COAIRE

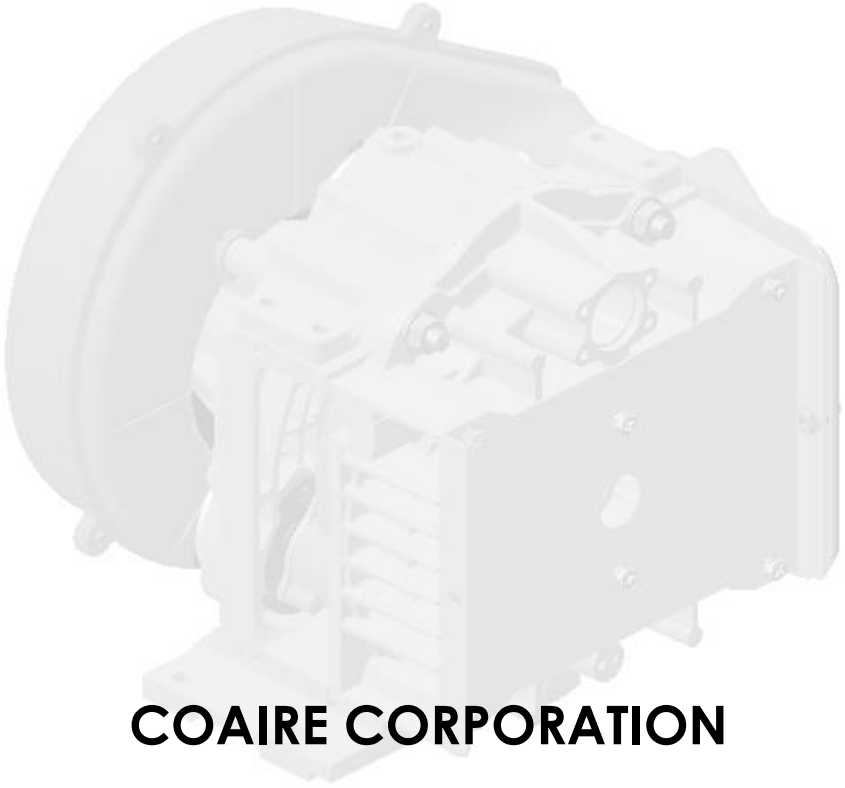
Authorized Distributor Only

OILFREE SCROLL AIREND
MAINTENANCE MANUAL AND PARTS LIST

MODEL

LB3L(H)

LB5L(H)



COAIRE CORPORATION

For proper and safe use of the compressor, please follow all instructions and safety precautions as identified in this manual, along with general safety regulations and practices.

Printed in U.S.A.

SAFETY AND PRECAUTIONS

Before you install the air compressor you should take the time to carefully read all the instructions contained in this manual. Electricity and compressed air have the potential to cause severe personal injury or property damage. Before installing, wiring, starting, operating or making any adjustments, identify the components of the air compressor using this manual as a guide. The operator should use common sense and good working practices while operating and maintaining this unit. Follow all procedures and piping accurately. Understand the starting and stopping sequences. Check the safety devices in accordance with the following procedures contained in this manual. Maintenance should be done by qualified personnel, accurately with proper tools. Follow the maintenance schedule as outlined in the manual to ensure problem free operation after start up.

SAFETY PRECAUTIONS
BEFORE INSTALLING THE COMPRESSOR OR PERFORMING ANY MAINTENANCE READ THIS MANUAL CAREFULLY.

WARNINGS

COMPRESSED AIR AND ELECTRICITY ARE DANGEROUS. BEFORE DOING ANY WORK ON THIS UNIT, BE SURE THE ELECTRICAL SUPPLY HAS BEEN SHUT OFF(LOCKED AND TAGGED) AND THE ENTIRE COMPRESSOR SYSTEM HAS BEEN VENTED OF ALL PRESSURE.

1. Do not remove the cover, loosen or remove any fittings, connections or devices when this unit is operating or in operation. Hot liquid and air that are contained within this unit under pressure can cause severe injury or death.
2. The compressor has high and dangerous voltage in the motor, the starter and control box. All installations must be in accordance with recognized electrical procedure. Before working on the electrical system, ensure that the system's power has been shut off by use of a manual disconnect switch. A circuit breaker or fuse switch must be provided in the electrical supply line to be connected to the compressor. The preparation work for installation of this unit must be done on suitable ground, maintenance clearance and lightning arrestors for all electrical components.
3. Do not operate the compressor at a higher discharge pressure than those specified on the compressor nameplate. If so an overload will occur. This condition will result in electric motor shutdown.
4. Use only safety solvent for cleaning the compressor and auxiliary equipment.
5. Install a manual shut off valve(isolation type) in the discharge line for service work.
6. Whenever pressure is released through the safety valve during operation, it is due to excessive pressure in the system. The cause of excessive pressure should be checked and immediately corrected.
7. Before doing any mechanical work on the compressor,
   a) Shut down the unit.
   b) Electrically isolate the compressor by use of the manual disconnect switch in the power line to the unit. Lock and tag the switch so that it cannot be operated.
8. Before starting the compressor, the maintenance instructions should be thoroughly read and understood.
9. After maintenance work is completed, covers must be securely closed.
10. For questions contact your distributor before proceeding.

STATEMENT OF WARRANTY TERMS & CONDITIONS

COAIRE's oilfree scroll pumps are warranted to be free of defects in materials and workmanship under proper use, installation, and application. This warranty shall be for a period of 15 months from date of shipment from our factory or other stocking facilities or 12 months from date of installation. Proof of installation date will be required. All air pumps outside the U.S. and Canada carry a parts only warranty.

ALL FREIGHT DAMAGE CLAIMS ARE NOT THE RESPONSIBILITY OF THE MANUFACTURER AND ARE NOT COVERED UNDER WARRANTY AS ALL PRODUCTS ARE SHIPPED F.O.B. SHIPPER.

PLEASE DIRECT ALL FREIGHT CLAIMS TO THE SHIPPER IN QUESTION.

MAINTENANCE AND ADJUSTMENTS

This warranty does not apply to any unit damaged by accident, modification, misuse, negligence, or misapplication. Damage to pumps by exposure to ammonia, any other corrosive substance or sub-freezing environment will be considered misuse.

Any air pumps, part or material found defective will be repaired, replaced or refunded, at the sellers option free of charge, provided that COAIRE is notified within the above stated warranty period. **All returns of allegedly defective equipment must have prior written authorization.** Said authorization may be obtained through our service department. All air pumps, parts, materials must be returned **freight prepaid to** the Manufacturer's factory within 30 days of return authorization date. Any shipment returned to the factory collect will be refused.

If an item is found to be warrantable, the repaired item or replacement will be returned normal ground freight prepaid within the continental United States and Canada. Expedited shipment costs are the responsibility of the requestor.

Any replacement part or material is warranted only to the extent of the remaining warranty period of the dryer or to the extent as provided by the supplier, whichever is longer.

Identification Plate

The identification plate is located on the side of the air pumps and shows all the primary data of the pump. Upon installation, fill in the table on the previous page with all the data shown on the identification plate. This data should always be referred to when calling the manufacturer or distributor. The removal or alteration of the identification plate will void the warranty rights.

DISCLAIMER

The warranty does not cover any responsibility or liability for direct or indirect damages to persons, or equipment caused by improper usage or maintenance, and is limited to manufacturing defects only. Refer to COAIRE Warranty policy manual for travel, mileage and special charge considerations. The warranty will be immediately voided if there are changes or alterations to the compressor.

WHO TO CONTACT IF YOU HAVE A WARRANTY CLAIM:

COAIRE Inc, Phone (562) 463-3935

Fax (562) 463-4928

All freight damage claims should be filed within 15 working days and should be directed to the carrier.

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1. AIREND MAINTENANCE TABLE

1) Low Pressure (LB3,5L)

Maintenance should be followed below table

Item	Check	Run Time			
		Regular maintenance			Disassembling maintenance
		Every 2,500hrs	Every 5,000hrs	Every 10,000hrs	Every 20,000hrs
		1 year	2 years	4 years	8 years
Bearing Grease	Re-grease		○	○	○
OS Center Bearing	check exchange			○	●
Pin Crank Bearing	check exchange			○	●
Bearing Cover	check exchange			○	●
Crank Shaft Bearing	check exchange			○	●
Tip Seal	exchange		○	●	
Dust Seal	exchange		○	●	
Airend Pulley	check exchange			○	●
Sirocco Fan	check exchange		○ (cleaning)	○	●
Os, Fs Fin	Cleaning		○	○	○
Fan Duct, Cover	Cleaning		○	○	○
Sirocco Fan	Cleaning		○	○	○
Housing	Cleaning		○	○	○

***)** ○ **:** check or cleaning**,** ●**:** exchange or check

CAUTION

① Routine maintenance and disassembly maintenance, must be applied when the hourly or time schedule comes due, whichever comes first.

② Regular maintenance, disassembly maintenance standard: is applied when the standard use condition and installation environment are satisfactory and when the surrounding environment or operation condition is severe, the period or time for regular maintenance and disassembly maintenance must be shortened.

③ The regular maintenance and disassembly maintenance are not part of the warranty.

④ Cleaning: When the surrounding environment or operation condition are service (high heat or dirty environment), the cleaning time or periodic maintenance intervals must be shortened. (LB3,5L(H)) per 2,500 hours)

2) High Pressure (LB3,5H)

Maintenance should be followed below table

Item	Check	Run Time			
		Regular maintenance			Disassembling maintenance
		Every 2,500hrs	Every 5,000hrs	Every 10,000hrs	Every 20,000hrs
		1 year	2 years	4 years	8 years
Bearing Grease	Re-grease		○	○	○
OS Center Bearing	check exchange			○	●
Pin Crank Bearing	check exchange			○	●
Bearing Cover	check exchange			○	●
Crank Shaft Bearing	check exchange			○	●
Tip Seal	exchange	○	●		
Dust Seal	exchange	○	●		
Airend Pulley	check exchange			○	●
Sirocco Fan	check exchange		○ (cleaning)	○	●
Os, Fs Fin	Cleaning		○	○	○
Fan Duct, Cover	Cleaning		○	○	○
Sirocco Fan	Cleaning		○	○	○
Housing	Cleaning		○	○	○

***)** ○ **:** check**,** ●**:** exchange or check

CAUTION

① Routine maintenance and disassembly maintenance, must be applied when the hourly or time schedule comes due, whichever comes first.
② Regular maintenance, disassembly maintenance standard: is applied when the standard use condition and installation environment are satisfactory and when the surrounding environment or operation condition is severe, the period or time for regular maintenance and disassembly maintenance must be shortened.
③ The regular maintenance and disassembly maintenance are not part of the warranty.
④ Cleaning: When the surrounding environment or operation condition are service (high heat or dirty environment), the cleaning time or periodic maintenance intervals must be shortened. (LB3,5L(H)) per 2,500 hours).

2. REGULAR MAINTENANCE

2.1 Preparation

1) Tools

① screw driver (+ cross-tip)

② 17mm hand socket, extension, ratchet handle

③ Holding Spanner
④ Low pressure compressed air
⑤ Torque wrench, in-lbs
⑥ Gear puller, 5mm T-Wrench

⑦ Cutter, Screw driver(flat-tip), Monkey spanner

2.2 Disassembly order and method

1) Fan duct

① Loosen the 3 upset type M6 bolts and separate the fan duct.

2) Fan cover (external)

① Loosen the 5 tapping screw M6 bolts and separate the fan cover.

3) Airend pulley

① Take off the hexagon socket head cap screws with a spanner in the balance weight of pulley rotation direction and remove the pulley/fan assembly.

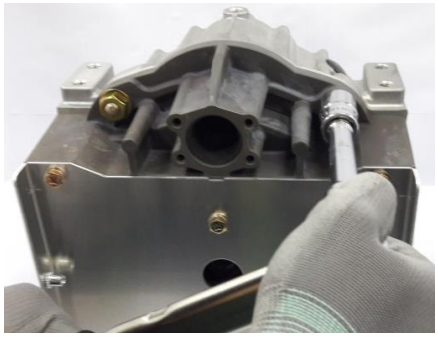
4) Fan cover (internal)

① Separate the fan cover by loosening the 3 screws.

.

5) Fixed scroll set

① Separate the fixed scroll by removing four(4) self locking nuts.



2.3 Cleaning

1) Orbiting scroll cooling fin

① Remove dust and dirt attached to the cooling fin using compressed air gun.

② Do not clean the orbiting scroll set with organic solvent (thinner, solvent)

2) Fixed scroll cooling fin

① Remove dust and dirt attached to the cooling fin using compressed air gun.

② Do not clean the orbiting scroll set with organic solvent (thinner, solvent).

NOTE

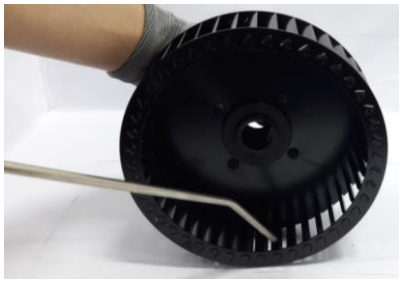
Damage may occur to special protective coating.

3) Fan cover & duct

① Remove dust and dirt attached to the fan cover and duct using air gun.

4) Sirocco fan

① Remove dust and dirt attached to the sirocco fan using air gun.



2.4 Maintenance

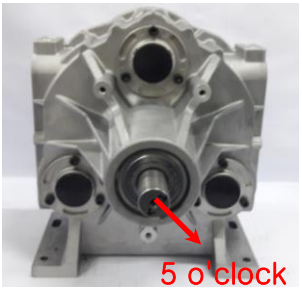
NOTE

Conduct maintenance in a clean location to prevent pollution and damage to the scroll maintenance parts. Use only recommended high temperature grease. (Consult your distributor)

1) Injecting grease into orbiting scroll center bearing

① Remove the dust cap on the top rib or right of housing.

② The crank shaft key must be in 5 o'clock direction when seen from the front.



③ Insert the nozzle connected to the grease gun into the housing dust cap hole and connect to the grease nipple attached to the crank.

NOTE

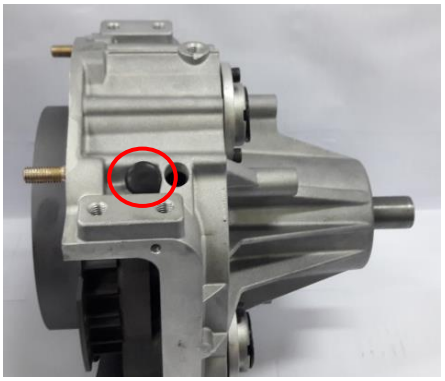
Move the crank shaft from left to right and check the connection of the grease nozzle and nipple. Bearing should rotate smoothly and quietly.

④ Press the grease gun button and inject grease.

NOTE

Keep the nipple securely on the grease gun nozzle so that grease does not leak between the grease gun nozzle and nipple. Rotate the crank so the grease is applied evenly within the bearing, do not over grease.

⑤ After injecting the grease fit the housing with the dust cap.



2) Injecting grease into pin crank bearing

① Use a flat screw driver to remove the 3 bearing grease caps behind the housing.

② Apply grease onto the pin crank orbiting scroll shaft bearing. Use a needle grease nozzle, apply grease evenly within the bearings, do not over grease.

③ Stick the grease gun nozzle closely into the pin crank bolt nipple and press the grease gun button about 3 to 4 times to supply grease to the housing bearing.

CAUTION

Watch closely so that grease does not leak between the grease gun and pin crank nipple when injecting the grease.

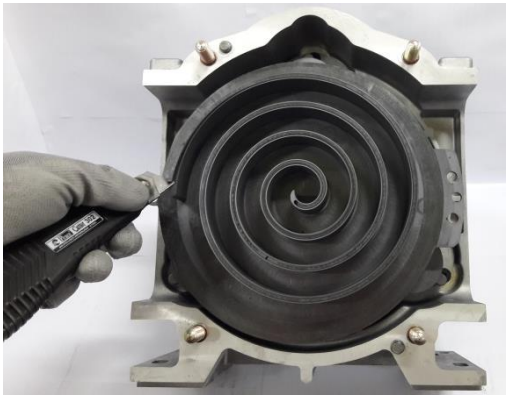
④ Re-assemble the 3 bearing grease caps into its original position, do not force them, hand pressure is adequate.

3) Tip seal set exchange

① Separate the high pressure and low pressure tip seal from the top seal by using pick in the fixed scroll set.

② Using the same method, separate the dust seal and back up tube.

③ Using the same method, separate tip seal from the orbiting scroll set.



④ Lift about 2mm from the high pressure central tip seal and insert into the high pressure tip seal vertical hem and fix with finger tips.

CAUTION

Shaped slit on the side and the bottom of the tip seal, wrap facing the center of the insertion.

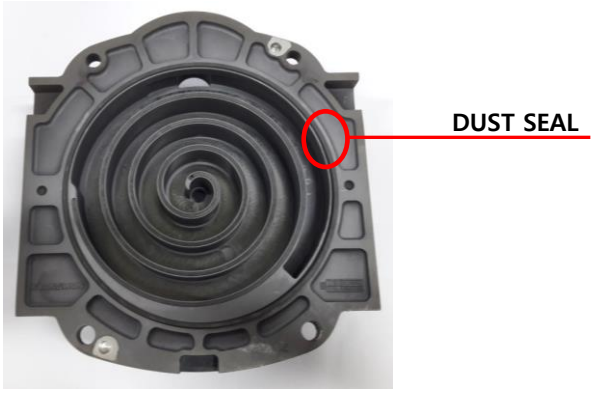
⑤ Insert high pressure tip seal using the same method.

⑥ Insert low pressure tip seal into the end of the high pressure tip seal and press down with finger tip and insert and cut according to tip seal groove with a knife.

⑦ Insert low pressure tip seal using the same method.

⑧ When fixing a backup tube to the fixed scroll set, the joint must face 6 o'clock direction.

⑨ Fit the dust seal on top of the back-up tube.



CAUTION

The top and bottom are not distinguishable when assembling dust seal.

2.5 Assembling

1) Fixed scroll set

① Assemble the fixed scroll set according to the housing parallel pin location.

② Temporarily assemble 4 self-locking nuts then tighten with cross pattern sequence using a torque wrench.

[TORQUE]

LB3L(H) : 260 lbf.inch(300㎏f.㎝)

LB5L(H) : 260 lbf.inch(300㎏f.㎝)

2) Sirocco fan & fan cover, duct

① Fit 3 screws onto the fan cover (internal).

② Tighten the hexagon socket head cap screws with a spanner in the balance weight of pulley reverse-rotation direction to assemble the pulley sirocco fan assembly.

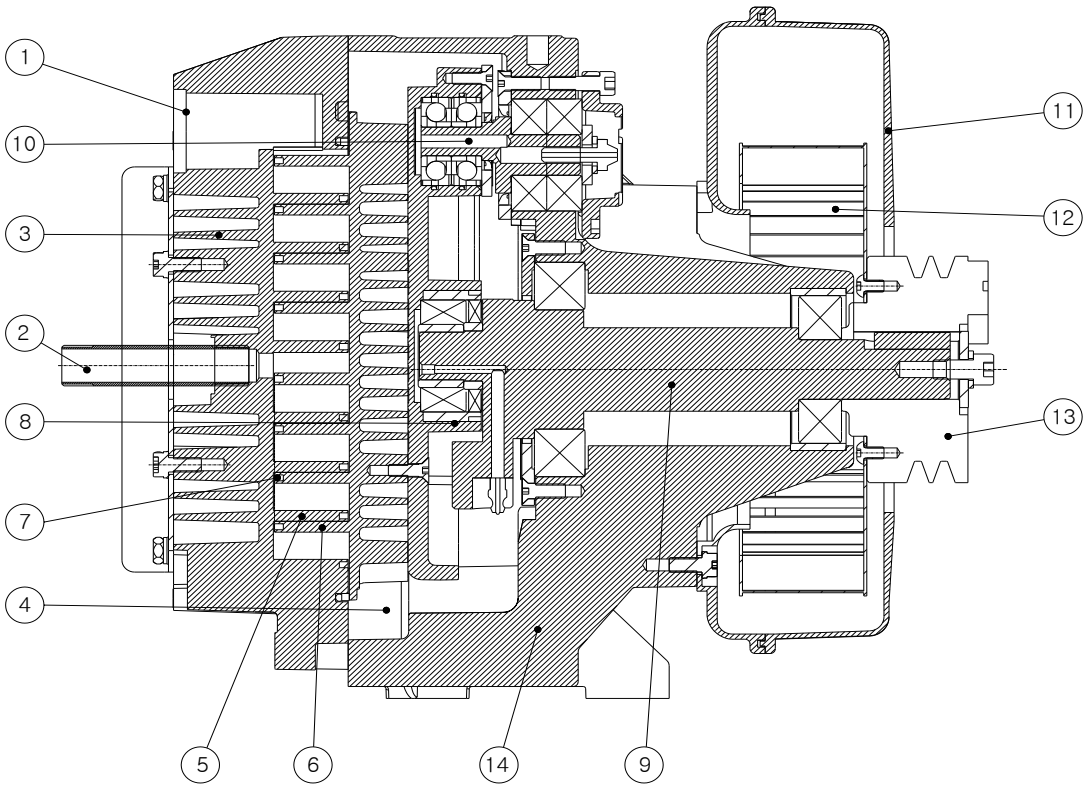
☞ Torque : 174 lbf.inch(200㎏f.㎝)

③ Close the fan cover (external) with self-tapping screw.

CAUTION

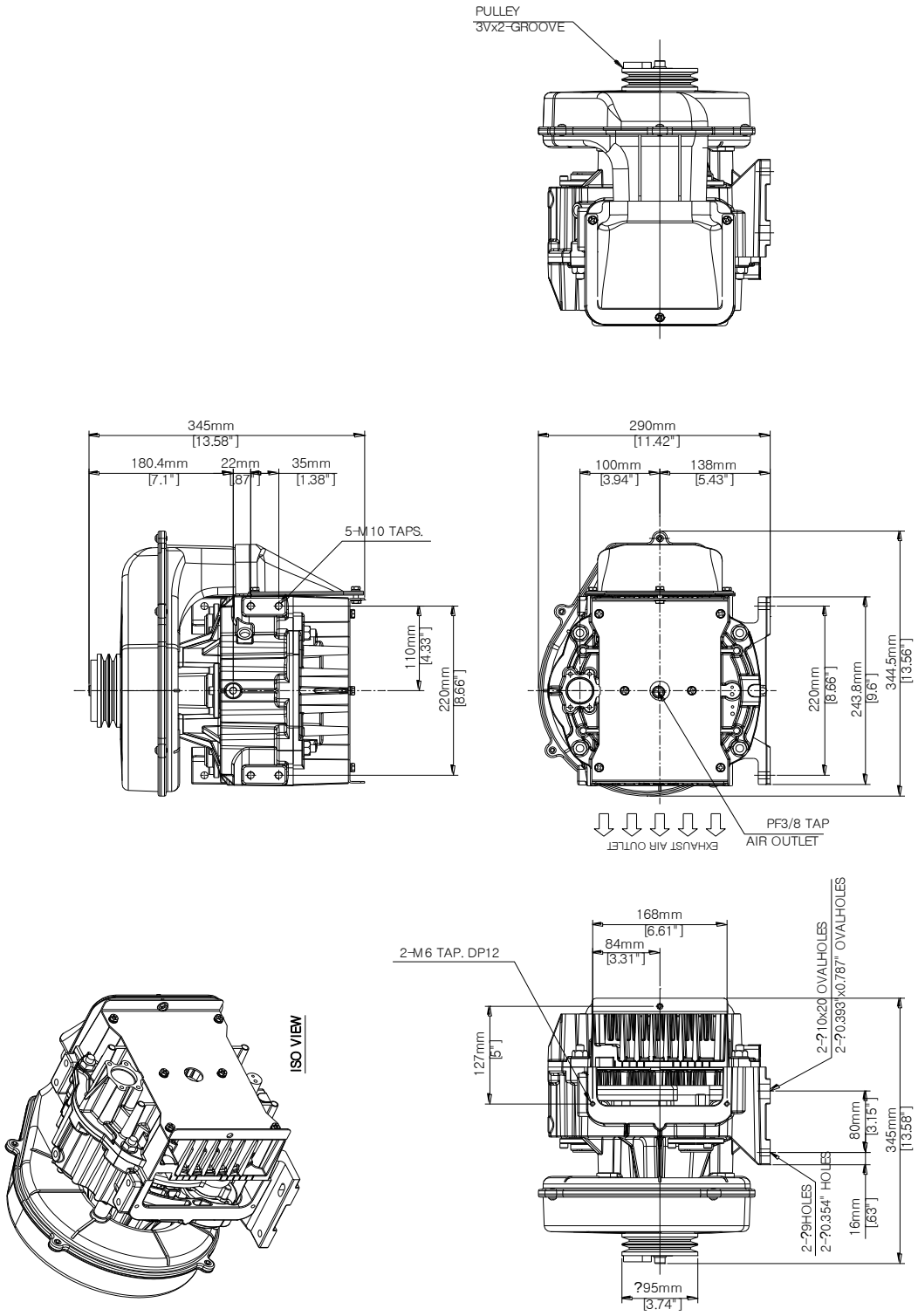
When tightening tapping screw, please be careful so that the screw thread does not get damaged.

3. AIREND SECTIONAL VIEW



NO.	PART NAME	NO.	PART NAME
①	INTAKE PORT	⑧	ORBITING SCROLL CENTER BEARING
②	DISCHARGE PIPE	⑨	CRANK SHAFT
③	FIXED SCROLL	⑩	PIN CRANK
④	ORBITING SCROLL	⑪	FAN COVER
⑤	FIXED SCROLL WARP	⑫	COOLING FAN
⑥	ORBITING SCROLL WARP	⑬	AIREND PULLEY
⑦	TIP SEAL	⑭	HOUSING

4. OUTSIDE DRAWING



5. ASSEMBLING TORQUE TABLE

Item	Part	standard	Torque (kgf.cm)
① Bearing support area	Hexagon socket head cap screws	M5	40
② Bearing support area (Housing inside)	Hexagon socket head cap screws	M6	90
③ Bearing support area (Housing outside)	Hexagon socket head cap screws	M6	70
④ Bearing support area	Hexagon socket head cap screws	M6	90
⑤ Pin crank	Hexagon socket head cap screws	M8	200
⑥ Airend pulley	Hexagon socket head cap screws	M8	200
⑦ Fixed scroll set	Nut	M10	300
⑧ Sirocco fan	Bolt	M5	60

CAUTION

When tightening bolts and nuts, use a torque wrench.

Warranty Claim Report

Please complete the following claim form, your claim will be confirmed by our sales representative.

To : Coaire Air Compressor Inc
407 International Parkway, Arlington TX
76011 TEL.(817) 770-0170 FAX(817) 770-0173

Distributor	Company	
	Address	
Customer	Company	
	Address	

Date	
Model	
Serial No.	
Run Hours	**Hrs.**
Setting Press.	**PSIG**

OPERATING CONDITIONS

Percent(%) on load	%	Ambient Temperature	·F
No. of days of operation weekly	Days	Discharge temperature	·F
Hours per day	Hours	Compressor area temperature	·F
Machine setting OL/OL or Mod		Environment [1]	

[1] 1 to 10, 1 being clean, 10 very dirty

Incoming Voltages			Full load amperage at _____ PSIG			Unload amperage at _____ PSIG		
L1 - L2	L2 - L3	L1 - L3	L1 - L2	L2 - L3	L1 - L3	L1 - L2	L2 - L3	L1 - L3
Volts	Amp.	Amp.	Amp.	Amp.	Amp.	Amp.	Amp.	Amp.

Symptom

Fault Diagnosis

Resolution

Parts required

No.	Item Number	Description/MFGR Part Number	Quantity
01			
02			
03			
04			

Labor Cost

Labor Time: Hrs x $/Hrs= $
Travel Time: Hrs x $/Hrs= $
Total Amount: $

Technicians name:

WRITTEN BY _____ SIGNATURE **X** _____

COAIRE
407 International Parkway Arlington TX 76011 TEL.(817) 770-0170 FAX(817) 770-0173

START UP REPORT

Please fill out completely and return to the factory to validate warranty.

CUSTOMER AND MACHINE INFORMATION

CUSTOMER		FACTORY SHIP DATE	/ /
ADDRESS		DATE STARTED UP	/ /
CITY/STATE		MODEL NUMBER	
PHONE		SERIAL NUMBER	
WRITTTEN BY		HOURS ON MACHINE	Hrs.

MACHINE INFORMATIONS AND INITIAL STARTUP

Compressor Environment- excellent ☐ , good ☐ , fair ☐ , poor ☐ .
Machine Location – indoors ☐ outdoors ☐ if outdoors, protected from rain? Yes ☐ No ☐ .

Approx. ambient temperature_____ adequate ventilation? - Yes ☐ No ☐ .

Did you check for correct rotation? Yes ☐ No ☐ Nameplate amperage for voltage used _____

Incoming Voltages

L1-L2	L2-L3	L1-L3
Volts	Volts	Volts

Full load amperage at _____ PSIG

L1	L2	L3
Amp.	Amp.	Amp.

Unload amperage at _____ PSIG

L1	L2	L3
Amp.	Amp.	Amp.

Is the machine on a level and stable surface? Yes ☐ No ☐ .
Did you have to add lubricant oil? – Yes ☐ No ☐ .
if yes, please indicate amount and exact name and type. (Amount _____ Name _____ Type _____)
Was a flexible connector used to connect piping? – Yes ☐ No ☐ .
Approx. time spent during startup procedure _____ Hrs.
Did you advice customer on operation and maintenance of machine? Yes ☐ No ☐ .
Application and installation comments:

_____
_____
_____
_____
_____

Machine Sold By(Company) _____ Sales Person _____
Startup performed by _____ Date _____

THERE IS NO WARRANTY WITHOUT THIS REPORT*!*

QUALITY AND RELIABILITY WITHOUT COMPROMISE

COAIRE
407 International Parkway Arlington TX 76011 TEL.(817) 770-0170 FAX(817) 770-0173