

Pilot: This overview is intended to be a quick reference for those not familiar with the E-VADE system installed on this aircraft. This overview is not intended to replace or supplement any other literature concerning the system and as such is for reference only. For more details concerning the installed E-VADE system please refer to the AFM or the Installation Manual.

NOTE - FLIGHT INTO KNOWN ICING CONDITIONS PROHIBITED.

When the deice button is first pushed the system begins a power-up test. During a normal power-up test the system controller automatically performs a series of system health checks to determine the condition of the system. The system is designed to run a series of checks while the pilot performs a normal pre-flight systems run-up, or during flight without any input from the pilot. The controller begins with an internal code check to verify the software in memory. The controller then applies a small amount of power to each heater to determine the resistance and checks the computed value with the value recorded on the last flight. Simultaneously the alternator is being monitored to determine if the correct amount of power is being supplied to the heaters. This process will take about 30-45 seconds to complete during which the **AIRFRAME** light will remain illuminated while the **ON** and **FAIL** lights will flash alternately. When the process completes successfully and the outside air temperature is above 42° F the **AIRFRAME** light will remain illuminated and the other lights will extinguish. When the process is successful and the outside air temperature is below 42° F the **AIRFRAME** and **ON** lights will remain illuminated while the system begins a de-ice cycle. After the power-up cycle has completed the system should be turned off until after take-off. If the system is not turned off, it is possible that during taxi the system will annunciate a soft fault due to low engine RPM. Once the engine returns to at least 1700 RPM the soft fault annunciation will be extinguished.

To increase the longevity of the system: DO NOT unnecessarily run the system in dry air.

NORMAL INDICATIONS AFTER A SUCCESSFUL POWER-UP TEST:



Normal Indication
Temperature 42 F and above
System is in standby



Normal Indication
Temperature 41 F and below
System is active

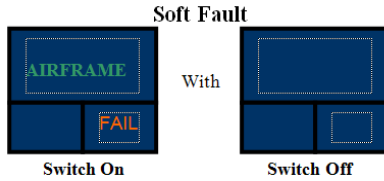
Operation of the system at full power can result in the loss of up to 10 horsepower (or 3.5%), reducing takeoff, climb, and cruise performance significantly. Takeoff distances, rate of climb, and cruise speed should be adjusted accordingly when the system is operating.

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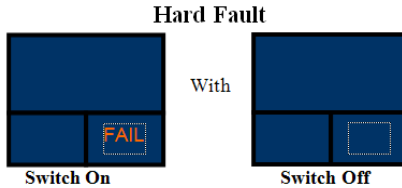
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AIRFRAME DE-ICE SYSTEM ANNUNCIATIONS

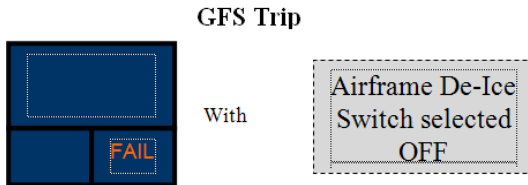
The Airframe De-ice System performs extensive self-tests both at startup and during operation. Three types of faults may be detected by the De-ice system:



Soft Faults indicate a temporary or partial degradation of the ice protection system. Monitor the system function visually to determine whether to manually disable the system. Note that a Soft Fault may occur when engine RPM is below 1700. For example, during taxi the RPM of the engine is low enough to produce a soft fault annunciation.



Hard Faults disable the system until the next power cycle. One reset may be attempted if desired by pulling the 2A Deice Controller circuit breaker and resetting the circuit breaker after at least 10 seconds. If the fault recurs, the system shall be disabled by pulling both the 2A Deice Controller circuit breaker and the 7.5A Deice Alternator Field circuit breaker. The system must be evaluated by qualified maintenance personnel for return to service.



Ground Fault Sensor Trip, like a hard fault, disables the system until the next power cycle. The indication is identical to a Hard Fault and can be identified by turning off the De-Ice switch. With the De-Ice switch in the OFF position and the FAIL light illuminated, this indicates a GFS Trip. When the GFS trips, it locks open the alternator Field Isolation Relay and the FAIL light remains illuminated.

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