**Date:** 07/13/2004

**Subject:** Overhaul and repair procedures for the SL10301-A1 Stud Assembly and SL10301-A20P and SL10301-A21P Power Assemblies.

**Application:**

| CYLINDER ASSEMBLY | APPLICATIONS - Textron Lycoming Engines |
|---|---|
| SL10301-A1<br>SL10301-A20P | O-235- K2A, K2B, K2C, L2A, L2C, M1 |
| SL10301-A1<br>SL10301-A21P | O-235-F2A, F2B, J2A |

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

This service letter covers specific differences between Superior Air Parts, Inc. SL10301 Series Millennium® Cylinders and the original equipment manufacturer's cylinders, 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.

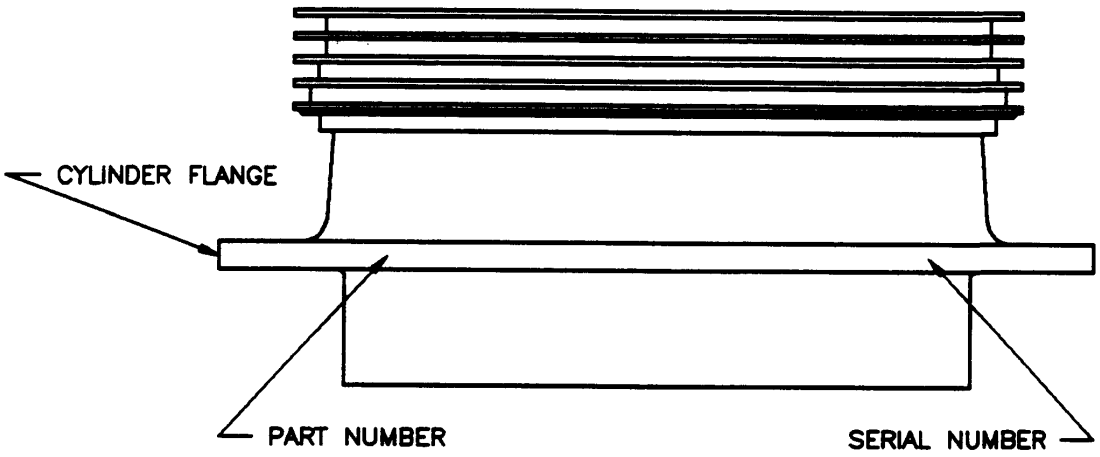


FIGURE 1



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**Cylinder Bore:**

The Millennium® Cylinder barrels are manufactured from AMS 6382 steel and through hardened with a choke bore that should be maintained during any boring or honing operation.

See Figures 2 and 3 for standard cylinder dimensions and finish specifications. Figure 2 shows the cylinder bore dimensions for cylinder Serial Number K-96-3327 and earlier serial numbers and Figure 3 shows cylinder bore dimensions for cylinder Serial Number K-96-3328 and later serial numbers.

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 manufacturer's current overhaul manual. Through hardened steel cylinders that are worn, can be oversized to .010 or chrome plated back to standard dimensions. Piston rings listed for use in nitrided cylinder barrels must be used in through hardened steel cylinder barrels.

Millennium® SL10301 Cylinders incorporate a hybrid cylinder barrel fin pack, which alleviates barrel cracking and transfers more heat. Care must be given during cleaning and chrome plating. Solvent and a soft scrub brush should be used to clean the aluminum barrel fins. In order to prevent fin erosion, media blasting should be kept to a minimum and used only where solvent and scrub brush have failed to clean. A protective mask (wax), used on other aluminum parts during the chrome plating process, must be applied to the barrel fins.

**Cylinder Heads:**

The Superior Air Parts, Inc. Millennium® cylinder heads for the engines listed in this service letter have been manufactured by sand casting from a proprietary improved grade of AMS 4220 Aluminum Alloy.



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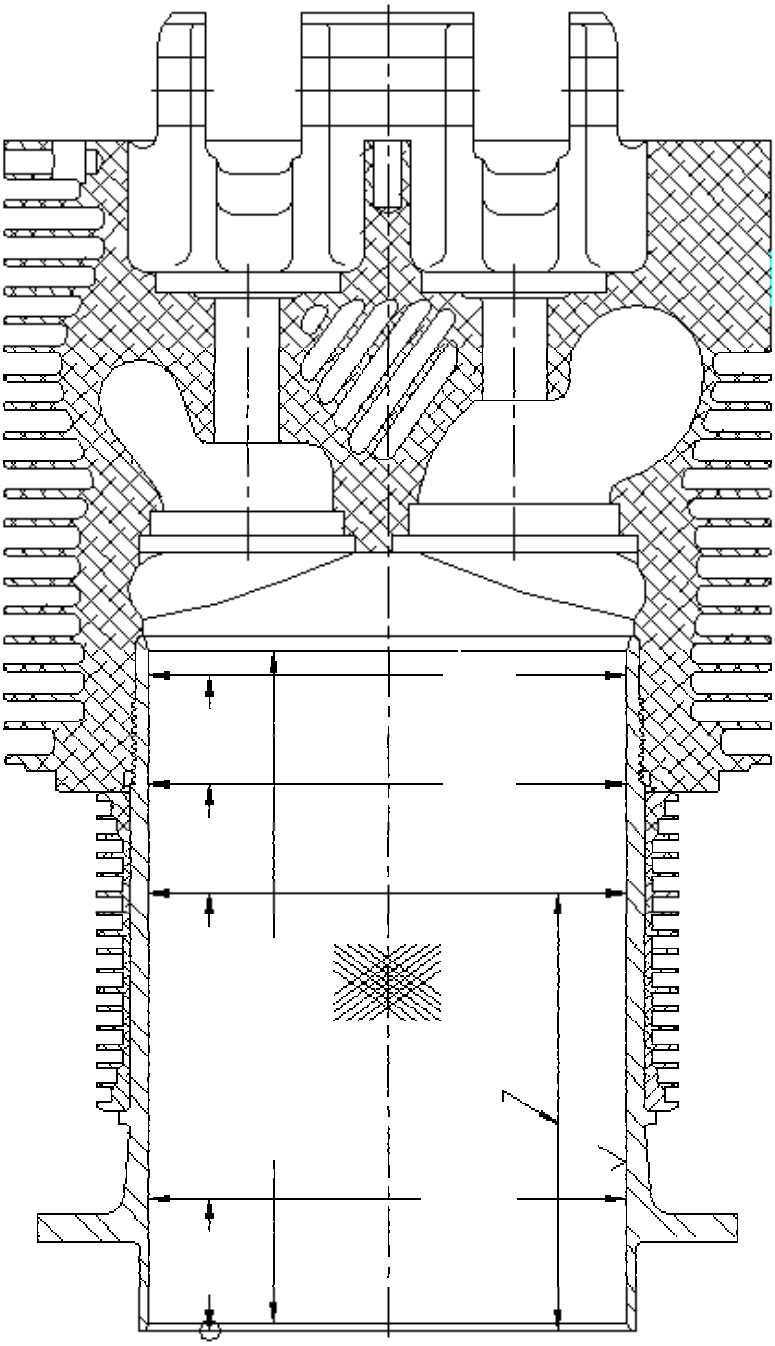

Figure 2



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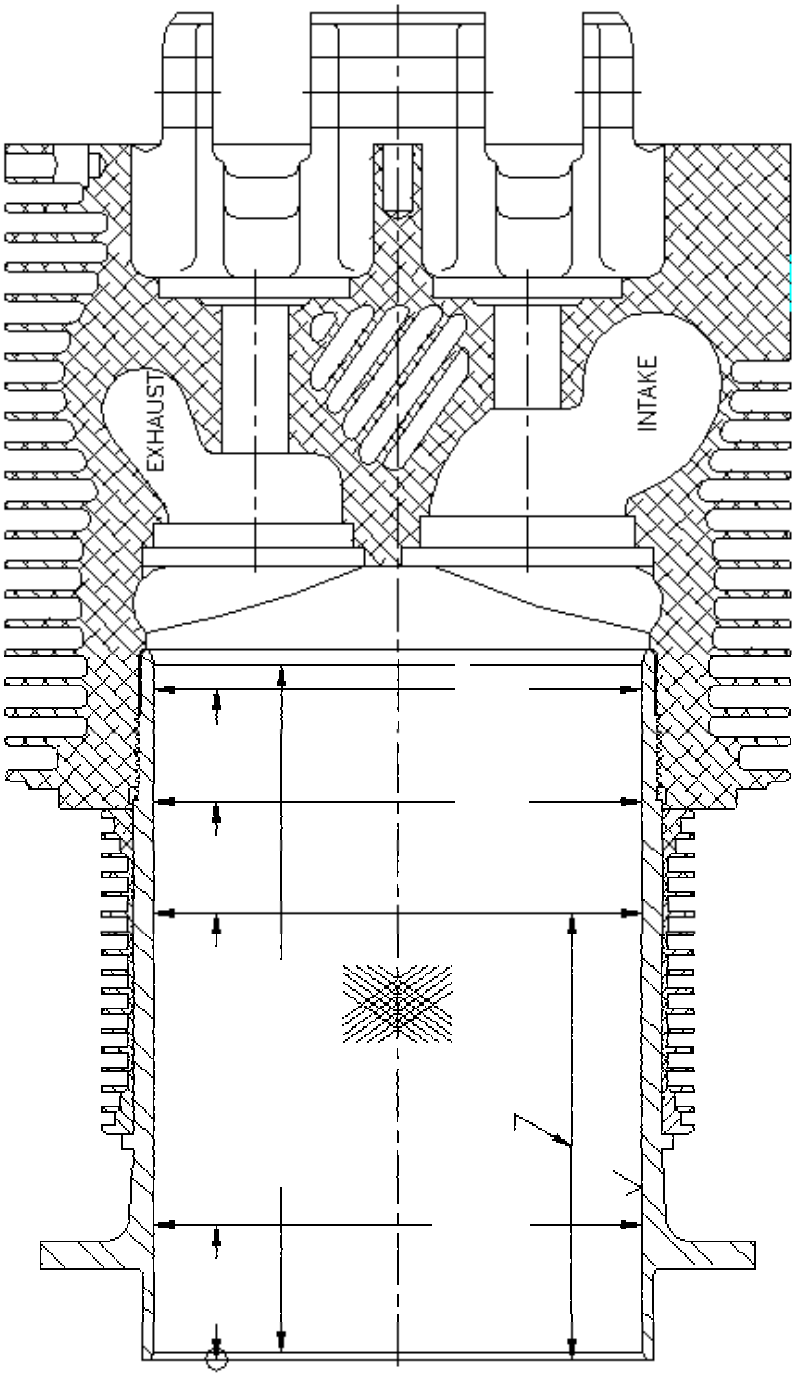


Figure 3



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