



SERVICE LETTER NUMBER 133			
TITLE: Structural reinforcement, exhaust deflector installation			
BY: K. Taylor	ACFT MAKE/MODEL(S):	FLOAT MODEL(S):	NOTE(S):
APP: D. Garrett	Quest 100 Kodiak as specifically	7000	MANDATORY COMPLIANCE
DATE: 25-Apr-12	equipped with exhaust		
REV: A	deflectors per Dwg. 1004690		

FAA APPROVAL HAS BEEN OBTAINED FOR TECHNICAL DATA IN THIS PUBLICATION THAT AFFECTS STC OR TSO DESIGN COMPLIANCE EFFECTIVITY:

All Manufacturers Serial Number (MSN) Quest 100 Kodiak aircraft with Wipaire, Inc. model 7000 amphibian or seaplane floats per STC SA02848CH as specifically equipped with exhaust deflectors per drawing 1004690. [Note: this service letter applies only to aircraft with the exhaust deflector installation.]

SERVICE LETTER P/N: 1005794 for ECN 10086

COMPLIANCE: **MANDATORY** FOR ALL AIRCRAFT EQUIPPED WITH STC SA02848CH and exhaust deflectors per drawing 1004690.

BACKGROUND:

Certain Kodiak 100 aircraft equipped with specialized exhaust deflectors have exhibited cracking on the engine exhaust duct attachment flange. This cracking has occurred between 200 and 1000 hrs of operation with the exhaust deflectors installed. Cracking has been noted on aircraft with the 4-blade propeller, but could also be present on aircraft with a 3- blade propeller. It is critical that the exhaust installation be inspected before further flight.

COMPLIANCE METHOD:

Compliance is achieved through completion of the instructions in the Technical Data section of this service letter. The aircraft must be inspected and then modified with a reinforcement ring; the aircraft must be inspected at recurring intervals.

APPROX. SHOP HOURS:

The functions outlined by this service bulletin will take approximately 3 hr. to accomplish.

WARRANTY INFORMATION:

This service letter does not include any warranty labor or parts.

NOTES:

1. Inspection and instructions in the Technical Data section of this service letter should be accomplished using general practices in the Quest 100 Kodiak maintenance manual P/N 490770, latest FAA approved revision.
2. Repair of either the engine or exhaust assemblies is not authorized by this service letter. If any damage is located during the inspections required by this service letter, contact Wipaire, inc. immediately.

TECHNICAL DATA AND INSTRUCTIONS:

1. Gather necessary technical data:
 - a. Installation drawing number 1004690, revision E, or later, available from Wipaire, Inc.
 - b. Latest copy of this SL 133, available on website www.wipaire.com – ensure you have the latest revision by checking on the website.
 - c. Quest 100 Kodiak maintenance manual P/N 490770, latest FAA approved revision
 - d. Wipline model 7000 float on Kodiak aircraft, Service manual and ICAW, P/N 1004646, Doc. No. W7001-24-01, rev. D or later approved revisions, as available on website www.wipaire.com.
 - e. Quest Aircraft Co. Service letter SL-007 dated 5/6/09, Exhaust stack installation and removal instructions.

2. Inspect aircraft
 - a. Remove the forward upper and lower cowlings of the aircraft to gain access to the exhaust ducts and their attachment flanges on the engine.
 - b. Inspect the flange of the exhaust duct and the mating flange on the engine visually. Look for any areas of leakage or sooting. Look for any cracking, especially adjacent to any bolt holes. Look closely in the radius of the flange on the burner can.
 - c. If any cracks are found contact Wipaire, Inc. immediately before further flight.
 - d. If no cracks are found, proceed to modification of the exhaust duct attachment as described below.
 - i. Note: as the exhaust is removed and reinstalled in the course of the modification, continue to look for any signs of cracking of other damage.

3. Modify aircraft

- a. Remove the exhaust duct from the engine – inspect all parts for cracking otherwise hidden during previous inspections.
- b. Install exhaust duct with all *new* hardware and reinforcement rings behind each engine flange. Install hardware per drawing 1004690.
 - i. Reinforcement rings – two (2) each per exhaust duct, four (4) total for each aircraft: P/N 6A14557-001
Note: the reinforcement rings are shaped as half-circles; they are installed on the inboard face of the engine exhaust attachment flange.
 - ii. Locknuts – six (6) each total: P/N MS21046C04
 - iii. Washers – one (1) on each side of flange, twelve (12) per aircraft: P/N NAS1149C0463R
 - iv. Bolts – six (6) each per aircraft: P/N AN4C6A
Note: tighten all attachment hardware to 50-70 in lbs.
- c. Double check security of all fasteners, then install the upper and lower forward cowlings.

FOLLOW UP ACTIONS:

After completion of procedures in the Technical Data section:

1. Make an aircraft logbook entry in accordance with 14 CFR Part 43, or in accordance with your local Civil Aviation regulations, referencing accomplishment of the inspection/modification procedures in this service letter.

REPETITIVE ACTIONS:

1. At each 100 hr inspection, be sure to follow instructions in Wipaire ICA P/N 1004646 with respect to 100 hr inspection of exhaust system. Refer to the inspection time chart in the Wipaire ICA for further information.

END