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**Subject: Lube Oil Leaks in Accessory Gear**

**Related Subjects: July 2002 (Bearing Lube Oil Leaks)**

**December 2004 (How to Find Lube Oil Leaks)**

Lube oil leaks from bearing oil seals in the accessory gear can manifest themselves in unusual ways. The problem, though appearing to be difficult to solve, can be as simple as a plugged vent.

On most GE gas turbines, the accessory gear is vented using a *venturi* located on top of the gear box. If this simple device does not work properly, the gear box will pressurize and allow oil to leak out of bearing seals into the accessory compartment, presenting a fire hazard. See Fig. 1 below for the vent.



Fig. 1: Venturi atop gear box

The *venturi* requires a low-pressure source of air from the turbine's axial-flow compressor to work properly. See flex hosing leading to and from the venturi in the rear as shown in Fig. 2 below.



Fig. 2: Air lines going to and from venturi

Also, it is important to occasionally check the *venturi* passageway itself, which must be clean of debris. Once the cover on top of the *venturi* is removed, determine if it is “clogged.” The passageway is blocked in Fig. 3 below.



Fig. 3: Cover removed on venturi, opening clogged

The *venturi* can be unscrewed and removed as shown in Fig. 4 below. The tapered shape of the venturi is apparent in the photo. Also, the foreign material “clogging” the opening of the venturi is obvious.



Fig. 4: Venturi unscrewed and removed atop gear box. Debris or clog is also shown

Fig. 5 below shows a clean *venturi* opening ready for reassembly. It can be screwed back into the retainer atop the accessory gear.



Fig. 5: Clean venturi opening

After reassembling the *venturi*, the turbine should be started with the accessory coupling cover removed, as shown in Fig. 6, to assure that oil is no longer dripping out of the bearing seal in the gear box. In the photo below, no oil is apparently leaking from the bearing (on the right) of the accessory gear box.

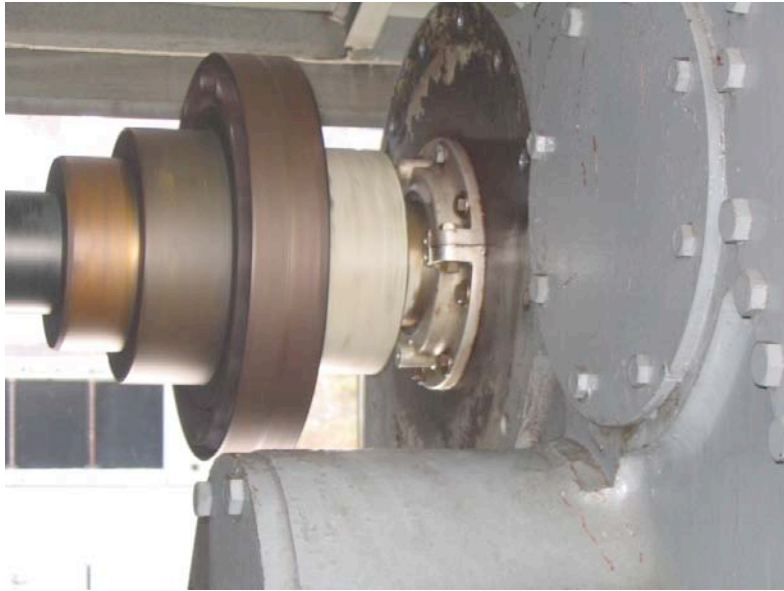


Fig. 6: Accessory Coupling and bearing operating without leaks

If you have any questions about lube oil leaks on gas turbine accessory gear, please contact Charlie Pond of ***Pond and Lucier, LLC***. Call: 518-371-1971 or email [charles@pondlucier.com](mailto:charles@pondlucier.com).