



652 Oliver Street  
 Williamsport, PA 17701 U.S.A.  
 Telephone +1 (877) 839-7878 (U.S. and Canada)  
 Telephone +1 (570) 327-7222 (International)  
 Facsimile +1 (570) 327-7101  
 Email [Technicalsupport@lycoming.com](mailto:Technicalsupport@lycoming.com)

# MANDATORY

# SERVICE BULLETIN

DATE: January 4, 2024 Service Bulletin No. 650  
Engineering Aspects are  
FAA Approved

SUBJECT: Intake Pipe and Flange Inspection

MODELS AFFECTED: IO-360-A, -C, -D, -M, -N, -P Series; TO, TIO-360-C16D; -C1A6D;  
 HIO-360-A, -C, -E, -F Series; LIO-360-C, -M Series; AEIO-360-A Series  
 IO, HIO, AEIO-390-A Series  
 IO-540-A, -E, -G, -K, -L, -M, -S, -AA, -AC, -AE, -AG Series;  
 TEO-540-A, -C Series; TIO-540-A, -F, -J, -R, -U, -S Series; TIO-540-AE2A,  
 -AH1A, -AJ1A; AEIO-540-L Series; LTIO-540-F, -J, -U Series  
 TIO-541-E1C4  
 IO, AEIO-580-B1A  
 IO-720-A, -B, -D Series  
 Refer to Appendix 1 for Affected Non-Certified Engine Models

TIME OF COMPLIANCE: Within the next 50 hours of engine operation, at every scheduled inspection, and any time the intake pipes are removed.

**This Service Bulletin provides Instruction for Continued Airworthiness (ICA).**

**NOTICE:** Incomplete review of all the information in this document can cause errors. Read the entire Service Bulletin to make sure you have a complete understanding of the requirements.

Lycoming has received reports of cracks occurring on the flange of some intake pipes and is requiring close inspection of the intake pipe flange during each 50-hour or 100-hour/annual inspection, during inspection for suspected induction system leaks, and any time the intake pipes are removed. This inspection applies to intake pipes of all part numbers on the affected engine models listed above and their equivalent chrome plated -C intake pipe part numbers.

**Intake Pipe Inspection at each Scheduled Inspection**

1. With the intake pipes installed on the engine, complete the following:
  - A. Visually inspect intake pipes for indications of fuel staining (Figure 1) and or looseness. Examine for loose flange bolts.
  - B. If no fuel staining is present and intake pipes are secure, reinspect at next scheduled inspection.
  - C. If fuel staining is present or looseness is found, remove the intake pipe for further inspection. Proceed to Step 2.



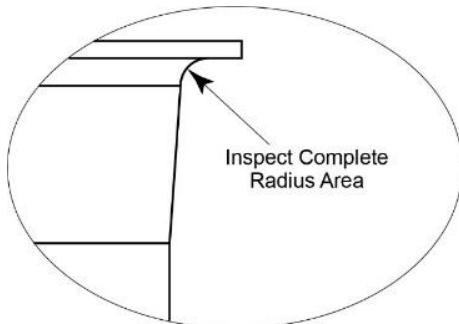
**Figure 1  
Fuel Staining on the Intake Pipe**



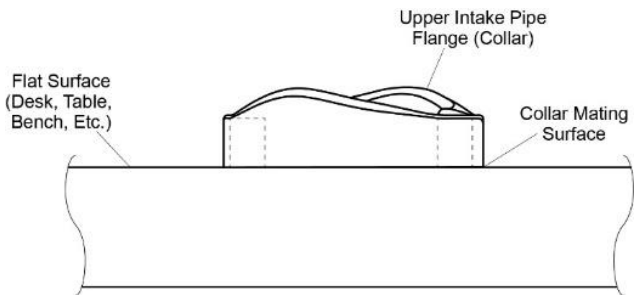
ISSUED			REVISED			PAGE NO.	REVISION
MO	DAY	YEAR	MO	DAY	YEAR	1 of 2	--
01	04	24	--	--	--		

2. If the intake pipes are removed for any reason, complete the following:

A. Examine intake pipes for cracks, especially around the complete radius of the intake pipe flange (Figure 2). Replace all intake pipes with visible cracks. Visual inspection is sufficient using a 10X power magnifying glass as necessary.



**Figure 2**  
**Intake Pipe Flange**



**Figure 3**  
**Inspection of the**  
**Upper Intake Pipe Flange (Collar)**

B. Remove the upper intake pipe flange (collar) from the intake pipe.

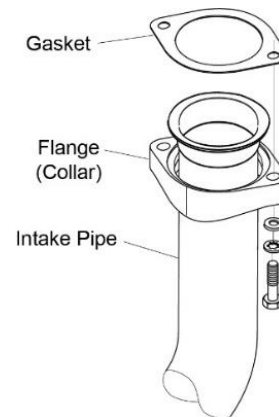
**NOTICE:** If the upper intake pipe flange (collar) cannot be removed from the intake pipe, move the collar to the cylinder end of the intake pipe to complete the following inspection.

C. Put the upper intake pipe flange (collar), with the mating surface down, on a flat surface (Figure 3) to ensure it does not wobble and there are no gaps between the upper intake pipe flange (collar) and the flat surface. Replace all upper intake pipe flanges (collars) that are not completely flat. (If the upper intake pipe flange (collar) cannot be removed from the intake pipe, replace the assembly.)

D. Examine the attaching hardware (bolts and plain washers). Replace the hardware as necessary.

**NOTICE:** Ensure the flange gasket is installed between the intake pipe and the cylinder as shown in Figure 4 and the intake pipe flange is centered in the collar when installing the intake pipe.

E. Reinstall intake pipes and upper intake pipe flanges (collars), with new flange gaskets seal rings and lock washers, in accordance with the applicable engine maintenance or overhaul manual. Torque the bolts in accordance with the Standard Torque Tables in the latest revision of the *Service Table of Limits - SSP-1776*.



**Figure 4**  
**Correct Installation of Gasket**  
**and Flange (Collar)**

If you have any questions, contact Lycoming Technical Support by phone at +1-570-327-7222 or +1-877-839-7878 or email to [Technicalsupport@lycoming.com](mailto:Technicalsupport@lycoming.com)

ISSUED			REVISED			PAGE NO.	REVISION	S.B. 650
MO	DAY	YEAR	MO	DAY	YEAR			
01	04	24	--	--	--	2 of 2	--	

## Appendix 1

The following is a list of Non-Certified engine models affected by Service Bulletin No. 650 and requiring the same close inspection of the intake pipe flange as Certified engine models during each 50-hour or 100-hour/condition inspection, during inspection for suspected induction system leaks, and any time the intake pipes are removed.

YIO-360-C1D6	YIO-360-EXP350	YIO-390-EXP140	YIO-390-EXP301
YIO-360-EXP	YIO-360-EXP358	YIO-390-EXP142	YIO-390-EXP335
YIO-360-EXP24	YIO-360-EXP365	YIO-390-EXP144	YIO-390-EXP336
YIO-360-EXP39	YIO-360-EXP366	YIO-390-EXP146	YIO-390-EXP338
YIO-360-EXP53	YIO-360-EXP367	YIO-390-EXP147	YIO-390-EXP343
YIO-360-EXP58	YIO-360-EXP370	YIO-390-EXP148	YIO-390-EXP360
YIO-360-EXP77	YIO-360-M1A	YIO-390-EXP150	YHIO-390-EXP15
YIO-360-EXP82	YIO-360-M1B	YIO-390-EXP151	YAEIO-390-EXP
YIO-360-EXP87	YLIO-360-M1A	YIO-390-EXP152	YAEIO-390-EXP09
YIO-360-EXP89	YAEIO-360-EXP223	YIO-390-EXP156	YAEIO-390-EXP49
YIO-360-EXP90	YAEIO-360-EXP290	YIO-390-EXP157	YAEIO-390-EXP141
YIO-360-EXP93	YAEIO-360-EXP362	YIO-390-EXP163	YAEIO-390-EXP193
YIO-360-EXP117	YIO-390-EXP	YIO-390-EXP165	YAEIO-390-EXP229
YIO-360-EXP120	YIO-390-EXP05	YIO-390-EXP166	YAEIO-390-EXP347
YIO-360-EXP124	YIO-390-EXP07	YIO-390-EXP167	YIO-540-EXP43
YIO-360-EXP139	YIO-390-EXP10	YIO-390-EXP170	YIO-540-EXP44
YIO-360-EXP161	YIO-390-EXP12	YIO-390-EXP172	YIO-540-EXP111
YIO-360-EXP179	YIO-390-EXP13	YIO-390-EXP174	YIO-540-EXP164
YIO-360-EXP187	YIO-390-EXP16	YIO-390-EXP177	YIO-540-EXP191
YIO-360-EXP199	YIO-390-EXP20	YIO-390-EXP178	YIO-540-EXP252
YIO-360-EXP212	YIO-390-EXP23	YIO-390-EXP182	YIO-540-EXP255
YIO-360-EXP221	YIO-390-EXP25	YIO-390-EXP183	YIO-540-EXP264
YIO-360-EXP232	YIO-390-EXP30	YIO-390-EXP185	YIO-540-EXP299
YIO-360-EXP249	YIO-390-EXP33	YIO-390-EXP195	YIO-540-EXP361
YIO-360-EXP259	YIO-390-EXP34	YIO-390-EXP202	YIO-540-K1G5
YIO-360-EXP262	YIO-390-EXP50	YIO-390-EXP203	YIO-540-K1H5
YIO-360-EXP266	YIO-390-EXP60	YIO-390-EXP207	YIO-540-K1J5
YIO-360-EXP267	YIO-390-EXP76	YIO-390-EXP208	YIO-540-L1C5
YIO-360-EXP271	YIO-390-EXP88	YIO-390-EXP219	YIO-540-MX1-A
YIO-360-EXP286	YIO-390-EXP100	YIO-390-EXP220	YTIO-540-EXP226
YIO-360-EXP293	YIO-390-EXP102	YIO-390-EXP222	YAEIO-540-EXP
YIO-360-EXP297	YIO-390-EXP109	YIO-390-EXP233	YAEIO-540-EXP96
YIO-360-EXP306	YIO-390-EXP115	YIO-390-EXP236	IO-580-EXP
YIO-360-EXP307	YIO-390-EXP122	YIO-390-EXP238	YIO-580-B1A
YIO-360-EXP327	YIO-390-EXP123	YIO-390-EXP246	YIO-580-EXP06
YIO-360-EXP328	YIO-390-EXP127	YIO-390-EXP275	YIO-580-EXP18
YIO-360-EXP329	YIO-390-EXP129	YIO-390-EXP288	YAEIO-580-EXP355
YIO-360-EXP330	YIO-390-EXP132	YIO-390-EXP295	YAEIO-580-EXP368