

# FALCON SERVICE ADVISORY

FSA2000-80-00-07-R1

## New Engine Air Starter P/N 3505656-7

Jun 12, 07	Origin: Field	Status: Closed	Classification: Maint & Ops
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### ? REASON

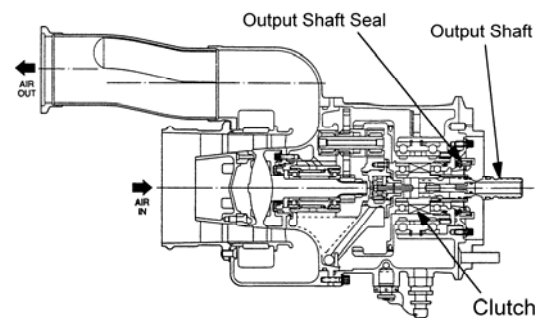
The engine air starter ATS50-118 P/N 3505656-6 was introduced on F2000 fleet to reduce the probability of oil leakage from the output shaft and to provide customers with an ATS compliant with High Thermal Stability (HTS) synthetic oils in accordance with the MIL-PRF-23699F standard (refer to FSA2000-80-00-06 R1).

Field feedback shows that occurrences of oil leakage have not been significantly reduced with this air starter version as initially targeted. In addition, several air starters P/N 3505656-6 were removed after no rotation during engine start due a decoupled output shaft.

### 🔍 FOLLOW UP / TECHNICAL FINDINGS

Evaluation of the returned units revealed that the oil leakage originated from the output shaft carbon seal damaged by heat. This heat was generated from high speed contacting surfaces.

Normally, the output shaft decouples when the designed decoupling drag torque is exceeded. This occurs during normal overrunning with the main engine and when the starter clutch drive shaft bearings or clutch components are worn to the point of creating this drag.



### 🔧 CORRECTIVE ACTION

A new air starter P/N **3505656-7** has been developed to improve the output shaft seal and the decoupler design.

The output shaft seal becomes a non-contacting seal eliminating heat generation that the carbon and rotor contacting surfaces produced.

The decoupler has been redesigned to eliminate nuisance decouplings.



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This new air starter is compliant with High Thermal Stability (HTS) synthetic oils in accordance with MIL-PRF-23699F.

Two air starter P/N 350656-7 were installed on two in-service F2000 and logged more than 1200 total hours with no anomalies reported. Subsequent analytical inspections found the hardware in excellent condition.

Air starters P/N 3505656-5/-6 can be upgraded into P/N 3505656-7 through Honeywell Service Bulletin 3505656-80-1722.

In the event of a failure, and the aircraft is under warranty, the replacement part will be provided at no charge with the upgrade to 3505656-7 incorporated. For aircraft not under warranty, when ordering a replacement part, the normal exchange price applies, with no additional charge for the upgrade.