



SERVICE LETTER

No. 716

Piper Aircraft Corporation

Lock Haven, Pennsylvania, U.S.A.

June 3, 1974 M

~~ATA 7300~~

Subject: Cross Shaft Support Tube Moisture Seal -- reference attached Avco Lycoming Service Bulletin No. 375A, dated May 10, 1974.

Models Affected: PA-31P Navajo

Serial Numbers Affected: Refer to attached Avco Lycoming Service Bulletin No. 375A, Models Affected section.

Compliance Time: Refer to attached Avco Lycoming Service Bulletin No. 375A, Time of Compliance section.

Purpose: To provide distribution of the attached Avco Lycoming Service Bulletin No. 375A, dated May 10, 1974 and to urge compliance with the provisions of the modifications specified thereon.

Instructions: Refer to attached Avco Lycoming Service Bulletin No. 375A.

Material Required: Refer to attached Avco Lycoming Service Bulletin No. 375A, Parts Data section.

Availability of Parts: Available through your Piper Field Service Facility.

Effectivity Date: This Service Letter is effective upon receipt.

Summary: Please contact your Piper Field Service Facility to make arrangements for compliance with provisions of the attached Avco Lycoming Service Bulletin No. 375A in accordance with the Time of Compliance section specified thereon. Appropriate modification material is being made available at no charge from the engine manufacturer (refer to Avco Lycoming Service Bulletin No. 375A, Page 2).

AVCO LYCOMING DIVISION

WILLIAMSPORT, PENNSYLVANIA 17701

Service Bulletin



DATE: May 10, 1974

Service Bulletin No. 375A
(Supersedes Service Bulletin No. 375)
Engineering Aspects are
FAA (DEER) Approved

SUBJECT: Cross Shaft Support Tube Moisture Seal

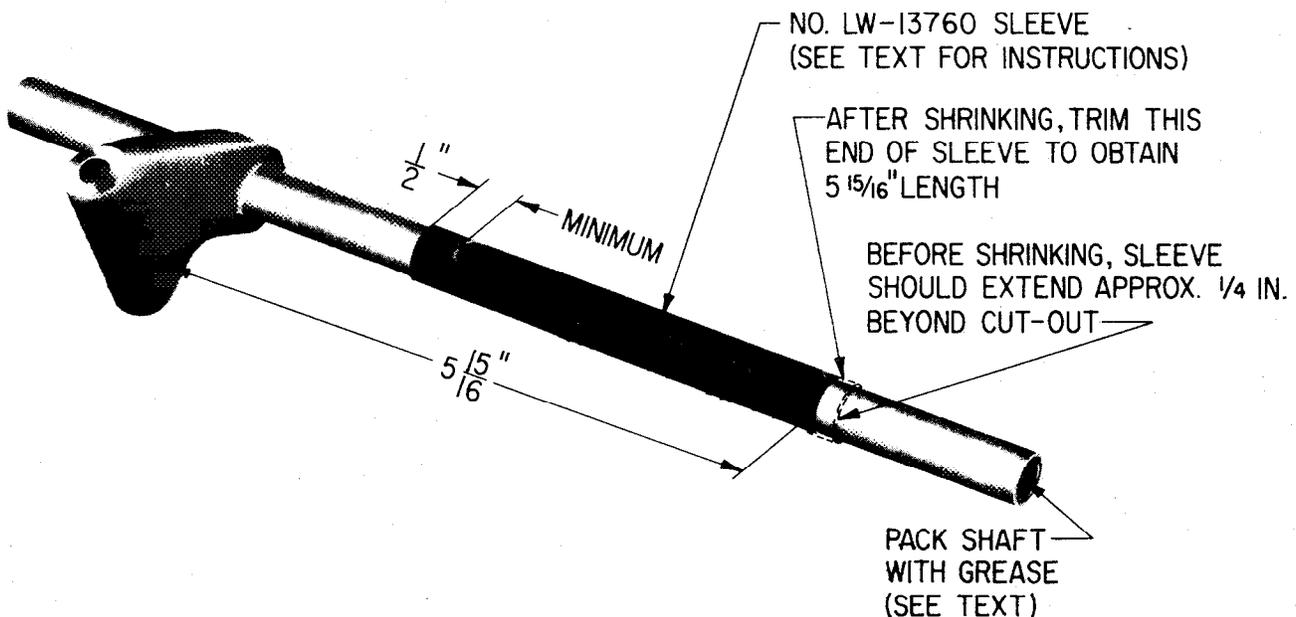
MODELS AFFECTED: TIO-541-E series engines with S/N up to and including 1050-59.
TIGO-541-E series engines with S/N up to and including 542-62.
TIO and TIGO-541-E remanufactured engines built prior to March 18, 1974.

TIME OF COMPLIANCE: At next 50 hour inspection or sooner at owner's discretion.

The cut-away portion of the cross shaft control support tube allows moisture to accumulate in the tube causing the fuel injector linkage shaft to freeze inside the cross shaft control support tube. To remedy this situation a heat shrinkable sleeve may be installed over the cut-away portion of the cross shaft control support tube in the following manner.

1. Remove number 2 and 4 intake pipes from the engine. Cover intake ports to prevent foreign objects from falling into cylinders.
2. Disconnect necessary fuel lines from the induction housing.
3. Remove the two 1/4 inch bolts which go through the induction housing to secure the control shaft assembly to the engine.
4. Remove left cross shaft shield from crankcase.
5. Disconnect the controller and fuel injector rod ends from control shaft assembly levers and remove from engine.

6. Remove throttle cross shaft control lever from fuel injector linkage shaft, by driving out the roll pin.
7. Remove fuel injector linkage shaft from cross shaft control support tube.
8. Remove cross shaft (right) support from cross shaft control support tube.
9. Clean cross shaft support tube thoroughly with Varsol or like solvent and blow dry with compressor air.
10. Slip heat shrinkable sleeve LW-13760 over cross shaft control support tube and position over cut-away portion allowing approximately 1/4 inch of the sleeve to extend beyond the slot as shown in the illustration.
11. Using an adequate heat lamp (approximately 375 watts) shrink the tubing on the cross shaft control support tube (using an even heat and rotating motion) until the tubing is tight.



Cross Shaft Support Tube Showing Heat Shrinkable Sleeve Installed

12. Allow the heat shrinkable sleeve to cool on the cross shaft control support tube and trim as shown in figure and assemble cover shaft (right) support.

13. Pack throttle cross shaft control support tube with Chevron SRI No. 2 or Aeroshell No. 5 rust inhibitor grease and lubricate the fuel injector linkage shaft before assembling.

14. Assemble throttle cross shaft control lever to fuel injector linkage shaft using new roll pin MS9047-104.

15. Assemble the control shaft assembly, left cross shaft shield to the engine and secure with the two 1/4 inch bolts through the induction housing assembly and torque to 50/70 inch pounds. (See Service Instruction No. 1234 for tightening procedure.)

16. Assemble the controller and fuel injector rod ends to the cross shaft control assembly lever using new cotter pins STD-68.

17. Install fuel lines.

NOTE

Carefully clean intake pipes, area of the cylinder head and induction housing intake pipes bores to remove oil, loose dirt and any other gasket material that has adhered so that the intake pipes seals and gaskets will seal firmly.

18. Install intake pipes to no. 2 and 4 cylinder using new intake pipe seal rings 72711 and gaskets 71973.

NOTE

Work the aircraft throttle control levers on the console to be sure they are working properly. Check the fuel lines for pressure and leaks.

19. Install and secure all engine cooling baffles and braces that were loosened.

NOTE

A note indicating completion of this modification should be entered in the engine log book.

PARTS DATA:

Kit No. LW-13887, Containing the component parts for two engines - (consists of):-

Qty.	Part No.	Nomenclature
2	LW-13760	Heat Shrinkable Sleeve
4	STD-68	Cotter Pins
2	MS9047-104	Roll Pin
4	72711	Intake Pipe Seal Rings
4	71973	Intake Pipe Flange Gaskets

The kit may be obtained directly from Avco Lycoming, Williamsport, Pa., at no cost. Serial numbers of the engines must be supplied with your request.

NOTE: Revision "A" changed to clarify serial numbers of models affected.

18200-A - This number for Avco Lycoming reference only.