

DUNCAN INTELLIGENCE

• Edited by Ken Kuchenreuther & Dan Arrick • Summer 2002

Engine Noise in the Cabin

By Dan Arrick

Occasionally operators have contacted Duncan Aviation with concerns over noises in the cabin that seem to originate from the engines on their JT15D powered aircraft. Usually the problem is minor and often unrelated to actual engine operation. These problems normally can be corrected with little downtime and expense to the operator. The noises could originate from a component of the engine contacting the engine mount or part of the pylon structure. Because the engine is isolated from these areas, the noise resulting from the vibration could be significant. In other situations, an accessory such as a hydraulic pump or a faulty engine synchronizer could be the culprit. In scenarios where operators experience a noticeable whine in the cabin at different power settings, a vibration survey and fan balance may be required. In any case, unnecessary noise in the cabin compromises passenger comfort and should be addressed to avoid possible problems in the future.

If you have any questions, please feel free to contact Dan Arrick at 800.525.2376, E-mail Dan at dan_arrick@duncanaviation.com.

Inlet Rivets

By Dan Arrick

One average day of operation for a JT15D powered aircraft can expose the engine inlets to many different conditions. Expansion and contraction due to different temperatures, inlet anti-ice requirements and possibly even vibration from the engine itself can result in loose or missing rivets inside the inlet. Rivets lost during operation can cause damage to the engine. Be sure to inspect the inlets during pre and post flight checks for the security of the rivets. The appropriate airframe maintenance manual will provide limits regarding the amount of loose or missing rivets allowed before a repair is required. For more info, contact Ken

Kuchenreuther or Dan Arrick at 800.525.2376, E-mail Ken at ken_kuchenreuther@duncanaviation.com or Dan Arrick dan_arrick@duncanaviation.com.

Citation Troubleshooting Class

By Ed Johnson

In the tradition of our Intelligence faxes, Duncan Aviation will be hosting a 2-day symposium in Lincoln in October of 2002. The event will offer a three hour course on Citation troubleshooting, as well as many other customer-requested topics. Many of the classes will be offered for IA renewal credit. Log on to www.DuncanAviation.com/ Conference for more information.

Flow Divider Operation

By Dan Arrick

The flow divider valve on a JT15 engine is responsible for delivering metered fuel from the fuel control to the fuel nozzles during engine operation. It is an instrumental component in the start process, shutdown and smooth operation of the throttle. Some signs that the flow divider is not working correctly are slow starts, high or low idle speeds and stiff throttles. The flow divider should move easily and not have to be forced out of the detent.

A quick way to check the flow divider for smooth operation is to disconnect the fuel control interconnect rod while the engine is not running and check for freedom of movement. The flow divider has a number of o-rings that can become old and brittle, preventing it from moving freely. Also, the detent ball could be incorrectly adjusted causing the same problem. Proper rigging is critical for the flow divider to work correctly and should be inspected at the interval required by the maintenance manual. Always consult the maintenance manual for proper rigging procedures while making adjustments to the flow divider.

For more information, please contact Dan Arrick at 800.525.2376, E-mail Dan at dan_arrick@duncanaviation.com.

For JT15D technical info, we have the experts with whom you should speak.

Our JT15D Engine Teams consist of technicians with hundreds of combined years of experience.

Need technical advice? Call Duncan's JT15D Tech Rep, Ken Kuchenreuther, at 616.969.8486.

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AVIATION**



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402.475.2611 or 1.800.228.4277*

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Visit www.duncanaviation.com/conference for October 2002 Intelli-Conference information.