

Service Letter

Technical Aspects are FAA Approved

Number: L97-02 D
Replaces L97-02 C

Date: 04/18/2005

Subject: Overhaul and repair of SL10303 Cylinders

Application:

CYLINDER ASSEMBLY	ENGINE APPLICATIONS
SL10303-A1 STUD ASSEMBLY	O-235-C1, C1B, C2A, C2B, C2C, E2A, H2C

Compliance: Any time the above cylinders are removed for overhaul or repair.

This service letter covers specific differences between a Superior Air Parts, Inc. SL10303 Series Millennium Cylinder® and the original equipment manufacturer's cylinder, as it pertains to repair and overhaul. If a specific procedure is not addressed in this service letter, the applicable procedure in the original equipment manufacturer's current overhaul manual applies. The cylinders are identified by part number and serial number on the cylinder flange, as shown in Figure 1.

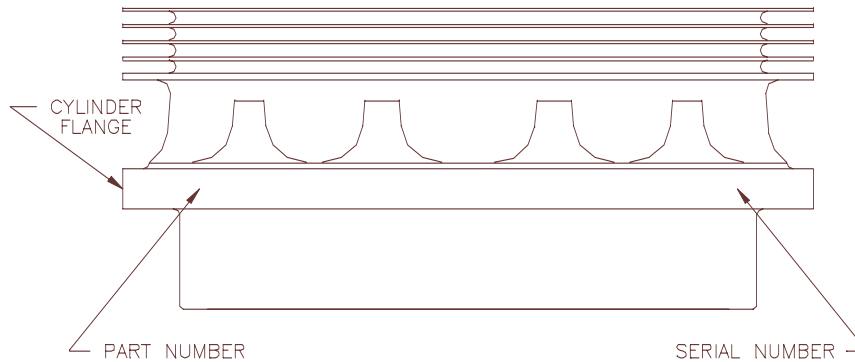


FIGURE 1

Cylinder Bore

The Millennium Cylinder® barrels are manufactured from AMS 6382 steel and through hardened with a straight bore that should be maintained during any boring or honing operation. See Figure 2 for standard cylinder dimensions and finish specifications.

Any time a cylinder is removed, the diameter and out-of-round condition should be checked as well as cylinder scoring, galling, low spots and ring step. Inspection results should be compared to the dimensions in Figure 2 and in the original equipment manufactures current overhaul manual. Through hardened steel cylinders that are worn, can be oversized to .010 or plated back to standard dimensions. Piston rings

listed for use in nitrided cylinder barrels must be used in through hardened steel cylinder barrels. See plated cylinder instructions for rings to be used with chrome or nickel plated cylinders.

Cylinder Rebarreling

A Millennium cylinder® may have the cylinder bore returned to new steel limits by having the cylinder barrel replaced by a Superior Air Parts licensed FAA Repair Station. The old worn barrel is removed and a new Superior Air Parts FAA-PMA Millennium Cylinder® barrel (the same high quality barrel used in new Millennium Cylinder® assemblies) is installed. This procedure returns the cylinder bore to the new steel limits shown in Figure 2, as well as, assuring that other critical dimensions, such as, compression height and cylinder barrel flange hole alignment, are returned to new limits. Superior Air Parts Customer Service may be contacted for approved sources of this repair.

Cylinder Heads

The Superior Air Parts, Inc. Millennium Cylinder® heads for the engines listed in this service letter have been manufactured using an improved ASTM B26 Aluminum Alloy with higher tensile strength and better casting quality.

Cylinder Parts

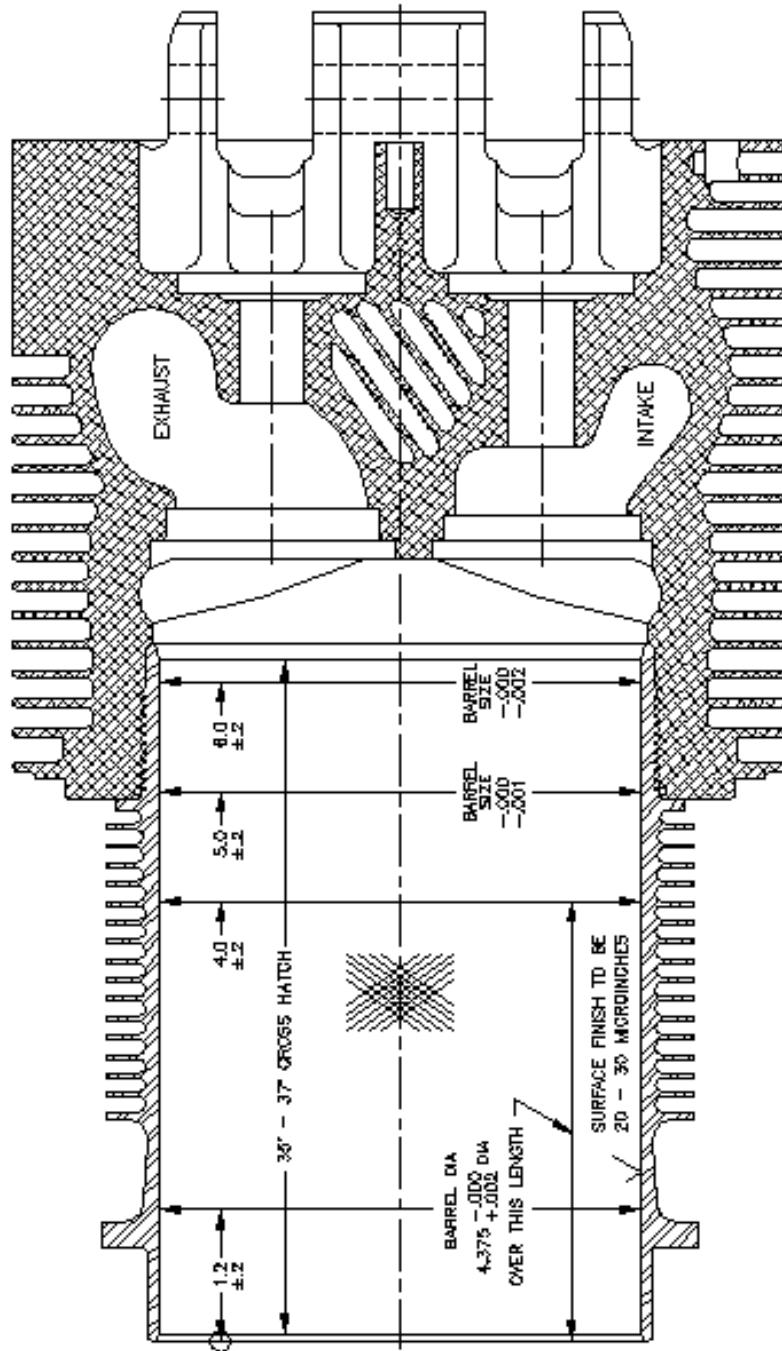
The following list of parts are used in new production of the SL10303-A1 stud assemblies.

SL10303-A1

SL11626	Exhaust Valve Guide - High Chrome Ni-Resist
SL61681A	Intake Valve Guide - Aluminum Bronze
SL31C-12	Exhaust Stud
SL16699	Exhaust Seat
SL11900	Intake Seat
MS9018-05/2-52	Helical Coil, Spark Plug
SL66610	Rocker Shaft Bushing
MS49005-2Z	Plug, 1/8-27 NPT
MS20822-6D	Elbow, Oil Drain

Additional Related Cylinder Assembly Parts

SL19034	Exhaust Valve
SL11901	Intake Valve
SL11795	Valve Spring-Inner
SL11800	Valve Spring-Outer
SL10077	Upper Spring Seat, Exhaust and Intake
SL60009	Valve Key, Intake and Exhaust
SL65441	Lower Spring, Seat, Exhaust and Intake



CYLINDER DIMENSIONS - STANDARD
SL10303
FIGURE 2