.

Vessel cover contaminated *clean*



Vessel contaminated *clean*

COOLANT SPECIFICATIONS

Never remove the cooling system filler cap while coolant is hot.

The system may be under pressure. Remove the cap slowly and only when coolant is at ambient temperature. A sudden release of pressure from a heated cooling system can result in personal injury from the splash of hot coolant.

It is strongly recommended to consult the engine's operation manual.

Never mix different coolants and mix the coolant components outside the cooling system.

COOLANT CHECK

Never remove the cooling system filler cap while coolant is hot.

The system may be under pressure. Remove the cap slowly and only when coolant is at ambient temperature. A sudden release of pressure from a heated cooling system can result in personal injury from the splash of hot coolant.

In order to guarantee the lifetime and quality of the product, thus to optimise engine production, regular coolant-condition-analysis is advisable.

The quality of the product can be determined by:

VISUAL CHECK

- Verify The outlook of the coolant regarding colour and make sure that no loose particles are floating around.

TOPPING UPCOOLANT

For topping up / replacing coolant consult engine operation manual.

- Verify if the engine cooling system is in a good condition (no leaks, clean,...).
- Check the condition of the coolant.
- If the condition of the coolant is outside the limits, the complete coolant should be replaced (see section **Replacing the coolant**).
- Topping up the coolant with water only, changes the concentration of additives and is therefore not allowed.

REPLACING THE COOLANT

Drain

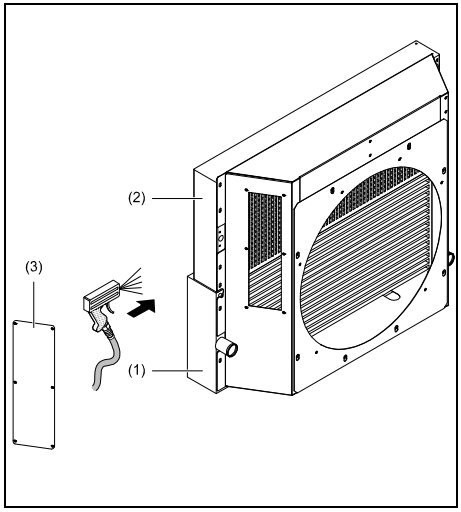
- Completely drain the entire cooling system.
- Used coolant must be disposed or recycled in accordance with laws and local regulations.

Fill

- To assure proper operation and the release of trapped air, run the engine until normal engine operation temperature is reached. Turn off the engine and allow to cool.
- Recheck coolant level and add if necessary.

Caution: do not top off when the engine is hot.

CLEANING COOLERS



Keep the coolers (1), (2) and (3) clean to maintain the cooling efficiency.

Remove any dirt from the coolers with a fibre brush. Never use a wire brush or metal objects.

Clean by air jet in the direction of the arrow.

Steam cleaning in combination with a cleansing agent may be applied (do not use jet at max. power).

To avoid damaging the coolers, angle between jet and coolers should be approx. 90 °.

Close the service doors (4).

Protect the electrical and controlling equipment, air filters, etc. against penetration of moisture.

Never leave spilled liquids such as fuel, oil, coolant and cleansing agents in or around the compressor.

BATTERY CARE

Before handling batteries, read the relevant safety precautions and act accordingly.

If the battery is still dry, it must be activated as described in section **Activating a dry-charged battery**.

The battery must be in operation within 2 months from being activated; if not, it needs to be recharged first.

Do not relocate battery location and compressor. Batteries should be used for compressor functionality only and not for other purpose e.g. truck starting, internal lighting for compressor/truck etc etc.

If such things happen then it will not be consider warranty.

ELECTROLYTE

Read the safety instructions carefully.

Electrolyte in batteries is a sulphuric acid solution in distilled water.

The solution must be made up before being introduced into the battery.

Always pour the sulphuric acid carefully into the distilled water; never pour the water into the acid.

ACTIVATING A DRY-CHARGED BATTERY

- Take out the battery.
- Battery and electrolyte must be at equal temperature above 10 °C (50 °F).
- Remove cover and/or plug from each cell.
- Fill each cell with electrolyte until the level reaches the mark on the battery. If there is no mark on the battery, the level must be above the plates for at least 10 mm (0.4 in) to 15 mm (0.6 in).
- Rock the battery a few times so that possible air bubbles can escape; wait 10 minutes and check the level in each cell once more; if required, add electrolyte.
- Refit plugs and/or cover.
- Place the battery in the compressor.

RECHARGING A BATTERY

Before and after charging a battery, always check the electrolyte level in each cell; if required, top up with distilled water only. When charging batteries, each cell must be open, i.e. plugs and/or cover removed.

Use a commercial automatic battery charger according to its manufacturer's instructions.

Apply with preference the slow charging method and adjust the charge current according to the following rule of thumb:

Battery capacity in Ah divided by 20 gives safe charging current in Amp.

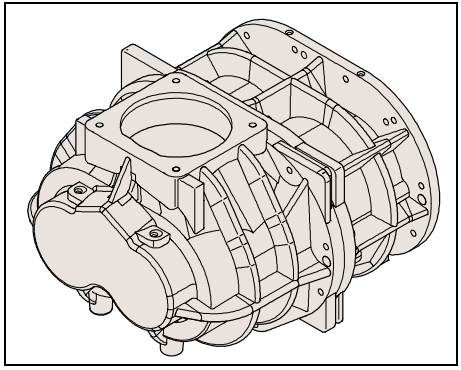
BATTERY MAINTENANCE

- Keep the battery clean and dry.
- Keep the electrolyte level above the plates or at the indicated level. Level above plates at least 10 mm (0.4 in) to 15 mm (0.6 in). Top up with distilled water only.
- Keep the terminals and clamps tight, clean, and lightely covered with petroleum jelly.
- Battery should never be kept or left loose in compressor, clamps to be properly secured and tight.

Compressor battery should never be used for any other equipment.

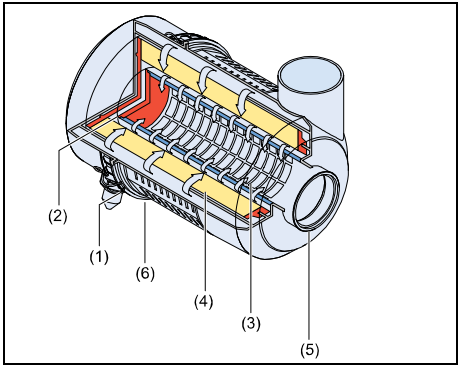
COMPRESSOR ELEMENT OVERHAUL

When a compressor element is due for overhaul, it needs to be done by Atlas Copco. This guarantees the use of genuine parts and correct tools with care and precision.



AIR FILTERS ENGINE / COMPRESSOR

MAIN PARTS



1. Snap clips (3x)
2. Dust trap cover
3. Safety cartridge
4. Filter element
5. Filter housing
6. Vacuator valve

The Atlas Copco air filters are specially designed for the application. The use of non-genuine air filters may lead to severe damage of the engine and/or compressor elements.

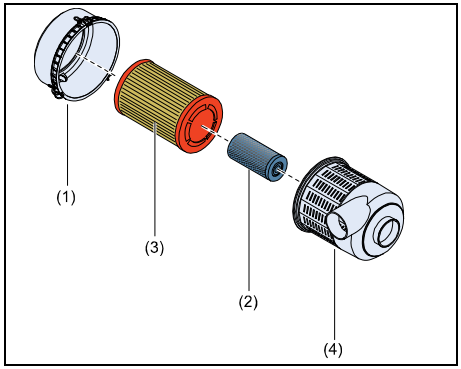
CLEANING THE DUST TRAP

Remove dust daily.

To remove dust from the dust trap pinch the vacuator valve (6) several times.

Change air filter, when vacuum indicator shows red indication. Never change air filter, when compressor is running.

REPLACING THE FILTER ELEMENT AND THE SAFETY CARTRIDGE



The instructions apply to one air filter and should be repeated for both air filters engine and air filters compressor.

1. Release the snap clips (1) and remove the dust trap cover (2). Clean the inside of the cover.
2. Withdraw the filter element (4) and safety cartridge (3) from the housing (5).

   Discard the filter element when damaged.

   A dirty safety cartridge (3) is an indication of a malfunctioning filter element.

Replace the filter element and the safety cartridge at the same time. New elements should be inspected for tears and punctures before installation.

The safety cartridge cannot be cleaned.

Engine preservation

Customer center or end user should maintain the log book for engine start and stop during the six months of storage and the field service report for B check conducted by the local Cummins dealer. Customer center or end user should share these set of documents for warranty extension.

STORAGE OF ENGINE LESS THAN OR UP TO 6 MONTHS FROM THE DATE OF ENGINE SHIPMENT FROM CUMMINS PLANT

If engine is to be stored in the engine box, as received from factory:

1. Store the engine box along with kit boxes in the protected place from water / rain water, dust etc...
2. Put the tags on all the boxes which must indicate:
   - Engine shipment date.
   - Engine is treated for preservation for a period of 6 months from the engine shipment date mentioned above.
3. Do not stack any material on engine box to avoid damage to engine/engine box.

If engine is to be stored without engine box and / or skid:

1. Store the engine in protected place from water, dust etc.
2. Put the tags on all the boxes which must indicate:
   - Engine shipment date.
   - Engine is treated for preservation for a period of 6 months from the engine shipment date mentioned above.
3. Do not rotate the engine, as engine is in dry condition.
4. Make sure that all the engine openings, kit items openings like radiators, air cleaners, silencers etc. are covered with the waterproof protected caps/plastic tapes.

STORAGE OF ENGINE MORE THAN 6 MONTHS FROM THE DATE OF ENGINE SHIPMENT FROM CUMMINS PLANT

Cooling system passage:

1. Prepare the engine for long term storage process.
2. Prepare the engine to fit on the equipment. Install the engine on the equipment and ensure the connections are fitted completely. Fill the cooling system with the engine coolant Compleat EG (recommended).
   - Leave the drain cocks open until the air is vented out completely. Gradually close the cocks until the coolant flows out from the thermostat housing.

Fuel passage:

No external treatment is required.

- Make sure that all necessary connections for the fuel system are fitted completely and prepare the engine for starting.

Lubricating oil passage:

1. Prepare the engine for filling the lube oil.
2. Fill the engine with the lube oil 15W40 (CH-4 category) as recommended for this engine model.
3. Start the engine and operate it for 15-20 minutes to ensure the lube oil, coolant and fuel is circulated to all the passages.

The above procedure is to be done repeatedly at the end of every six months during the storage period and must be done at OEM works on the equipment / on the engine testbed depending upon the location of the engine.

Engine must be sent to Cummins HHP rebuild plant for revalidation after 3 preservations at site (before completion of 24 months at OEM).

If case any one of the three preservation is missed, then the concerned Cummins Area Service Manager (ASM) should certify the condition of the engine coolant, lube oil, fuel and exhaust systems. In case of abnormality, the engine is to be sent to HHP rebuild plant for revalidation.

4. Drain the lube oil from the oil pan.
5. Loosen the belt tension on fan belt, alternator belt, water pump belt and other accessories driven by belt.
6. Put a tag to the engine which must indicate:
   - Engine preservation process date.
   - Engine is treated for preservation for a period of 6 months. Due date for the next preservation process (if not installed to the equipment).

STORAGE OF THE ENGINE THAT IS INSTALLED ON THE EQUIPMENT

Many times, engines shipped from the factory are installed on the equipment within six months from the date of shipment from the factory. But these engines as installed in the equipment are not put in service for a long period. For such engines the engine coolant and engine lube oil is generally filled in the engine and no special process is required, but periodic running is a mandatory requirement.

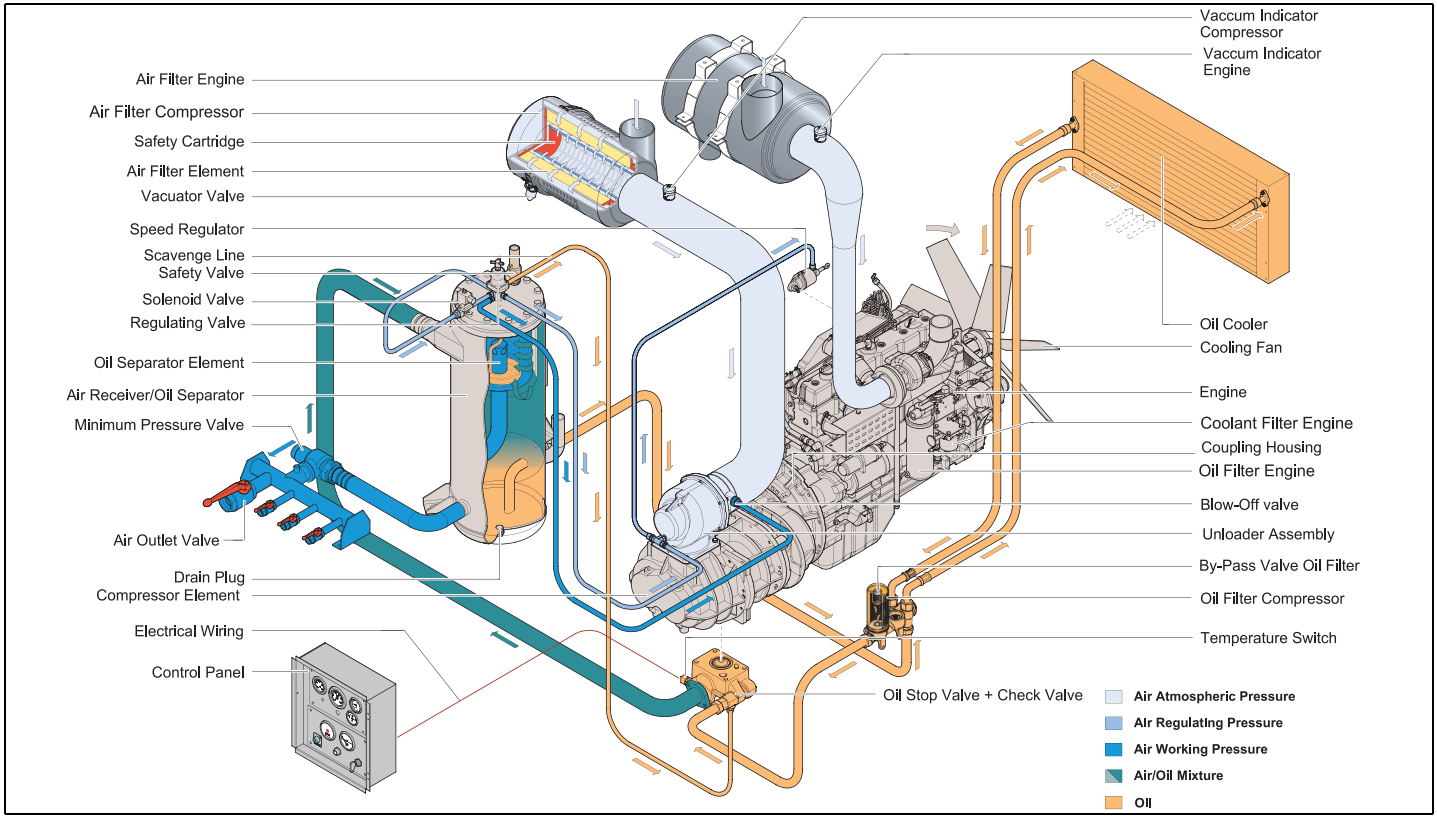
- Run the engine once in every week for 5 to 10 minutes at low idle rpm. “B” check to be carried out at every six months as mentioned in Operation & Maintenance manual 3243773 (Cummins Part number).

PREPARE THE STORED ENGINE FOR PUTTING IN SERVICE

1. Clean off the accumulated dirt from exterior of the engine.
2. Remove all protected caps, wrappings and tape from connections such as breathers, fuel-in and out connections, water-in and out connections etc.
3. Use the suitable solvent, cleaner or degreaser to remove rust preventive compound from unpainted external surfaces of the engine.
4. Fill the oil pan with the new lube oil. Replace the fuel, lube oil filters and lube oil bypass filters only when the engine is stored beyond six months from the date of shipment.
5. Check and correct the engine belt tensioning.
6. In case of any doubts, contact Atlas Copco or Cummins dealer for more info.

Adjustments and servicing procedures

ADJUSTMENT OF THE CONTINUOUS REGULATING SYSTEM



Atlas Copco

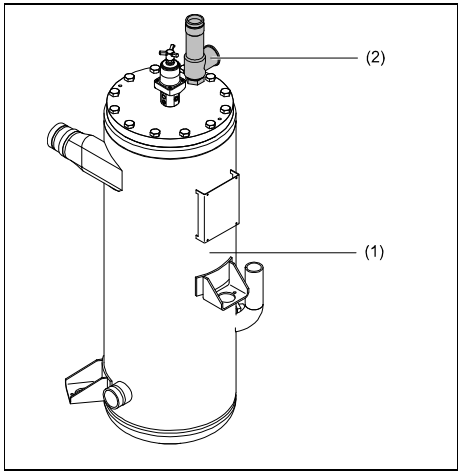
PRESSURE SYSTEM

The working pressure is determined by the tension of the spring in the regulating valve (RV). This tension can be increased to raise the pressure and decreased to lower it by turning the adjusting wheel clockwise and anti-clockwise respectively.

To adjust the normal working pressure, proceed as follows:

1. Loosen the lock nut of the regulating valve.
2. Release Regulating Valve (turn out).
3. With the outlet valves (AOV) closed, adjust the regulating valve (RV), until a pressure is reached of nominal pressure + 2 bar (+ 29 psi).
4. Lock the regulating valve (RV) by fixing the lock nut.

AIR RECEIVER



The air receiver (1) is tested according to official standards. Regularly have inspections carried out in conformity with local regulations.

Daily drain condensate.

SAFETY VALVE

All adjustments or repairs are to be done by an authorized representative of the safety valve (2) supplier, see section Specific safety precautions.

Following checks must be carried out:

- A check of the opening of the lifting gear, twice a year.
  This can be done by screwing the cap of the valve anti-clockwise.
- A check of the set pressure once a year according to the local regulations. This check cannot be done on the compressor and must be carried out on a proper test bench.

FUEL SYSTEM

PRIMING INSTRUCTIONS

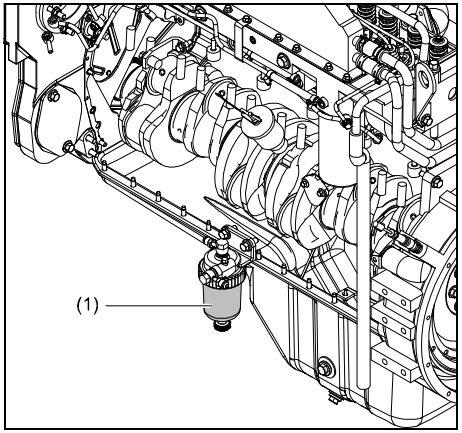
Fuel leaked or spilled onto hot surfaces or electrical components can cause a fire. To help prevent possible injury, turn the "ON/OFF" switch in position "OFF" when changing fuel filters or water separator elements. Clean up fuel spills immediately.

Prime the fuel system in order to fill the fuel filter. Prime the fuel system in order to purge trapped air (see paragraph **Specific start procedure**). The fuel system should be primed under the following conditions:

- Compressor is put in operation for the first time
- Running out of fuel
- Storage
- Replacement of the fuel filter

Do not loosen the fuel lines at the fuel manifold. The fittings may be damaged and/or a loss of priming pressure may occur when the fuel lines are loosened.

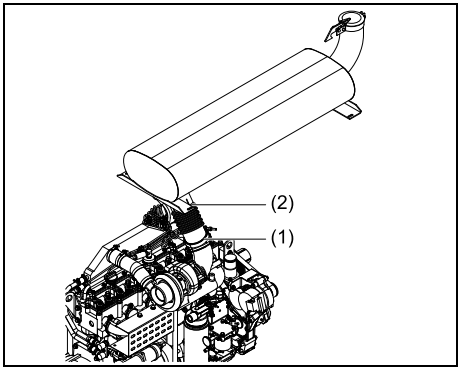
REPLACING FUEL FILTER ELEMENTS



For replacing the fuel filter element (1) refer engine instruction manual.

Compressor is supplied with Fuel tank and do not relocate fuel tank as location of fuel tank is decided based on Engine Fuel pump capability.

EXHAUST SYSTEM



Do not leave above clamps loose to prevent exhaust leakage and water entry.

Problem solving

It is assumed that the engine is in good condition and that there is adequate fuel flow to the filter and injection equipment.

An electrical fault must be traced by an electrician.

Make sure that the wires are not damaged and that they are clamped tight to their terminals.

For denomination of switches, relays, etc., see **Electric system - Circuit diagram**.

See also section **Control panel**.

Problem: Compressor capacity or pressure below normal.

Possible faults	Corrective actions
Air consumption exceeds capacity of compressor.	Check equipment connected.
Choked air filter elements (AF).	Remove and inspect elements. Clean or replace, if necessary.
Regulating valve (RV) defective.	Have regulating valve removed and inspected by an Atlas Copco Service representative.
Blow down valve stuck in open position.	Check and correct as necessary.
Loading valve (LV) leaking past O-ring.	With compressor running at max. load speed, disconnect hose leading to unloader. If air leaks from the hose, remove and inspect loading valve. Replace damaged or worn O-rings.
Oil separator element clogged.	Have element removed and inspected by an Atlas Copco Service representative.
Air intake throttle valve remains partially closed.	Remove air filters, air intake manifold and throttle valve spring seat. Withdraw the valve and inspect. Replace parts where necessary. Caution: the spring seat is fixed with 4 short and 2 long setscrews: first remove the short screws, then release the spring tension unscrewing the long ones.

Possible faults	Corrective actions
Safety valve (SV) leaking.	Remove and inspect. Replace if not airtight after reinstallation.
Blow-off valve leaking.	Remove and inspect. Replace if necessary.

Problem: Pressure in air receiver rises above maximum and causes safety valve to blow.

Possible faults	Corrective actions
Regulating valve (RV) opens too late or its ball valve spring is broken.	Have regulating valve removed and inspected by an Atlas Copco Service representative.
Air leaks in regulating system.	Check hoses and their fittings. Stop leaks; replace leaking hoses.
Air intake throttle valve does not close for some reason.	Remove air filters, air intake manifold and throttle valve spring seat. Withdraw the valve and inspect. Replace parts where necessary. Caution: the spring seat is fixed with 4 short and 2 long setscrews: first remove the short screws, then release the spring tension unscrewing the long ones.
Minimum pressure valve malfunctioning.	Remove and inspect valve.
Blow-off valve malfunctioning.	Remove and inspect valve.

Problem: After working some time, the unit stops through a shutdown switch.

Possible faults	Corrective actions
Engine oil pressure too low.	Refer to the engine instruction manual.
Compressor or engine overheating.	See corrective actions “Compressor overheating”.
Fuel tank contains insufficient fuel.	Fill fuel tank.
Low coolant level.	Top up cooling system.

Problem: Air and oil mist expelles from air filters immediately after stopping.

Possible faults	Corrective actions
Check valve at element outlet.	Remove and inspect. Replace if necessary. Replace air filter elements and safety cartridges. Check the oil level and add oil if necessary. Run the compressor for a few minutes, stop and recheck oil level.
Plunger of oil stop valve jammed.	Remove and inspect. Replace if necessary. Replace air filter elements and safety cartridges. Check the oil level and add oil if necessary. Run the compressor for a few minutes, stop and recheck oil level.

Problem: Compressor overheating.

Possible faults	Corrective actions
Insufficient compressor cooling.	Locate compressor away from walls; when banked with other compressors, leave space between them.
Oil cooler clogged externally.	Clean oil cooler. Refer to section **Cleaning coolers**.
Oil cooler clogged internally.	Consult Atlas Copco.
Oil filters clogged.	Replace oil filters.
Oil level too low.	Check oil level. Top up with recommended oil if necessary.
Thermostatic by-pass valve remains stuck in opened position.	Remove valve and check for proper opening and closing. Replace if out of order.
Fan blade(s) broken.	Check and correct if necessary.
Oil stop valve malfunctioning.	Remove and inspect valve.
Oil separator element (OS) clogged.	Have element removed and inspected by an Atlas Copco Service representative.

Alternator precautions

1. Never reverse the polarity of the battery or the alternator.
2. Never break any alternator or battery connections while the engine is running.
3. When recharging the battery, disconnect it from the alternator. Before using booster cables to start the engine, be sure of the polarity and connect the batteries correctly.
4. Never operate the engine without the main or voltage sensing cables connected in the circuit.

Technical specifications

TORQUE VALUES

GENERAL TORQUE VALUES

The following tables list the recommended torques applied for general applications at assembly of the compressor.

For hexagon screws and nuts with strength grade 8.8

Thread size	Torque value (Nm / lbf.ft)
M6	9 (6.64)
M8	23 (16.97)
M10	46 (34.69
M12	80 (59.04)
M14	125 (92.25)
M16	205 (151.29)

For hexagon screws and nuts with strength grade 12.9

Thread size	Torque value (Nm / lbf.ft)
M6	15 (11.07)
M8	39 (28.78)
M10	78 (57.56)
M12	135 (99.63)
M14	210 (154.98)
M16	345 (254.61)

Secure the drain cock and tank cap of the fuel tank handtight

COMPRESSOR / ENGINE SPECIFICATIONS

REFERENCE CONDITIONS

Designation	Unit	XAXS 600
Absolute inlet pressure	bar(e)	1
	psi	14.5
Relative air humidity	%	0
Air inlet temperature	°C	20
	°F	68
Nominal effective working pressure	bar(e)	17
	psi	247

The inlet conditions are specified at the air inlet grating outside the canopy.

LIMITATIONS

Designation	Unit	XAXS 600
Minimum effective receiver pressure	bar(e)	12
	psi	174
Maximum effective receiver pressure, compressor unloaded	bar(e)	18.6
	psi	270
Maximum ambient temperature at sea level	°C	50
	°F	119
Maximum ambient temperature at sea level, with after cooler	°C	NA
	°F	NA
Altitude capability	-	see graph section

PERFORMANCE DATA

At reference conditions, if applicable, and at normal shaft speed, unless otherwise stated.

Designation	Unit	XAXS 600
Engine shaft speed, normal and maximum	r/min	2200
Engine shaft speed, compressor unloaded	r/min	1200
Free air delivery [1)]	l/s	281.7
	cfm	596.89
Free air delivery [1)]	l/s	NA
	cfm	NA
Fuel consumption:		
at full load 100% FAD	Kg/h	43.2
	lb/hr	95.23
at full load 75% FAD	Kg/h	NA
	lb/hr	NA
at full load 50% FAD	Kg/h	NA
	lb/hr	NA
Specific fuel consumption	g/m^3	42.60
	lb/1000 cu.ft	2.65
Typical oil content of compressed air	mg/m^3 free air	<5
	oz/1000 cu.ft	<0.005
Engine oil consumption (maximum)	l/h	0.08
	g/h	0.0211
Compressed air temperature at outlet valve	°C	Ambient + 80
	°F	Ambient + 176

Noise level		
- Sound pressure level (LP), measured under free field conditions at 7 m distance	dB(A)	NA

Tolerance:	• +/- 5% 25 l/s (53 cfm) < FAD < 250 l/s (530 cfm) • +/- 4% 250 l/s (530 cfm) < FAD
The international standard ISO 1217 corresponds to Given national standards:	• British BSI 1571 Part 1 • German DIN 1945 Part 1 • Swedish SS-ISO 1217 • American ANSI PTC9

[1]) Free air delivery is measured according to ISO 1217 ed.3 1996 annex D

DESIGN DATA

Compressor

Designation	Unit	XAXS 600
Number of compression stages		1
Net capacity of compressor oil system	l	52
	US gal	13.74
Net capacity of air receiver capacity	l	91
	US gal	24

DESIGN DATA

Engine

Designation	Unit	XAXS 600
Make		Cummins
Type		6CTA 8.3
Coolant		EG 50-50 DCA4 Premix
Number of cylinders		6
Bore	mm	114
	in	4.48
Stroke	mm	135
	in	5.31
Displacement	l	8.3
	US gal	2.19
Output power at 2500 rpm according to BS 5514	kW	194
	hp	260
Capacity of oil sump	l	23.8
	US gal	6.28
Load factor	%	80
Capacity of oil sump	l	23.8
	US gal	6.28
Initial fill	l	18.92
	US gal	5
Refill (max.)	l	15.15
Capacity of cooling system	l	45
	US gal	11.88

DESIGN DATA

Unit

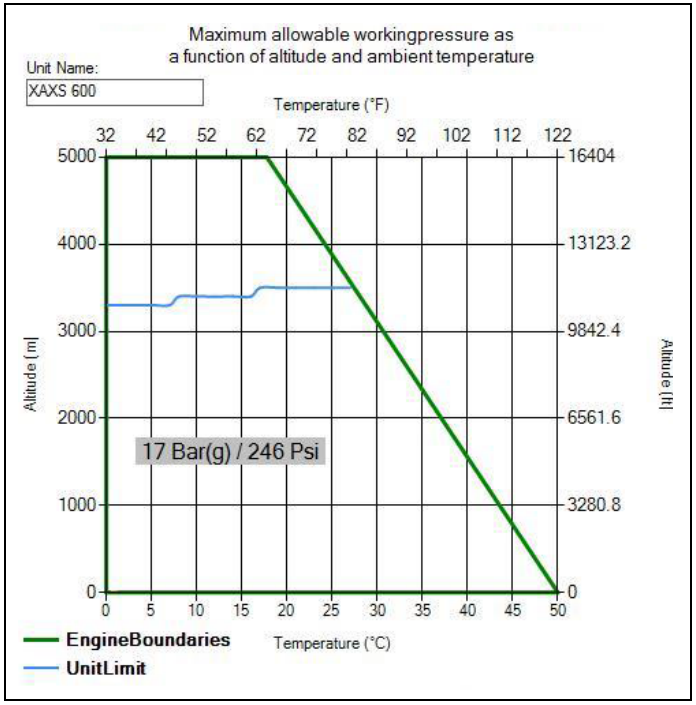
Designation	Unit	XAXS 600
Fuel tank capacity	l	284
	US gal	75.02
Air volume at inlet grating (approx;)[1)]	m^3/s	-
Overall Dimensions with Under carriage (Approx)		
Length	mm	5574
Width	mm	2008
Height	mm	2291
Overall Dimensions without Under carriage (Approx)		
Length	mm	3534
Width	mm	1675
Height	mm	2096
Net weight DRY with Under Carriage (approx)[2)]	Kg	2800
Net weight WET with Under Carriage (approx)[2)]	Kg	3130
Net weight DRY Stationary (approx)	Kg	2400
Net weight WET Standard Stationary (approx)	Kg	2730

Shipping dimension (approx)		
Length	meter	5.8
Width	meter	2.3
Height	meter	2.3

[1]) Air required for engine and compressor cooling, combustion and for compression.

[2]) with filter change.

ALTITUED UNIT PERFORMANCE CURVE



Disposal

GENERAL

When developing products and services, Atlas Copco tries to understand, address, and minimize the negative environmental effects that the products and services may have, when being manufactured, distributed, and used, as well as at their disposal.

Recycling and disposal policy are part of the development of all Atlas Copco products. Atlas Copco company standards determine strict requirements.

Selecting materials the substantial recyclability, the disassembly possibilities and the separability of materials and assemblies are considered as well as the environmental perils and dangers to health during the recycling and disposal of the unavoidable rates of not recyclable materials.

Your Atlas Copco compressor consists for the most part of metallic materials, that can be remelted in steelworks and smelting works and that is therefore almost infinite recyclable. The plastic used is labelled; sorting and fractioning of the materials for recycling in the future is forseen.

This concept can only succeed with your help. Support us by disposing professionally. By assuring a correct disposal of the product you help to prevent possible negative consequences for environment and health, that can occur with an inappropriate waste handling.

Recycling and re-usage of material helps to preserve natural resources.

DISPOSAL OF MATERIALS

Dispose contaminated substances and material separately, according to local applicable environmental legislations.

Before dismantling a machine at the end of its operating lifetime drain all fluids and dispose of according the applicable local disposal regulations.

Remove the batteries. Do not throw batteries into the fire (explosion risk) or into the residual waste. Separate the machine into metal, electronics, wiring, hoses, insulation and plastic parts.

Dispose all components according to the applicable disposal regulations.

Remove spilled fluid mechanically; pick up the rest with absorbing agent (for example sand, sawdust) and dispose it according the applicable local disposal regulations. Do not drain into the sewage system or surface water.

Maintenance Log

Compressor Customer.....

Serial number.....

Service hours	Maintenance action	Date	By initials

Maintenance Log

Compressor Customer.....

Serial number.....

Service hours	Maintenance action	Date	By initials

Maintenance Log

Compressor Customer.....

Serial number.....

Service hours	Maintenance action	Date	By initials

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