SUPERIOR AIR PARTS, INC

Service Letter

Technical Aspects are FAA Approved

Number: L98-08 D

Replaces L98-08 C

Date: 04/18/2005

Subject: Overhaul and repair of SL32000WH and SL36000WH Cylinder.

Application:

CYLINDER ASSEMBLY	APPLICATIONS - Textron Lycoming Engines
SL32000WH-A1 Stud Assembly	O-320-H2AD and –H3AD (see Service Letter No. 98-007A)
SL36000WH-A1 Stud Assembly	O-360-E1A6D LO-360-E1A6D (see Service Letter No. 98-007A)

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

This service letter covers specific differences between Superior Air Parts, Inc. SL32000WH and SL36000WH Millennium Cylinder® assemblies 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 Figures 1

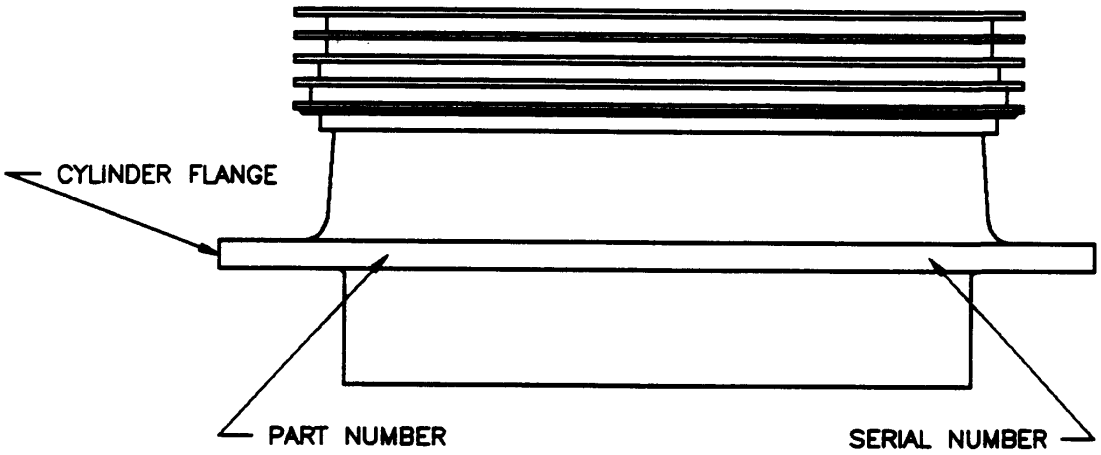

Figure 1

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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. Cylinders manufactured before March 2003 were manufactured using the "honed in" choke process. After that date, cylinders were manufactured using what Superior refers to as the "Natural Choke" process. Cylinders manufactured by this process have two advantages over the "honed in" process. First, the cylinder bore, at operating temperature, is much rounder and straighter than a "honed in " cylinder bore. This results in better ring seating and seal over the life of the cylinder. The second advantage, is the result of the state of the art cylinder finishing process used to put the crosshatch finish in the barrel. This process results in much quicker ring seating, while producing much less metal than a traditionally honed cylinder bore. See Figures 2 and 3 for standard cylinder dimensions and finish specifications for the "honed in" choke cylinders. The "Natural Choke" cylinder bore contour is shown in Figures 4 and 5.

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 Figures 2 through 5, as applicable, and to information in the original equipment manufacturer's current overhaul manual. Through hardened steel cylinders that are worn, can be undersized to .010 or plated back to standard dimensions. This applies to both "honed in" and "Natural Choke" cylinders. Piston rings listed for use in nitrided honed bores must be used in through hardened cylinder bores.

Cylinder Heads:

The Superior Air Parts, Inc,. Millennium Cylinder® heads for the engines listed in this service letter have been manufactured by investment casting ASTM B26 Aluminum Alloy.

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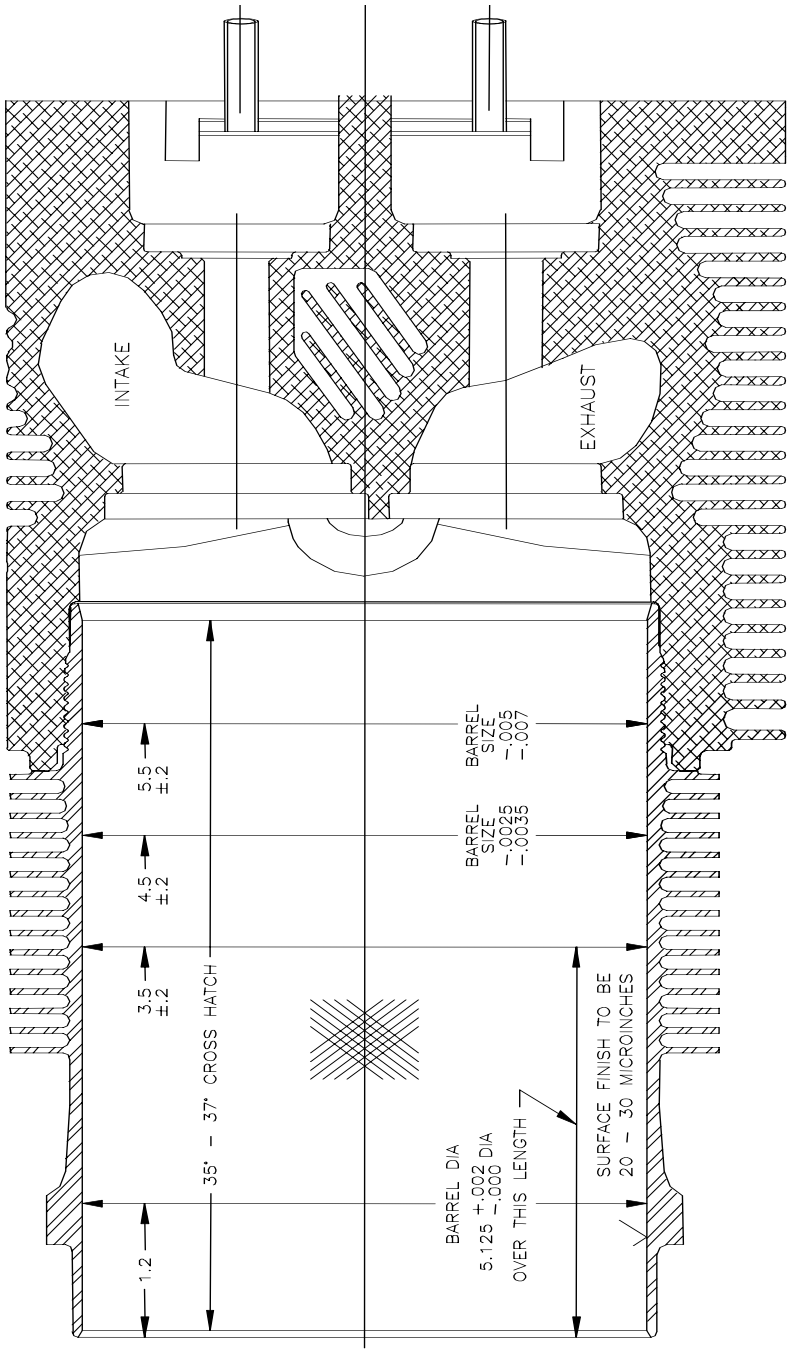

Cylinder Dimensions – Standard
SL32000WH

Figure 2

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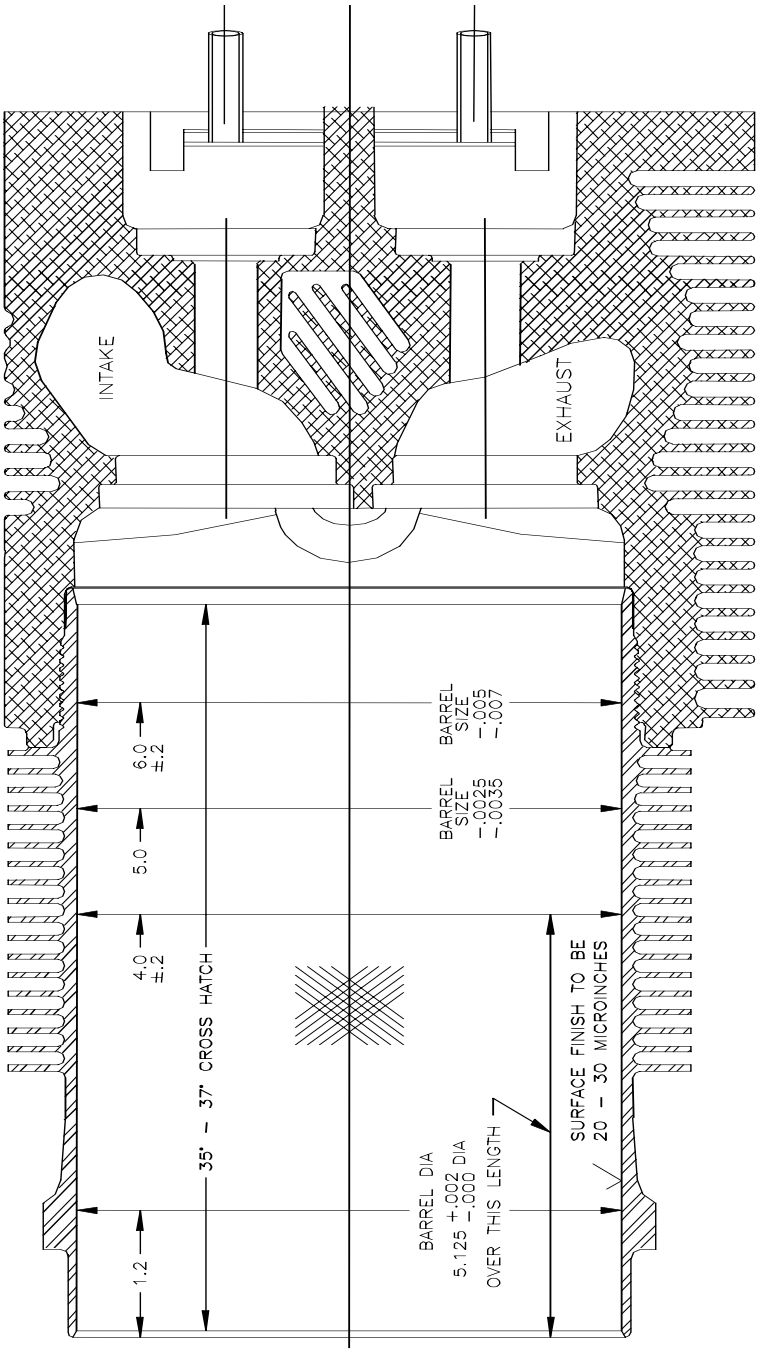

Cylinder Dimensions – Standard
SL36000WH

Figure 3

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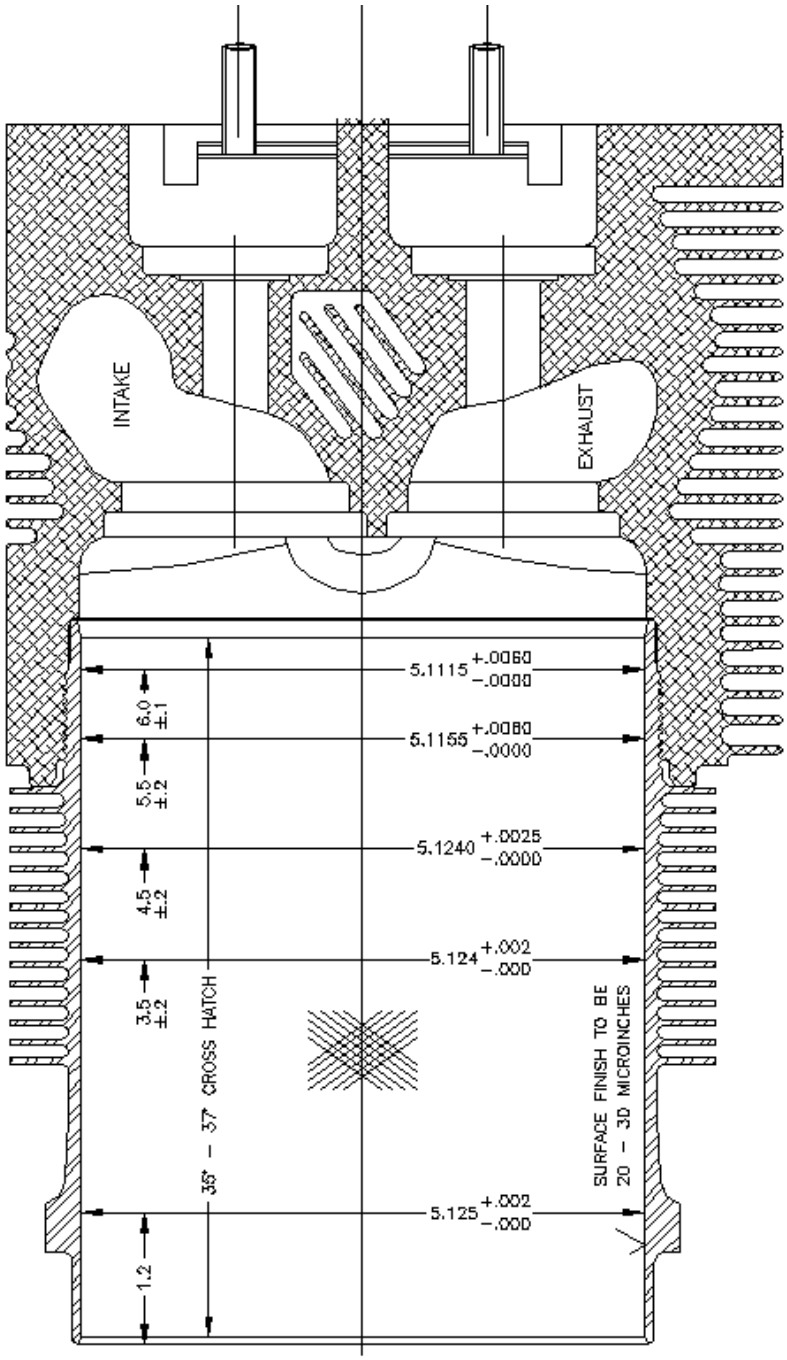

Cylinder Dimensions – Natural Choke
SL32000WH

Figure 4

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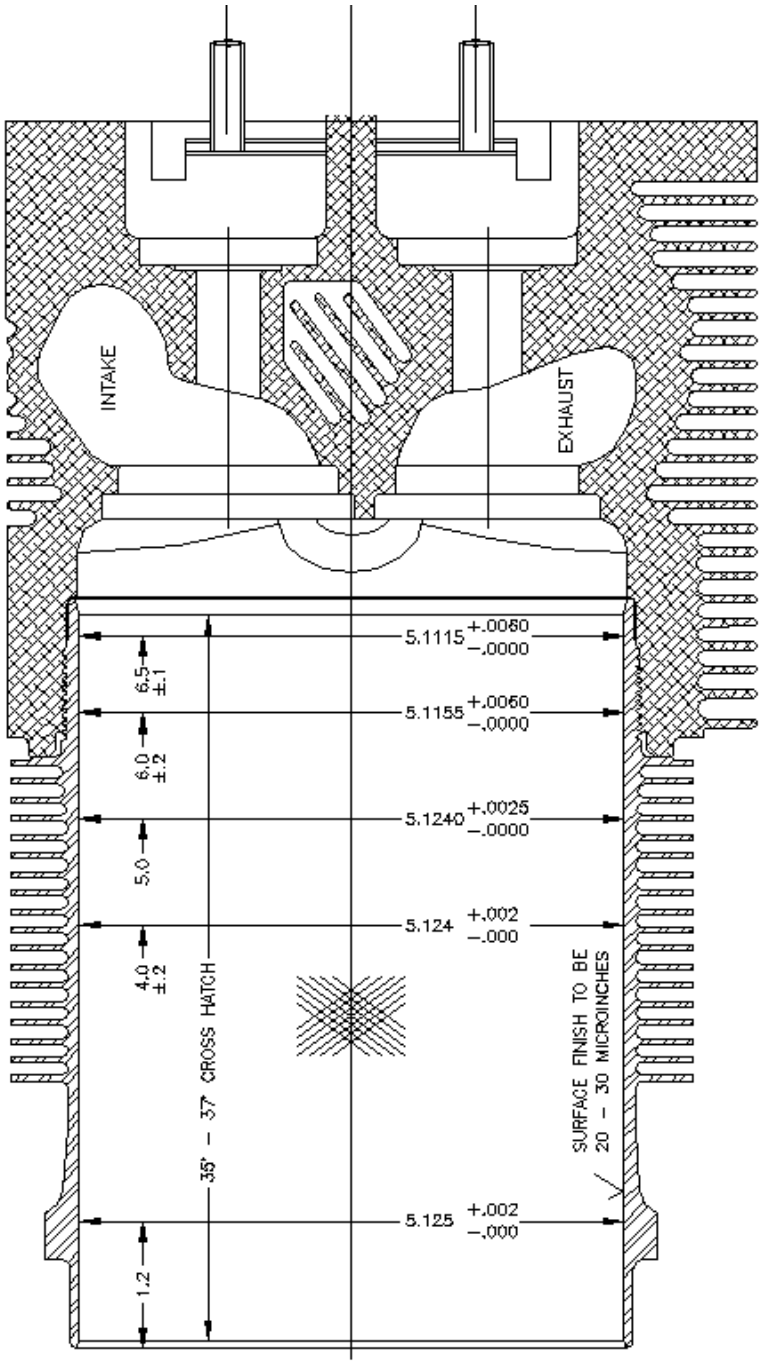

Cylinder Dimensions –Natural Choke
SL36000WH

Figure 5

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Cylinder Parts:

The following lists of parts are used in new production of the SL32000WH-A1 and SL36000WH-A1 stud assemblies.

SL32000WH-A1 and SL36000WH-A1

SL74230A	Exhaust Valve Guide - High Chrome Ni-Resist
SL61681A	Intake Valve Guide - Aluminum Bronze
SL31C-12	Exhaust Stud
SL72058A	Exhaust Seat
SL72057A	Intake Seat
MS9018-05/2-52	Helical Coil, Spark Plug
SL31-16	Rocker Arm Stud
MS20823-8D	Fitting, Oil Drain
MS49005-2Z	Pipe Plug
SL-STD-1872	Insert, Tapered Pipe Thread
SL25C-9	Stud

Additional Related Cylinder Assembly Parts

SL19001A	Exhaust Valve
SL15314	Intake Valve
SL11795	Valve Spring - Inner
SL11800	Valve Spring - Outer
SL13323	Lower Spring Seat, Exhaust
SL65441	Lower Spring Seat, Intake
SL16475	Upper Spring Seat, Exhaust
SL10077	Upper Spring Seat, Intake
SL15316	Rotator Cap, Exhaust
MS13997-3	Valve Key, Exhaust
SL60009	Valve Key, Intake

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