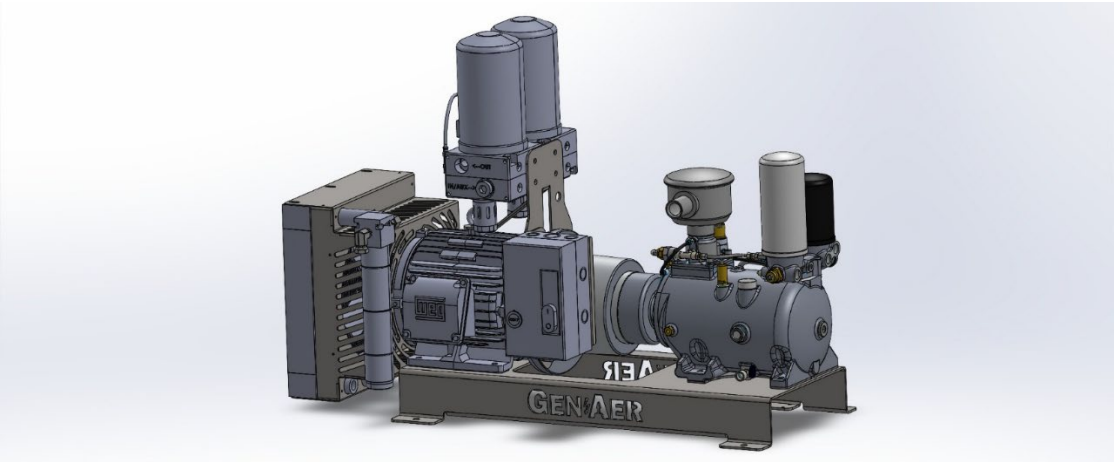
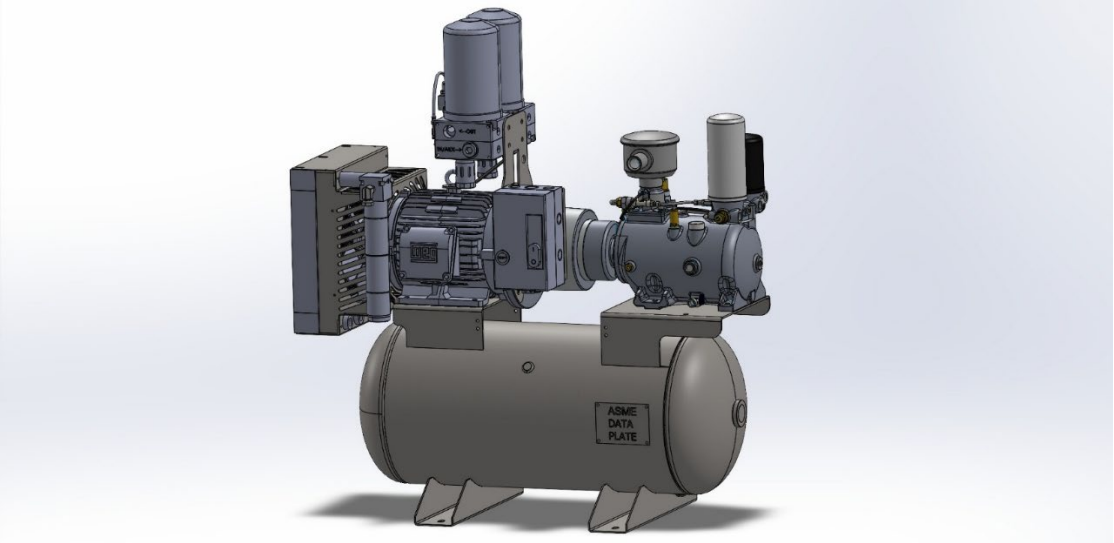
GEN AER
Industrial Air & Power

User Manual

GAX Electric Rotary Screw Air Compressor





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Safety Information

GenAer Power units have been designed and manufactured for safe, reliable performance. Maintenance neglect and improper use can result in potentially deadly hazards, including electrical shock or fire. Please read all safety instructions carefully before installation or use. Follow all unit warning labels and instructions.

CALIFORNIA PROPOSITION 65 WARNING: This product can potentially expose you to chemicals including cobalt, nickel and chromium which are known to the State of California to cause cancer, birth defects or other reproductive harm and developmental issues. For more information go to www.P65Warning.ca.gov.

Safety Definitions

Danger - Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
Warning - Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
Caution - Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

DANGER: ELECTRICAL SHOCK

The power supplied to this unit can result in fatal electric shock.

- This equipment must be operated by responsible personnel.
- Operators must have proper instruction to operate this equipment.
- Avoid contact with live terminals.
- Use extreme care if operating this unit in rain or snow.
- Installation must comply with the national electrical code.

CAUTION: NOISE HAZARD

Hearing protection is recommended.
Continuous exposure to excessive noise can lead to loss of hearing.

CAUTION

- The operation of this equipment must comply with all local and national codes.
- Installation, repairs and maintenance should be performed by qualified technicians.
- Use GenAer approved repair and service parts.
- No repairs or service should be performed while the unit is running.
- Allow compressor to adequately cool and air pressure to drain prior to performing repairs or maintenance.

Receiving your Unit

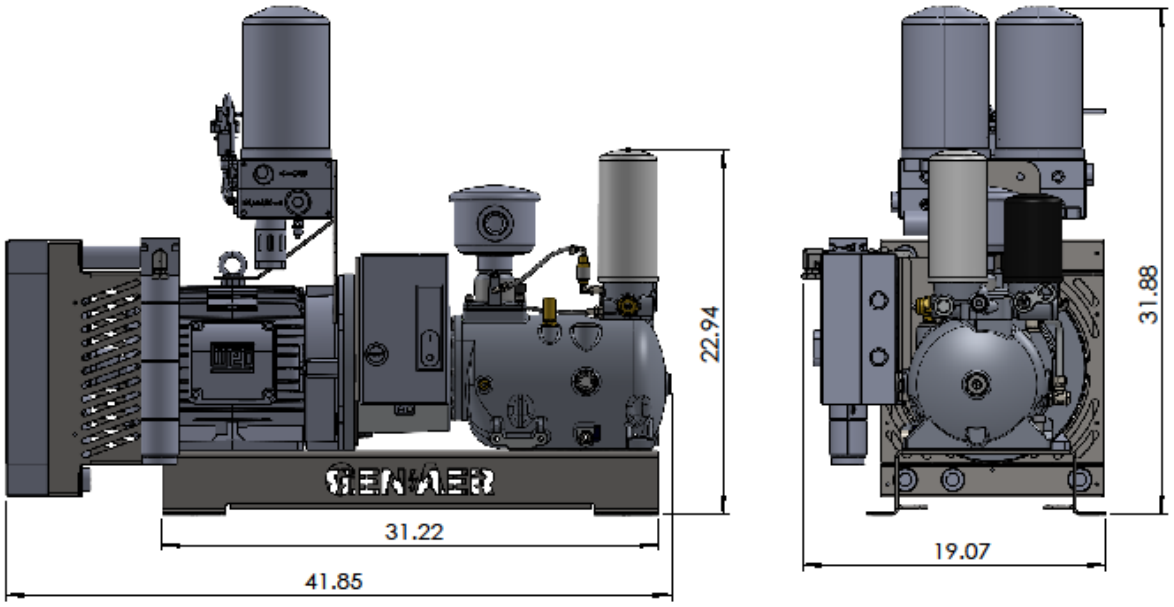
After unpacking, inspect the compressor for any shipping damage. Contact GenAer or shipper if any shipping damage is present.

Unit Specifications

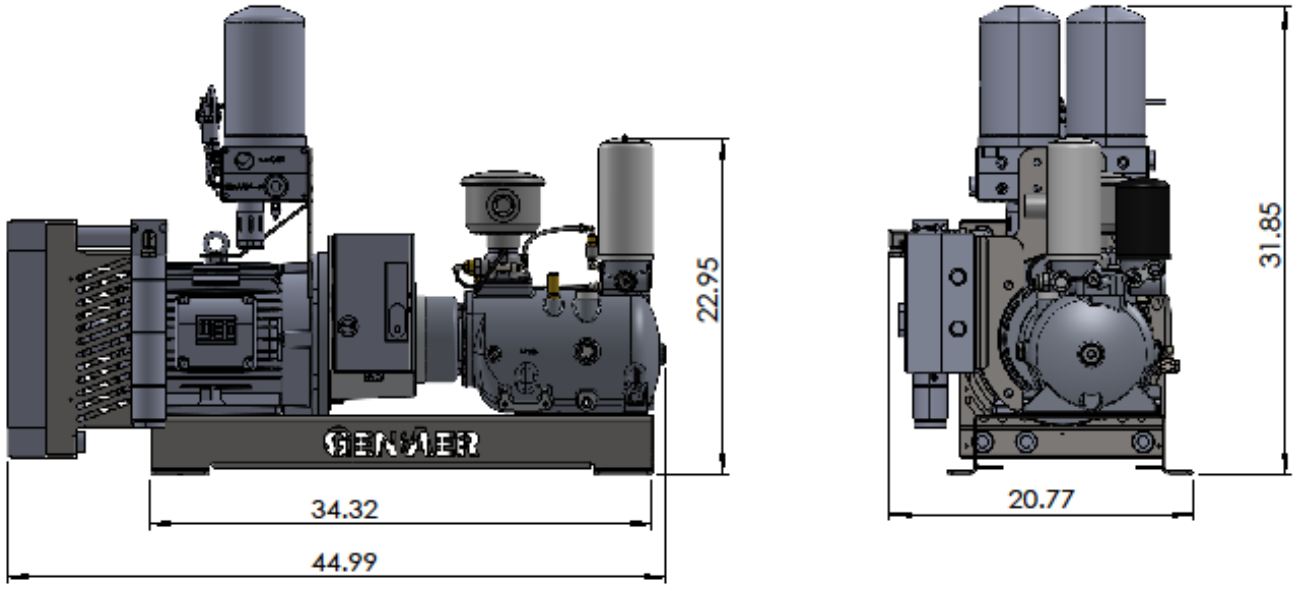
The GAX Electric Compressor is a direct-drive rotary screw air compressor designed for industrial, agricultural, and service applications.

Model	GAX30RS	GAX40RS
Max Operating Pressure	165 PSI	135 PSI
Power	7.5 HP	10 HP
Voltage	230/460V 3-Phase	230/460V 3-Phase
Amps	19	29
Speed	3550 RPM	3550 RPM
Cooling	Air Cooled	Air Cooled
CFM*	30	40
Compressor Oil Capacity	1.2 Gal	1.2 Gal
Air End	20073	20074
Service Interval	2,000 hrs/Annual	2,000 hrs/Annual
Service Kit	GA725	GA725
Hertz	60	60
Minimum Air Tank	10 Gallons	10 Gallons

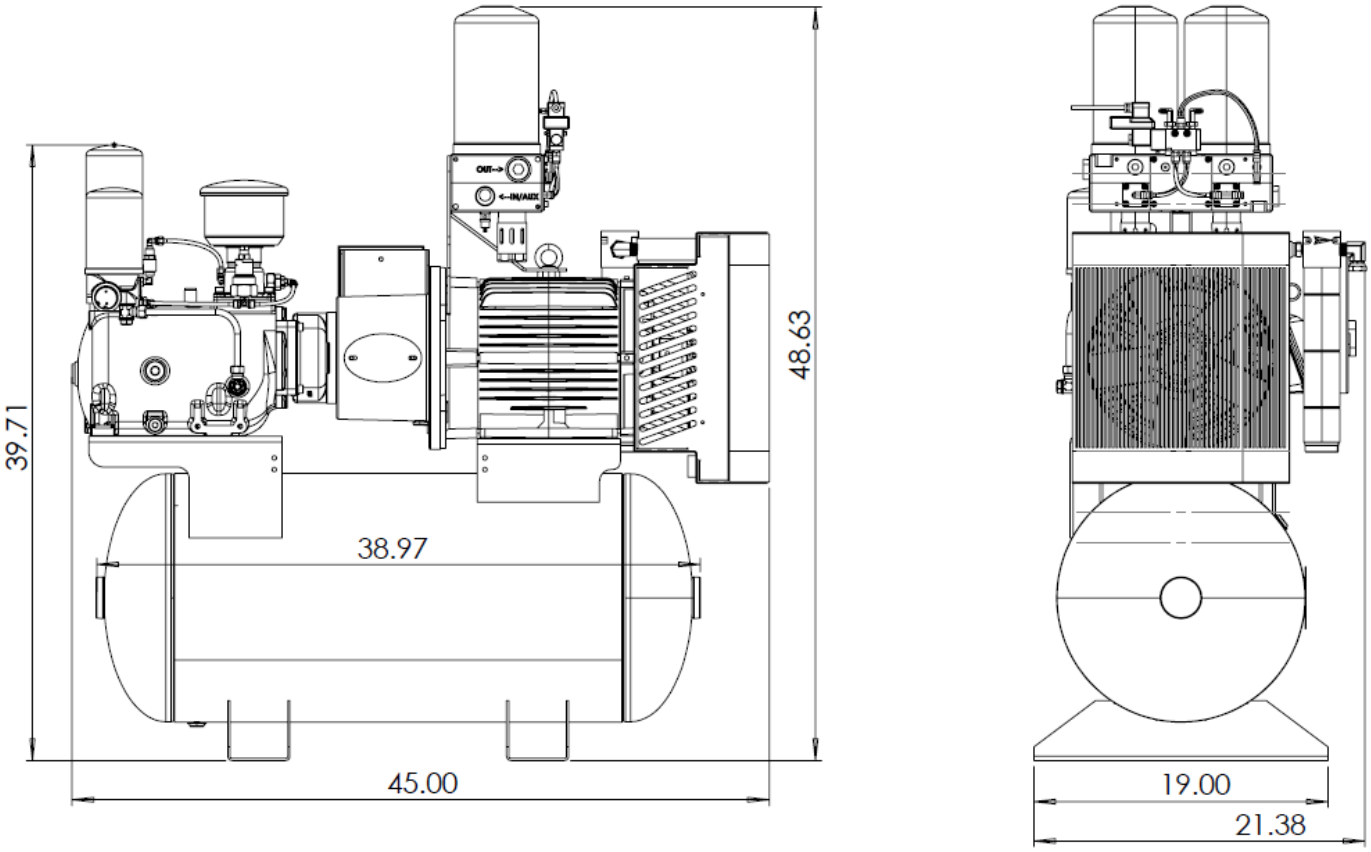
Unit Dimensions



1. GAX30RSD – 30 CFM with Air Dryer



2. GAX40RSD – 40 CFM with Air Dryer

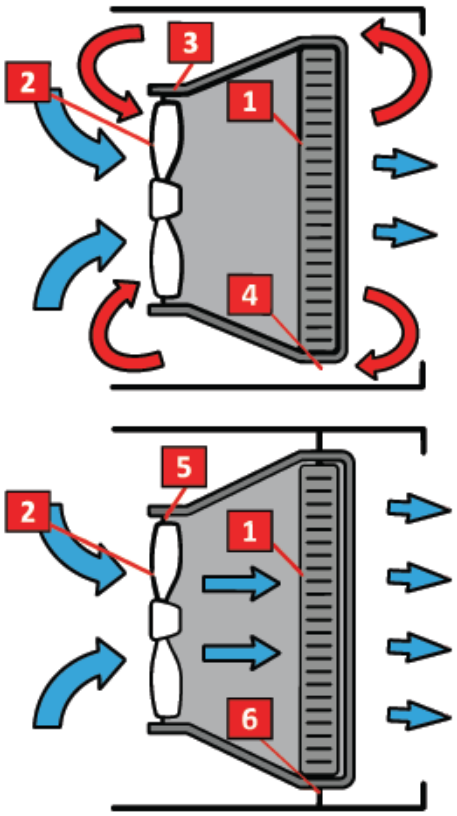


3. GAX40RSTD – 40 CFM with Air Dryer and Air Tank

Installation

Ventilation

WARNING: EQUIPMENT DAMAGE
Installers must ensure sufficient cooling air is available to prevent the engine and generator from overheating. If mounted in an enclosed space, Air intake must be 50% larger than the equipment oil cooler. Damage caused by overheating is not covered by warranty.



1. Oil Cooler
2. Fan
3. Large Radial clearance on fan
4. No partition
5. Small radial clearance on fan
6. Fitted partition with seal

A strict separation of cold and hot air spaces must be provided for the supply and exhaust air.

The reintroduction of hot air due to suction must be avoided when installing the unit. Use an effective sealing system to seal the compressor oil cooler to ventilation louver to prevent hot air from recirculating into the cooling air intake area. See illustration above.

A minimum of .5 inch of space between the oil cooler and louver/vent is required. A foam or rubber seal is recommended to seal the gap.

All louvers/vents should be kept clear inside and out of any objects that could restrict air flow causing insufficient cooling. The vents should be installed opposite each other to ensure optimal air flow.

Mounting the Unit

Units must be bolted to a solid base using provided mounting holes in the frame. Install on a level surface.

Electrical Connection

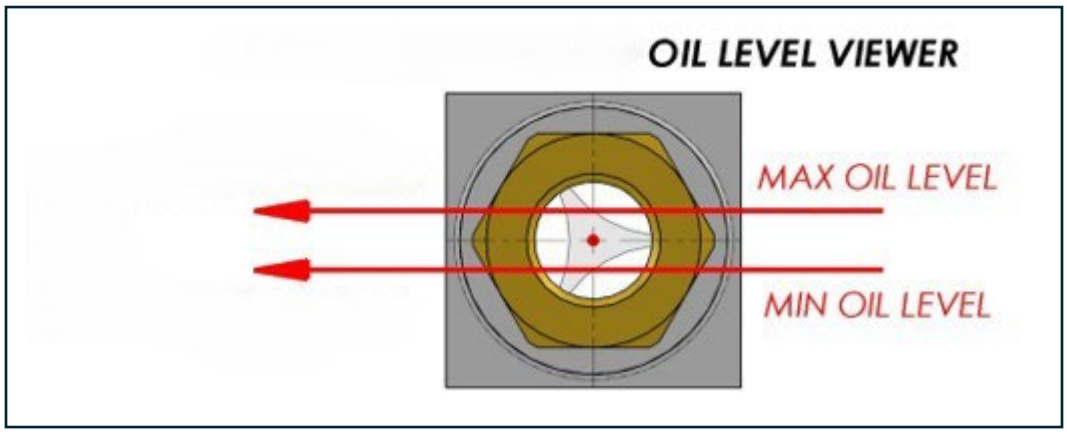
Verify power supply matches compressor requirements. See unit specifications chart.

Compressed Air Connection

Use only hose and fittings rated for 200psi or higher for compressor discharge connection.

Starting Procedure

Initial Startup:
1. Check compressor oil level.
2. Ensure compressor air filter is installed
3. Bump start compressor and ensure correct compressor rotation.
   - **WARNING: incorrect rotation can cause severe damage to compressor!**
4. Check for leaks or abnormal noise.
5. Verify pressure reaches normal operating range.
6. **This air compressor requires an air tank for proper operation. See unit specification for details.**



Check compressor oil level on level surface or terrain.

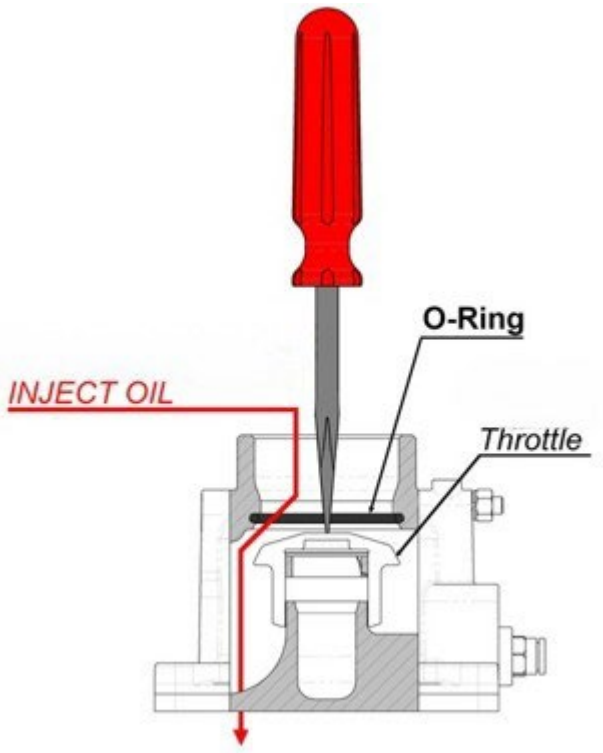
Unit Operations

Normal Operation:
- Monitor operating pressure.
- Keep cooler clean.
- Check oil level regularly.
- Record operating hours.

Shutdown:
1. Turn off all air demand
2. Turn compressor OFF.
3. Disconnect electrical power supply if maintenance is required.

⚠ WARNING!

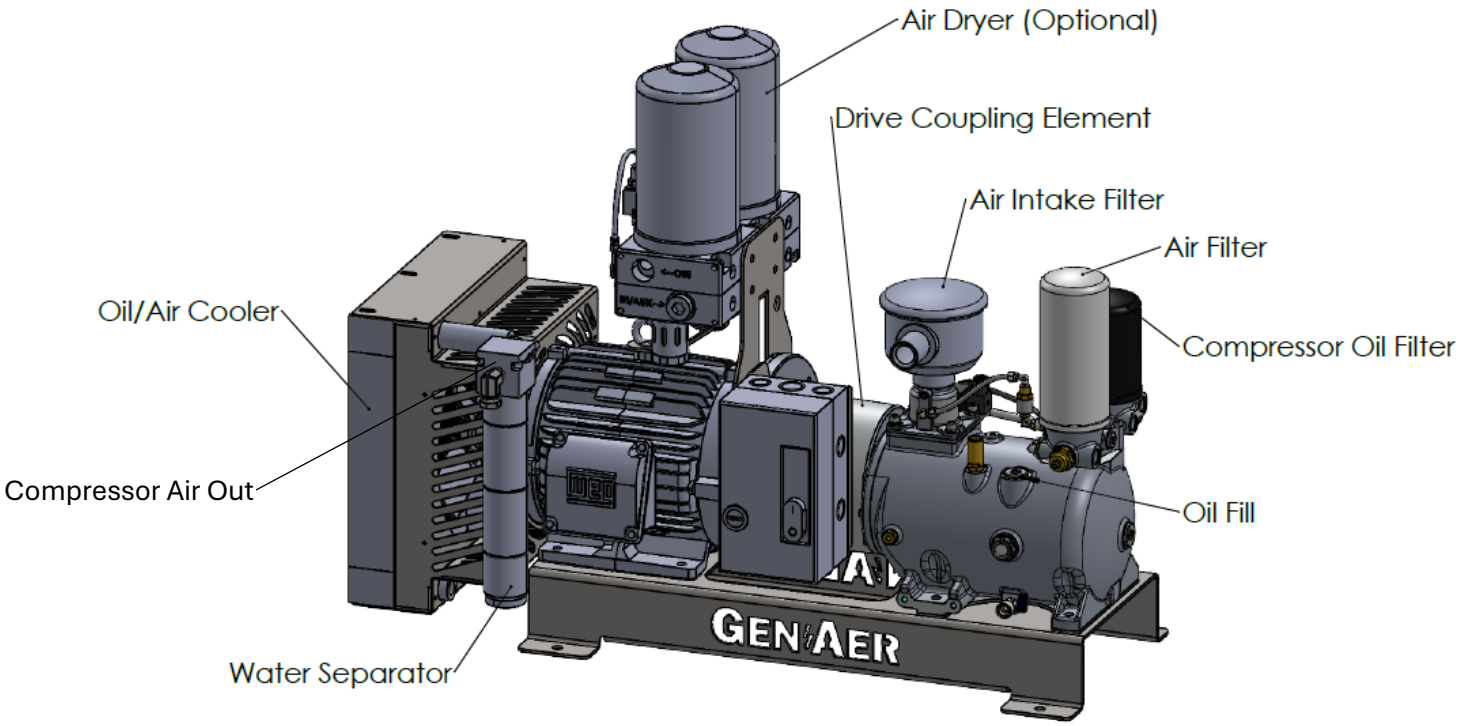
If the machine is inactive for extended periods (more than 60 days) before starting the motor and operating the compressor, inject about **0.11 U.S. gal (0.4L)** of lubricating oil into the intake valve air inlet, keeping the throttle pressed down. While pressing down the throttle, be careful to avoid damaging the throttle O-ring seal.

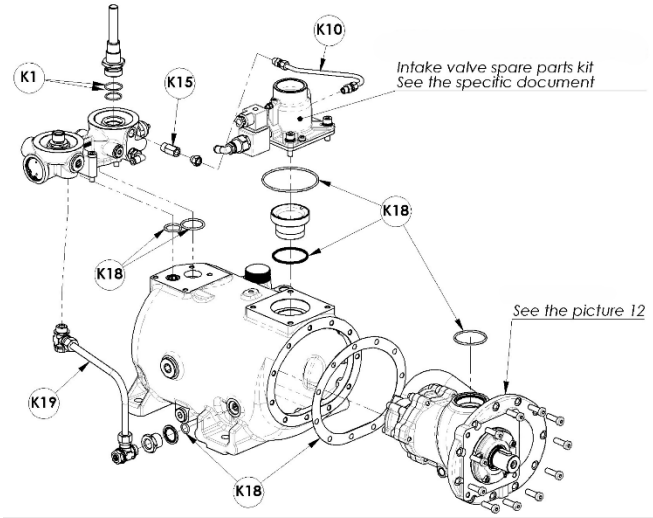


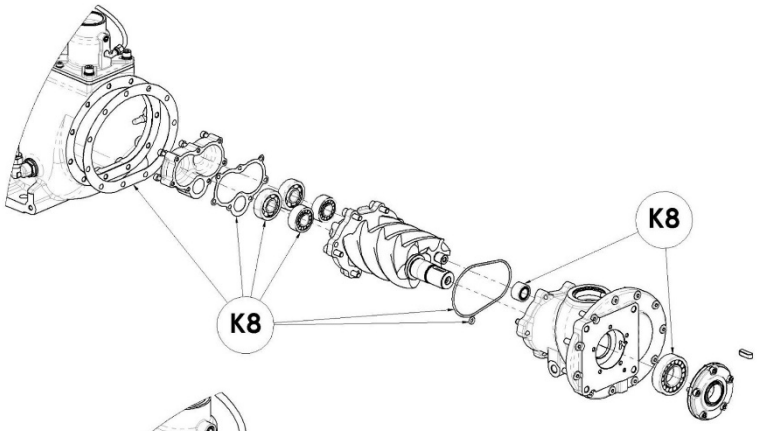
Maintenance

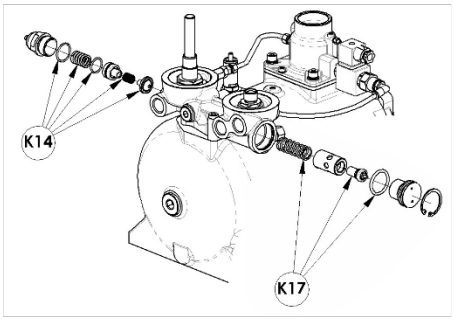
⚠ WARNING!

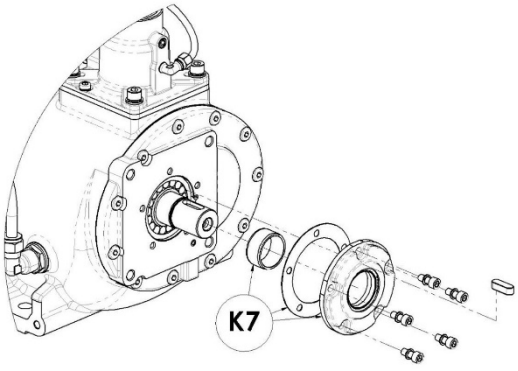
Before any oil extraction or oil fill-up operation, switch off the machine and wait until the system pressure reaches the environment pressure. Handle the lubricant with proper protection.







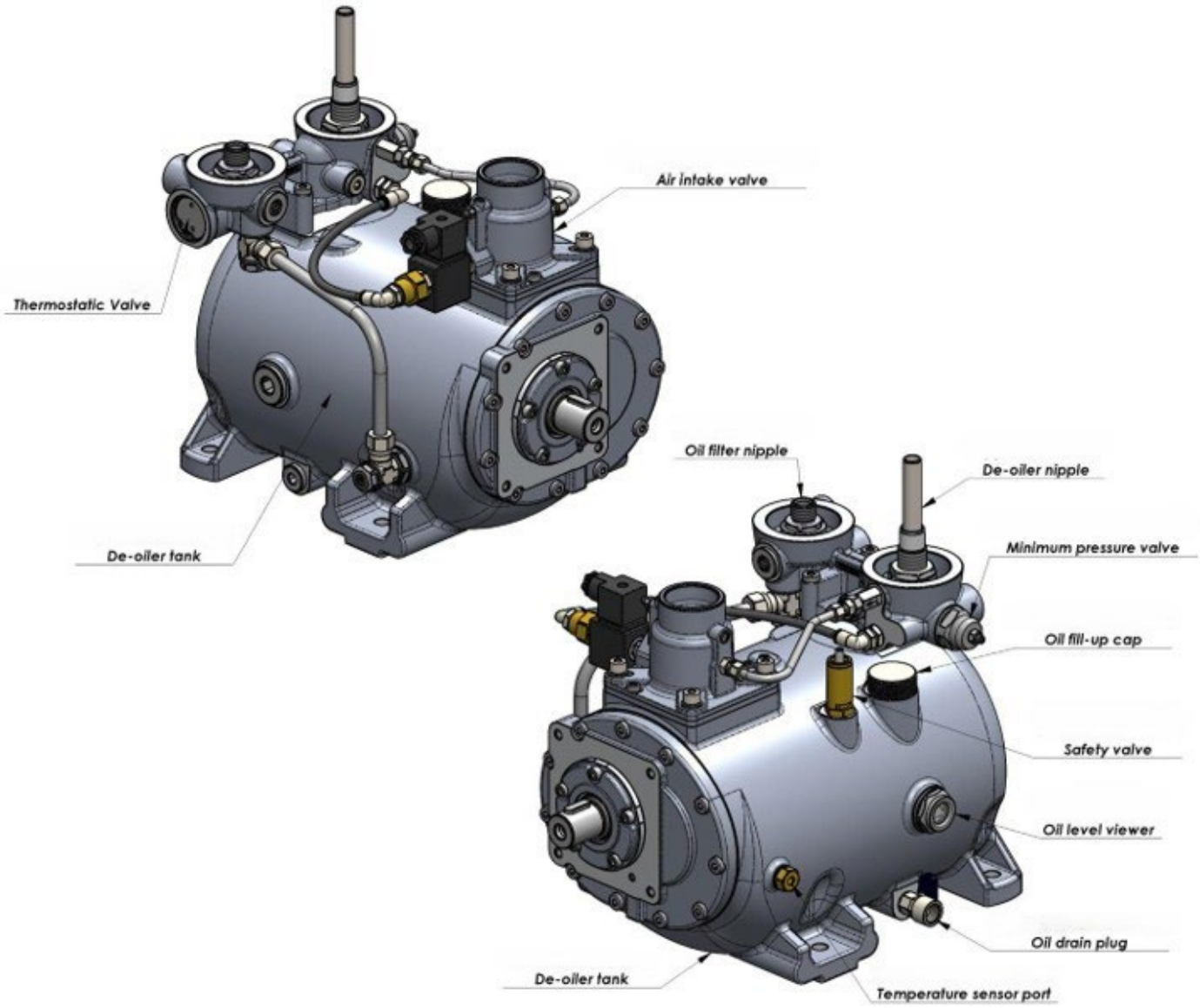




GAX Series Maintenance Schedule For 30/40 CFM Without Dryer		
Weekly	Check Air Intake Filters	
	Check Oil Cooler Fins for Blockage	
2,000 Hr/1 Yr	Change Compressor Oil	Service Kit Part Number GA725
	Change Compressor Oil Filter	
	Change Compressor Air Filter	
	Change Compressor Oil Separator	
8,000 Hr	Change Drive Coupling Element	Part Number 20050
	Change Separator Nipple M22-24	Reference # K1
	Change Minimum Pressure Valve	Reference # K14
	Change Thermostatic Valve	Reference # K17
10,000 Hr	Change Shaft Seal Spare	Reference # K7
20,000 Hr	Change Bearings	Reference # K8

GAX Series Maintenance Schedule For 30/40 CFM With Dryer		
Weekly	Check Air Intake Filters	
	Check Oil Cooler Fins for Blockage	
2,000 Hr/1 Yr	Change Compressor Oil	Service Kit Part Number GA725D
	Change Compressor Oil Filter	
	Change Compressor Air Filter	
	Change Compressor Oil Separator	
	Replace Air Dryer Oil Coalescing Element x2	
8,000 Hr	Change Drive Coupling Element	Part Number 20050
	Change Separator Nipple M22-24	Reference # K1
	Change Minimum Pressure Valve	Reference # K14
	Change Thermostatic Valve	Reference # K17
10,000 Hr	Change Shaft Seal Spare	Reference # K7
20,000 Hr	Change Bearings	Reference # K8

GenAer 20073/20074 Air End

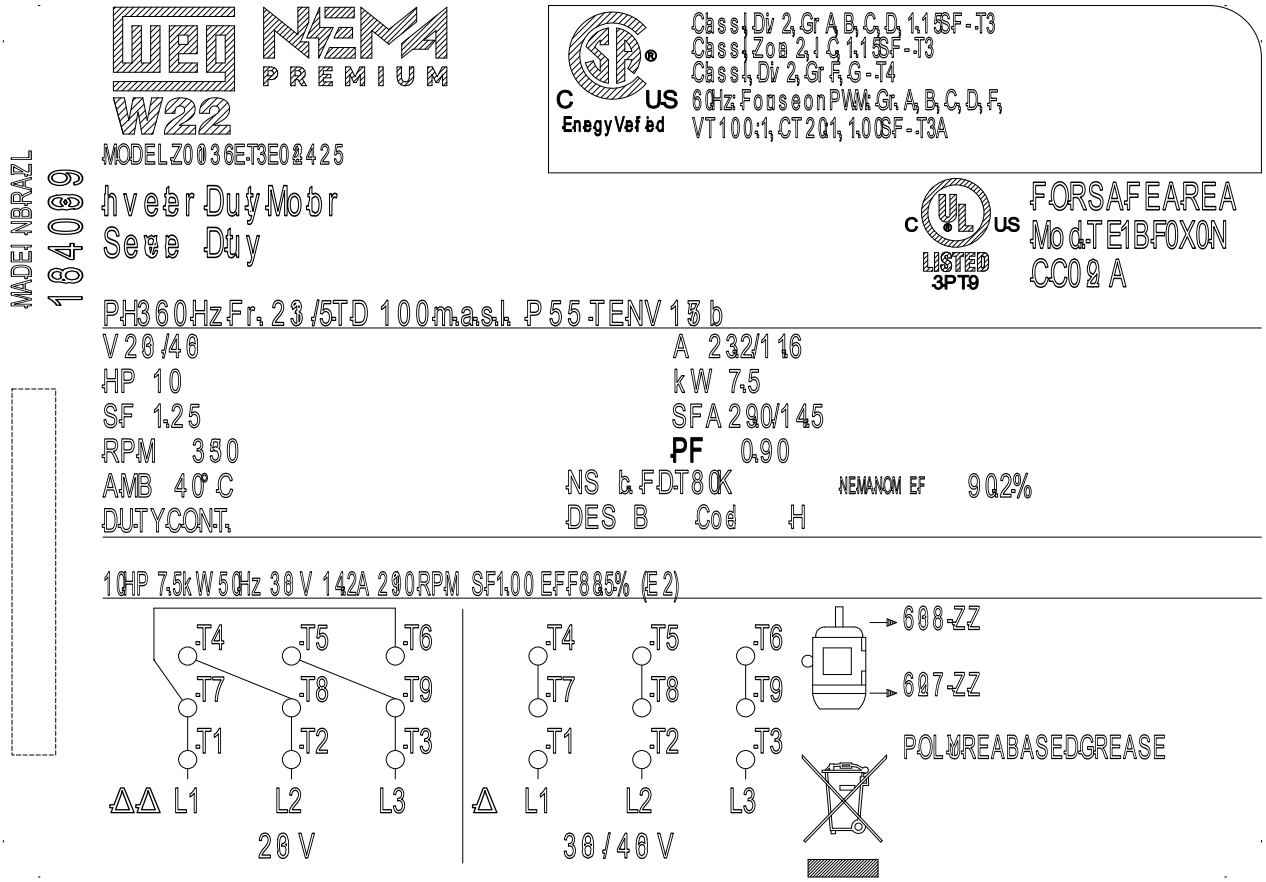


Symptoms	Probable Cause	Corrective Action
Compressor discharging oil	Defective separator Filter	Replace filter
	Clog in Oil Scavenging System	Clean out K15 and K10
The compressor does not load.	The intake valve remains closed.	Check the valve. If necessary, replace the damaged parts with the specific spare parts kit.
	The solenoid valve does not work properly.	Check the solenoid valve. If necessary, replace it.
	Losses on the pressure line.	Check pipes and cables. If necessary, fix or replace them.
Compressor capacity or pressure lower than usual standard.	The air filter is clogged.	Remove the air filter. Clean or replace it.
	The intake valve does not open.	Check the valve. If necessary, replace the damaged parts with the specific spare parts kit.
	Air loss from safety valve.	Replace the valve.
Compressor keeps on loading over working pressure: safety valve opens.	The solenoid valve does not work properly.	Check the solenoid valve. If necessary, replace it.
	Clogged separator filter.	Replace the separator filter.
Compressor overheating.	Insufficient cooling.	Check the cooling system. Check coolant level on tank.
	Dirty oil.	Replace it with new oil.
	Oil level is too low.	Check coolant level on tank and if necessary, add oil.
	Clogged-up cooler or pipe connection.	Clean cooler and pipes.
	The thermostatic valve does not work properly.	Check the thermostatic valve. If necessary, replace the damaged parts with K17 spare parts kit.
	Clogged oil filter.	Replace the oil filter.
During unloading phase, pressure increases up to safety valve opening.	The intake valve remains open.	Check the valve. If necessary, replace the damaged parts with the specific spare parts kit.
	The calibrated nozzle is clogged.	Remove the calibrated nozzle. Clean or replace it.
Oil leakage from intake valve only when the machine is switched off.	The intake valve does not work properly (does not close).	Check the valve. If necessary, replace the damaged parts with the specific spare parts kit.
	The non-return valve of intake valve does not work properly.	Check it and clean it.
Oil soaked-up air filter during unloading phase.	Too high level of oil in the tank.	Check oil level on separator tank (see Page 7).
	Clogged separator filter.	Replace the separator filter.
	The oil recovery viewer is dirty or does not work properly.	Clean it. If necessary, replace the damaged parts with the K15 spare parts kit. If separator filter is clogged up, replace it.

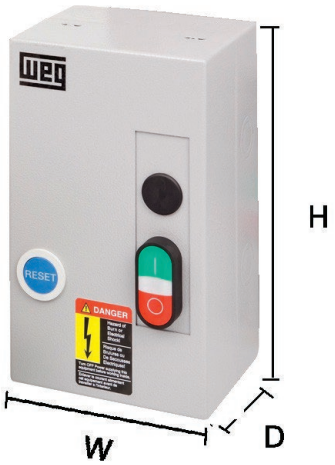
The compressor remains under loading phase.	The intake valve does not work properly (does not close).	Check the valve. If necessary, replace it.
In stop phase, without using the air, the pressure in the air tank goes down.	Losses in the air circuit.	Check the air circuit.
	The minimum pressure valve does not work properly.	Check the valve. If necessary, replace the damaged parts with K14 spare parts kit.
Rotor seizure.	Unknown particles inside.	Contact GenAer technical support.
	Insufficient lubrication.	Contact GenAer technical support.
Noisy transmission (in Gear models).	Damaged transmission or elastic spider.	Replace the specific spare parts kit.
Oil leaks in the outlet of minimum pressure valve.	Separator filter damaged.	Replace the separator filter.
	Clogged oil recovery viewer.	Clean the oil recovery viewer.
	Damaged O-ring of the separator nipple.	Replace K1 spare parts kit.
Motor does not start, neither coupled nor decoupled	Power cables are interrupted	Check the control panel and the motor power supply cables
	Blown fuses	Replace blown fuses
	Wrong motor connection	Correct the motor connection according to the connection diagram
	Locked rotor	Check the motor shaft to ensure that it rotates freely
The motor starts at no-load but fails when load is applied. It starts very slowly and does not reach the rated speed	Load torque is too high during start-up	Do not start the motor on load
	Too high voltage drop in the power cables	Check the installation dimensioning (transformer, cable cross section, relays, circuit breakers, etc.)
Abnormal/excessive noise	Defective transmission component or defective driven machine	Check the transmission force, the coupling and the alignment
	Misaligned / unleveled base	Align / level the motor with the driven machine
	Unbalanced components or unbalanced driven machine	Balance the machine set again
	Different balancing methods used for motor and coupling balancing (halve key, full key)	Balance the motor again
	Wrong motor direction of rotation	Reverse the direction of rotation
	Loose bolts	Retighten the bolts
	Foundation resonance	Check the foundation design
	Damaged bearings	Replace the bearings
Motor overheating	Insufficient cooling	Clean air inlet and outlet and cooling fins
		Check the minimum required distance between the fan cover and nearest walls.
		Check air temperature at inlet
	Overload	Measure motor current, evaluate motor application and if required, reduce the load

	Number of starts per hour is too high or the load inertia moment is too high	Reduce the number of starts per hour
	Power supply voltage too high	Check the motor power supply voltage. Power supply voltage must not exceed the tolerance in Motor Manual
	Power supply voltage too low	Check the motor power supply voltage and the voltage drop. Power supply voltage must not exceed the tolerance specified in Motor Manual
	Interrupted power supply	Check the connection of the power cables
	Voltage unbalance at the motor terminals	Check for blown fuses, wrong commands, voltage unbalance in the power line, phase fault or interrupted power cables
	Direction of rotation is not compatible with the unidirectional fan	Check if the direction of rotation matches the rotation arrow indicated on end shield
Bearing overheating	Excessive grease/oil	Clean the bearing and lubricate it according to the provided recommendations
	Grease /oil aging	
	The used grease / oil does not match the specified one	
	Lack of grease/oil	Lubricate the bearing according to the provided recommendations
	Excessive axial or radial forces due to the belt tension	Reduce the belt tension
		Reduce the load applied to the motor

Motor Specs

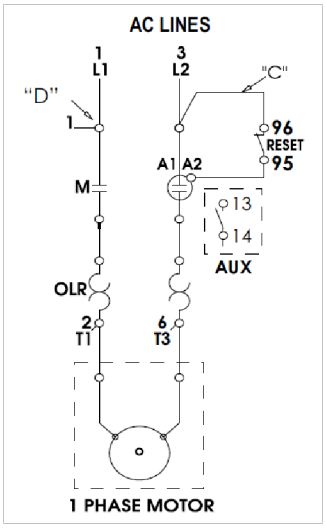

MADE IN BRAZIL
184089
W22
PREMIUM
MODEL Z0136ET3E0425
Inverter Duty Motor
Severe Duty
Class I Div 2 Gr A B C D T3 SF - T3
Class I Zone 2 IIC T3 SF - T3
Class I Div 2 Gr F G - T4
60Hz Foot Mount PWM Gr A B C D F
VT100:1 CT20:1 1.00 SF - T3A
Energy Verified
FOR SAFE AREA
Mod TE1BF0X0N
CCOA
LISTED
3PT9
P H 3 60 Hz Fr 213/5T D 100 m.a.s.l. IP 55 TENV 155 (b)
V 208/460
A 23.2/11.6
HP 10
kW 7.5
SF 1.25
SFA 29.0/14.5
RPM 3500
PF 0.90
AMB 40°C
NS (kA FD T80K
NEMA NOM EF 90.2%
DUTY CONT.
DES B Cod H
10 HP 7.5 kW 50 Hz 380 V 14.2 A 2900 RPM SF 1.00 EFF 88.5% (IE2)
T4 T5 T6
T7 T8 T9
T1 T2 T3
ΔΔ L1 L2 L3
220 V
T4 T5 T6
T7 T8 T9
T1 T2 T3
Δ L1 L2 L3
380/460 V
6308-ZZ
6207-ZZ
POLYUREA BASED GREASE

Compressor Controls and Main Power Connection Guide

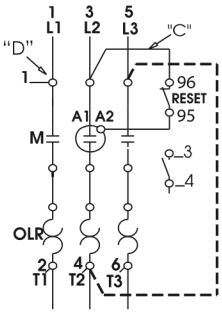


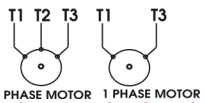
WIRING DIAGRAM

Single-phase Starter



Three-phase Starter





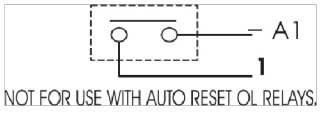
Conversion to single-phase, add jumper wire from L3 to T2 (follow dotted line connection above)

Separate Control

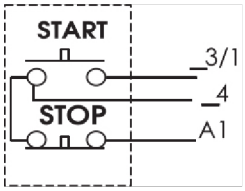
FOR SEPARATE CONTROL, REMOVE WIRES "C" AND "D" IF SUPPLIED AND CONNECT SEPARATE CONTROL LINES TO TERMINAL Nº 96 ON THE OVERLOAD RELAY AND TO TERMINAL Nº _3 ON THE AUX. CONTACT BLOCK (FOR 3 WIRE CONTROL) OR TO THE CONTACTOR COIL Nº A1 (FOR 2 WIRE CONTROL).

Pilot Devices

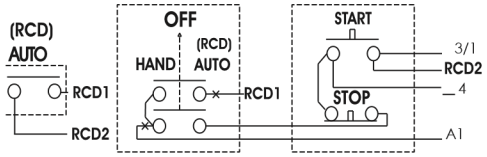
2 Wire Control



3 Wire Control



Hand-Off Auto Wire Control (For ESW Series Only)



Warranty Information

Compressor Warranty: 1 Year Manufacturer Warranty

20073/20074 Air End: 2 Year Warranty

WEG Electric Motor: 2 Year Warranty

GenAer Power Systems
60677 120th Ave
Claremont, MN 55924
Phone: (888) 841-1068
Email: office@genaer.com
Website: www.genaer.com

Warranty and Diclaimer

GenAer Power Systems, (GenAer) warrants its Equipment to be free of defects in material and workmanship for a period of one year from the day of sale by GenAer or an authorized GenAer distributor to the original purchaser. GenAer will at its discretion repair or replace any part of the equipment proven to be defective. This warranty applies only when the equipment is used for the intended purpose and has been installed, operated and maintained in accordance with the written recommendations.

A condition of the warranty is the prepaid return of the equipment to an authorized distributor of GenAer who shall provide verification of the warranty claim. GenAer will repair or replace, free of charge, any parts found and verified to be defective. Should the inspection of the equipment not reveal any defect in material or workmanship, repairs will be made, at standard charges, which include parts, labor and transportation.

The warranty does not apply to, nor will GenAer be liable for, damage, wear, or malfunction of equipment caused by improper installation, misuse, negligence, accident, tampering, lack of, or improper maintenance, or by substitution of non-GenAer parts. The warranty does not apply to, nor will GenAer be responsible for the improper operation, maintenance, design, manufacture, installation of components, accessories, or equipment not supplied by GenAer.

This is a sole and exclusive warranty offered by GenAer to the purchaser. No other warranties (expressed or implied) or non-contractual liabilities are made, including product liability, whether on negligence or strict liability basis. Factory warranties that are offered by manufacturers of Engines, air pumps, electric Motors and related components that are used in the manufacture of Equipment by GenAer, do apply as general warranty. GenAer's liability shall in no case exceed the amount of purchase price.

Maintenance Log

Date _____ Hours _____ Service Performed _____

Date _____ Hours _____ Service Performed _____

Date _____ Hours _____ Service Performed _____

Date _____ Hours _____ Service Performed _____

Date _____ Hours _____ Service Performed _____

Date _____ Hours _____ Service Performed _____

Date _____ Hours _____ Service Performed _____

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