

**Five Year Warranty Program**



**POLARIS®**

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# Introduction

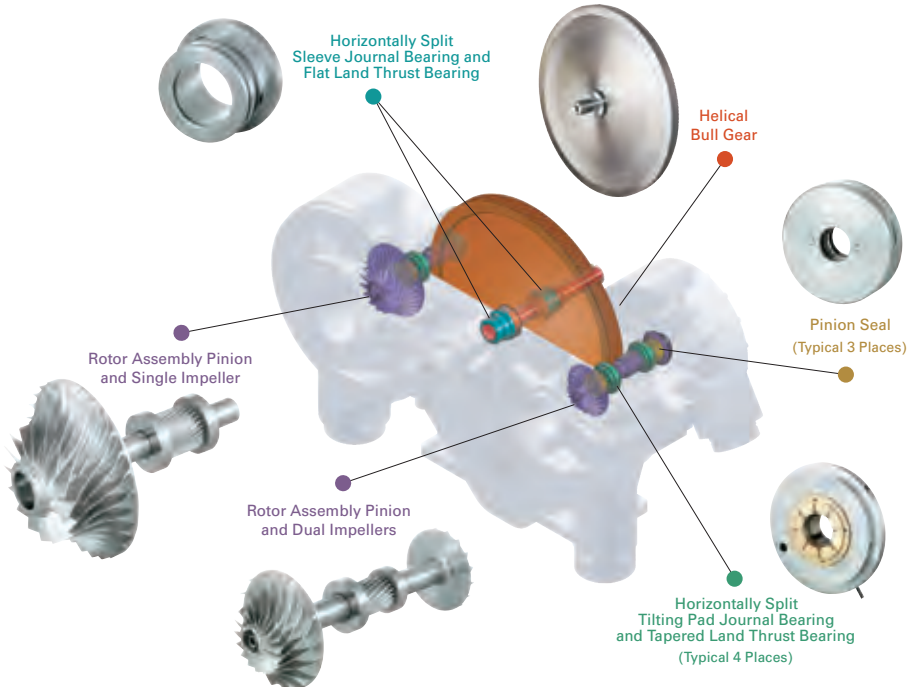
Congratulations, you have purchased the most advanced “oil-free” centrifugal air compressor in the industry. FS-Elliott’s “oil-free” air compressors have acquired a prestigious heritage since being introduced to the marketplace over a half a century ago. These compressors are installed around the globe in facilities that produce a vast array of products that impact all facets of today’s economy. Every compressor is carefully crafted and undergoes the same rigorous execution process including design, manufacture, and inspections governed by our ISO 9001:2000 Certified Quality Management System.

All of our compressor packages are backed by a 12 / 18 month warranty i.e. 12 months from start-up or 18 months from shipment – whichever occurs first. This booklet outlines an expanded warranty – the Five Year Air End Warranty Program. It covers the following compressor air end components – gear casing, low and high speed pinions, impellers, bull gear, bearings and pinon seals. Under the program, FS-Elliott warrants that the compressor air end assembly shall operate free from defects in material or workmanship for a period of five (5) years starting from the time of shipment.

There is no initial investment cost associated with the Five Year Air End Warranty Program. The registration for the Five Year Air End Warranty Program has been streamlined and can either be handled on-line via the internet or alternatively by mailing in the Five Year Air End Program Registration Card. The operation and maintenance requirements are the basic practices identified in the FS-Elliott technical manual. The operating and maintenance scheduled activities must utilize a factory-trained authorized FS-Elliott distributor.

At the core of this program are the people that know this equipment the best – our carefully selected and certified distributors and service providers. Together our TEAM provides our valued customers with the on-site and on-time services, parts, training and advice that will keep your equipment running.

The FS-Elliott philosophy is simple and consistent: FS-Elliott combines unyielding reliability with leading-edge technology and best maintenance and operations practices to ensure that your vital operations are not compromised which allows you to stay focused on your business. This philosophy, along with comprehensive, full-life cycle service, has made FS-Elliott a world leader in engineered air technology.

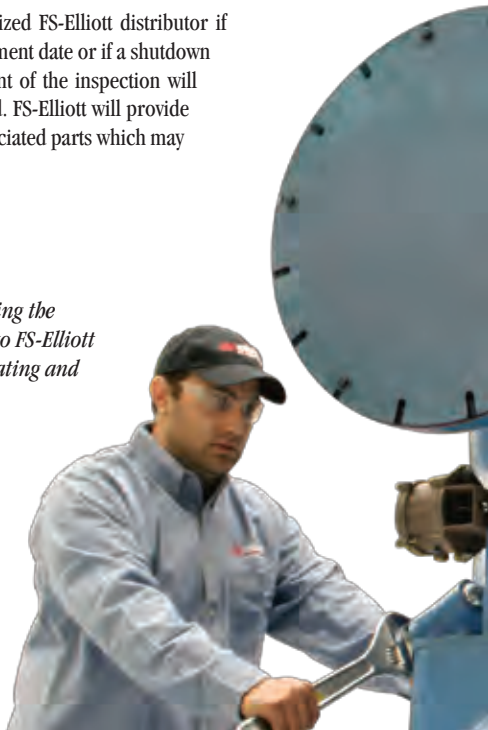


## Compliance Requirements

The following list outlines the Five Year Air End Warranty Program compliance requirements. Under the terms of this program, FS-Elliott warrants that the compressor air end assembly shall operate free from defects in material or workmanship for a period of five (5) years starting from the time of shipment.

- The compressor must be placed into service by either FS-Elliott personnel or an authorized FS-Elliott distributor.
- The compressor must be operated and maintained in accordance with the published guidelines and instructions contained in FS-Elliott's technical manual which is supplied with each compressor package.
- The compressor must be observed daily, including monitoring and logging operating parameters.
- FS-Elliott must be notified of any unusual events or observations.
- FS-Elliott genuine parts must be used exclusively.
- FS-Elliott's Corona™ lubricant must be used exclusively.
- Quarterly lubricant samples must be submitted to FS-Elliott for analysis. (The oil sampling is free-of-charge to users of Corona™ lubricants.)
- Throughout the term of the Five Year Air End Warranty Program, members must establish and maintain a service agreement with a local authorized FS-Elliott distributor. The service agreement must be in place prior to the first quarterly visit and inspection. Maintenance activities must be performed at the specified time intervals in accordance with the program checklist.
- Return any parts claimed to be defective and provide transportation pre-paid to Attention: Service Manager, FS-Elliott Co., LLC, 6013 Enterprise Drive, Export, PA 15632.
- Comply with the Five Year Air End Warranty Program Terms and Conditions.
- The air compressor must be inspected by an authorized FS-Elliott distributor if startup is delayed more than six (6) months after shipment date or if a shutdown more than three (3) months has occurred. The extent of the inspection will depend upon the duration of the time periods involved. FS-Elliott will provide recommendations, as needed. Inspection and any associated parts which may need to be replaced are not covered.

*FS-Elliott offers two technical training sessions during the year. Customers are encouraged to send personnel to FS-Elliott Customer Service School to ensure that proper operating and maintenance practices are being followed.*



The following items are excluded from the coverage in the Five Year Air End Warranty Program.

- Items that are subject to normal wear and tear, including but not limited to, inlet air filter, oil filters, by-pass silencers, valves, bull gear seal, seal carbon rings, drivers, actuators, gaskets, O-rings, lubricants, drive couplings, oil pumps, electrical and electronic components, control systems, accessory equipment, and consumables of any kind.
- Items that are damaged as a result of negligence, improper repairs, unauthorized service, improper operation, misuse, accidents, failure to resist the action of dirt, erosion, corrosive gases or liquids and acts of god.
- Items that are damaged as a result of compressor operation outside the parameters of the original specifications.
- Items that are damaged as a result of failure to perform the required inspections / maintenance at the specified schedule.
- Labor costs associated with the scheduled maintenance activities.
- The air end, if the compressor nameplate has been altered, removed, replaced or cannot be read.



# Data & Maintenance Schedule Checklist

Company Name: \_\_\_\_\_

Compressor Model: \_\_\_\_\_

Site Location: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Reported By: \_\_\_\_\_

Date: \_\_\_\_\_

## Sample Daily Data Recording & Checks

- Record Operating Data
- Open Drain Valves (Exhaust Water Accumulation)
- Check Lubricant Levels
- Investigate All Alarms/Trips
- Note Unusual Events and Observations

## Maintenance & Services Performed

### *Quarterly*

Exterior Inspection:

- Compressor
- Oil System
- Control System

Check Differential Pressure:

- Air Filter Element and Replace, If Necessary
- Oil Filter Element and Replace, If Necessary
- Oil Mist Eliminator and Replace, If Necessary
- Check Oil Reservoir Level, Add Make-Up Lubricant, If Necessary
- Oil Sample / Follow-Up Analysis
- Check and Confirm Proper Condensate Drain Valve Operation
- Check For Water and Oil Leaks
- Check Operational Data
- Written Follow-Up Report

### *Semi Annual*

- Inspect and Grease Main Coupling, If Necessary
- Inspect and Grease Driver, If Necessary
- Inspect and Replace Motor Air Filter Elements, If Necessary

### *Annual*

- Inspect and Replace Bull Gear Seals, If Necessary
- Inspect and Replace Interstage Air Gaskets, If Necessary
- Check Compressor / Driver Alignment
- Inspect Inlet & Discharge Expansion Joints
- Inspect Inlet Valve / Guide Vanes / For Proper Operation
- Inspect Unloading Valve
- Inspect Discharge Check Valve (Air system)
- Change Out Lubricant and Clean Reservoir, If Necessary
- Clean Oil Cooler
- Inspect Instrumentation and Safety and Protection Devices

### *As Necessary*

- Inspect and Clean Impellers And Diffusers
- Inspect and Clean Compressor Bearings and Seals
- Inspect and Clean Bull Gear Bearings and Seals
- Inspect and Clean Oil Cooler
- Inspect and Clean Intercooler and Aftercooler
- Inspect, and Replace Bull Gear Bearings, If Necessary
- Inspect, and Replace Compressor Bearings, If Necessary
- Inspect, and Replace Compressor Seals, If Necessary
- Inspect Motor Starters
- Inspect Motor Internals
- Clean Intercoolers and Aftercoolers And Replace Head Gaskets

# Sample Daily Operating Record Sheet

Company Name: \_\_\_\_\_

Compressor Model: \_\_\_\_\_

Site Location: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Reported By: \_\_\_\_\_

Date: \_\_\_\_\_

Type Of Operation: (Circle One)

Base

Suction

Throttle

Intermittent

Dual

<i>Abbv</i>	<i>Description</i>	<i>Units (Circle One)</i>				
Date	Date (Real Time Clock)					
Time	Time (Real Time Clock)					
Dish P	Compressor Discharge Pressure	psig / bar g				
Oil In P	Inlet Oil Pressure	psig / bar g				
Oil In T	Inlet Oil Temperature	F° / C°				
HS Vib	High Speed Rotor Vibration	Mils				
LS Vib	Low Speed Rotor Vibration	Mils				
	Motor Current	Amps				
Fnl I/S	Final Interstage Air Temperature	F° / C°				
U/V PO	Unloading Valve Position	% Open				
I/V PO	Inlet Valve Position	% Open				
	Total Run Time	Hours				
Pwr On	Panel Power Time	Hours				
Air Sys	Plant Air System Pressure	psig / bar g				
Stator	Motor Stator Winding Temp	F° / C°				
1st I/S	First Interstage Air Temp	F° / C°				
Air Cool	Aftercooler Air Temp	F° / C°				
1st Dis	First Stage Discharge Pressure	psig / bar g				
2nd Dis	Second Stage Discharge Pressure	psig / bar g				
	Number Of Surges					
	Number Of Starts					
	Reservoir Oil Level	(High / OK / Low)				
	Driver Shaft End Bearing Oil Level	(High / OK / Low)				
	Driver Cap End Bearing Oil Level	(High / OK / Low)				
	Motor AC Voltage	Volts				
	Seal Air Pressure	psig				
	Inlet Manometer Reading	Inches H2O				
	First Intercooler Drain Operating?	Yes / No				
	Second Intercooler Drain Operating?	Yes / No				

1. FS-Elliott Co., LLC (“Seller”) hereby warrants against defects on all equipment sold by Seller, except the air-end (as defined below), for a period of one (1) year from date of startup or use or eighteen (18) months from date of shipment, whichever comes first.
2. Seller warrants against defects on the air-end for a period of five (5) years from the compressor shipment date. As used herein, “air-end” includes gear casing, low and high speed pinions, impellers, bull gear, bearings and pinion seals. This warranty shall remain in effect, if and only if, Customer purchases and uses the Seller recommended engineered lubricant Corona™; initial startup occurs within three (3) months from the shipment date; and, required oil-sampling analysis is performed on a quarterly basis.
3. Seller’s obligation is to repair or replace the “Goods” (refers collectively, to all equipment sold by Seller, including the air-end) during the warranty period. This shall be the Customer’s exclusive remedy and Seller’s sole liability arising under this warranty or any warranty claim made by Customer. If said Goods have been in non-usage for a period of more than six (6) months from shipment, an inspection must be performed before the equipment is placed into operation. Customer bears the responsibility and the cost for ensuring that the Goods have been inspected by a Seller’s representative and returned to an “as-shipped” condition prior to being placed into operation. Any parts that are rusted, pitted or damaged due to inadequate or faulty storage provisions must be replaced by the Customer at its cost prior to the Goods being placed into initial operation. THIS WARRANTY IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.
4. Seller shall not be responsible for labor or other charges resulting from removal or reinstallation of defective Goods, charges for transportation, handling, shipping, taxes, duties, insurance or travel. No allowance will be made for repairs or alterations made by others without Seller’s written consent or approval. No part of the Goods or spare parts shall be deemed defective by reason of failure to resist the action of erosive or corrosive gases or liquids.
5. Warranty work provided under this contract does not assure uninterrupted operation of the Goods.
6. Seller does not assume liability for damages caused by any delays involving warranty work.
7. Seller’s maximum liability for any claims, damages, losses or liabilities arising out of or relating to its performance under this Five Year Air End Warranty Program or products covered herein shall not exceed the purchase price. IN NO EVENT SHALL SELLER BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY SORT, INCLUDING BUT NOT LIMITED TO, LOSS OF USE OF PRODUCTION FACILITIES OR EQUIPMENT, LOST PROFITS OR LOST PRODUCTION, WHETHER SUFFERED BY CUSTOMER OR ANY THIRD PARTY, ARISING AT ANY TIME, FROM ANY CAUSE WHATSOEVER.
8. The Customer must comply with the following items to maintain the benefits of the Five Year Air End Warranty Program.
  - a. The compressor package must be placed into service by either FS-Elliott personnel or an authorized FS-Elliott distributor.
  - b. The compressor must be operated and maintained in accordance with the published guidelines and instructions contained in the FS-Elliott’s technical manual supplied with each compressor package.
  - c. The air compressor package must be observed daily, including monitoring and logging operating parameters.
  - d. FS-Elliott must be notified of any unusual events or observations.
  - e. FS-Elliott genuine parts must be used exclusively.

- f. FS-Elliott's Corona™ lubricant must be used exclusively.
  - g. Quarterly lubricant samples must be submitted to FS-Elliott for analysis. (The oil sampling is free-of-charge to users of Corona™ lubricants.)
  - h. Throughout the term of the Five Year Air End Warranty Program, members must establish and maintain a service agreement with a local authorized FS-Elliott distributor. The service agreement must be in place prior to the first quarterly visit and inspection. The maintenance activities must be performed at the specified time intervals in accordance with the program checklist.
  - i. Return any parts claimed to be defective, and provide transportation pre-paid to Service Manager, FS-Elliott Co., LLC, 6013 Enterprise Drive, Export, PA 15632.
  - j. Comply with the Five Year Air End Warranty Program Terms and Conditions.
  - k. The air compressor must be inspected by an authorized FS-Elliott distributor if startup is delayed more than six (6) months after shipment date or if a shutdown more than three (3) months has occurred. The extent of the inspection will depend on the duration of the time periods involved. FS-Elliott will provide recommendations, as needed. Inspection and any associated parts required are not covered.
- 9.** The Five Year Air End Warranty Program does not cover the following:
- a. Items that are subject to normal wear and tear, including but not limited to, inlet air filter, oil filters, by-pass silencers, valves, bull gear seal, seal carbon rings, drivers, actuators, gaskets, O-rings, lubricants, drive couplings, oil pumps, electrical and electronic components, control systems, accessory equipment, consumables of any kind, etc.
  - b. Items that are damaged as a result of negligence, improper repairs, unauthorized service, improper operation, misuse, accidents, failure to resist the action of dirt, erosion, corrosive gases or liquids and acts of god.
  - c. Items that are damaged as a result of compressor operation outside the parameters of the original specifications.
  - d. Items that are damaged as a result of failure to perform the required inspections / maintenance at the specified schedule.
  - e. Labor costs associated with the scheduled maintenance activities.
  - f. The air end, if the compressor nameplate has been altered, replaced or cannot be read.
- 10.** All of the associated repair costs resulting from a customer contact reporting a defect later found to not exist or caused by unauthorized use, service, operation or maintenance shall be charged to the customer.
- 11.** Seller and Customer agree that in case of minor faults or routine servicing, Seller may authorize the Customer to do the necessary work itself, at its own expense, while the warranty continues to apply and replacement parts shall be supplied by Seller at its expense.
- 12.** In case of failure on part of the Customer to comply with one or more clauses of the Warranty, Seller shall still perform any repairs, but shall apply the then prevailing service and after-market parts rates.

IN THE EVENT THE CUSTOMER FAILS TO COMPLY WITH THE DEFINED TERMS & CONDITIONS,  
THIS FIVE YEAR AIR END WARRANTY SHALL BE NULL AND VOID.

## Mailing & Contact Information

*Registering an FS-Elliott Polaris® compressor for the Five Year Air End Warranty Program can be done in two ways:*

**1** Go on-line <http://www.fs-elliott.com/extwarranty.aspx> and submit the compressor and designated contact information.

**2** Complete the Five Year Air End Warranty Program Registration Card (Page #11 of this booklet), fold and seal; apply first class postage and then mail.

Contact your nearest authorized FS-Elliott distributor for additional information regarding the Five Year Air End Warranty Program. Visit the following website for the nearest distributor contact information: <http://www.fs-elliott.com/locator.aspx>

To contact FS-Elliott Co., LLC directly use the following information:

Phone: ..... + 724-387-3200

FAX: ..... + 724-387-3270

Internet: ..... [www.fs-elliott.com](http://www.fs-elliott.com)

E-mail:..... [info@fs-elliott.com](mailto:info@fs-elliott.com)

Should you require emergency assistance, contact our 24 hour number at + 724-989-6051

To better serve you, we ask that you have the following information available when you contact FS-Elliott:

- Your Name
- Address
- Telephone Number
- FAX Number
- E-mail Address
- Compressor Serial Number
- Compressor Frame / Model Designation



# Five Year Air End Warranty Program Registration Card

# 11

Compressor Model \_\_\_\_\_ Serial Number \_\_\_\_\_

Shipment Date \_\_\_\_\_ Startup Date \_\_\_\_\_ Use Date \_\_\_\_\_

**End User:** \_\_\_\_\_ Contact Name \_\_\_\_\_

Company Name \_\_\_\_\_ Phone Number \_\_\_\_\_

Mailing Address \_\_\_\_\_ FAX Number \_\_\_\_\_

\_\_\_\_\_ E-mail Address \_\_\_\_\_

**FS-Elliott Distributor:** \_\_\_\_\_ Contact Name \_\_\_\_\_

Company Name \_\_\_\_\_ Phone Number \_\_\_\_\_

The following list outlines the Five Year Air End Warranty Program compliance requirements. Under the terms of this program, FS-Elliott warrants that the compressor air end assembly shall operate free from defects in material or workmanship for a period of five (5) years starting from the time of shipment.

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- Customer is encouraged to send personnel to FS-Elliott Customer Service School to ensure that proper operating and maintenance practices are being followed.

In the event that the Customer fails to comply with the defined terms and conditions, this Five Year Air End Warranty Program shall be null and void. FS-ELLIOTT MAKES NO OTHER WARRANTIES EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

**AGREED AND ACCEPTED:**

Customer Signature \_\_\_\_\_ Authorized FS-Elliott Co., LLC Signature \_\_\_\_\_

Title \_\_\_\_\_ Title \_\_\_\_\_

Date \_\_\_\_\_ Date warranty validated \_\_\_\_\_



Place  
First Class  
Postage  
Here

Attention: Service Manager  
**FS-Elliott Co., LLC**  
5710 Mellon Road  
Export, PA 15632-8948  
U.S.A.

Fold on dashed line.

