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Date:	02/18/2021
Code	D300T4F-DB
Revision	00

Air compressor : D300T4F-DB

USER'S AND MAINTENANCE MANUAL



Air Compressor D300T4F-DB





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Dear customer,

Thank you for purchasing this ROTAIR Air Compressor, which is designed and manufactured in compliance with high standards in order to ensure high quality performance as well as easy use and installation.

For additional information, you can contact our customer service at the following address:

ELGi Portable Compressors 4610 Entrance Drive Suite A Charlotte, NC 28273 Direct (704) 523-4123 www.elgi.us/portable-compressors www.Portableservice@elgi.com www.Portablesales@elgi.com





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FOREWORD

These service instructions have been drafted to facilitate the knowledge of the machinery purchased and its modes of use. In drafting them, we have intentionally omitted the technical in-depth description of some operations linked to the engine, since such information is contained in the user's and maintenance manuals of the respective manufacturers. The service instructions contain recommendations of the utmost importance concerning the safe, appropriate, and cost-effective operation of the machine. Complying with these recommendations helps prevent potentially hazardous situations, additional costs, and loss of time, increasing the service life of the machine. The service instructions and safety measures reported in this manual must be complied with by the user of the machinery. In addition to the service instructions and the accident prevention measures that apply in the countries and places of installation, all of the general safety rules at the workplace must be complied with. It is therefore recommended to carefully read, understand, and follow the instructions reported in this manual. This manual cannot be disclosed, duplicated, or copied without the previous authorization by the manufacturer. Any lack of compliance with the above shall be pursued under the law, especially if the illicit action involves advantages for competing companies.





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1 GENERAL

1.1 Definitions

The most significant definitions contained in this manual are reported below.

1.1.1 QUALIFIED PERSONNEL

"Qualified personnel" are those personnel who are familiar with the rules for installation, assembly, repair, and servicing of the machinery and who are provided with the specified technical qualifications, such as:

- Technical training of proper operation and safety precautions relating to possible hazards of electric currents, hydraulic and air pressure circuits, etc.
- Technical background or specific training relevant to the safe operation and maintenance procedures of the machinery
- Training in basic first-aid activities

1.1.2 HAZARD

A potential source of injury or damage to health

1.1.3 HAZARDOUS AREA

Any area within and/or in proximity of machinery where the presence of a person constitutes a risk for the health and safety of said person

1.1.4 EXPOSED PERSON

Any person being fully or partially in a hazardous area

1.1.5 OPERATOR

The person/people in charge of installing, operating, adjusting, cleaning, repairing, or moving machinery or performing maintenance

1.1.6 RISK

Combination of the likelihood and severity of an injury or damage to health which may arise in a hazardous situation

1.1.7 GUARD

Part of the machinery utilized to ensure protection by means of a material barrier

1.1.8 **PROTECTION EQUIPMENT**

Device (different from a guard) which reduces the risk, by itself or associated to a guard

1.1.9 EXPECTED USE

The use of the machinery in compliance with the user's information

1.1.10 INCORRECT USE

The use of the machinery in a different way than indicated in the user's instructions

1.1.11 COMPONENT

A part of the electrical, mechanical, or pneumatic equipment, usually specified by its function but used in various applications





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1.1.12 CONTROL DEVICE

A device introduced in a control circuit and used to control the operation of the system (e.g. position sensors, manual control switches, relays, electro-magnetic control valves)

1.1.13 SAFETY INTERLOCK

Mechanical, electrical, or other device whose purpose is to prevent the parts of the machinery from operating in specified conditions (generally, until the guard is closed)

1.1.14 MANUFACTURER

Physical or legal person who designs and/or develops machinery or partly-completed machinery which is subject of this directive and who is liable for the compliance of the machinery or partly-completed machinery with this directive as related to its marketing with his/her name or brand, or for personal use. In absence of a manufacturer as defined above, the manufacturer shall be considered the physical or juridical person who markets or puts into service machinery or partly-completed machinery.

1.2 Machinery Identification

The CE identification nameplate is attached on the air compressor chassis.

Such nameplate reports the manufacturer's data, the denomination of the machinery, and the code and year of manufacturing.

For any requests for spare parts or actions by our technicians, please refer to the data reported in the nameplate; in particular, the code number of the machinery must always be mentioned.

MODE	EL.
YEAR	R/MFG
WEIG	HT (LBS)
PRES	SURE (PSI)
SER	AL NO.
ROTAT	
BUILT BY: ROTAIR S.P.A. 12023 - CARAGLIO (CN) - 11	ELGI PORTABLE COMPRESSORS
	TELEPHONE: (704) 523-4123 www.elgi.us

Figure 1.2.1 Nameplate of air compressor D300T4F-DB



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1.3 General technical specifications

The machinery has been designed and developed in compliance with the recommendations contained in the technical standards reported below:

UNI EN ISO 12100	Safety of machinery -General design principles - Risk assessment and risk reduction.
UNI EN ISO 13857	Safety of machinery– Safety distances to prevent from reaching the hazardous areas with the upper or lower limps.
UNI EN ISO 13850	Safety of machinery - Emergency stop system, functional aspects
CEI EN 62061	Safety of machinery - Functional safety of the programmable electrical and electronic control systems as related to safety
CEI EN 60204-1	Safety of machinery - Electrical equipment of the machineries. Part I: General rules.
UNI EN 983	Safety of machinery. Safety requirements relevant to systems and related components for hydraulic and pneumatic transmission. Pneumatics.
UNI EN 349	Safety of machinery - Minimum openings to prevent the crushing of parts of the human body.
D. LGS. January 27th 2010 no.17	Implementation of Directive 2006/42/CE relevant to machinery, which modifies directive 95/16/CE relevant to elevators.
UNI EN ISO 14121-1	Safety of machinery - Risk assessment. General principles
UNI EN ISO -TR 14121-2	Safety of machinery - Examples

Machine directive 2006/42/CE.

Article 7. Presumption of conformity and general standards

- 1) The Member States deem that the machinery provided with the "CE" marking and accompanied by the CE declaration of conformity, whose elements are provided for in Annex II, Part 1, Section A, comply with the recommendations of this directive.
- 2) The machinery manufactured in compliance with an authorized standard, whose reference has been published on the Official Journal of the European Union is assumed to be compliant with the essential health and safety requirements covered by such general standards.
- 3) The Commission published the references of the general standards in the Official Journal of the European Union.
- 4) The Member States shall take the appropriate measures to allow the social partners influencing—at national level—the development and control process of the general standards.



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1.4 General description of the machinery

The piece of machinery described in this manual is the air compressor D300T4F-DB. The air compressor has the capacity of generating a given quantity of compressed air in liters per minute (I/m) by using a diesel engine as its power source. The pneumatic energy finds applications in different fields of use, where "pneumatic" operated tools, accessories, and equipment are utilized, for instance demolition hammers, drilling hammers, vibrators, drilling machines, rammers, coating machines, etc.

Each of these tools/accessories has its own consumption of compressed air, expressed in liters per minute (I/m). The optimum coupling between the compressor and the tool is achieved when the compressed air consumption does not exceed 85% of the air generated by the compressor; furthermore, it must be taken into consideration that the quantity of compressed air required by the tool shall increase over time proportionally to the wear of the tool itself.

The correct compressor-tool coupling ratio allows the machinery to operate in optimum conditions as appropriate to ensure long life-span at the highest performance. An oversized tool, besides creating unfavorable conditions for the appropriate operation of the machinery, shall not develop full performance since it cannot be supplied with the required quantity of compressed air.

This machinery has been designed to work at ambient temperatures ranging from -10°C (14°F) and +40°C (105°F).





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2 **TECHNICAL SPECIFICATIONS OF THE MACHINERY**

The general technical specifications of the machinery are reported below:

2.1 **General technical specifications**

	D300T4F-DB
DESCRIPTION	TECHNICAL VALUES AND DATA
Length (Body)	2100 mm – 82.7 inches
Width	1590 mm – 62.6 inches
Height (with hood closed)	1640 mm – 64.6 inches
Compression system	Screw single-stage
Fuel tank capacity	130 lt – 34.3 gal

2.2 Technical specifications of the compressor

	D300T4F-DB
DESCRIPTION	TECHNICAL VALUES AND DATA
Service pressure	7 bars – 102 psi
Minimum pressure	5 bars – 73 psi
Max. pressure	8.5 bars – 123 psi
Rated payload at service pressure	8000 lt/min – 282 CFM
Hydraulic system capacity*	17 lt – 4.50 gal*

(*) Use ELGi/Rotair AL-00025 AirLube





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2.3 Technical specifications of the engine

	D300T4F-DB
DESCRIPTION	TECHNICAL VALUES AND DATA
Engine brand	Kohler
Туре	KDI2504 – Turbo Common Rail
Number of cylinders	4
Fuel	Diesel
Cooling	by liquid
Power available	55.4 Kw (74Hp) @ 2600 RPM
Max. rotation speed	2600 RPM
Min. rotation speed	1600 RPM
Emissions	Interim Tier 4 Final / Stage III B
Engine oil capacity	11.5 lt, 3 gal
Engine oil, CJ-4*	

* 5w30@ -30°C(-22°F) to 30°C(86°F) 10w30@ -20°C(-4°F) to 45°C(113°F) 5w40@ -30°C(-22°F) to 45°C(113°F)

2.4 Technical specifications of the battery

DESCRIPTION	TECHNICAL VALUES AND DATA
Rated voltage	12 VDC
Capacity	132 Ah
Discharge current	950 CCA

2.5 Service temperatures

DESCRIPTION	TECHNICAL VALUES AND DATA
Minimum ambient temperature limit	-10°C, 14°F
Maximum ambient temperature limit	+40°C, 105°F
Humidity limits	≤ 50% @ +40°C, 105°F
Altitude	3280 feet above sea level



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3 SYMBOLS AND WARNINGS

The pictograms and main warnings for the operators are reported below and are indicated by the following denominations and symbols:

3.1 Hazards



WARNING

The pictogram calls attention to specific recommendations in order to prevent damage.



WARNING FOR ELECTRICAL HAZARD The pictogram calls attention tospecific recommendations order to prevent damage.



WARNING FOR CRUSHING HAZARD The pictogram calls attention to a likely hazardous situation with risk of crushing the upper limbs.



WARNING HAZARD OF PARTS IN MOTION The pictogram calls attention to the hazard of parts in motion.



WARNING ON RISK OF SCALDING OR HAZARD DUE TO HIGH-TEMPERATURE ELEMENTS

The pictogram calls attention to the hazard of high-temperature parts and risk of scalding.



OVERHANGING LOAD WARNING

The pictogram calls attention to the hazard due to the presence of overhanging loads



WARNING OF THE PRESENCE OF PRESSURE TANKS The pictogram calls attention to the presence of pressure tanks.





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3.2 Safety Precautions and Warnings



DO NOT REMOVE THE PROTECTION EQUIPMENT OR GUARDS The pictogram instructs that the users SHOULD NOT remove protective equipment such as fixed, movable, and interlocking guards and SHOULD NOT tamper with photocells or photocell barriers.



DO NOT PERFORM CLEANING OR MAINTENANCE WHEN THE MACHINERY IS IN OPERATION The pictogram warns the user AGAINST performing cleaning or maintenance operations with parts in motion.



DO NOT WALK UNDER OVERHANGING LOADS The pictogram instructs the user to avoid walking under overhanging loads.



DO NOT OPERATE THE MACHINERY WHEN THE HOOD IS OPEN





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3.3 Recommendations and notices



NOTICES

This symbol recommends consulting the manual before undertaking a given action.



RECOMMENDATION TO USE THE PPE (PERSONAL PROTECTION EQUIPMENT) The pictogram expresses the necessity of using personal protection equipment.

NOTICES:

This symbol highlights that the description involves significant parts, since they may cause severe mechanical and electrical damage and malfunctions if the relevant standards are not complied with. It is recommended to comply with the information contained in this manual and with the law provisions in force as related to health and safety at the workplace.



HIGHLIGHTING OF THE HOOKING POINT TO LIFT THE MACHINERY



REQUIREMENT TO USE THE SUPPORT FOOT, PARKING BRAKE, AND WHEEL LOCKING WEDGES

3.4 General notices

This manual includes the user's and routine maintenance instructions for the machinery. Whenever it is not otherwise specified, the operation and maintenance actions are to be considered "specialized", meaning they can only be performed by a technician appointed for that purpose.

Before undertaking any operation on the machinery, carefully read this manual. ROTAIR S.P.A. declines any responsibility for any operation performed in conflict with the contents of this document. Before utilizing the machinery, carefully read this document and comply with the safety laws, regulations, recommendations, and standards in force. This manual and the annexed documents must be considered as an integral part of the machinery they refer to and must always accompany the machinery, even if the latter is transferred to another user. It is therefore appropriate to preserve them for further reference.

This manual and the annexed documents are specific to the machinery they have been drafted for.



Do NOT utilize this manual and the other included documents on similar machinery even of the same brand or type.

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ELGi is available to its customers for any further information. Please report the information (type of machinery, model, and code) found on the machinery identification nameplate. All of the specific data not indicated in the text are mentioned in the chapter "Technical Specifications of the Machinery" as well as in the technical annexes of this user's and maintenance manual.

This manual thoroughly describes:

- The information relevant to lifting and parking of the machinery
- The general rules and recommendations useful for routine and extraordinary maintenance
- The procedures to identify and order parts

Remark: The instructions for the appropriate use of the engine are described in the manual drafted by the engine manufacturer.

This manual must be preserved with care in its folder, far from sources of humidity, heat, and sun rays so that it can be consulted at any time by both the personnel appointed to its use and by those who need to perform routine and extraordinary maintenance. This machinery has been exclusively designed and manufactured to deliver compressed air in the conditions stated by the manufacturer. Every other utilization not mentioned in the "expected uses" shall relieve the manufacturer from any liabilities, which will be at full liability of the user.

"Approved purpose" assumes compliance with the recommendations reported and related to the appropriate use and maintenance, as well as to the transport of the unit. All of the accident prevention regulations and standards in place need to be complied with as well, besides complying with the general rules for safety and occupational medicine which are governed by the legislation in force.

The manufacturer declines any responsibility in case of changes made on the machinery without its authorization. Before commissioning, the buyer must ascertain that ANY equipment or machinery components and protection installations that are not part of this machinery comply with Machine Directive 2006/42/CE and the other applicable European Directives (2006/95/CE - 2004/108/CE, etc.).





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4 **USE OF THE MACHINERY**

4.1 Use allowed

The machinery described in this manual is the air compressor D300T4F-DB and is allocated to work outdoors. The air compressor is a piece of machinery with the capacity of generating a given quantity of compressed air in I/m by using a diesel engine as its power source. The pneumatic energy finds applications in different fields of use where "pneumatic" operated tools, accessories, and equipment are utilized, for instance: demolition hammers, drilling hammers, vibrators, drilling machines, rammers, coating machines, etc.

Each of these tools/accessories has its own consumption of compressed air expressed in liters per minute. The optimum coupling between the compressor and the tool is achieved when the compressed air consumption does not exceed 85% of the air generated by the compressor. Furthermore, it must be taken into consideration that the quantity of compressed air required by the tool shall increase over time proportionally to the wear of the tool itself.

The correct compressor-tool coupling ratio allows the machinery to operate in optimum conditions as appropriate to ensure long life-span at the highest performance. An oversized tool, besides creating unfavorable conditions for the appropriate operation of the machinery, shall not develop full performance, since it cannot be supplied with required quantity of compressed air.

This machinery has been designed to work at ambient temperatures ranging from -10°C (14°F) to +40°C (105°F).



WARNING: It must be recognized that the compressed air generated by this unit may contain some very fine traces of oil; therefore, it is not appropriate to be utilized with those systems that call for fully oil-free air (e.g..: food processing and pharmaceutical industry, transports of flours and powders, cement, etc...).

4.2 Use not allowed

Using the machinery for other processes than those which are mentioned in the section above is not allowed. ROTAIR S.P.A. declines any responsibility as related to injuries or accidents due to lack of compliance with the specific provisions for use.





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4.3 Residual risk



Avoid standing in front of the compressed air discharge ports. The direct exposure to the air stream may cause severe injuries due to the strength and speed of the compressed air.



The machine must operate outdoors because of the presence of the engine and the relevant exhaust gases.



DO NOT operate the machine in an indoor environment that has an atmosphere containing vapors or mixtures of corrosive or explosive gases.

When performing demolition, drilling, sandblasting activities, or any other operation that generates dust, the tool needs to be connected to the compressor through a pressure-resistant hose of sufficient length to keep the machinery away from the work area, thus preventing clogging of both the air filters mounted on the unit or the radiator for the cooling of the lubrication and engine cooling systems. Even in this case, an educated user will operate the machinery an appropriate distance away from the work area.

The machinery has been designed and built to work with the hood closed and, consequently, DO NOT keep it open when the engine is on because besides generating harmful sound emissions, the required internal ventilation would be interrupted, and possible damage to the machine may result.

Make sure that the hood is closed and the latches located on the rear side of the air compressor are latched.



Figure 4.3.1 Engine compartment hood latches

When selecting the hoses to connect the machinery to the tool, make sure that they are sized appropriately, taking into account their length, the volume of air which needs to pass through them, and the service pressures. If the hoses are too small in diameter or too long in length, the air flow would be interrupted, with subsequent loss of load and poor performance of the tool. The hoses, which transmit compressed air from the machinery to the tool or to any device applied, are to be provided with a valve located at the end which is connected to the tool.

The air valve shall be held closed during the connection of the hoses to both the machinery and the tool in order to prevent an accidental opening of the air valve on the machine side and to prevent an uncontrolled whipping of the hoses, which may cause injuries. Before disconnecting any hose, make sure there is no pressure inside.



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5 LEVELS AND QUALIFICATIONS OF THE PERSONNEL

The operation, service, and maintenance of the machinery must be performed by qualified, trained, and informed personnel only. "Qualified personnel" means people who, based on their profession, have acquired experience and instructions as well as knowledge on the relevant standards and recommendations on accident prevention and operational conditions. Such personnel, appointed by the machinery safety managers, must be able to perform the required operations as well as recognize and anticipate the potential hazards.



Entrust the activities to appropriately trained or instructed personnel only; determine unmistakably the competence of personnel as related to the fine-tuning, maintenance, and repair activities. Define the responsibility of the operators appointed to run the equipment through accurate written recommendations and authorize them to reject recommendations by third parties if in conflict with the safety regulations and standards of the machine manufacturer. Ensure that the activities are performed by purposely-appointed personnel only.

The actions on the electrical equipment of the machinery can be performed in compliance with the electrotechnical regulations and standards by qualified electricians or by people with an appropriate level of competence in the electro-technical field. The mechanical and pneumatic maintenance can be performed by the technicians of the authorized service centers.

6 SAFETY RECOMMENDATIONS

6.1 Safety recommendations concerning transport

The motor-compressors which are not certified for towing need to be loaded onto another means of transport. The air compressor shall have to be attached as appropriate to the floor of the means of transport in order to prevent and unbalancing of the load during transport. The unit is shipped by Rotair and attached to a support appropriate for its handling by means of fork-lift trucks; such wooden platform facilitates the anchorage to the floor of the transport vehicle and prevents the load from sliding.

6.2 Safety recommendations concerning lifting

A purposely-allocated opening protected by a rubber cover is located in the upper panel of the hood and allows for easy access to the lifting hook.

List of the operations for the safe lifting of the machine:

- 1) Make sure that the lifting device (crane, hoist, etc.) is of the appropriate payload for the weight of the unit and that it is maintained appropriately.
- 2) In the case that the lifting device is installed on the truck, use the side anti-tilting stabilizers.
- 3) Attach the hook of the lifting device to the hooking point of the compressor (Figure 6.2.1).
- 4) Lift the unit slowly and without sudden movements to prevent the load from swaying excessively.



Figure 6.2.1 Lifting system of the machinery

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- 5) Before transporting, always check that there are no parts that may fall off during transport.
- 6) Check the status of tie-downs or chains before starting the transport operations.
- 7) In any case, always make sure that the machine is solidly secured to the loading deck of the transport vehicle and balanced appropriately.
- 8) Communicate appropriately when the compressor is lifted to or from the transport vehicle.
- 9) Never leave the lifting area with the compressor hanging.
- 10) Do not stand or walk under the hanging load.







The user must periodically check the condition of the lifting equipment and machinesupplied lifting hook and replace it if it is no longer appropriate or safe. No other hooking and lifting systems are allowed except those that are provided with the machine.



This pictogram shows the hooking system to lift the machine.



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6.3 Safety recommendations concerning maintenance

In order to perform the maintenance operations in safety conditions, the following recommendations need to be complied with:

- 1) The control and maintenance operations need to be performed by specialized qualified personnel aware of the recommendations shown in this manual. "Specialized qualified personnel" means people with the appropriate educational background and whose level of skills is appropriate to the kind of intervention and who have acquired experience and instructions on accident prevention and on the procedures required to perform maintenance operations.
- 2) All of the maintenance activities need to be performed after a safe stop of the machine and an interruption of the power supply to the engine.
- 3) If the machinery is stopped during the maintenance and repair operations, it must be protected against accidental restart.
- 4) If replacement parts are needed, they must be ordered at ELGi customer service and must correspond to the technical standards defined by ROTAIR.
- 5) The electrical equipment of the machinery must be periodically inspected. Any component's faults must be immediately pointed out and replaced after careful assessment of their effectiveness and efficiency.
- 6) Keep the greatest possible cleanliness during the maintenance operations and using flammable solvents.
- 7) Before restarting the machinery after maintenance or overhaul, make sure that all of the guards and safety devices are restored and operational.
- 8) Never use water to extinguish the flames in case of fire (Figure 6.5.1).



Figure 6.5.1

After performing any maintenance operations, it is mandatory to restore all protective devices, particularly in the area of the cooling fan or other moving parts.





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7 MACHINERY COMPONENTS

This unit is a single-phase, silenced oil injection screw mobile air compressor. The engine is internalcombustion, fueled by gas or diesel, and is connected to the compressor by a flexible coupling.

7.1 Body

The body is built entirely out of galvanized sheet iron. Panels can easily be removed to allow convenient access to the main machine parts. The machine is entirely lined with sound absorbent and fire-retardant material. Special holes have been created in the panels forming the body, complete with baffles, which allow the cool air necessary for engine and compressor cooling to be sucked in from one side and the heated air to be expelled from the other side. These baffles have been carefully designed in terms of size and shape so as to allow the most efficient internal ventilation of the machine. Therefore, it is advisable to ensure that these openings are kept free from debris and remain undamaged. All of the parts of the body have been treated with a special painting process which guarantees excellent finishing quality, together with maximum impact and rust resistance.

7.2 Engine

The unit is equipped with a diesel engine whose features are described in Section 2. As related to the user's and maintenance instructions, refer to the manual provided by the manufacturer and enclosed in the documentation relevant to this machinery.

7.3 Compressor unit

It is completely manufactured in the ROTAIR factory and consists of a central body cylinder inside, which is fitted with two screw rotors with asymmetric section: a male one with 5 lobes and female one with 6 lobes. The cylinder is closed at the ends by two head sections which contain the bearings that bear the radial and axial loads created by the air compression. A series of channels inside the cylinder and heads deliver the oil to the various components. The distribution of the lubricant serves to lubricate the bearings and maintain a coating of oil between the rotors and the bearings themselves as well as the internal cylinder walls, thereby promoting compression resistance. Another important function of the oil injected between the rotors is that of absorbing the heat generated by the compression of the air. The compressed air supplied by this compressor is free of any pulsations, and compression comes about axially.

A "regulator" unit is mounted on the compressor unit to regulate the quantity of air taken in according to the amount of air consumed. A double-stage filter mounted on the top of this unit guarantees maximum purity of the suctioned air.

7.4 Oil mist separator tank

The oil mist separator tank consists of a pressurized container, and, due to its construction features, it is exempt from the annual I.S.P.E.L. inspection and is supplied with a conformity certificate issued by the manufacturer. The identification and inspection details are stamped on a plate which is welded to the machine.





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7.5 Hub and splined coupling (KTR Joint)

The engine and the compressor are interconnected by a hub and splined coupling which guarantees concentricity between the engine flywheel and the compressor shaft. A large-size block joint with rubber pieces inter-spaced transmits power in a smooth and silent way without splitting.

The engine and compressor, once assembled, are clamped to the frame with four flexible supports (silent-blocks) which completely absorb the vibrations the machine generates. A fan is splined to the engine shaft on the opposite side of the flywheel, generating large air displacement which cools the machine fluids and parts.

7.6 Control panel

The control panel layout on the right hand side was specifically designed to have all of the controls within reach of a single person. All of the necessary instruments to control the unit are located on the control panel.





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8 ELECTRICAL EQUIPMENT OF THE MACHINERY

WARNING: Any service to the electrical system must be performed by qualified personnel.

8.1 Operator's panel

- 1) Air pressure gauge
- 2) Hour meter
- 3) START button
- 4) ON/OFF button



Figure 8.1.1 Instrument panel and controls



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8.2 Operator's panel warning/indicator lights



Figure 8.2.1 Warning/indicator lights





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WARNING/ INDICATOR LIGHTS	DEFINITION	FUNCTION	OPERATION TO BE PERFORMED	S/O
	LOW FUEL	The low fuel light illuminates when there is a minimum level of fuel in the fuel tank.	Fill the fuel tank (Diesel only)	о
	AIR FILTER CLOGGED	This light will illuminates when the air filter is clogged.	Clean the filter or replace it	0
	HIGH TEMP LIGHT	This light will illuminate when the engine coolant or compressor oil has reached an excessive temperature.	 Immediately switch off the machinery and verify the following cases: 1) check the coolant level in the radiator and clean debris from the radiator fins 2) the coolant pump does not operate as appropriate (contact ROTAIR customer service) 3) the engine thermostat does not operate correctly (replace) 4) check for coolant leaks, contact ROTAIR customer service 5) air flow to the radiator is obstructed; remove the obstruction (contact ROTAIR assistance) 	•
<u>R</u>	GLOW- PLUG PRE- HEATING	This light remains illuminated during the pre-heating of the glow- plugs. Wait for the light to go off before cranking the engine by pushing the START button. The light should be off when the engine is running.	If the light is on for a lengthened period of time, inspect the condition of the glow-plugs and replace them if required.	•
Y	ENGINE, LOW OIL PRESSURE LIGHT	This light will illuminate if there is insufficient engine oil pressure. The light should be off when the engine is running.	 Insufficient engine oil pressure may be caused by: 1) low engine oil level 2) defective engine oil pump 3) oil not reaching the pump, blocked oil pump inlet 	•
	ALTERNATOR CHARGE LIGHT	This light illuminates if the alternator is not supplying an adequate charge back to the battery when the engine is running.	If it is illuminated during normal operation of the engine, test the battery and the alternator.	•

• Warning/Indicator lights operational on the series version

O Optional Warning/Indicator lights



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8.3 Fuses

The fuse is an electrical device which can protect a circuit or a device from excessive current. The fuse consists of a cartridge provided by a thin lead wire through which the rated current of the circuit travels; this wire is the actual fuse, with a precise amperage load capability. In case of excessive current, the filament melts and causes the circuit to open.

Fuse holder	Fuse	Description	Ampere
		Secondary fuse: device to protect against overcurrent which might damage the fuel solenoid	15 A
	0000	Operator Panel Fuse: protection device against excessive current that may damage the operator's control panel	40 A
30 M 5 10 M 5 23.8 0 4.8		Glow plug fuse: protection device against excessive current that could damage the engine	40 A



WARNING: When replacing the fuses, we recommend always utilizing the same type as indicated in this table and to follow the procedure reported in section 13.4.3 of the manual.



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9 HYDRAULIC AND PNEUMATIC SYTEMS



Figure 9-1 Hydraulic and pneumatic systems

9.1 Hydraulic lubrication system

The system includes the oil separator tank (Z), the thermostatic valve (U) on which, at the entrance, the oil filter is mounted (V) and the oil cooling radiator is attached(M). As shown in Fig. 4, the lower part of the oil separator tank (Z) acts as an oil tank, with the filter at the top which separates the oil from the air. On start up, the air pressure generated by the compressor makes the oil inside the tank flow through the tubing in the direction indicated by the arrow. A thermostatic valve (U) is positioned along the route, which according to the actual oil temperature, conveys all or part of the oil to the cooling radiator (M). More specifically, at temperatures of below 65°C (149°F), the thermostatic valve remains open and the oil in circulation is directly injected into the compressor without going through the radiator (M).

During normal operation the oil becomes heated, and when it reaches a temperature of 65°C (149°F), the thermostatic valve (U) begins to close, thereby making it necessary for part of the oil to go through the cooling radiator (M). When the oil temperature reaches 75°C (167°F), the thermostatic valve (U) closes completely, and from then on, all of the oil in circulation goes through the radiator and is thereby cooled (M).

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From the radiator (M), the oil is injected into the compressor (O). The filter (V) has an internal "by-pass" valve which permits oil circulation even if it gets blocked, in which case the oil will circulate regularly without being filtered. It is therefore necessary to replace the filter at regular intervals, as indicated in the maintenance schedule. The cooled and filtered oil thereby reaches the compressor (O), and by means of the various internal channels, it is distributed to the various parts (rotors, bearings etc.) which are thereby cooled and lubricated. From the compressor (O), the oil mixed with compressed air is sent to the oil mist separator tank (Z), inside which the separator (Y) separates the oil from the air.

We have mentioned that the oil mist separator filter (Y) separates the oil from the air; however a very small quantity of oil is still able to penetrate the inside of the filter and deposit itself into the oil mist separator tank. It is sucked through the tubing, the calibrated nozzle, and the check valve. The check valve impedes the return of oil into the oil separator filter when the machine is stopped.

WARNING: The filter needs therefore to be replaces at regular intervals, as specified in the

maintenance program.

9.2 Pneumatic system

The system includes: the compressor air filter (A), the suction regulator (B), compressor (O), oil mist separator tank (Z), oil separator filter (Y), minimum pressure and check valve (L), air valve (R), maximum pressure valve (G), and the discharge solenoid valve (P).

The compressor suction air, after having passed through the double stage filter (A), reaches the suction regulator, followed by the compressor which transmits it, together with the injected oil, into the oil mist separator tank. The oil is separated from the air. This separation process comes about by means of centrifugal spinning of the air and oil in the second stage with the use of the oil separator filter (Y). The air, which is cleansed of the oil, is routed by the minimum pressure valve (I) and only opens when the pressure in the tank reaches the pre-set value. This minimum pressure formed in the tank guarantees oil circulation even when the air valves (R) are in the fully open position.

However, it is not a good idea to use tools and equipment which excessively consume compressed air and which may cause the tank pressure to fall to below 5-5.2 bar (72.5-75psi). In fact, prolonged working conditions at/below 5 bar (72.5psi) may cause compressor overheating due to insufficient lubrication and inadequate air and oil separation, resulting in excessive lubricant consumption. The solenoid valve (P), upon stopping the machine, opens automatically, gently discharging all the compressed air still inside the system to the atmosphere. The minimum pressure valve (L) also acts as a check valve, impeding the return of compressed air coming from channels or tools connected to the machine.



WARNING: Pressure tank

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9.2.1 **AUTOMATIC ADJUSTMENT OF THE ENGINE RPM**

The system controls the diesel engine RPM as a function of the compressed air retrieved and includes:

- Max. Pressure valve (G)
- Suction adjustment valve (B)
- Accelerator control piston (E)
- With the engine running and the air valve (R) fully open, the engine RPM is at the max. value and the suction adjuster (regulator) is fully open.
- Partially close the air valve (R) to simulate a reduction in the air consumption with subsequent increase of the pressure in the tank (Z).
- When the air valve (R) is progressively closed, the pressure reaches the established adjustment value and the max. pressure valve (G) once letting the compressed air flow out and act-at the same time-on the accelerator control piston (E) and under the suction adjuster valve (B).
- Under the action of such pressure, the piston (E) proportionally decelerates the engine.
- At the same time, the suction adjustment valve (B) proportionally closes as well, thus reducing the passage of the air which is being sucked into the compressor. Consequently, with the air valve (R) closed and subsequently, without any air demand, the engine shall stabilize at the minimum RPM it was adjusted for, while the suction valve (B) of the adjuster shall move to an almost totally closed position.
- At this stage of the cycle, the suction air is at its minimum and is used to compensate for any leakages.
- The pressure gauge on the control panel shall display the value of the max. final pressure.
- When air demand is increased, the max. pressure valve (G) shall start closing again and shall be totally closed once the pressure valve lowers by approximately 1 bar (14.4psi) versus the value of the max. final pressure.
- At this stage, the compressor delivers the max. rate at the service pressure, since the internal spring of the accelerator piston (E) accelerate the engine up to the max. speed, and the suction adjustment valve is in the fully open position.
- If tools of greater consumption than the rated capacity of the compressor are used, the pressure gauge shall display a lower pressure which in any case must never be lower than 5 bar (72.5psi).
- Avoid suddenly opening the air valves; this will generate excessive stress to the separator filter with subsequent severe damage to the filter itself.







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10 RECOMMENDATIONS FOR THE APPROPRIATE USE OF THE AIR COMPRESSOR

Consult this user's and maintenance manual before starting the machinery.

10.1 Before starting

Before starting the machinery, strictly follow the instructions listed below:

- 1) Level the machine by adjusting the support foot or the wheel; no incline greater than 15° is allowed.
- 2) Check that the battery cables are connected to the battery correctly; if the cables need to be connected, use care and verify that the cable coming from the starter motor is connected to the positive pole (+) of the battery and that the ground cable is connected to the negative pole (-) of the battery.
- 3) Check the fuel level in the tank. USE DIESEL FUEL ONLY.
- 4) Check the level of the engine oil. As related to the types of lubricant and correct quantities, comply with the recommendations contained in the engine manufacturer's user's and maintenance manual included with the machinery documentation.
- 5) Check the oil level in the compressor. Stop the machine and allow it to sit for at least 5 minutes, allowing the lubricant to return to the oil mist separator tank. Before unscrewing the dipstick, level the machine, making sure that there is no pressure in the system (the pressure gauge shall indicate 0 bar/psi).
 - a) Remove and clean the dipstick Figure 10.1.1
 - b) Thoroughly screw the dipstick back in and then remove it again to verify that the lubricant level is between the two engraved marks (min. and max. level).
 - c) Top off the oil if required; the level must never exceed the max. mark.
 - d) Exclusively utilize the types of oil recommended in this user's and maintenance manual.

Use ELGi/Rotair AL-00025 AirLube





Figure 10.1.1 Checking the oil level of the compressor



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6) If the air compressor is equipped with a liquid-cooled diesel engine, check the level of the engine coolant contained in the radiator (Figure 10.1.3).



Figure 10.1.3 Checking the engine coolant in the radiator

Recommended engine radiator coolant: Green, ethylene glycol



WARNING: The radiator cap (Figure 10.1.3) must never be removed when the engine is hot; this would cause a sudden outflow of liquid which might result in severe scalding. Topping off, if required, must be done with a mixture of water and anti-freeze in the percentage indicated on the container.

10.2 Starting

Operations to be performed for a correct start-up of the machinery:

1) By turning the ignition switch (Part. 4 Figure 8.1.1) to the right in the position "ON", the panel is powered and the following warning lights come on:

Engine oil pressure warning light

This indicates whether the engine has sufficient oil pressure (warning light off) or not (warning light on).



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Alternator warning light

This indicates alternator efficiency.

Glow plug warning light

The first two warning lights are red, and when the engine has been started, they must go off.

The glow plug warning light stays on for as long as it takes to heat the glow plugs, after which it switches itself off automatically. At this point, it is possible to start the engine-compressor by the push button (Part 3, Figure 8.1.1). The starter motor is powered by the push-button which will start the diesel engine.



WARNING: Release the key at the first signs that the diesel engine is starting. Do not run any lengthened starts, and do not crank the engine for more than 10 seconds at a time. In case of a difficult start-up, repeat the maneuver with short start-ups at intervals.

- 1) Wait for a few minutes until the engine warms up. The pressure shall raise up to the max pressure of the machinery. If one or more lamps are still lit, immediately stop the engine and identify the cause.
- 2) Connect the compressed air lines to the relevant tools.
- 3) Progressively open the air valves (Letter A, Figure 10.2.1).



WARNING: DO NOT operate the compressor with the engine hood open.



Figure 10.2.1 Location of the air valves (top view)



WARNING: Do not breathe the compressed air exiting the air valves.

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10.3 During operation



The air compressor hood must be closed while machine is in operation.

During the operation, it is necessary to verify that the intake openings are free of foreign objects such as pieces of paper, plastic, etc. as these materials can create obstructions to the ventilation system.



Figure 10.3.1 Exhaust pipe



WARNING: Areas near the exhaust pipes are very hot, and exhaust gases are harmful. Avoid coming in close proximity of the exhaust system.

10.4 Stopping the engine

By turning the starting block key (Part 4, Figure 8.1.1) to the left in the "OFF" position, the pressure in the tank lowers up to 3-3.5bar (43-51psi).

As soon as the pressure reaches 3-3.5bar (43-51psi), the engine automatically stops.

10.5 After stopping the engine

- 1) If the machine has been operated in dusty environments, it will be necessary to replace the air filter and check the status of the cooling radiator; if the fins are obstructed by debris, remove the debris as needed.
- 2) Check that during the operation there is no leaking of fuel or lubricating oil inside the machine.
- 3) When possible, store the air compressor under cover.





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11 MONITORING AND TESTING OF THE MACHINE

11.1 Monitoring and testing of engine RPM



ALL TESTING AND CALIBRATION SYSTEM MINIMUMS AND MAXIMUMS MUST BE ADJUSTED BY A KNOWLEDGABLE PROFESSIONAL WHO IS TRAINED AND EQUIPPED WITH A SPECIAL TACHOMETER FOR THIS APPLICATION AND MUST WEAR EAR PROTECTION.



For all calibrations and adjustments, we highlight the following residual risks:



Presence of parts in motion. Pay attention to mechanical risks.

Pay attention to the risk burns. Presence of hot surfaces at high temperatures



11.1.1 CONTROL SYSTEM OF MAXIMUM ENGINE SPEED



The calibration of the maximum speed is set by the manufacturer. It should not be changed for any reason. Any tampering or variation of the maximum speed of rotation of the motor will cause an immediate voiding of the warranty.

11.1.2 ADJUSTING MINIMUM ENGINE RPM



Figure 11.1.1 Adjusting idle speed motor

For calibration of the idle speed of the engine RPM, a qualified maintenance technician must do the following:

- 1) Start the machine as described in Section 10.2 "Starting"
- 2) Wait for the compressor to reach the maximum pressure while the engine is at idle speed
- 3) Close all air valves (Figure 10.2.1)




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- 4) Open the hood with the engine running
- 5) Loosen the 23mm lock nut (Letter A in Figure 11.1.1)
- 6) To increase the idle speed of the engine, tighten the 18mm nut (Letter B in Figure 11.1.1)
- 7) To reduce the idle speed of the engine, loosen the 18mm nut (Letter B in Figure 11.1.1)
- 8) Measure with an optical tachometer (Letter B in Figure 11.1.2) the RPM of the harmonic balancer, focusing the optical beam on the reflective indicator (Letter A in Figure 11.1.2)
- 9) Compare the measured value with the specification in Section 2.3 (1700RPM)
- 10) Adjust RPM as described above to the value of idle speed indicated ± 2-3%
- 11) Tighten the 23 mm lock nut when the appropriate RPM is obtained (Letter A in Figure 11.1.1)
- 12) Close the hood



Figure 11.1.2 Reflective mark "A" on the harmonic balancer



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11.2 Adjusting the maximum air pressure



Figure 11.2.1 Adjusting maximum air pressure of the compressor

The maximum pneumatic pressure is calibrated during the testing phase of the machine. If the value of the maximum air pressure indicated by the pressure gauge on the control panel has changed more than $\pm 5\%$ from the value specified in Specification Section 2 of this manual, proceed as follows:

- 1) Start the machine as described in Section 10.2 "Starting"
- 2) Wait for the compressor to reach maximum pressure when the engine is at idle speed
- 3) Close all air valves (Figure 10.2.1)
- 4) Open the hood with the engine running and loosen the 22mm lock nut (Letter A in Figure 11.2.1) on the maximum pressure valve
- 5) To increase the maximum pressure, tighten the 19 mm nut (Letter B in Figure 11.2.1)
- 6) To reduce the maximum pressure, loosen the 19 mm nut (Letter B in Figure 11.2.1)
- 7) Tighten the lock nut when the appropriate pressure is obtained (Letter A in Figure 11.2.1)
- 8) Slightly open the air valve until the engine accelerates, then close the air valve. Repeat this 2-3 times to allow the settling of the pressure valve.
- 9) Check the reading on the pressure gauge located in the control panel to insure that the maximum pressure has been obtained
- 10) Compare the measured pressure with the specification in Section 2.2 and repeat Steps 5-10 if needed to obtain the correct maximum pressure max. 8.5bar/123psi.
- 11) Close the hood



WARNING: Notice that the gauge needle should move smoothly; if it doesn't, replace it. Before making any calibration to the high or low pressure, make sure that the gauge is working correctly and reliably.



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11.3 Adjusting the minimum air pressure



Figure 11.3.1 Adjusting minimum pressure pneumatic circuit

The maximum pneumatic pressure is calibrated during the testing phase of the machine. If the value of the maximum air pressure indicated by the pressure gauge on the control panel has changed more than \pm 5% from the value specified in Specification Section 2 of this manual, proceed as follows:

- 1) Start the machine as described in Section 10.2 "Starting"
- 2) Wait for the compressor to reach maximum pressure when the engine is at idle speed
- 3) Close all air valves (Letter A Figure 10.2.1)
- 4) Open the hood with the engine running and loosen the lock nut (1 in Figure 11.3.1) on the maximum pressure valve
- 5) Tighten the regulation screw (2) to increase the pressure to the desired value
- 6) Loosen the regulation screw (2) to reduce the pressure to the desired value
- 7) Tighten the lock nut (1) and close the air valves
- 8) Slowly open an air air valve (Letter A Figure 10.2.1) and close it again, repeating the process a few times to allow the settling of the valve
- 9) Close the hood



WARNING: Pressure tank

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12 VERIFICATION OF THE SAFETY VALVE OPERATION

The safety valve is located on the oil separator tank and starts working to relieve any accidental excessive pressure. The calibration of this valve is performed and verified in testing at the factory and cannot be adjusted for any reason. Its efficiency should be checked quarterly by doing the following:

- 1) Start the machine as described in Section 10.2 "Starting"
- 2) With the air valves closed and the engine at idle speed, using smooth needle-nose pliers, pull out on the pin as shown in Figure 12.2.1 and release it as soon as pressure exits the valve.





Figure 12.2.1 Testing the safety valve



WARNING: The air escaping from the valve during this operation contains small particles of oil.



WARNING: Pay attention to the danger of high-pressure liquids.



If, following the testing of the valve, the pin does not return to its normal operating position, thus preventing the valve to vent or seal properly, an immediate replacement of the valve will be necessary. Contact ROTAIR/ELGi for replacement parts.



If part replacement is necessary, it is recommended to contact ELGi, quoting the serial number of the machine.

The use of a non-ROTAIR supplied safety valve will release ROTAIR from any liability.





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13 MAINTENANCE

The machine must be receive regular periodic maintenance in order to provide safe, adequate, and uninterrupted service. Maintenance work must be performed by qualified personnel that have been properly trained to operate and service the machine. Most maintenance and service will be performed with the machine stopped and the power switched off on the electrical panel. The maintenance and service technicians must check that they have removed their tools at the end of service and before starting the machine again to avoid damage to the moving parts.

13.1 Routine maintenance

The sole objective of routine maintenance is to restore a system (or one of its components) from a state of failure or non-optimal operation to the state that it is performing as it was before the onset of the problem.

In the following chapter are listed in order of frequency all operations concerning the compressor and the engine. It will be necessary to refer to OPERATING AND MAINTENANCE, which is prepared by the manufacturer of the engine and is supplied with the machine.

13.2 Maintenance program

In this program are listed all the maintenance items and the frequency of which they must be executed on the various components of the machine. Such maintenance is essential for the proper functioning of the machine and its mechanical durability over time.





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Required Maintenance Chart D300T4F-DB	Wet O	peration	Dry O	peration
	Hours	Time	Hours	Time
Replace compressor oil filter, 099-009-S	first 50	2 weeks	first 50	2 weeks
Replace compressor oil, ELGi/Rotair AL-00025 AirLube	first 50	2 weeks	first 50	2 weeks
Checking the compressor oil level	8	Daily	8	Daily
Check engine oil level	8	Daily	8	Daily
Checking engine coolant level, use green ethylene glycol	8	Daily	8	Daily
Check fuel level and top off (if necessary)	8	Daily	8	Daily
Check for oil or fuel leakage	8	Daily	8	Daily
Check operation of indicator/warning lights	8	Daily	8	Daily
Check the readability of measuring instruments	8	Daily	8	Daily
General cleaning operations	8	Daily	8	Daily
Check for obstructions to the ventilation system	8	Daily	8	Daily
Check the air filters (engine and compressor) in severe conditions	8	Daily	8	Daily
Check the air filters (engine and compressor) under normal conditions	40	Weekly	8	Daily
Compressor air filter, Primary 162-582-S, Secondary 162-583-S				
Engine air filter, Primary 162-0085-S, Secondary 162-0084-S				
Check torque of screws and bolts	40	Weekly	40	Weekly
Check the battery electrolyte level	100	Monthly	100	Monthly
Check the torque of all screws and bolts	100	Monthly	100	Monthly
Check tightness of all pipe connections	100	Monthly	100	Monthly
Clean the oil cooler and engine radiator	250	3 months	40	weekly
Checking belt tension	250	3 months	250	3 months
Check minimum and maximum engine RPM	250	3 months	250	3 months
Check the operation of the safety valve	250	3 months	250	3 months
Check the oil recovery nozzle	250	3 months	250	3 months
Drain the fuel tank	250	3 months	250	3 months
Replace diesel fuel filter, Kohler #ED0021753180-S	500	3 months	250	3 months
Change engine oil, see engine owner's manual or Section 2.3	500	6 months	250	3 months
Change engine oil and filter, Kohler #ED0021750010-S	500	6 months	250	3 months
Replace compressor air filter, Primary 162-582-S,Secondary 162-583-S	500	6 Months	250	3 months
Replace compressor oil filter, 099-009-S	500	6 months	250	3 months
Replace compressor oil, ELGi/Rotair AL-00025 AirLube	1500	Annual	500	6 months
Replace oil mist separator filter, 157-180-S	2000	2 years	2000	1 year
Check readability of the nameplate	1000	Annually	1000	Annually



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The chart below contains long term maintenance items that the compressor will require in order to maintain maximum performance. Failure to service these parts will result in possible reduced performance and/or machine downtime. The following chart includes items that need to be replaced at the intervals indicated.

Supplemental Required Maintenance Chart D300T4F-DB

]	Frequency
Replace orifice	1 year
Replace check valve	1 year
Replace thermostatic valve	1 year
Replace fan belt	2 years
Flush radiator, replace engine coolant	2 years
Flush the fuel tank	2 years
Replace the start work valve	2 years
Replace the silent blocks	2 years
Clean oil mist separator tank	3 years
Rebuild or replace the intake valve	3 years
Replace minimum air pressure valve	3 years
Replace the accelerator piston	3 years

The ROTAIR S.P.A. disclaims any responsibility for the failure to comply with maintenance requirements in the table above.





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13.3 Torque values for screws and bolts

For the correct tightening of screws and bolts on the machine, please observe the tightening values corresponding to the class of coupling illustrated in the table below. We recommend the use of torque wrenches for tightening the screws and bolts on the machine.

Torques not binding N.m (Newton meters) Couples test sockets for hexagonal screws							/S							
These pairs are reference values for normal metric threads according to DIN ISO 261 and measures supporting heads according to DIN EN ISO 4762, DIN ISO EM 4032, DIN EN ISO 4014 and DIN 931-2, 6912, 7984 and 7990. With these values obtains an exploitation of 90% of the yield strength of the screws, on the basis of a coefficient of friction equal to 0.14 (screw new, untreated, not lubricated). Important: In extreme cases, e.g. screws lubricated with MOS2 and coupling elements cadmium-plated on both sides, the value of torque should be reduced by about 20%.						No. 2, 2A, 2B No. 1B, 308, 7	No. 4	No. 6, No. 1B, 7, 400	No. 25	No. 26 R No. 626	No. 35 A No. 35 B No. 3112	No. 894 No. 895		
W	Tigh	itening v ac		r classes to DIN 2		pling	E E	1	î	Ĩ	٦	0	H	Ÿ
8	4.6	5.6	6.9	8.8	10.9	12.9	0	8	8	a		0	8	L L
M 2	0,123	0,162	0,314	0,373	0,520	0,628	4			1,90				
M 2,2	0,196	0,265	0,510	0,598	0,843	1,010	4,5*			2,64				
M 2,5	0,284	0,373	0,726	0,863	1,206	1,451	5			3,55				
M 3	0,441	0,588	1,128	1,344	1,883	2,256	5,5			4,64		14,4		2,32
M 3,5	0,677	0,902	1,736	2,060	2,893	3,481	6*	17,6	7,4	5,92		17,6		2,96
M 4	1,000	1,344	2,599	3,040	4,315	5,148	7	25,2	11,4	9,12		25,2		4,56
M 5	1,916	2,648	5,099	6,031	8,483	10,200	8 9*	34,5 45,4	16,6 23	13,3 18,4		34,5 45,4	34,5 45,4	6,65 9,20
M 6	3,432	4,511	8,728	10,300	14,710	17,652	10	58,1	31	24,8	58,1	58,1	58,1	12,4
M 7	5,590	7,453	14,220	17,162	24,517	28,439	11 12	72,7 89,1	40,4 51,5	32,3 41,2	72,7 89,1	72,7 89,1	72,7 89,1	16,1 20,6
M 8	8,238	10,787	21,575	25,497	35,304	42,168	13 14 [*]	107 128	64,5 79,4	51,6 63,5	107 128	107 128	107 128	25,8 31,7
M 10	16,67	21,575	42,168	50,014	70,608	85,317	15 16 17	150 175 201	96,2 115 134	77,0 92,3 107	150 175 201	150 175 201	150 175 201	38,5 46,1 53,5
M 12	28,44	38,246	73,550	87,279	122,60	147,10	18 19* 20*	230 261 294	160 186 215	128 149 172	230 261 294	230 261 294	230 261 294	64,0 74,5 86,0
M 14	45,11	60,801	116,70	138,30	194,20	235,40	21 22* 23*	330 368 408	247 281 319	198 225 255	330 368 408	330 368 408	330 368 408	99,0 112 127
M 16	69,63	93,163	178,5	210,80	299,10	357,90	24 25 [*] 26 [*]	451 496 544	359 402 449	287 322 359	451 496 544	451 496 544	451 496 544	143 161 179



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13.4 Maintenance



Figure 13.4.1A Compressor air filter

Check the air filters every 100 hours of work. If the machine operates in severe conditions, especially very dusty environments, it may be necessary to check the air filters daily. The filter consists of two filtering elements.

To check or replace the filters:

- 1) Loosen the nut (Figure 13.4-1A) and remove the element of the Primary (outer, #3). Should any traces of dust be noticed on the element of the secondary (inner, #5),
- 2) Remove the nut (#4) and remove the secondary (inner) filter.

Air filter part numbers. Primary (outer) 162-582-S, Secondary (inner) 162-583-S

ENGINE AIR FILTERS

Check the air filters every 100 working hours, however should the machine operate in particularly dusty

environments it may be necessary to check the air filters daily. The filter consists of two filter cartridges, Primary (outer) and Secondary (inner).

To check or replace the filters:

- 1) Remove the cap by releasing the three hooks
- Remove the Primary and secondary filter by rotating and pulling it out. Replace with the new filters and close the cap again.





The filter element must never be washed with water or other substances, but it must be replaced after every 500 hours of work.

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13.4.2 CHECKING THE BATTERY

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- To avoid complete discharge of the battery, if the machine will not be used for more than 3 months, disconnect the negative terminal of the electrical system.
- Periodically check the battery charge and recharge it every 3 months.

Cleaning the terminals

The battery terminals (poles) must be cleaned and greased periodically. The accumulation of dirt can hinder the passage of electric current. For cleaning, it is necessary to switch off the machine, disconnect the terminals starting with the negative terminal, and clean the terminals.

Checking the clamps

Generally, the negative and positive poles of the battery are greased (eg. Pulp Vaseline or similar product) to avoid the oxidation of metals. The paste on the clamps must be periodically replaced. In the same way, check that the terminals are firmly connected to the battery poles, and if necessary, tighten them. In fact, it may occur that vibrations loosen the grip of the clamps. A mobile connection can cause malfunctions and even failures to the vehicle's electrical systems.

Checking the electrolyte (in the case of an unsealed battery)

The electrolyte must always cover the element plates. If the battery fluid is low, it may compromise its operation. In these cases, if the level of electrolyte is below the minimum level, it is necessary to have it checked by a qualified electric maintenance technician, and if necessary, provide the addition of distilled water to restore the electrolyte level. If, after refilling and charging the battery, the battery continues to discharge frequently, it must be replaced.



CAUTION: Take special care when handling battery electrolyte because it is a potentially corrosive liquid.



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13.4.3 **FUSE REPLACEMENT**

Fuse replacement should be performed when one or both fuses are damaged. To replace the fuse, proceed as follows:

- 1) Stop the machine.
- 2) Open the hood.
- 3) Open the fuse box.
- 4) Pull the fuse to be replaced with tweezers (for fuse 16 A) or remove the nuts for the 40 A fuses.
- 5) Once the fuse has been removed, observe the internal filament. This must be intact to function properly, and if it is intact, reinstall the fuse.
- 6) In the event of a open/broken fuse, replace it by choosing a fuse with identical ratings. The ratings of the fuses are described in Section 8.3 of this manual.
- 7) After inserting the new fuse in the fuse box, close the fuse box
- 8) Close the hood
- 9) Resume normal operation of the machine





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13.4.4 **CLEANING THE RADIATOR**

The oil of the compressor and the engine are cooled by a radiator which, consequently, must be kept clean so that the ventilation air can pass freely and easily through its fins. Radiator fins clogged with dust or any other debris will lead to harmful and dangerous overheating of the mechanical screw compressor, greatly jeopardizing the operation and durability of the machine. We recommend that you check the radiator fins periodically and, if necessary, clean them with compressed air or a jet of water under pressure.

13.4.5 **MIXTURE OF ENGINE COOLANT**

To determine the proper amount of antifreeze to be added to the the radiator (Figure 13.4-3), follow the mixture amounts in the table below:

T (°C / °F)	Total volume of the cooling system	Water volume	Antifreeze volume	Antifreeze percentage*
(°C / °F)	(lt - gal)	(lt - gal)	(lt - gal)	%
- 10 / 14	18 – 4.75	13.5 – 3.55	4.5 – 1.20	25%
- 15 / 5	18 – 4.75	11.7 – 3.10	6.3 – 1.65	35%
- 20 / -4	18 – 4.75	10 – 2.65	8 – 2.10	45%

Coolant recommendation: Green ethylene glycol



Figure 13.4.3 Checking the engine coolant radiator



WARNING: The radiator cap (Figure 10.1.3) must never be removed on a warm or hot engine. Doing this would cause hot coolant under pressure to exit the radiator and cause severe burns to the person(s) in the area. Refilling/filling the system must be done with a cold engine and a mixture of water and antifreeze in the correct percentages to allow for proper cooling and protection in cold climates

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13.4.6 CHECKING AND CLEANING OIL RECOVERY NOZZLE

Check and clean the oil recovery system. Should you find a leak of oil mist mixed with compressed air, operate as follows (Figure 13.4.4):

- 1) Remove the fitting located at the center of the tank (Letter Z).
- 2) Inside the fitting (Letter Z) is a nozzle (Letter U). Make sure that its calibrated hole is not blocked (blow it out with compressed air).
- 3) Reinstall the fitting.



WARNING: During normal operation of the compressor, the fitting in the pipe is transparent (Z). You will notice a certain amount of oil flow from the fitting (Z) towards the head of the compressor.



Figure 13.4.4 Oil recovery nozzle

13.4.7 DRAINING THE FUEL TANK

The draining of the fuel tank is recommended at times in an effort to remove water and contaminants that may collect in the tank during normal operation and filling. Avoid refueling with cans because these may contain traces of water which, being heavier than the diesel fuel, are at the bottom of the can and thus can be introduced into the fuel tank of the machine.



Periodically open the fuel tank drain to remove the water from the fuel tank. Failure to periodically drain the tank can allow small amounts of water to be injected into the engine.

It is also advisable to refuel at the end of the work shift to prevent the varying temperature range of the tank walls from allowing condensation to form in the fuel tank overnight.

In conjunction with draining water from the fuel tank, replacing the fuel filter at the same time can help to eliminate water from the entire fuel system.



The draining of the tank must be performed at least 30 minutes after stopping the machine to allow water to separate from the diesel fuel and settle to the bottom of the tank.





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The contaminated fuel from the tank should be disposed of properly and in accordance to the requirements of hazardous waste disposal in your area.



Remember that the contaminated fuel should not be discarded into the environment.

13.4.8 REPLACING DIESEL FUEL FILTER

For instructions regarding replacing the diesel fuel filter, engine oil, and other specific filters, refer to the owner's manual of the engine manufacturer attached to this documentation.



Fuel filter part number is Kohler # ED0021753180-S



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13.4.9 COMPRESSOR OIL FILTER REPLACEMENT

For proper compressor oil filter replacement, do the following:

- 1) Stop the machine and open the hood of the engine compartment.
- 2) Use an oil filter wrench to unscrew the filter to be replaced (A Figure 13.4.6).
- 3) Apply clean oil to the seal of the new filter.
- 4) Install the new filter and hand tighten only.
- 5) Check the compressor oil level; add oil if needed.
- 6) Start the engine and make sure that there are no oil leaks in the vicinity of the seal. If there is a leak, stop the engine and correct the cause of the leak.



Use ELGi/Rotair AL-00025 AirLube



Figure 13.4.6 Compressor oil filter



WARNING: The used oil filter contains hazardous materials and needs to be treated as hazardous waste; therefore, it must be disposed of according to the requirements for hazardous waste disposal in your area.





WARNING: Replace the compressor oil filter after 500 hours or after a long storage period (9-12 months), whichever comes first.

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13.4.10 REPLACING COMPRESSOR OIL

The compressor oil change must be performed taking into consideration the working conditions in which the machine operates (dusty, very high temperatures, etc.). The oil change intervals must never exceed 1,500 hours of work. In conjunction with the replacement of the oil, the corresponding filter must also be replaced (Section 10.9).

RECOMMENDED OIL	BRAND
Use ELGi/Rotair AL-00025 AirLube	ELGi



Use ELGi/Rotair AL-00025 AirLube





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13.4-11 CHECKING THE OIL MIST SEPARATOR FILTER

The oil mist separator filter is expected to last for around 2000 hours of work but is closely related to a careful observance of all maintenance requirements given in this manual. An excessively low oil level, not following recommended oil change intervals, and using the machine with the cooling radiator clogged may cause serious and irreparable deterioration of the filters.

Therefore, if after checking and cleaning the oil recovery nozzle (operation described in Section 13.4-7) and making sure of the proper oil level in the tank, there are still traces of oil in the compressed air, the oil mist separator filter will need to be replaced.

To determine the degree of restriction of the oil mist separator filter, proceed as follows:

- 1) Install a pressure gauge upstream of the separator and make sure that the engine is ready to be started.
- 2) Start the engine.
- 3) Partially open the air valve until the pressure gauge on the control panel shows the maximum operating pressure.
- 4) Read the value of the pressure gauge located upstream of the oil mist separator filter and compare the two gauge readings. If there is a difference of more than 1 bar/14.5psi, replace the separator filter. The oil separator filter must never be washed with water.



WARNING: Pressure tank





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13.4.12 **REPLACEMENT OF THE OIL SEPARATOR FILTER**

- 1. The operation must be undertaken with machine off and no pressure in the oil separator tank.
- 2. Disconnect all the pipes/tubing from the connections positioned on the cover of the oil mist separator tank, marking them so there are no mistakes on re-assembly.
- 3. Loosen the screws (Fig. 13.4.7 part A) and remove the cover (B).
- 4. Remove the filtering element (D) together with the seals (C) and (E).
- 5. Assemble the new seal (E) in the relative slot which has been previously cleaned. Check that a metallic staple has been clipped to the seal in order to avoid the insulation of the filter and the accumulation of static electricity. Otherwise, there is a risk of the separator filter catching fire.
- 6. Install the new separator element, correctly positioning it into the relative slot.
- 7. Assemble the second seal (C) with the same precautions as above.
- 8. Reassemble the cover (B) in the pre-assembly position.
- 9. Tighten the bolts (A) with a tightening torque of 80 Nm/59 ft-lbs.
- 10.Re-connect all the pipes/tubing to the respective fittings.
- 11.Start the engine and check that there is no leakage between the cover and the tank or at any connections.
- 12.Allow the machine to operate for 10-15 minutes with closed air valves.
- 13. Stop the engine and with the tank depressurized to 0 bar/0 psi, re-check the torque of the cover bolts (A).



Filter Part #157-180-S, Gasket 023-0744-S

Figure 13.4.7 Oil mist separator filter



WARNING: Pressure tank

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13.4.13 ENGINE CONTROL AND MAINTENANCE



As for the controls of the engine and replacing air filters, diesel filters, fan belt, engine oil, and other specific controls, refer to the owner's manual of the engine manufacturer attached to this documentation.

14 SPARE PARTS



To order any parts, contact your authorized ELGi service center.

ELGi Portable Compressors 4610 Entrance Drive Suite A Charlotte, NC 28273 Direct (704) 523-4123 www.elgi.us/portable-compressors www.Portableservice@elgi.com www.Portablesales@elgi.com



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FAULTS AND TROUBLESHOOTING 15

Abnormal	Cause	Solution
	Battery discharged or defective	Recharge and replace if necessary
	Terminals of the battery cables corroded or loose	Clean or tighten the connections
	No fuel	Top off the fuel in the diesel tank
	Faulty fuel soleoid	Seek customer service by the manufacturer of the engine
	Air in the fuel pipe	Locate the leak by carefully inspecting all fuel lines and make repairs as necessary
The engine	Injection pump defective	Seek customer service support from the engine manufacturer
will not start	Temperature sensors defective	 They are located at: Cylinder head Output of air compressor Oil mist separator tank One at a time, unplug the wire from each sensor to identify the defective sensor and then replace it. The temperature light on the control panel should go off when the faulty sensor is disconnected.
	Starter defective injectors failures	Seek customer service support from the engine manufacturer
When opening the air valves, the engine does not accelerate	Maximum pressure valve defective	Remove the maximum pressure valve spring and conical seat. Inspect the valve and seat. If a defect cannot be found and repaired, the valve must be replaced.
The engine speeds up but no air comes out	Minimum pressure control valve blocked	Disassemble and check that the piston is free to move. Check that the spring is intact. If the defect cannot be repaired, the valve must be replaced. Reassemble and adjust the minimum pressure, following the instructions in Section 11.3.
The machine stops suddenly and can only be restarted after a few minutes of waiting	A temperature sensor detects a high temperature and consequently stops the machine	Disconnect one sensor at a time and locate the sensor that caused the engine to stop. If that sensor is on the engine, check the oil level, the voltage, and the condition of the alternator belt. For water-cooled engines, check the coolant level. If the faulty sensor was the sensor on the compressor control, check the level of oil in the tank and fill as needed.



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Abnormal	Cause	Solution
The engine does not reach the	The spring in the accelerator piston is broken or needs to be	Check the tension of the accelerator piston spring (Section 11.1.2)
and the compressor	adjusted. Engine speed is lower than expected.	Have the diesel injection pump of the engine inspected by a qualified personnel
not keep up with the work load.	Lingine speed is lower than expected.	Drain the fuel tank and replace the fuel filter (Section 13.4.9)
	Minimum working pressure too low	Adjust it according to the instructions of Section 11.3
	Too much oil in the tank	Adjust to the correct level (Section 13.4)
Oil leaking from the air valves	The machine works in non- horizontal position	Ensure position the machine level
	Nozzle clogged oil recovery	See Section 13.4.8
	Defective oil mist separator filter	See Section 13.4.13



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16 DISPOSAL, ELIMINATION, DISPOSAL OF THE MACHINE

16.1 Instructions for dismantling

To dismantle the machine safely, proceed as follows:

- 1) Place the machine in a large area and make sure it is turned off.
- 2) Drain all liquids from all the tanks, including engine oil, fuel, coolant, and hydraulic oil and store them in safety containers. For disposal of these types of waste, follow the next paragraph.
- 3) Loosen the screws of the body panels and remove all covers.
- 4) Remove all the components of the machine one by one, dividing them according to their material composition. The various components of the machine have to be disposed of based on the type of waste they contain.

The following describes the different types of waste that can be generated during the life of the machine:

- 1) Waste motor oil
- 2) Waste hydraulic oil
- 3) Engine coolant
- 4) Diesel fuel
- 5) Electrolyte from the battery
- 6) Rags or paper impregnated with solvents or other substances used to clean various parts of the machine

17 ELIMINATING THE MACHINE

The operations of destruction and disposal must be carried out in a safe condition by a qualified specialist and after carefully reading and incorporating the recommendations and instructions provided in this section of the manual of use and maintenance and consulting the safety data sheets relating to substances in the machine mentioned in the previous chapter.

Once you reach the end of the mechanical life of the compressor, it has to be taken out of service so that it cannot be used for other purposes.





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18 WASTE MANAGEMENT



The withdrawal of special waste and/or hazardous materials should be entrusted with the written contract to authorized firms, and those who physically transport and handle the waste must be in possession of the required authorizations. The haulers authorized to accept the waste must be authorized by the local waste management authorities.

18.1 Special waste

Parts or fluids are considered a hazardous waste from industrial, agricultural, crafts, commercial, and service, by quality or quantity, are declared similar to municipal waste. These also include machinery, equipment, and metal parts of deteriorated and obsolete engines.



18.2 Toxic and hazardous waste



Items considered to be hazardous or toxic include all waste containing or contaminated by the substances listed in Directives 75/442 / CEE, 76/403 / CEE and 768/319 / CEE or other regulations in the countries of use and installation of the machines.



18.3 Temporary storage



Hazardous or toxic waste is waste containing or contaminated by substances listed in Directives 75/442 / CEE, 76/403 / CEE and 768/319 / CEE or other regulations in the countries of use and installation of the machines. Temporary storage of toxic and hazardous waste is allowed according to the expected disposal methods of waste by treatment and/or final disposal. In any case, observe the mandatory laws of the country of the user in the field of environmental protection.

18.4 Features of the containers

Stationary and mobile containers designed to contain toxic and hazardous waste must possess adequate strength requirements in relation to the chemical-physical properties and to its hazardous specifications of the waste contained. The containers in which dangerous or harmful products are stored must be labeled to disclose the nature of their content and carry signs and markings as required by local laws.



18.5 Registration requirements

In accordance with the EU Directive 75/439 / CEE on the disposal of waste oil, the records of loading/unloading must be kept by all companies that produce hazardous waste or hazardous toxins from industrial use (in each case the users should refer to the regulations implementing that Directive in the country of installation and use of the machines).







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PARTS LIST AIR COMPRESSOR D300T4F-DB





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PARTS LEGEND: Clampings to the frame

Tab. 01.1

REF	NA	ME	CODE	QUANTITY
1	Chassis	Chassis		1
2	Muffler		042-0851830-S	1
3	Muffler collector		119-07450-S	1
4	Schnorr washer d.8		015-251-S	11
5	Copper washer (1/2")		015-012-S	2
6	Iron plug (½")		106-125-S	2
7	Seal for muffler d.40 th5		023-077-S	4
8	Lock without hole		128-006-S	1
9	Lock (possible with padlock		128-0065-S	1
10	Hex head screw . M6x20		132-063-S	4
11	Diaphgragm fairlead		239-021-S	2
12	Large head screw M6x16		243-009-S	4
13	Control panel hinge		007-029-S	1
14	Plexiglass door		057-0203-S	1
15	Large head screw 4x10		243-088-S	3
16	Right hinge		007-022-S	1
17	Left hinge		007-023-S	1
18	Flat washer d. 13		015-047-S	2
19	Hexagonal head screw M.12x30 UNI 5739		132-192-S	2
20	Diaphgragm fairlead		239-048-S	1
21	Plexiglass hinge protection blade		120-219402-S	1
22	Flat washer 8x24x2 UNI6593		015-031-S	4
23	Tropicalized air radiator closing panel		124-3010-S	1
24	Large head screw M6x16		243-009-S	6
25	Gasoil tank	Up to serial No. C39748	201-027332-S	1
20	Gasoil tank	From serial No. C39749	201-02733201-S	1
26	Copper washer (1")		015-018-S	1
27	Iron plug (1")		106-135-S	1
28	Hex head screw M8x25 UNI 573	Hex head screw M8x25 UNI 5739		11





Air compressor – D300T4F-DB

PARTS LEGEND: Radiator - Fancover

Tab. 02.1

REF	NAME	CODE	QUANTITY
1	Radiator	011-09650-S	1
2	Radiator support	049-02080-S	1
3	Fan cover closing panel	124-300-S	1
4	Hex head screw . M6x20	132-063-S	12
5	Fancover	001-153600-S	1
6	Fairlead	239-016-S	1
7	Right fan protection grid	124-267522-S	1
8	Left fan protection grid	124-267524-S	1
9	Upper fan protection grid	124-267520-S	1
10	Expansion tank	201-018150-S	1
11	Expansion tank support	010-34500-S	1
12	Hex head screw . M8x20 UNI 5739	132-101-S	8
13	Schnorr washer d.8	015-251-S	6
14	Flat washer 8x24x2 UNI6593	015-031-S	22
15	Self locking nut M8 UNI 7473	137-040-S	6
16	Flat washer 6x24x2 UNI6593	015-038-S	16
17	Washer d.6	015-250-S	18
18	Cable fastener clamp	149-220-S	1





Air compressor – D300T4F-DB

PARTS LEGEND: Radiator - Fancover

Tab. 02.2

REF	NAME	CODE	QUANTITY
1	Chassis	038-10340-S	1
2	Chassis reinforcement plate	208-3133-S	1
3	Oil filter	099-009-S	1
4	By-pass valve assembly	024-01152-F	1
5	Copper washer (1")	015-018-S	2
6	90° fitting M+M (1")	148-2987-S	1
7	Double screw (1")	187-070-S	1
8	Flat washer 8x24x2 UNI6593	015-031-S	4
9	Hex nut M6 UNI 5587	135-030-S	4
10	Flat washer 6x24x2 UNI6593	015-038-S	4
11	Washer d.6	015-250-S	4
12	Hex head screw M8x25 UNI 5739	132-102-S	4
13	Silent block	061-019800-S	4
14	Hexagonal head screw M10x30 UNI 5739	132-143-S	4
15	Schnorr washer d.10	015-252-S	4
16	Flat washer 10.2x21x2	015-032-S	4





Air compressor – D300T4F-DB

PARTS LEGEND: D300T4F - By-pass block - Expansion tank

Tab. 03

REF	NAME	CODE	QUANTITY
1	Expansion tank	201-018150-S	1
2	Hex head screw . M8x20 UNI 5739	132-101-S	4
3	Flat washer 8x24x2 UNI6593	015-031-S	4
4	Schnorr washer d.8	015-251-S	4
5	Expansion tank support	010-34500-S	1
6	Pipe d. 25x34	089-009.5-S	1
7	Anti-oil pipe for fuel 15x8	089-120-S	3
8	Pipe clamp 10x16	149-007-S	3
9	M fitting (1/4") d.8	148-198.2-S	2
10	Pipe clamp	149-305-S	1
11	OR seal	023-0281-S	2
12	OR seal	023-1162-S	3
13	Double screw	187-003-S	1
14	By-pass big body	053-05662-S	1
15	Copper washer (1/8")	015-005-S	2
16	Self-locking nut M10	137-050-S	1
17	Hex socket head cap screw M6x120	133-120-S	4
18	Hex socket head cap screw M10x25	133-182-S	1
19	Spring	043-053-S	1
20	Big by-pass valve spacer	009-1495-S	1
21	By-pass thermostat	103-015-S	1
22	Plug for big by-pass valve	106-411-S	1
23	Screw T.S.E.I.M M6x16	146-092-S	4





Air compressor – D300T4F-DB

PARTS LEGEND: Separator tank

Tab. 04

REF	NAME	CODE	QUANTITY
1	Hexagonal head screw M14x35x1,5 UNI 5739	132-2435-S	8
2	Washer Diam. 15 x 28 x 2,5	015-036-S	8
3	Pressure regulation valve	024-032.1-F	1
4	Copper washer (¹ / ₂ ")	015-012-S	1
5	Fitting 90' (1/4") for pipe d. 6	148-090-S	1
6	S.T screw (1/8")	218-001-S	1
7	Separator tank closing flange	004-0635-S	1
8	Separator filter	157-180-S	1
9	Oil filter support bush	223-506-S	1
10	Filter d.14x2	099-225-S	1
11	S.T screw M.6x10	218-1405-S	1
12	Spacer 20 D. 1/8"	009-014-S	1
13	Solenoid valve D.1/8 12V	160-052-S	1
14	Copper washer (1/8")	015-005-S	1
15	Reduction 3/8"M to 1/8"F	190-021-S	1
16	T Fitting (3/8")	148-282.5-S	1
17	Copper washer d.int. 17x22x1.5 (3/8")	015-010-S	2
18	Reduction M12x1.75 female to 3/8"M	190-027-S	1
19	Oil pressure switch 1,4bar	154-030-S	1
20	Double screw 3/8" cil a 3/8" conical	187-0252-S	1
21	Minimum pressure valve assembly	024-03111-F	1
22	Copper washer (1 1/2")	015-019.1-S	1
23	Double screw (1 ¼" a 1 ½")	187-094-S	1
24	Double screw con+cil (1 1/2")	187-0906-S	2
25	Short radius elbow M+F (1 1/2")	111-061-S	1
26	Double screw (³ / ₄ " a 1") foro 19.1	187-065-S	1
27	Extension 16x1.5F – ¼ M L=34	189-350-S	1
28	Copper washer (¹ / ₄ ")	015-007-S	1
29	Copper washer (d. 16.2x22x1.5)	015-009-S	3
30	Iron plug (M16x1.5)	106-100-S	3
	Short radius elbow M $\frac{1}{2}$ + F $\frac{3}{4}$	111-035-S	
31	Short radius elbow M + F (3/4")	111-040-S	1
32	Separator tank 43 It ASME	037-0345-S	1
33	Copper washer (³ / ₄ ")	015-015-S	1
34	Iron plug (³ / ₄ ")	106-130-S	1
35	Clamping ring	214-004.5-S	1
36	Oil level check	059-029-S	1
37	Oil level rod	086-026-S	1
38	OR seal CC2-4175	023-047-S	1
39	Oil level rod plug	106-010-S	1
40	Safety valve ASME	033-059-S	1
41	Extension M+F ½" (for ASME tank)	189-007-S	1
42	Separator tank seal	023-0744-S	1




Air compressor – D300T4F-DB

PARTS LEGEND: Engine

FROM SERIAL NO. C42954			
REF	NAME	CODE	QUANTITY
1	Engine	165-4280-S	1
2	Fly-wheel housing	020-1010-S	1
3	Hoisting hook	017-0438220-S	1
4	Hoisting hook spacer	009-318550-S	2
5	KTR Engine joint	006-10811-S	1
6	R Engine support	039-112932-S	1
7	Fan	083-14143-S	1
8	L Engine support	039-112930-S	1
9	Copper washer (¹ / ₂ ")	015-012-S	1
10	Double screw ($\frac{1}{2}$ " – M22x1.5)	187-014-S	1
11	Hex head screw 5/16-18	132-70180-S	8
12	Silent block	061-02375-S	1
13	Silent block	061-02470-S	1
14	Hex socket head cap screw M10x40 UNI 5931	133-185-S	4
15	Elastic washers d.12	139-060-S	14
16	Fan support	028-06561-S	1
17	Washer d.6	015-250-S	4
18	Washer d. 6.6x18x2	015-029-S	4
19	Hexagonal head screw 3/8-16 UNC L=1"	132-701-S	12
20	Schnorr washer d.12	015-252-S	12
21	Hex head screw M10x75 UNI 5739	132-152-S	2
22	Schnorr washer d.10	015-252-S	2
23	Washer d. 10x40x2.5	015-037-S	2
24	Schnorr washer d.8	015-251-S	8
25	Hex head screw . M6x20	132-063-S	4
26	Hex head screw M12x95 screw	132-205-S	8





Air compressor – D300T4F-DB

PARTS LEGEND: Engine

Tab. 05.1

	UP TO SERIAL No. C42953			
REF	NAME	CODE	QUANTITY	
1	Engine	165-4280-S	1	
2	Fly-wheel housing (Up to serial No.	020-10031-S	1	
3	Left hoisting hook (Up to serial No.	017-0438015-S	1	
4	Right hoisting hook (Up to serial No.	017-0438215-S	1	
5	KTR Engine joint	006-10810-S	1	
6	R Engine support	039-112932-S	1	
7	Fan	083-14143-S	1	
8	L Engine support	039-112930-S	1	
9	Copper washer (½")	015-012-S	1	
10	Double screw ($\frac{1}{2}$ – M22x1.5)	187-014-S	1	
11	Hex head screw 5/16-18	132-70180-S	8	
12	Silent block	061-0233-S	1	
13	Silent block	061-0243-S	1	
14	Hex socket head cap screw M10x40 UNI 5931	133-185-S	4	
15	Elastic washers d.12	139-060-S	6	
16	Fan support	028-06561-S	1	
17	Hex head screw M12x40 screw	132-194-S	15	
18	Self-locking nut M12	137-060-S	9	
19	Hexagonal head screw 3/8-16 UNC L=1"	132-701-S	12	
20	Schnorr washer d.12	015-254-S	12	
21	Hex head screw M10x75 UNI 5739	132-152-S	2	
22	Schnorr washer d.10	015-252-S	2	
23	Washer d. 10x40x2.5	015-037-S	2	
24	Schnorr washer d.8	015-251-S	8	
25	Hex head screw . M6x20	132-063-S	4	
26	Washer d.6	015-250-S	4	
27	Washer d. 6.6x18x2	015-029-S	4	





Air compressor – D300T4F-DB

PARTS LEGEND: Air end – Acc.Piston

Tab. 05.2

REF	NAME	CODE	QUANTITY
1	Air end assembly (From Serial No. C42954)	024-03291596-F	1
2	Regulator assembly (Up to Serial No. C42954)	024-130-F	1
2	Regulator assembly (From Serial No. C42955)	024-1302-F	1
3	KTR Compressor joint	006-10813-S	1
4	"L" air end support	039-1153-S	1
5	Air end support	027-07755-S	1
6	Compressor thermo contact 125°	103-0125-S	1
7	Copper washer (³ / ₄ ")	015-015-S	1
8	Double screw (³ / ₄ " a 1") foro 19.1	187-065-S	1
9	Washer	015-090510-S	1
10	Silent block	061-02375-S	1
11	Silent block	061-02470-S	1
12	Elastic washers d. 16	139-080-S	4
40	Hex socket head cap screw M16x 35 (Up to Serial No. C42954)	133-332-S	4
13	Hex socket head cap screw M16x 40 (From Serial No. C42955)	133-333-S	4
14	Self-locking nut M12	137-060-S	2
15	Hex head screw M10x75 UNI 5739	132-152-S	2
16	Flat washer d.10x40x2.5	015-037-S	2
17	Self-locking nut M10	137-050-S	2
18	Hex head screw M12x40	132-194-S	2
19	Flat washer d.12,5x40x3	015-0405-S	2
20	Schnorr washer d.10	015-252-S	2
21	Accelerator piston support	010-10950-S	1
22	Accelerator piston Kit	044-0040523-S	1
23	Accelerator signal transducer	205-0502-S	1
24	Accelerator piston fork	196-010-S	1
25	Hex nut M6 UNI 5589	135-031-S	1
26	Hex head screw M8x25 UNI 5739	132-102-S	2
27	Washer d.6	015-250-S	2
28	Flat washer 8x24x2 UNI6593	015-031-S	2
29	Hex nut M6 UNI 7473	137-030-S	2
30	Washer d. 6.6x18x2	015-029-S	2
31	Hex head screw screw M6x25 UNI 5739	132-065-S	2
32	Hexagonal head screw M8x30 UNI 5739	132-104-S	1
33	Flat washer 8,4x17x1,5 UNI 6592	015-030-S	1
34	Self locking nut M8 UNI 7473	137-040-S	1
35	Rubber washer	015-051-S	2
36	Double screw $(2^{"} - 2^{"})$	187-100-S	1
37	Delivery clamping flange	004-047150-S	1
38	OR seal 3206	023-067-S	1
39		146-301-S	4
40	Hexagon socket countersunk head 16x35 UNI 5933	004-204250-S	4
40	Flange OR seal 4725	023-065-S	1





Air compressor – D300T4F-DB

PARTS LEGEND: Air end – Acc.Piston

Tab. 05.2.1

UP TO SERIAL No. C42953			
REF	NAME	CODE	QUANTITY
1	Air end assembly	024-0971-F	1
2	Regulator assembly	024-130-F	1
3	KTR Compressor joint	006-10812-S	1
4	"L" air end support	039-1153-S	1
5	Air end support	027-07754-S	1
6	Compressor thermo contact 125°	103-0125-S	1
7	Copper washer (¾")	015-015-S	1
8	Double screw (¾" a 1") foro 19.1	187-065-S	1
9	Fly-wheel housing	020-10031-S	1
10	Silent block	061-0233-S	1
11	Silent block	061-0243-S	1
12	Elastic washers d. 16	139-080-S	4
13	Hex socket head cap screw M16x 40	133-333-S	4
14	Self-locking nut M12	137-060-S	2
15	Hex head screw M10x75 UNI 5739	132-152-S	2
16	Flat washer d.10x40x2.5	015-037-S	2
17	Self-locking nut M10	137-050-S	2
18	Hex head screw M12x40	132-194-S	2
19	Flat washer d.12,5x40x3	015-0405-S	2
20	Schnorr washer d.10	015-252-S	2
21	Accelerator piston support	010-10950-S	1
22	Accelerator piston Kit	044-0040523-S	1
23	Accelerator signal transducer	205-0502-S	1
24	Accelerator piston fork	196-010-S	1
25	Hex nut M6 UNI 5589	135-031-S	1
26	Hex head screw M8x25 UNI 5739	132-102-S	2
27	Washer d.6	015-250-S	2
28	Flat washer 8x24x2 UNI6593	015-031-S	2
29	Hex nut M6 UNI 7473	137-030-S	2
30	Washer d. 6.6x18x2	015-029-S	2
31	Hex head screw screw M6x25 UNI 5739	132-065-S	2
32	Hexagonal head screw M8x30 UNI 5739	132-104-S	1
33	Flat washer 8,4x17x1,5 UNI 6592	015-030-S	1
34	Self locking nut M8 UNI 7473	137-040-S	1





Air compressor – D300T4F-DB

PARTS LEGEND: Clampings to the chassis

1 Battery 174-040-S 1 2 Positive battery cable L=1270 252-054-S 1 3 Negative battery cable L=600 252-041-S 1 4 Chassis 038-10340-S 1 5 Intercooler pipe support 010-34504-S 1 6 Battery clamp 115-010-S 1 7 Silent block (Up to Serial No.C43143) 061-0243-S 2 8 Silent block (Up to Serial No.C43143) 061-0237-S 2 8 Silent block (From Serial No.C43143) 061-0237-S 2 9 Fuses box support blade 120-21977-S 1 10 Hex head screw M6x20 132-063-S 4 11 Flat washer d.10x40x2.5 015-037-S 2 12 Self-locking nut M10 137-050-S 2 13 Intercooler pipe support clamping section 120-396500-S 1 14 Hex head screw M8x30 132-103-S 8 15 Flat washer 8,4x17x1,5 UNI 6592 015-031-S 8 <th>REF</th> <th>NAME</th> <th>CODE</th> <th>QUANTITY</th>	REF	NAME	CODE	QUANTITY
3 Negative battery cable L=600 252-041-S 1 4 Chassis 038-10340-S 1 5 Intercooler pipe support 010-34504-S 1 6 Battery clamp 115-010-S 1 7 Silent block (Up to Serial No.C43143) 061-02470-S 2 8 Silent block (From Serial No.C43143) 061-0237S-S 2 9 Fuses box support blade 120-21977-S 1 10 Hex head screw M6x20 132-063-S 4 11 Flat washer d.10x40x2.5 015-037-S 2 13 Intercooler pipe support clamping section 120-396500-S 1 14 Hex head screw M8x30 132-103-S 2 15 Flat washer 8,4x17x1,5 UNI 6592 015-031-S 8 16 Flat washer 4.8 015-251-S 8 17 Schnorr washer d.8 015-251-S 8 18 Hex nut M8 UNI 5587 132-004-S 8 19 Separator tank sasembly 024-61656-S 1	1	Battery	174-040-S	1
4 Chassis 038-10340-S 1 5 Intercooler pipe support 010-34504-S 1 6 Battery clamp 115-010-S 1 7 Silent block (Up to Serial No.C43143) 061-0243-S 2 8 Silent block (Up to Serial No.C43144) 061-0233-S 2 8 Silent block (Up to Serial No.C43144) 061-0233-S 2 9 Fuses box support blade 120-21977-S 1 10 Hex head screw M6x20 132-063-S 4 11 Flat washer d.10x40x2.5 015-037-S 2 12 Self-locking nut M10 137-050-S 2 13 Intercooler pipe support clamping section 120-396500-S 1 14 Hex head screw M8x30 132-103-S 2 15 Flat washer 8,4x17x1,5 UNI 6592 015-031-S 8 16 Flat washer 0.8 015-251-S 8 17 Schnorr washer d.8 015-251-S 8 18 Hex nut M8 UNI 5587 135-040-S 8 <t< td=""><td>2</td><td>Positive battery cable L=1270</td><td>252-054-S</td><td>1</td></t<>	2	Positive battery cable L=1270	252-054-S	1
5 Intercooler pipe support 010-34504-S 1 6 Battery clamp 115-010-S 1 7 Silent block (Up to Serial No.C43143) 061-0243-S 2 8 Silent block (From Serial No.C43144) 061-0243-S 2 8 Silent block (From Serial No.C43143) 061-0233-S 2 9 Fuses box support blade 120-21977-S 1 10 Hex head screw M6x20 132-063-S 4 11 Flat washer d.10x40x2.5 015-037-S 2 12 Self-locking nut M10 137-050-S 2 13 Intercooler pipe support clamping section 120-396500-S 1 14 Hex head screw M8x30 132-103-S 2 15 Flat washer 8.4x17x1,5 UNI 6592 015-031-S 8 16 Flat washer d.8 015-251-S 8 17 Schnorr washer d.8 015-251-S 8 18 Hex nut M8 UNI 5587 135-040-S 8 19 Separator tank assembly 024-61656-S 1	3	Negative battery cable L=600	252-041-S	1
6 Battery clamp 115-010-S 1 7 Silent block (Up to Serial No.C43143) 061-0243-S 2 8 Silent block (From Serial No.C43144) 061-0237-S 2 8 Silent block (Up to Serial No.C43143) 061-0237-S 2 9 Fuses box support blade 120-21977-S 1 10 Hex head screw M6x20 132-063-S 4 11 Flat washer d.10x40x2.5 015-037-S 2 12 Self-locking nut M10 137-050-S 2 13 Intercooler pipe support clamping section 120-396500-S 1 14 Hex head screw M8x30 132-103-S 2 15 Flat washer 8,4x17x1,5 UNI 6592 015-030-S 8 16 Flat washer 8,4x17x1,5 UNI 6592 015-031-S 8 17 Schnorr washer d.8 015-251-S 8 18 Hex nut M8 UNI 5587 135-040-S 8 19 Separator tank assembly 024-61656-S 1 20 Washer d.6 015-250-S 4	4	Chassis	038-10340-S	1
Silent block (Up to Serial No.C43143) Off-0243-S 2 3 Silent block (From Serial No.C43143) 061-0243-S 2 8 Silent block (Up to Serial No.C43143) 061-0233-S 2 9 Fuses box support blade 120-21977-S 1 10 Hex head screw M6x20 132-063-S 4 11 Flat washer d.10x40x2.5 015-037-S 2 12 Self-locking nut M10 137-050-S 2 13 Intercooler pipe support clamping section 120-396500-S 1 14 Hex head screw M8x30 132-103-S 2 15 Flat washer 8,4x17x1,5 UNI 6592 015-030-S 8 16 Flat washer 4.8 015-251-S 8 17 Schnorr washer d.8 015-251-S 8 18 Hex nut M8 UNI 5587 135-040-S 8 19 Separator tank support 010-070501-S 1 20 Washer d.6 015-250-S 4 21 Separator tank support 01010-070501-S 1 2	5	Intercooler pipe support	010-34504-S	1
7 Distribution (p) 061-02470-S 2 8 Silent block (From Serial No.C43143) 061-0233-S 2 9 Fuses box support blade 120-21977-S 1 10 Hex head screw M6x20 132-063-S 4 11 Flat washer d.10x40x2.5 015-037-S 2 12 Self-locking nut M10 137-050-S 2 13 Intercooler pipe support clamping section 120-396500-S 1 14 Hex head screw M8x30 132-103-S 2 15 Flat washer 8,4x17x1,5 UNI 6592 015-031-S 8 16 Flat washer 8,4x17x1,5 UNI 6592 015-031-S 8 17 Schnorr washer d.8 015-251-S 8 18 Hex nut M8 UNI 5587 135-040-S 8 19 Separator tank assembly 024-61656-S 1 20 Washer d.6 015-250-S 4 21 Separator tank support 010-070501-S 1 22 Silent block 061-028-S 4	6	Battery clamp	115-010-S	1
Silent block (From Serial No.C43144) 061-02470-S 2 8 Silent block (Up to Serial No.C43143) 061-0233-S 2 9 Fuses box support blade 120-21977-S 1 10 Hex head screw M6x20 132-063-S 4 11 Flat washer d.10x40x2.5 015-037-S 2 12 Self-locking nut M10 137-050-S 2 13 Intercooler pipe support clamping section 120-396500-S 1 14 Hex head screw M8x30 132-103-S 2 15 Flat washer 8,4x17x1,5 UNI 6592 015-031-S 8 16 Flat washer 8,4x17x1,5 UNI 6592 015-031-S 8 17 Schnorr washer d.8 015-251-S 8 18 Hex nut M8 UNI 5587 135-040-S 8 19 Separator tank assembly 024-61656-S 1 20 Washer d.6 015-251-S 4 21 Separator tank support 010-070501-S 1 22 Silent block 061-028-S 4 <t< td=""><td>7</td><td>Silent block (Up to Serial No.C43143)</td><td>061-0243-S</td><td>2</td></t<>	7	Silent block (Up to Serial No.C43143)	061-0243-S	2
8 District (From Serial No.C43144) 061-02375-S 2 9 Fuses box support blade 120-21977-S 1 10 Hex head screw M6x20 132-063-S 4 11 Flat washer d. 10x40x2.5 015-037-S 2 12 Self-locking nut M10 137-050-S 2 13 Intercooler pipe support clamping section 120-396500-S 1 14 Hex head screw M8x30 132-103-S 2 15 Flat washer 8,4x17x1,5 UNI 6592 015-031-S 8 16 Flat washer 8x24x2 UNI6593 015-031-S 8 17 Schnorr washer d.8 015-251-S 8 18 Hex nut M8 UNI 5587 135-040-S 8 19 Separator tank assembly 024-61656-S 1 20 Washer d.6 015-250-S 4 21 Separator tank support 010-070501-S 1 22 Silent block 061-028-S 4 23 Hexagonal head screw M8x30 UNI 5739 132-104-S 2	7	Silent block (From Serial No.C43144)	061-02470-S	2
Silent block (From Serial No.C43144) 061-02375-S 2 9 Fuses box support blade 120-21977-S 1 10 Hex head screw M6x20 132-063-S 4 11 Flat washer d.10x40x2.5 015-037-S 2 12 Self-locking nut M10 137-050-S 2 13 Intercooler pipe support clamping section 120-396500-S 1 14 Hex head screw M8x30 132-103-S 2 15 Flat washer 8,4x17x1,5 UNI 6592 015-030-S 8 16 Flat washer 8x24x2 UNI6593 015-031-S 8 17 Schnorr washer d.8 015-251-S 8 18 Hex nut M8 UNI 5587 135-040-S 8 19 Separator tank assembly 024-61656-S 1 20 Washer d.6 015-250-S 4 21 Separator tank support 010-070501-S 1 22 Silent block 061-028-S 4 23 Hexagonal head screw M8x30 UNI 5739 132-104-S 2 24 <td>0</td> <td>Silent block (Up to Serial No.C43143)</td> <td>061-0233-S</td> <td>2</td>	0	Silent block (Up to Serial No.C43143)	061-0233-S	2
10 Hex bed sore M6x20 132-063-S 4 11 Flat washer d.10x40x2.5 015-037-S 2 12 Self-locking nut M10 137-050-S 2 13 Intercooler pipe support clamping section 120-396500-S 1 14 Hex head screw M8x30 132-103-S 2 15 Flat washer 8,4x17x1,5 UNI 6592 015-030-S 8 16 Flat washer 8x24x2 UNI6593 015-031-S 8 17 Schnorr washer d.8 015-251-S 8 18 Hex nut M8 UNI 5587 135-040-S 8 19 Separator tank assembly 024-61656-S 1 20 Washer d.6 015-250-S 4 21 Separator tank support 010-070501-S 1 22 Silent block 061-028-S 4 23 Hexagonal head screw M8x30 UNI 5739 132-104-S 2 24 Washer d. 6.6x18x2 015-029-S 2 25 Schnorr washer d.10 015-252-S 4 26	0	Silent block (From Serial No.C43144)	061-02375-S	2
11 Flat washer d.10x40x2.5 015-037-S 2 12 Self-locking nut M10 137-050-S 2 13 Intercooler pipe support clamping section 120-396500-S 1 14 Hex head screw M8x30 132-103-S 2 15 Flat washer 8,4x17x1,5 UNI 6592 015-030-S 8 16 Flat washer 8x24x2 UNI6593 015-031-S 8 17 Schnorr washer d.8 015-251-S 8 18 Hex nut M8 UNI 5587 135-040-S 8 19 Separator tank assembly 024-61656-S 1 20 Washer d.6 015-250-S 4 21 Separator tank support 010-070501-S 1 22 Silent block 061-028-S 4 23 Hexagonal head screw M8x30 UNI 5739 132-104-S 2 24 Washer d. 6.6x18x2 015-029-S 2 25 Schnorr washer d.10 015-252-S 4 26 Flat washer 10,2x21x2 015-032-S 4 27 Hex nut M10 (galvanized) 135-0502-S 4	9	Fuses box support blade	120-21977-S	1
12 Self-locking nut M10 137-050-S 2 13 Intercooler pipe support clamping section 120-396500-S 1 14 Hex head screw M8x30 132-103-S 2 15 Flat washer 8,4x17x1,5 UNI 6592 015-030-S 8 16 Flat washer 8x24x2 UNI6593 015-031-S 8 17 Schnorr washer d.8 015-251-S 8 18 Hex nut M8 UNI 5587 135-040-S 8 19 Separator tank assembly 024-61656-S 1 20 Washer d.6 015-250-S 4 21 Separator tank support 010-070501-S 1 22 Silent block 061-028-S 4 23 Hexagonal head screw M8x30 UNI 5739 132-104-S 2 24 Washer d.10 015-252-S 4 25 Schnorr washer d.10 015-252-S 4 26 Flat washer 10,2x21x2 015-032-S 4 26 Flat washer 10,2x21x2 015-032-S 4 27 <t< td=""><td>10</td><td>Hex head screw M6x20</td><td>132-063-S</td><td>4</td></t<>	10	Hex head screw M6x20	132-063-S	4
13 Intercooler pipe support clamping section 120-396500-S 1 14 Hex head screw M8x30 132-103-S 2 15 Flat washer 8,4x17x1,5 UNI 6592 015-030-S 8 16 Flat washer 8x24x2 UNI6593 015-031-S 8 17 Schnorr washer d.8 015-251-S 8 18 Hex nut M8 UNI 5587 135-040-S 8 19 Separator tank assembly 024-61656-S 1 20 Washer d.6 015-250-S 4 21 Separator tank support 010-070501-S 1 22 Silent block 061-028-S 4 23 Hexagonal head screw M8x30 UNI 5739 132-104-S 2 24 Washer d. 6.6x18x2 015-029-S 2 24 Washer d.10 015-252-S 4 25 Schnorr washer d.10 015-252-S 4 26 Flat washer 10,2x21x2 015-032-S 4 26 Flat washer 10,2x21x2 015-032-S 4 27	11	Flat washer d.10x40x2.5	015-037-S	2
14 Hex head screw M8x30 132-103-S 2 15 Flat washer 8,4x17x1,5 UNI 6592 015-030-S 8 16 Flat washer 8,24x2 UNI6593 015-031-S 8 17 Schnorr washer d.8 015-251-S 8 18 Hex nut M8 UNI 5587 135-040-S 8 19 Separator tank assembly 024-61656-S 1 20 Washer d.6 015-250-S 4 21 Separator tank support 010-070501-S 1 22 Silent block 061-028-S 4 23 Hexagonal head screw M8x30 UNI 5739 132-104-S 2 24 Washer d. 6.6x18x2 015-029-S 2 25 Schnorr washer d.10 015-252-S 4 26 Flat washer 10,2x21x2 015-032-S 4 26 Flat washer 10,2x21x2 015-032-S 4 27 Hex nut M10 (galvanized) 135-0502-S 4	12	Self-locking nut M10	137-050-S	2
15 Flat washer 8,4x17x1,5 UNI 6592 015-030-S 8 16 Flat washer 8x24x2 UNI6593 015-031-S 8 17 Schnorr washer d.8 015-251-S 8 18 Hex nut M8 UNI 5587 135-040-S 8 19 Separator tank assembly 024-61656-S 1 20 Washer d.6 015-250-S 4 21 Separator tank support 010-070501-S 1 22 Silent block 061-028-S 4 23 Hexagonal head screw M8x30 UNI 5739 132-104-S 2 24 Washer d. 6.6x18x2 015-029-S 2 25 Schnorr washer d.10 015-252-S 4 26 Flat washer 10,2x21x2 015-032-S 4 27 Hex nut M10 (galvanized) 135-0502-S 4	13	Intercooler pipe support clamping section	120-396500-S	1
16 Flat washer 8x24x2 UNI6593 015-031-S 8 17 Schnorr washer d.8 015-251-S 8 18 Hex nut M8 UNI 5587 135-040-S 8 19 Separator tank assembly 024-61656-S 1 20 Washer d.6 015-251-S 4 21 Separator tank support 010-070501-S 1 22 Silent block 061-028-S 4 23 Hexagonal head screw M8x30 UNI 5739 132-104-S 2 24 Washer d.10 015-029-S 2 25 Schnorr washer d.10 015-252-S 4 26 Flat washer 10,2x21x2 015-032-S 4 27 Hex nut M10 (galvanized) 135-0502-S 4	14	Hex head screw M8x30	132-103-S	2
10 11 Max Washer 0.22 M2 0000000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 <	15	Flat washer 8,4x17x1,5 UNI 6592	015-030-S	8
18 Hex nut M8 UNI 5587 135-040-S 8 19 Separator tank assembly 024-61656-S 1 20 Washer d.6 015-250-S 4 21 Separator tank support 010-070501-S 1 22 Silent block 061-028-S 4 23 Hexagonal head screw M8x30 UNI 5739 132-104-S 2 24 Washer d. 6.6x18x2 015-029-S 2 25 Schnorr washer d.10 015-252-S 4 26 Flat washer 10,2x21x2 015-032-S 4 27 Hex nut M10 (galvanized) 135-0502-S 4	16	Flat washer 8x24x2 UNI6593	015-031-S	8
19 Separator tank assembly 024-61656-S 1 20 Washer d.6 015-250-S 4 21 Separator tank support 010-070501-S 1 22 Silent block 061-028-S 4 23 Hexagonal head screw M8x30 UNI 5739 132-104-S 2 24 Washer d. 6.6x18x2 015-029-S 2 25 Schnorr washer d.10 015-252-S 4 26 Flat washer 10,2x21x2 015-032-S 4 27 Hex nut M10 (galvanized) 135-0502-S 4	17	Schnorr washer d.8	015-251-S	8
20 Washer d.6 015-250-S 4 21 Separator tank support 010-070501-S 1 22 Silent block 061-028-S 4 23 Hexagonal head screw M8x30 UNI 5739 132-104-S 2 24 Washer d. 6.6x18x2 015-029-S 2 25 Schnorr washer d.10 015-252-S 4 26 Flat washer 10,2x21x2 015-032-S 4 27 Hex nut M10 (galvanized) 135-0502-S 4	18	Hex nut M8 UNI 5587	135-040-S	8
21 Separator tank support 010-070501-S 1 22 Silent block 061-028-S 4 23 Hexagonal head screw M8x30 UNI 5739 132-104-S 2 24 Washer d. 6.6x18x2 015-029-S 2 25 Schnorr washer d.10 015-252-S 4 26 Flat washer 10,2x21x2 015-032-S 4 27 Hex nut M10 (galvanized) 135-0502-S 4	19	Separator tank assembly	024-61656-S	1
22 Silent block 061-028-S 4 23 Hexagonal head screw M8x30 UNI 5739 132-104-S 2 24 Washer d. 6.6x18x2 015-029-S 2 25 Schnorr washer d.10 015-252-S 4 26 Flat washer 10,2x21x2 015-032-S 4 27 Hex nut M10 (galvanized) 135-0502-S 4	20	Washer d.6	015-250-S	4
23 Hexagonal head screw M8x30 UNI 5739 132-104-S 2 24 Washer d. 6.6x18x2 015-029-S 2 25 Schnorr washer d.10 015-252-S 4 26 Flat washer 10,2x21x2 015-032-S 4 27 Hex nut M10 (galvanized) 135-0502-S 4	21	Separator tank support	010-070501-S	1
24 Washer d. 6.6x18x2 015-029-S 2 25 Schnorr washer d.10 015-252-S 4 26 Flat washer 10,2x21x2 015-032-S 4 27 Hex nut M10 (galvanized) 135-0502-S 4	22	Silent block	061-028-S	4
25 Schnorr washer d.10 015-252-S 4 26 Flat washer 10,2x21x2 015-032-S 4 27 Hex nut M10 (galvanized) 135-0502-S 4	23	Hexagonal head screw M8x30 UNI 5739	132-104-S	2
26 Flat washer 10,2x21x2 015-032-S 4 27 Hex nut M10 (galvanized) 135-0502-S 4	24	Washer d. 6.6x18x2	015-029-S	2
27 Hex nut M10 (galvanized) 135-0502-S 4	25	Schnorr washer d.10	015-252-S	4
	26	Flat washer 10,2x21x2	015-032-S	4
28 Centering blade 120-039522-S 2	27	Hex nut M10 (galvanized)	135-0502-S	4
	28	Centering blade	120-039522-S	2





Air compressor – D300T4F-DB

PARTS LEGEND: Clampings to the chassis

Tab. 06.1

POSITION	DESCRIPTION	PART No.	QUANTITY
	Old version		
1	Separator tank clamping ring	214-045-S	1
2	Silent block	061-013-S	2
3	Hex nut M8 UNI 5587	135-040-S	4
4	Schnorr washer d.8	015-251-S	19
5	Flat washer 8,4x17x1,5 UNI 6592	015-030-S	8
6	Separator tank support blade	120-2193-S	1
	New version		
1	Separator tank clamping ring	214-04450-S	1
2	Separator tank support blade	120-212520-S	1
3	Hexagonal head screw M10x130	132-163-S	1
4	Schnorr washer d.10	015-252-S	4
5	Flat washer 10x30x2,5 UNI6593	015-033-S	2
6	Hex head screw . M10x25	132-142-S	4
7	Flat washer 10,2x21x2	015-032-S	2
8	Self-locking nut M10	137-050-S	1
9	Hex head screw . M12x65	132-199-S	1
10	Schnorr washer d.12	015-254-S	1
11	Flat washer d. 12x30x4	015-03980-S	1
12	Flat washer d. 10x40	015-037-S	2





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PARTS LEGEND: Air filters

REF	NAME	CODE	QUANTITY
1	Regulator assembly	024-130-F	1
2	Air filter cartridge	162-583-S	1
3	Air filter cartridge	162-582-S	1
4	Air filter container	014-293-S	1
5	Elbow	111-10505-S	1
6	Hex nut M8 UNI 5587	135-040-S	1
7	Hex head screw M8x25 UNI 5739	132-102-S	1
8	Copper washer (1/8")	015-005-S	2
9	Double screw (1/8")	187-001-S	2
10	Air filter clogging signaller	257-048-S	1
11	Air filter container support (Up to Serial No. C39951)	010-345021-S	1
11	Air filter container support	010-345022-S	1
12	Primary air filter	162-0085-S	1
13	Secondary air filter	162-0084-S	1
14	MANN air filter support	010-2417-S	1
15	MANN filter group	014-418-S	1
16	Pipe clamp d.70x90	149-145-S	3
17	MANN curve d.80 (Up to Serial No. C39951)	111-107-S	1
17	MANN curve d.80	111-10705-S	1
18	Engine	165-42801-S	1
19	Engine intake pipe (Up to Serial No. C39951)	064-1706041-S	1
19	Engine intake pipe	064-1706042-S	1
20	Air filter clogging sensor	257-0470-S	1
21	Hex head screw M12x40 screw	132-194-S	2
22	Elastic washers	139-060-S	2
23	Hex head screw M8x40 UNI 5739	132-105-S	2
24	Schnorr washer d.8	015-251-S	2
25	Flat washer 8x24x2 UNI6593	015-031-S	2
26	Pipe clamp d.97-104	149-1672-S	1





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PARTS LEGEND: Canopy

REF	NAME	CODE	QUANTITY
1	Handle	209-003-S	1
2	Rear removable panel with grid	124-308805-S	1
3	Fixed canopy	036-158151-S	1
4	Mobile canopy (Up to Serial No. C40499)	036-159151-S	1
4	Mobile canopy (From serial No. C40500)	036-1591512-S	1
5	Lifting piston	091-09470-S	2
6	Lifting piston clamping support	120-39340-S	2
7	Hexagon socket countersunk head 8x 16 UNI 5933	146-120-S	4
8	Handle	209-009-S	2
9	Plate	208-004-S	1
10	Rubber plate	177-201-S	1
11	Large head screw 6x20	243-010-S	2
12	Air intake panel	022-059251-S	1
13	Air intake sound proof panel	124-3054120-S	5
14	Hex head screw M8x40 UNI 5739	132-105-S	4
15	Flat washer 8x24x2 UNI6593	015-031-S	4
16	Hex socket head cap screw M8x25 UNI 5931	133-133-S	4
17	Plate	208-001-S	2
18	Hex head screw . M6x20	132-063-S	4
19	Socket head cap screw 6x40 UNI7380	150-505-S	4
20	Large head screw M6x16	243-009-S	30
21	Hex head screw . M8x20 UNI 5739	132-101-S	8
22	Schnorr washer d.8	015-251-S	8
23	Flat washer 8x24x2 UNI6593	015-031-S	8
24	Hinge (From serial No. C40500)	007-007501-S	2
25	Hex socket countersunk head 10x20(From serial No. C40500)	146-151-S	4





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PARTS LEGEND: Connections

REF	NAME	CODE	QUANTITY
1	Muffler	042-0851830-S	1
2	Flex pipe	090-101805-S	1
3	Pipe clamp d.50x70	149-140-S	1
4	Pipe clamp d.40x60	149-135-S	1
5	Fiber glass braiding d.70	097-0325-G	1
6	Muffler collector	119-07450-S	1
7	Engine	165-4280-S	1
8	Catalyst (supplied with engine)		1
9	Seal for muffler d.40 th5	023-077-S	5
10	Flat washer 8x24x2 UNI6593	015-031-S	10
11	Hex nut M8 UNI 5587	135-040-S	11
12	Schnorr washer d.8	015-251-S	11
13	Hex head screw M8x30	132-103-S	6
14	Flat washer 8,4x17x1,5 UNI 6592	015-030-S	12
15	Hex head screw M8x25 UNI 5739	132-102-S	1





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PARTS LEGEND: Connections

REF	NAME	CODE	QUANTITY
1	Air-Oil radiator	011-09650-S	1
2	Anti-oil pipe for fuel 15x8	089-1203-S	3
3	Pipe clamp 10x16	149-007-S	1
4	Expansion tank	201-018150-S	1
5	Clamp cost.torque d.32-54	149-1321-S	4
6	Calorflex pipe d.38x48	089-006-S	2
7	Engine	165-4280-S	1
8	Pipe d. 25x34	089-009.5-S	1
9	Clamp 31-34	149-305-S	1
10	Pipe clamp 32x50 (From Serial No.C40100)	149-131-S	2
11	Radiator pipe d.35x43 (From Serial No.C40100)	089-00560-S	10"
12	Reduction d.35 L=70 (From Serial No.C40100)	190-613953-S	1





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PARTS LEGEND: Connections

REF	NAME	CODE	QUANTITY
1	Chassis	038-10340-S	1
2	Copper washer (1/2")	015-012-S	2
3	Double screw (¹ / ₂ " foro 12.6)	187-045-S	1
4	Pipe ¹ / ₂ "	065-176.402-S	1
5	Anti-oil pipe for fuel 15x8	089-120-S	1
6	Gasoil plug	193-016-S	1
7	Engine	165-4280-S	1
8	Pipe clamp 10x16	149-007-S	4
9	Gasoil level control assembly	024-0193-S	1
10	M fitting (1/4") d.8 with OR	148-198.21-S	2
11	Screw (1/2")	188-100-S	1
12	Copper washer (d. 24.1)	015-014-S	2
13	Iron plug (½")	106-125-S	1
14	Straight adapter fitting ¼"M conical – ¼"F cil.	148-03600-S	1





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PARTS LEGEND: Connections

REF	NAME	CODE	QUANTITY
1	Exit valves clamping sleeve	063-109-S	1
2	Separator tank	024-61656-F	1
3	By-pass valve assembly	024-01152-F	1
4	Air end assembly	024-0971-F	1
5	Pipe (1 ¼")	065-3019.59-S	1
6	Pipe (1 ½")	065-314.016-S	1
7	Pipe (1")	065-882.39-S	1
8	Pipe (1")	065-882.87-S	1
9	Double screw (³ / ₄ " a 1") foro 19.1	187-065-S	1
10	Copper washer (³ / ₄ ")	015-015-S	1





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PARTS LEGEND: Pneumatic connections

REF	NAME	CODE	QUANTITY
1	Accelerator piston assembly	044-0040523-S	1
2	Quick coupling 90° (1/8") for pipe d.8	148-572-S	2
3	15 Bar pressure gauge	206-020-S	1
4	Straight quick coupling F (1/8") for pipe d.6	148-5765-S	1
5	Straight coupling (1/8") for pipe d.6	148-040-S	1
6	Non return valve(1/8")	033-001-S	1
7	Adaptor clamping 90° M+M(1/8")	148-288-S	1
8	Reduction M with + F cil ($\frac{1}{4}$ " – 1/8")	190-010-S	1
9	Straight coupling (¼")	148-7115-S	1
10	Double screw (1/8")	187-001-S	1
11	Copper washer(1/8")	015-005-S	5
12	Regulator assembly	024-130-F	1
13	Quick coupling 90° (1/4") per tubo d.8	148-573.5-S	2
14	Straight quick coupling (1/4") per tubo d.8	148-575-S	3
15	Copper washer (1/4")	015-007-S	6
16	Non return valve (¼")	033-0178-S	1
17	Super quick coupling (¼")	148-5901-S	3
18	Quick coupling (¼")	148-5900-S	1
19	Double screw (¹ / ₄ ")	187-005-S	1
20	Straight quick coupling F (1/8") for pipe d.6	148-576-S	1
21	T fitting F+F+F (1/8")	148-141-S	1
22	Oil pressure switch	154-025-S	1
23	Minimum pressure valve assembly	024-03111-F	1
24	Straight quick coupling (1/8") for pipe d.6	148-8001-S	2
25	T fitting F+M+F (¼")	148-194-S	1
26	Solenoid valve	160-0871-S	1
27	Pressure regulation valve	024-032.1-F	1
28	Copper washer (1/2")	015-012-S	1
29	Separator tank closing flange	004-0635-S	1
30	Fitting 90' (1/4") for pipe d. 6	148-090-S	1
31	Rilsan blue pipe 6x4	089-0605-S	1
32	Polyamidis pipe 6x4	089-060-S	1
33	Rilsan blue pipe 8x6	089-0705-S	5





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PARTS LEGEND: Intercooler connections

REF	NAME	CODE	QUANTITY
1	Engine	165-4280-S	1
2	Air-Oil radiator	011-09650-S	1
3	Protection belts grid	005-0955-S	1
4	Intercooler outlet pipe	064-170600-S	1
5	Intercooler inlet pipe	064-170602-S	1
6	Silicone elbow	111-106720-S	1
7	Pipe clamp 32x54	149-1321-S	1
8	Pipe clamp d.45x67	149-1360-S	3
9	Silicone pipe	089-0155-S	4.70 "
10	Silicone elbow	111-10605-S	1
11	Pipe clamp d.50x70	149-140-S	1
12	Silicone pipe	089-0325-S	4.70 "
13	Hex nut M8 UNI 5587	135-040-S	4
14	Schnorr washer d.8	015-251-S	6
15	Flat washer 8,4x17x1,5 UNI 6592	015-030-S	4
16	Pipe clamp d.70x90	149-145-S	1
17	Hexagonal head screw M8x30 UNI 5739	132-104-S	1
18	Hex head screw M8x25 UNI 5739	132-102-S	1
19	Flat washer 8x24x2 UNI6593	015-031-S	4
20	Clamp support	010-1530-S	1
21	Spacer	009-0875-S	1
22	Silent block	061-013-S	2
23	Pipe clamp d.57x79 (From Serial No.C40224)	149-1420-S	4





Air compressor – D300T4F-DB

PARTS LEGEND: Soundproofing

REF	NAME	CODE	QUANTITY
1	Mobile canopy sound-proof kit	204-309221-S	1
2	Fixed canopy sound-proof kit	204-309121-S	1
3	Chassis sound-proof kit	204-345508-S	1
4	Air intake sound-proof kit	204-335432-S	1





Air compressor – D300T4F-DB

PARTS LEGEND: Control panel – Electrical harness

REF	NAME	CODE	QUANTITY
1	Electrical harness	224-4657-S	1
2	Control panel	040-051600-S	1
3	Electronic card	269-408-S	1
4	15 Bar pressure gauge	206-020-S	1
5	Green button switch	154-055-S	1
6	Vemer switch	154-076-S	1
7	Two-positions selector	249-022-S	1
8	Contact holder	127-376-S	1
9	Contact	127-375-S	2
10	Anti-dust plastic plug for push-buttons	106-290-S	1
11	Electronic hour counter	180-010-S	1
12	Rubber seal for hour counter	023-219-S	1
13	Control panel decal	238-1632205-S	1
14	"Yellow" led	183-041-S	2
15	"Red" led	183-011-S	3
16	Fuel level indicator	186-020-S	1





Air compressor – D300T4F-DB

PARTS LEGEND: Maintenance Kit

REF	NAME	CODE	QUANTITY
	Filter kit 500 Hrs		
1	Engine gasoil filter	191-0950-S	2
2	Compressor oil filter	099-009-S	1
3	Engine oil filter	099-1010-S	2
4	1' engine air filter	162-0085-S	1
5	2° engine air filter	162-0084-S	1
6	Compressor air filter 1°	162-582-S	1
7	Compressor air filter 2°	162-583-S	1
	Filter kit 2000 Hrs		
1	Engine gasoil filter	191-0950-S	8
2	Compressor oil filter	099-009-S	4
3	Engine oil filter	099-1010-S	8
4	1' engine air filter	162-0085-S	4
5	2° engine air filter	162-0084-S	4
6	Compressor air filter 1°	162-582-S	4
7	Compressor air filter 2°	162-583-S	4
8	Separator filter	157-180-S	1

BOTA DB °	
SCHEDA DI GARANZIA WARRANTY CARD CARTE DE GARANTIE GARANTIESCHEIN TARJETA DE GARANTIA	
Macchina Tipo - Machine Type - Machine Type - Maschine Typ - Maquinaria Tipo	TO BE FILLED BY EUR - VON DER EL DISTRIBUIDOR
Numero Matricola - ID Number - Numero de Matricula - Matrikel Nummer -Numero d'Identification	ORE - TO BE RIBUTEUR - N R POR EL DIST
Data di Acquisto - Purchase Date - Date d'Achat - Kauft am - Fecha de compra	JEL DISTRIBUTORE - R PAR LE DISTRIBUT - A COMPILAR POR
Messo in servizio il - Commission Date - Mis en service le - Inbetriebnahme am -Fecha de activacion	si A CURA DE - A REMPLIR SZUFÜLLEN -
	DA COMPILARSI A CURA DEL DISTRIBUTORE - TO BE FILLED BY DISTRIBUTOR - A REMPLIR PAR LE DISTRIBUTEUR - VON DER VERTRIEBER AUSZUFÜLLEN - A COMPILAR POR EL DISTRIBUIDO
Rivenditore - Dealer - Vendu par - Verkaufer -Vendido por	
Acquirente - Purchaser - Acheteur - kauft bei - Comprado por	ITE - TO BE FILLED BY END USER - A REMPLIR PAR JSZUFÜLLEN - A COMPILAR POR EL COMPRADOR
Indirizzo - Address - Adresse - Direccion Email	FILLED BY END
www	LENTE - TO BE AUSZUFÜLLE
Luogo di installazione - Installed at - Installe a - Inbetriebsgesetz bei - lugar de installacion	DELL'ACQUIF RENDKUNDE
	DA COMPILARSI A CURA DELL'ACQUIREN L'UTILISATEUR - VON DER ENDKUNDE AL
Persona di riferimento - Contact person - Personne a contacter - Kontaktperson - Persona a contactar [TEL, FAX, EMAIL]	DA COMPIL
Data compilazione - Fill-in date - Date de compilation - Eingefüllt am - Fecha de compilacion	
LA SCHEDA DEVE ESSERE COMPILATA IN OGNI SUA PARTE E SPEDITA A ROTAIR SPA ; LA COMPILAZIONE PARZIALE O LA MANCATA SPEDIZIONE SONO MOTIVO DI DECADENZA DELLA GARANZIA. FOTOCOPIARE/TRATTENERE UNA COPIA A CURA DEL CLIENTE THE CARD SHALL BE DULY FILLED AND SENT TO ROTAIR SPA ; MISSING DATA OR THE NON COMPLIANCE WITH MAILING DUTY ENTAIL THE	
LOSS OF WARRANTY. COPY SHALL BE MADE AND KEPT AT THE CARE OF THE CUSTOMER LA FICHE DOIT ETRE <u>COMPLETEMENT</u> REMPLIE ET ENVOYEE A ROTAIR SPA ; UNE FICHE INCOMPLETE OU NON TRANSMISE COMPORTE LA PERTE DE LA GARANTIE. COPIE A EFFECTUER ET GARDER AUX SOINS DU CLIENT.	
DER SCHEIN MUSS <u>KOMPLETT</u> AUSGEFÜLLT UND AM ROTAIR SPA GESENDET WERDEN ; INKOMPLETTE DATEIEN ODER DAS FEHLENDES VERSAND EINSCHLISSEN DEN GARANTIEVERLUST. KOPIE SOLL BEI DER KUNDE GEHALTET WERDEN.	
LLENAR LA TARJETA <u>EN TODAS SUS PARTES</u> Y ENVIARLA A A ROTAIR SPA ; UNA TARJETA INCOMPLETA O NO ENVIADA COMPORTA LA PERDIDA DE LA GARANTIA. EL CLIENTE DEBE GUARDAR COPIA.	