

SERVICE BULLETIN

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**Supersedes M81-25
TECHNICAL PORTIONS
FAA APPROVED****SUBJECT:** Exhaust Flange to Cylinder Installations**PURPOSE:** Installing and sealing the exhaust flange at the engine cylinder exhaust port.**COMPLIANCE:** During all maintenance, repair, or overhaul events.**MODELS****AFFECTED:** All CMI Aviation Gasoline Engines

I. General Information

Successful performance and service of an aircraft engine exhaust system is dependent on installing and sealing the exhaust flange at the engine cylinder exhaust port. CMI provides the exhaust manifold installation components (studs, gaskets, and nuts) for aviation gasoline engines, but exhaust systems may often be provided by the aircraft manufacturer. For engines not supplied with CMI exhaust systems, use the installation instructions provided by the aircraft manufacturer (see applicable aircraft maintenance manual / service documents).

Where factory engines are supplied with CMI installed exhaust systems, refer to the CMI engine maintenance manuals and service documents for installation instructions.

II. Procedure

These are recommended procedures to be followed when an exhaust flange is installed on a cylinder exhaust port:

WARNING

Before performing any preventive maintenance, maintenance or inspections ensure that the aircraft engine Master Switch is in the OFF position, the Ignition Switch is in the OFF position, and disconnect engine electrical power, and confirm continuity between the magneto capacitor ("P" lead terminal) and aircraft ground. Stand clear of the propeller arc prior to proceeding and DO NOT stand or place equipment within the arc of the propeller.

1. Before assembling the exhaust system to the cylinders, inspect the cylinders, exhaust flanges, and exhaust studs for serviceability (see applicable aircraft maintenance manual).
2. Install gaskets and properly position the exhaust system on the cylinders. Ensure the exhaust flanges are all properly mated to the cylinder.
3. Lubricate the exhaust studs with clean 50 weight aviation engine oil.
4. Evenly torque exhaust nuts to their specified torque value (see Table 1). Refer to the latest revision of SB96-7, "Torque Limits" for a complete list of all CMI AvGas engine torque values.
5. Perform ground run-up to normal operating temperature according to the Airplane Flight Manual/ Pilot's Operating Handbook (AFM/POH) published by the aircraft manufacturer.

ISSUED	REVISED	 P.O. Box 90 Mobile, AL 251-436-8299	PAGE NO	DOC NO	REVISION
2015/02/03			1 of 2	SB14-8	

6. Inspect exhaust system for leaks and security prior to return to service (see engine Maintenance and Overhaul Manual).
7. After completing ground run-up, repeat *step 4.* (above) and re-torque all exhaust nuts to their full final torque value.

Table 1. Exhaust Gaskets, Nuts, and Nut Torque Values

ENGINE	MODELS	GASKET	NUT	TORQUE VALUE		NOTES
				IN. LBS.	FT. LBS.	
A65	All Models	652459	22022	200-210	16.7-17.5	
C75						
C85						
C90						
O200	A, B, C, D & X	632837	MS20500-524	100-110	8.3-9.2	
C125	All Models		22022	200-210	16.7-17.5	
C145			MS20500-524	100-110	8.3-9.2	
O300	All Models					
GO300						
E165						
E185			MS20500-428			
E225						
IO240	All Models	630365	22022	200-210	16.7-17.5	Use two each gaskets per exhaust port, concave sides together.
IOF240						
IO360						
LTSIO360						
TSIO360						
O470	All Models (except J)	652458	643967	100-110	8.3-9.2	
	J Model Only	632837				
IO470	All Models (except K)	652458	MS20500-428	200-210	16.7-17.5	
	K Model Only	632837	22022			
TSIO470	All Models	652458	643967	100-110	8.3-9.2	
IO520		652459	MS20500-428			
GTSIO520		652458				
LTSIO520	All Models except AE	652458	MS20500-428	100-110	8.3-9.2	4-Hole Gasket
	AE Model Only	652459				2-Hole Gasket
TSIO520	All Models except AE	652458				4-Hole Gasket
	AE Model Only	652459				2-Hole Gasket
IO550	All Models	652458	MS20500-428	100-110	8.3-9.2	
IOF550						
TSIO550						
TSIOF550						
TSIOL550						