



COMBUSTION HEATER SUPPLEMENTAL OWNER'S MANUAL P/N ES1035*

JANITROL AERO MODIFIED MEGGITT/SOUTH WIND HEATER MODELS

8240-A	8240-C	8240-E
8259-A	8259-C	8259-DL
8259-FL1	8259-GL1	8259-GL2
8259-HL1	8259-HL2	8259-L
8259-HR2	8259-JR2	8259-M
8472-C	8472-D	8472-E

*** NOT A COMPLETE MANUAL.
Must be used with Meggitt/South Wind Service
Manuals 09-998, PM35710, and 09-1015 as applicable.**



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This manual pertains to Meggitt/South Wind* aircraft cabin heaters that have been modified with Janitrol Aero's** FAA approved Global Alternate Method of Compliance (AMOC) for Airworthiness Directive (AD) 2017-06-03. We encourage you to read this manual thoroughly. It contains information about how to properly maintain your Meggitt/South Wind combustion heater once modified by the installation of an Janitrol Aero Global AMOC kit so that it may give you many years of safe and reliable service.

Should you have a question regarding your Janitrol Aero modified Meggitt/South Wind combustion heater that is not covered in the manual, Janitrol Aero Product Support is ready to assist you. We may be reached at the following contact information:

Phone: +1.334.386.5400, option 2
E-mail: techsupport@HartzellEngineTech.com
Fax: +1.334.386.5450
Web: www.Janitrol.aero/contact/

* South Wind is a trademark of Meggitt (Troy), Inc.

** Janitrol Aero is a trademark of Hartzell Engine Technologies LLC.

Warning:

People who fly should recognize that there are various types of risks are involved in this activity; and they should take all precautions to minimize them, since they cannot be eliminated entirely.

The cabin heater is a critical component of the aircraft and a failure could result in unplanned landing or even more severe consequences creating an unsafe condition that may result in death, serious bodily injury, and/or substantial property damage. It is, therefore, essential that the cabin heater is properly maintained according to the recommended service procedures and monitored to detect impending problems before they become serious. Any unusual operation should be investigated and corrected, as it may be a warning of impending failure.



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Record of Revisions

Revision Letter	Issue Date	Page Revised	Description	Inserted Date	By
New	Aug. 25/17	All pages	Original Issue		



Record of Revisions

Revision Letter	Issue Date	Page Revised	Description	Inserted Date	By
Reserved					



Service Publication List

Reserved		



Service Publication List

Pub. Number	Description	Heater Affected
Reserved		



List of Effective Pages

Content of Pages	Page	Date of Latest Revision
Title Page -	i	New - August 25/17
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AIRWORTHINESS LIMITATIONS

A.0 General Information

CAUTION:

THE AIRWORTHINESS LIMITATIONS HEREIN ARE THOSE MANDATED BY HARTZELL ENGINE TECHNOLOGIES. THESE LIMITATIONS ARE THE MINIMUM REQUIRED TO MEET CONTINUED AIRWORTHINESS BUT MAY BE SUPERSEDED BY MORE STRINGENT REQUIREMENTS AS PUBLISHED BY THE FAA, AIRCRAFT, ROTORCRAFT OR OTHER MANUFACTURERS THAT USE THESE COMPONENTS IN THEIR APPLICATIONS. FAILURE TO OBSERVE THESE LIMITATIONS MAY COMPROMISE THE COMPONENT OR THE APPLICATION IT IS USED IN.

**Airworthiness
Limitations**

A.1 Airworthiness Limitation Statement

A. The Airworthiness Limitations Section is FAA approved and specifies maintenance required under Secs. 43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved.

FAA APPROVED

By: Date: 8/29/17
 Manager, Propulsion and Program Management Section,
 Chicago ACO Branch, Compliance & Airworthiness Division
 Aircraft Certification Service

Airworthiness Limitation Revisions Log

Revision Number	Description of Revision
Original Issue	Contains ICA and instruction to comply with AD2017-06-03 AMOC.



AIRWORTHINESS LIMITATIONS (cont'd)

A.2 Airworthiness Limitations

- A. The Airworthiness Limitations Section is FAA approved and specifies maintenance and inspection required for continued airworthiness (ICA). The combustion heater models and their component parts affected by this manual currently have the following limitations:

Note 1: When performing these checks, use the applicable Meggitt/South Wind Service manual, applicable aircraft service manual and the HET instructions as appropriate (refer to Table 1.1).

Note 2: If an hour meter is not used, count one (1) heater hour for every two (2)-flight hours of normal aircraft operation. Consideration should be given for excessive ground operations of the heating system.

B. 100 HOUR/ANNUAL OPERATIONAL CHECK

Recurring 100 hour or annual inspection, whichever occurs first.

- (1) Visually, inspect ventilating air and combustion air inlets for obstructions, attachment security, and obvious damage.
- (2) Visually inspect ventilating air outlets for obstructions, attachment security, and obvious damage.
- (3) Visually inspect exhaust outlet for obstructions, attachment security, and obvious damage.
- (4) Visually inspect heater drain lines for obstructions, attachment security and obvious damage.
- (5) Visually inspect the entire length of all heater fuel lines for security and signs of leakage. Ensure all joints and shrouds are secure and in good condition.
 - (a) Correct/replace those showing evidence of looseness or leakage.
- (6) Visually inspect all heater wiring for loose connections, broken wires, cracked or frayed insulation, and security at attachment points.
 - (a) Correct any condition which may lead to arcing, chafing, or looseness.
- (7) Visually inspect combustion air hose for tears, restrictions, or other damage.
- (8) Perform operational check per the aircraft AFM/POH or aircraft service manual.
 - (a) Make sure the heater cycles via the thermostat or duct limit/cycling switch and does not trip the overheat/lockout switch.

C. 250 HOUR/ 2 YEAR HEATER INSPECTION

Recurring 250 hour or two (2) year inspection, whichever occurs first.

- (1) Inspect ignition cable/lead from coil to spark plug.
- (2) Inspect/change fuel filter.
- (3) Inspect combustion air airflow switch.
- (4) Inspect the combustion air blower/fuel pump assembly, remote solenoid valve, and thermostat for signs of obvious damage, leakage, corrosion, metal shavings, excess grease, or overheating.
- (5) Inspect heater fuel pump outlet pressure.
- (6) Inspect spark plug for signs of fouling or erosion.



A.2 Airworthiness Limitations (cont'd)

D. PRESSURE DECAY TEST (PDT)

- (1) Perform PDT per instructions in applicable Janitrol Aero Supplemental Maintenance Instruction on the following schedule:
 - (a) Initial PDT at 1000 hours or four (4) years, whichever occurs first.
 - (b) Thereafter, perform PDT every 250 hours or four (4) years, whichever occurs first.

A.3 Life Limits

- A. The FAA establishes specific life limits for certain component parts as well as the complete combustion heater. Such limits require replacement of the identified parts after a specified number of cycles or hours of use.
 - (1) There are no life limited parts associated with the Janitrol Aero South Wind Global AMOC kits.
- B. Additions of, or changes to, any life limit for the combustion heater or its components, will be noted in the Airworthiness Limitation Revision Log.

FAA APPROVED

By: Date: 8/29/17
Manager, Propulsion and Program Management Section,
Chicago ACO Branch, Compliance & Airworthiness Division
Aircraft Certification Service



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Section 1 INTRODUCTION

1.0 General Information

WARNING:

IMPROPER OR UNAUTHORIZED APPLICATIONS OF THE INFORMATION CONTAINED IN THIS MANUAL MAY RENDER THE AIRCRAFT OR THE COMPONENT UNAIRWORTHY AND RESULT IN LOSSES, DAMAGES, OR INJURY TO THE USER.

DO NOT USE OBSOLETE OR OUTDATED INFORMATION. PERFORM BASIC MAINTENANCE AND INSPECTION PER THIS MANUAL OR OVERHAUL ACTIVITY IN ACCORDANCE WITH THE MOST RECENT REVISION OF HET INSTRUCTIONS, OWNER'S MANUAL AND THE APPLICABLE SOUTH WIND OVERHAUL MANUAL. INFORMATION CONTAINED IN EITHER MANUAL MAY BE SIGNIFICANTLY CHANGED FROM EARLIER REVISIONS. USE OF OBSOLETE INFORMATION MAY CREATE AN UNSAFE CONDITION THAT MAY RESULT IN DEATH, SERIOUS BODILY INJURY, AND/OR SUBSTANTIAL PROPERTY DAMAGE. REFER TO THE JANITROL AERO WEBSITE FOR THE MOST RECENT REVISION LEVEL.

- A. This owner's manual has been approved by Janitrol Aero and accepted by the FAA to provide the proper methods and procedures that Airframe Mechanics, FAA approved repairmen, and/or other approved facilities should use for incidental maintenance of Janitrol Aero modified South Wind heaters as may be indicated by the owner.
- B. This manual provides basic information for select South Wind 8240, 8259 and 8472 aircraft combustion heaters modified by the installation of a Janitrol Aero Global AMOC kit. This manual has been issued for the Global AMOC to Airworthiness Directive 2017-06-03.
- C. The FAA has given HET the authority to issue documents and manufacture parts for South Wind combustion heaters as a Global Alternate Method of Compliance (Global AMOC) to Airworthiness Directive 2017-06-03.
- D. Meggitt (Troy), Inc. holds the design authority for the South Wind 8240, 8259 and 8472 (including all dash number variants) aircraft combustion heaters and as such, the FAA will require that all overhaul or maintenance activities be performed in accordance with the applicable Meggitt (Troy), Inc. service documents unless otherwise specified by this FAA approved Global AMOC.



1.0 General Information

About the heater:

- A. South Wind Models 8240, 8259 and 8472 (including dash number variants other than 8472-G) Combustion Heaters are considered herein. The 8240 and 8259 models are similar, varying by BTU capacity and are used in non-pressurized applications. The 8472 is used in pressurized applications. These models are designed for 24 volt operation. All heaters use aviation gasoline.
- B. The Janitrol Aero modified South Wind models use DuraKcoat™ combustion tubes which, when incorporated do not apply to AD 2017-06-03.
- C. The manual describes maintenance on heater or components as they may be installed on the aircraft. Maintenance tasks must be accomplished by competent qualified personnel using appropriate equipment. There is no owner preventative maintenance permitted on combustion heaters.
- D. When performing the installation in accordance with the Global AMOC for AD 2017-06-03, it is imperative that the latest revision of the applicable Janitrol Aero installation instruction be referenced.
- E. When performing maintenance, it is imperative that the latest revision of the applicable Janitrol Aero supplemental maintenance instruction and supplemental owner's manual be referenced.
- F. Reference the Janitrol Aero website, (www.Janitrol.Aero) to be sure you have the latest revision of the document before performing any work.
- G. When performing maintenance, replacement, adjustment, inspection or overhaul of any assembly, component or part, refer to the latest revision of the applicable Meggitt/South Wind Service manual and the applicable Janitrol Aero Supplemental Maintenance Instruction.
- H. Service Bulletins, Service, Letters and other important publications affecting continued safe operation of the heater should always be referenced along with this manual. This applies to Janitrol Aero and Meggitt (Troy), Inc. documents. Be advised that some service publications do not have terminating action but are recurring and will require continued action as may be required by Meggitt/South Wind, Janitrol Aero, the FAA or other civil aviation authorities.

1.1 About the manual:

- A. This Supplemental Owner's Manual is provided with each Janitrol Aero Global AMOC kit for the heater model shown on the Title page. This manual does not contain part numbers or overhaul data. For these activities, consult the applicable South Wind Service Manual with IPC and the applicable Janitrol Aero Supplemental Maintenance Instruction.
- B. This Supplemental Owner's Manual is divided into 6 parts. Each part is designed to offer information to a specific area or provide instruction pertinent to any changes induced by the Global AMOC modification. This manual supplements existing AFM, POH, and South Wind manuals.
- C. This Supplemental Owner's Manual does not replace or supersede any document or publication issued by a specific design holder as may be certified under a type certificate, supplemental type certificate or other restricted categories. This includes domestic and foreign aircraft, rotorcraft, or other manufacturers.
- D. When using this manual for operation or maintenance, always refer to the most current aircraft/rotorcraft AFM/POH, maintenance manual or service publications prior to beginning these activities.



1.2 How to use the manual:

- A. Refer to this Supplemental Owner's Manual in its entirety before operation or maintenance. Use Maintenance Section 6 for basic servicing of the Combustion Heater.
- B. Refer to "Troubleshooting" Section 3 prior to starting work to assure that the condition lies with the heater or heater component.
- C. If you need to identify a part or find a part number, refer to the applicable South Wind combustion heater service manual Illustrated Parts List (IPL), except as modified by the applicable Janitrol Aero Supplemental Maintenance Instruction. Some parts for the combustion heater may be available from Janitrol Aero as FAA approved PMA replacement parts.
- D. Along with aircraft publications and documents specific to the heater, it is imperative that you read and understand this manual. Observe the applicable **WARNINGS** and **CAUTIONS** before you operate or perform any work on the combustion heater.
- E. Test the heater per the test procedures in the applicable Meggitt/South Wind combustion heater overhaul manual, except as modified by the applicable Janitrol Aero Supplemental Maintenance Instruction, prior to running the aircraft. Utilize the aircraft manufacturers AFM, POH, and other service manuals and related publications before returning the aircraft to service.
- F. All inquiries concerning this or other Janitrol Aero manuals should be directed to Janitrol Aero, 2900 Selma Highway, Montgomery, AL 36108. Tel: (334) 386-5400 (option 2), Fax: (334) 386-5410 or by our website, <http://www.Janitrol.Aero>.

1.3 Definitions

This paragraph defines the warnings and notifications used in this manual. **Warnings** place critical attention to use of tools, materials, procedures, or limitations, which must be followed without deviation to avoid injury to the technician or other persons. **Cautions** place immediate attention to use of tools and procedures which must be followed to avoid damage to equipment and facilities. **Notes** call attention to procedures which make the job easier.

The following are basic definitions of the terms used herein: (as related to this manual)

COMBUSTION AIR: The air forced into the combustion area via an electric motor and fan assembly or ram air for the purpose of enhancing and maintaining heater combustion.

COMBUSTION TUBE: The tubular device which contains the fuel/air combustion that provides a heat source via radiant heat to the ventilating air being forced past it and on to the cabin.

COMBUSTION HEATER: The complete unit which transforms chemical energy (fuel) to heat energy by contained combustion via electrical ignition and forced air movement.

DESIGN HOLDER: This may be defined as the company or entity responsible for design and certification of an aviation product. Type Certificate (TC), Supplemental Type Certificates (STC), and Form 337 Field Approvals (or foreign equivalents) are typical examples.

JACKET: The external housing which covers the heater liner and combustion tube assemblies.

SPRAY NOZZLE: The device provided to atomize fuel in a specific pattern to maximize efficient fuel burn in the combustion tube.

TERMINALS: Studs, screws or other connections provide access for electrical power.

VENTILATING AIR: The air forced through and around the combustion tube via electric motor and fan assembly for the purpose of supplying clean heated air to the aircraft or rotorcraft cabin.



1.4 Serial number Identification

- A. Information concerning the Serial Number identification of the Meggitt/South Wind aircraft combustion heaters may be found in the applicable Meggitt/South Wind service manual for your specific aircraft combustion heater.

1.5 Model Number & Specification

- A. Information concerning the Model Number and Specifications of the Meggitt/South Wind aircraft combustion heaters may be found in the applicable Meggitt/South Wind service manual for your specific aircraft combustion heater.

1.6 Requirements to relieve AD 2017-06-03 (Global AMOC)

Note 1:

To relieve AD 2017-06-03 the affected heater must be overhauled utilizing a Janitrol Aero Global AMOC parts kit. During overhaul the heater is modified per the installation instructions provided with the parts kits. Once modified during overhaul, the heater would fall under the inspection intervals of the Airworthiness Limitations Section of this manual.

Note 2:

Instructions for recurring inspections, routine maintenance, and heater overhaul are provided in the applicable South Wind service manual, except as modified by the associated Janitrol Aero Supplemental Maintenance Instructions. Refer to Table 1.1 for kit part number and applicable documents for each South Wind heater.

Table 1.1- Janitrol Aero Kit & Document Applicability

HET Kit P/N	81047	81048	81049	81032	81033	81034
Installation Instructions	IN81047	IN81048	IN81049	IN81032	IN81033	IN81034
Supplemental Maintenance Instructions	HET- SM09- 998			HET- SM35710		HET- SM09- 1015
South Wind Heater Service Manuals	Form No. 09- 998			PM35710		Form No. 09- 1015
Applicable Meggitt/ South Wind Heaters	8240- A 8240- C	8259- A 8259- C 8259- DL	8259- FL1 8259- GL1 8259- GL2	8240- E	8259- HL1 8259- HL2 8259- L 8259- HR2 8259- JR2 8259- M	8472- C 8472- D 8472- E

1.7 Warranties

Janitrol Aero's Limited warranty terms and conditions may be found on our website at <http://www.Janitrol.Aero/support/warranty>. Or write to the address below:

Hartzell Engine Technologies LLC
2900 Selma Highway,
Montgomery, AL 36108
USA.



Section 2 DESCRIPTION OF OPERATION

DESCRIPTION

2.0 General

- A. The cabin heater is designed to provide fresh, conditioned (heated) air from outside the aircraft to warm the crew and passenger areas during any phase of flight. In addition, the heater is designed to maintain a desired cabin temperature within the limitations of the given heater.

2.1 Combustion Heater Description

- A. The heater is modified with the incorporation of a redesigned heat-resistant stainless steel combustion tube. The combustion tube is a welded gas tight container consisting of the combustion chamber and radiator assembly with DuraKoat™ applied to specific areas for longer life. The ventilation fan, combustion air inlet, combustion head assembly and fuel feed assembly are located at one end while the exhaust is generally located at the opposite end.
- B. The combustion tube is encased in a Galvanized steel shroud or 'jacket' assembly. Space between the tube and shroud provides an area for air to be heated.
- C. The inner combustion tube and outer wall 'radiator' are typically connected by a single crossover passage. DuraKoat™ combustion tubes utilize a five-hole crossover design. The combustion tube also contains an exhaust outlet, a combustion air inlet, a fuel drain (in the nozzle end of the tube) and a threaded boss to support the spark plug.
- D. On the inlet end of the combustion tube is the 'head assembly'. Attached in the head assembly is the fuel feed and nozzle assembly that houses the spray nozzle.
- E. Ignition for the heater is supplied by a power source that converts 24 VDC into a high voltage oscillating current. A continuous spark is thus maintained across the gap of the spark plug. The high voltage current is conducted via an ignition lead to the spark plug.
- G. Air for the ventilation system is picked up via an external ram air scoop and/or a blower assembly, which is mounted on the inlet end of the jacket.

2.2 Heater Principles of Operation

- A. The combustion heater principles of operation is described in the applicable South Wind service manual except for the combustion gas flow through the heat exchanger (combustion tube).
 - (1) In the Janitrol Aero DuraKoat™ combustion tube, the hot gases flow axially through the inner combustion tube.
 - (2) The gases then pass through the five cross-overs and into the outer portion of the combustion tube.
 - (3) The hot gases are then directed out of the heater through the exhaust.



DESCRIPTION (cont'd)

2.3 Heater Components

- A. The combustion heater components have no significant changes to description and function from that found in the applicable South Wind service manual.
- B. Information concerning the components and accessories of the South Wind aircraft combustion heater may be found in the applicable service manual for your specific aircraft combustion heater. Refer to section 1.6 for service manual applicability.

2.4 Operating Procedure

- A. Refer to the aircraft AFM, POH, or applicable aircraft service manual to determine the operational technique.



Section 3 TROUBLESHOOTING

3.0 General

- A. Troubleshooting of the combustion heater and its components have no significant changes to the symptom, cause, and solution from that found in the applicable South Wind service manual.
- B. Information concerning Troubleshooting of the South Wind aircraft combustion heater may be found in the applicable South Wind service manual for your specific aircraft combustion heater. Refer to section 1.6 for service manual applicability.



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Section 4 CHECK

4.0 General

- A. This section provides the various checks and inspections needed to assure reliable and safe operation of the combustion heater while in service. **It is the owners responsibility to observe and understand the task and the time it occurs.**
- B. The required checks are listed in hours time in service (TIS) or calendar time whichever is applicable with some check being mandatory per the ALS section of this manual.
- C. Some checks are one time initial and others are recurring.
 - (1) Refer to the appropriate section as required for the specific check in the applicable Meggitt/South Wind overhaul manual.
 - (2) Use only one method to determine TIS for inspection and maintenance (actual heater Hobbs meter time **or** calculation from flight time) **never use both.**
- D. These Checks must be accomplished by properly licensed aircraft mechanics or repairmen experienced in aircraft heating systems.
- E. Owners performing an annual inspection should note "the first to occur" is TIS requirement which may come prior to or after the annual inspection calendar time is reached.

4.1 Preflight and/or Daily Inspection Checks (all heaters)

- A. Inspect the ventilating air inlet scoop, combustion air inlet opening or scoop, exhaust outlet and fuel drain for possible obstructions. Make sure that all of these openings are clear of any restrictions and that no damage has occurred to air scoop protrusions.
- B. During preflight inspections look in the area of the combustion heater exhaust tube for large or unusual accumulations of soot on the skin of the aircraft. Soot accumulates are caused by the heater burning at a fuel "rich" condition.

4.2 Operational Check (Typical Heater)

- A. An operational check should be performed prior to commencing any inspection interval or any unscheduled maintenance to help determine the heater condition. **Always refer to the aircraft AFM or POH to assure proper operation for your specific aircraft and heater.**
 - (1) Heater Operation for Heating and Defrosting
 - (a) Battery Switch - ON.
 - (b) Cabin Air Knobs - OPEN.
 - (c) Defrost Knob - Adjust as desired (if defrosting is desired).
 - (d) Temperature Control Knob - OPEN.
 - (e) Cabin Heat Switch - HEAT.
 - (f) Heat Outlets or Registers - OPEN.
 - (2) Heater Operation for Ventilation Only
 - (a) Battery Switch - ON.
 - (b) Cabin Air Knobs - OPEN.
 - (e) Cabin Heat Switch - FAN.
 - (f) Outlets or Registers - OPEN.



4.2 Operational Check (Typical Heater) Cont'd

- B. During the operational check, make sure the heater cycles via the duct/cycling switch or the thermostat switch.
 - (1) The heater should not trip the lockout (overheat) switch during normal operation.

4.3 Periodic Inspection Checks

- A. Periodic Inspection checks of the combustion heater have significant changes from that found in the applicable Meggitt/South Wind service manual. These changes are mandatory in accordance with the Janitrol Aero Airworthiness Limitations Section A found in this manual.
- B. Information for periodic Inspection checks not shown in the Airworthiness Limitations Section A of this manual are shown in the applicable Meggitt/South Wind aircraft combustion heater service manual for your specific aircraft combustion heater. Refer to section 1.6, Table 1.1 for service manual applicability.



Section 5 TESTING

5.0 General

WARNING:

THERE ARE NO OWNER/OPERATOR TESTING ACTIVITIES ALLOWED ON JANITROL AERO / SOUTH WIND COMBUSTION HEATERS EXCEPT NORMAL OPERATION. ALL TESTING PROCEDURES MUST BE ACCOMPLISHED BY A QUALIFIED LICENSED MECHANIC OR REPAIRMAN FAMILIAR WITH THE AIRCRAFT HEATING SYSTEM. FAILURE TO OBSERVE THIS WARNING MAY COMPROMISE THE COMPONENT OR THE AIRCRAFT IT IS USED IN. IMPROPER TESTING MAY RESULT IN DEATH, SERIOUS BODILY INJURY, AND/OR SUBSTANTIAL PROPERTY DAMAGE.

- A. Refer to the procedures given in TROUBLESHOOTING Section 3 prior to making a determination of repair and testing for unscheduled maintenance.
- B. For any overhaul activity or detailed maintenance consult the applicable Meggitt/South Wind service manual or Janitrol Aero supplemental maintenance instruction. Refer to section 1.6 (Table 1.1) for service manual applicability.
- C. **All testing activities must be accomplished by properly licensed mechanics or repairmen experienced in aircraft heating systems.**
- D. Operational testing may be performed by the owner/operator provided the aircraft AFM or POH and/or the applicable aircraft service manual is consulted and used.

5.1 Testing

- A. This section provides the owner/operator with information on testing which may be required for a properly licensed mechanic or repairman to accomplish for typical scheduled or unscheduled maintenance.
 - (1) Publications Required for Testing:
 - (a) Applicable Meggitt/South Wind Overhaul manual.
 - (b) Applicable aircraft AFM or POH and the applicable aircraft service manual.
 - (c) Applicable Janitrol Aero supplemental maintenance instruction.
 - (2) Common Test Equipment
 - (a) Fuel, air, and electrical instruments
 - (3) Special Test Equipment
 - (a) Janitrol Aero Pressure Decay Tester, Janitrol Aero P/N CD70100 or CD70200
 - (i) Refer to Janitrol Aero supplemental maintenance instruction for alternative test.
 - (b) Refer to the applicable South Wind service manual for a comprehensive list of required test equipment.

5.1 Testing (cont'd)



B. Precautions for Service Personnel

WARNING:

WHETHER THE HEATER IS INSTALLED OR REMOVED, MAKE SURE THAT THE AREA IN AND AROUND THE AIRCRAFT OR SHOP IS SECURE AND THE TESTING AREA IS WELL VENTILATED. MAKE SURE THAT ALL STAFF AND PERSONNEL ARE WARNED THAT TESTING IS IN PROGRESS. **CARBON MONOXIDE FROM THE HEATER EXHAUST AS WELL AS THE POTENTIAL OF UNCONTAINED FIRE MAY CAUSE INJURY OR DEATH.** FAILURE TO OBSERVE THESE WARNINGS MAY COMPROMISE THE COMPONENT OR THE AIRCRAFT IT IS USED IN. IMPROPER TESTING MAY RESULT IN DEATH, SERIOUS BODILY INJURY, AND/OR SUBSTANTIAL PROPERTY DAMAGE.

- (1) It is imperative that regular maintenance be accomplished in accordance with the Janitrol Aero Supplemental Owner's manual, the applicable Meggitt/South Wind service manual, and applicable Janitrol Aero Supplemental Maintenance Instruction in accordance with the requirements of the applicable aircraft service manuals and publications. In addition, observe the following precautions:
 - (a) Disconnect the battery or any ground power source before connecting or disconnecting test instruments (except voltmeter), or before removing or replacing any unit. Accidental grounding or shorting of power from the battery may cause severe damage to the test instruments, heater components, and heater or airframe wiring.
 - (b) If the heater is tested on an aircraft to observe heater performance, make sure that the area in and around the aircraft is secure and the testing area is well ventilated. Make sure that all staff and personnel are warned that testing is progress.
 - (c) If the heater is being tested on the bench and combustion will occur, be sure that the heater is retained and secure before power and fuel are applied. Make sure that the air inlet is clear and the exhaust has been routed to outside air without leaks. Make sure the fuel source is well away from the heater or any ignition sources. The fuel source must come from an approved fuel container.

5.2 Pressure Decay Test (PDT)

- A. Evaluation of the condition of the combustion chamber (tube) is a vital task in maintaining the combustion heater until overhaul time is reached. The latest revision of applicable heater related service publications must be reviewed for compliance in preparation for decay testing.
- B. The pressure decay test consists of sealing all openings into the heater combustion chamber assembly. The openings into the combustion chamber include the combustion air inlet, fuel feed tube, fuel drains, and the exhaust tube.
- C. Refer to the applicable Janitrol Aero Supplemental Maintenance Instruction for the PDT procedure. If the combustion chamber is leaking, it must be replaced with an Janitrol Aero combustion tube assembly.
- D. This test is intended to be accomplished while the heater is installed with a minimum of accessory disconnection. When necessary or desired for convenience, the combustion heater may be removed from the aircraft to conduct the pressure decay test.



Section 6 GENERAL MAINTENANCE

6.0 General

WARNING:

THERE ARE NO OWNER/OPERATOR SERVICE ACTIVITIES PERMITTED ON HET MODIFIED SOUTH WIND HEATERS. ALL SERVICE PROCEDURES MUST BE ACCOMPLISHED BY A QUALIFIED LICENSED MECHANIC OR REPAIRMAN FAMILIAR WITH AIRCRAFT HEATING SYSTEMS. FAILURE TO OBSERVE THIS CAUTION MAY COMPROMISE THE COMPONENT OR THE APPLICATION IT IS USED IN. IMPROPER MAINTENANCE MAY RESULT IN DEATH, SERIOUS BODILY INJURY, AND/OR SUBSTANTIAL PROPERTY DAMAGE.

- A. Maintenance for the Meggitt/South Wind combustion heater contains no changes from that found in the applicable Meggitt/South Wind service manual with the following exceptions:
 - (a) Modifications as shown in the applicable Janitrol Aero Installation instructions. Refer to Section 1.6, Table 1.1.
 - (b) All changes as shown in the applicable Janitrol Aero Supplemental Maintenance instruction. Refer to Section 1.6, Table 1.1.
- B. Information concerning maintenance of Meggitt/South Wind aircraft combustion heaters may be found in the applicable Meggitt/South Wind service manual for your specific aircraft combustion heater. Refer to section 1.6, Table 1.1 for service manual applicability.
- C. Whenever Meggitt/South Wind combustion heater is modified with an Janitrol Aero Installation Instruction the combustion chamber assembly will change part number.
 - (a) This new part number MUST be used in any subsequent replacement of the combustion chamber assembly.
 - (b) Refer to the individual Global AMOC kit for specific part numbers.

6.1 Service, Overhaul, & Maintenance Manuals

- A. Aircraft service or maintenance manuals provide detailed information for installation and service for Meggitt/South Wind combustion heaters in specific aircraft. Aircraft manuals must be obtained separately.
- B. For Meggitt/South Wind Combustion Heaters, the detailed instructions for service, overhaul and maintenance may be found in applicable Meggitt/South Wind manual.
 - (a) Affected sections of the applicable Meggitt/South Wind manual may be changed by the Janitrol Aero Supplemental Maintenance instruction.
 - (b) Janitrol Aero Supplemental Maintenance Instructions supersede maintenance instructions stated in the applicable Meggitt/South Wind service manual.
 - (c) Parts changed by an applicable Janitrol Aero Global AMOC kit shall supersede the parts listing (IPL) stated in the applicable Meggitt/South Wind service manual.
 - (d) Meggitt/South Wind Series manuals must be obtained separately.



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