

SERVICE INFORMATION LETTER

Contains Useful Information Pertaining to Your Aircraft Engine

- SUBJECT:** Titan™ Experimental Parallel Valve, Tapered Fin Cylinder Assemblies
- PURPOSE:** To identify appropriate cylinder applicability and authorized service data
- COMPLIANCE:** During engine assembly, repair, at overhaul or cylinder replacement

MODELS

AFFECTED: Continental Aerospace Technologies OX320, IOX320, OX340, OX340CC, IOX340, OX360, IOX360, OX370, IOX370, OX540, IOX540, VA540 Titan™ experimental aircraft engines

I. GENERAL INFORMATION

Continental Aerospace Technologies has standardized the configuration of tapered barrel fin cylinder replacements for Titan experimental and ASTM approved engines. Replacement cylinder assemblies are no longer available with NiC3 plating or with 14mm spark plug bosses. Replacement cylinders have standard, thru-hardened steel barrels, 18 mm spark plug bosses, and are assembled to a valve assembly configuration.

For engines with electronic ignition systems, the accessory manufacturers are the source for spark plug boss adapters to reduce the spark plug boss diameter from 18 mm to 14 mm. Follow those manufacturer’s instructions for installation of spark plug inserts.

II. CYLINDER CLASS AND PART NUMBER IDENTIFICATION

Continental uses a shorthand method of identifying cylinder assemblies called the class reference numbering system.

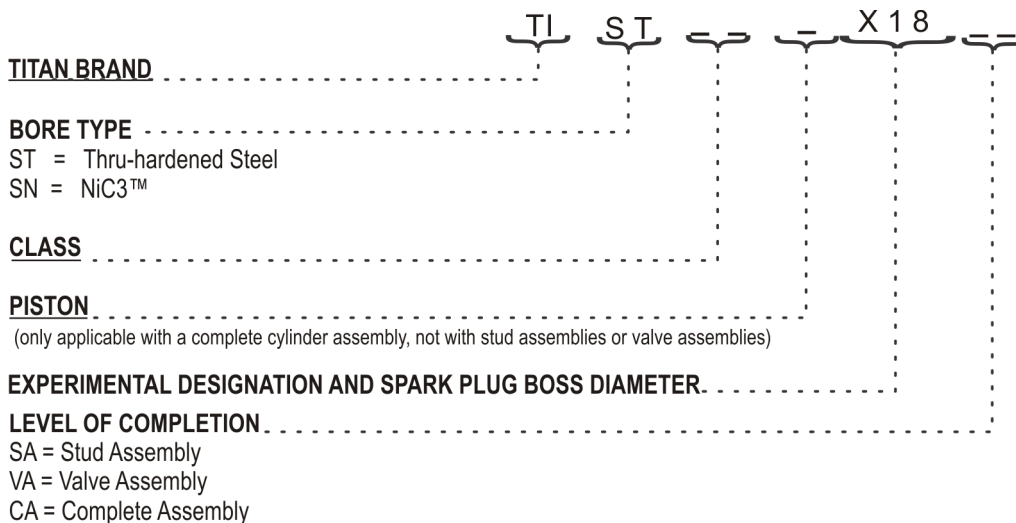


Figure 1. Class Reference Assembly Level Designation, typical

PART NO. A E L 8 5 1 0 1 ST ---
BORE TYPE
 ST = Thru-hardened Steel
 SN = NiC3™
CLASS

Figure 2. Cylinder Part Number Matrix, typical

III. CYLINDER MARKING

Cylinder assemblies are serialized and identified as indicated in Figure 3. Additionally, cylinder part numbers are marked on the barrel flange.

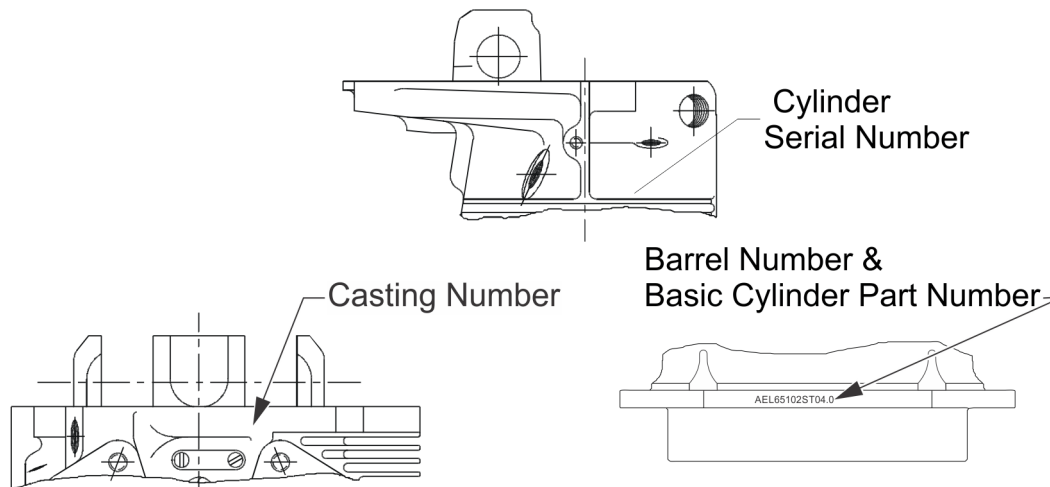


Figure 3. Cylinder Marking Locations

IV. AVAILABLE VALVE ASSEMBLIES

Replacement cylinders for Titan experimental engines are sold as individual Cylinder Valve Assemblies (VA). Cylinder Valve Assemblies include the machined cylinder head and barrel assembly, valves, springs, spring retainers, valve keys, oil drain elbow, and exhaust valve cap only.

NOTE: For Titan experimental cylinders, only the barrel is painted with primer. The cylinder head is not painted.

Engine Applicability	Valve Assembly Part Number
OX/IOX320	TIST04.OX18VA
OX/IOX340	
OX/IOX360	TIST12.OX18VA
OX/IOX370	
OX/IOX/VA540	

To complete the cylinder assembly with correct piston, choose the appropriate piston and ST203 ring set based upon the engine displacement and compression ratio which appears on the data plate:

Engine Applicability	Compression Ratio	Piston	Ring Set
OX/IOX320	7.2:1	AEL75413	ST203
	8.5:1	AEL75089	
	9.0:1	AEL15357	
OX/IOX340	8.0:1	AEL75412	ST203
	9.0:1	AEL75413	
OX/IOX360	7.2:1	AEL75413	ST203
	8.5:1	AEL75089	
	9.0:1	AEL15357	
OX/IOX370	8.0:1	AEL75413	ST203
	8.3:1	AEL75082	
	9.6:1	AEL75089	
OX/IOX/VA540	7.2:1	AEL75413	ST203
	8.5:1	AEL75089	
	9.0:1	AEL15357	

Add the following parts (as required) to complete the installation:

Part Number	Description	Quantity (per cylinder)
AEL13790	Shaft, Rocker	1
AEL12892	Thrust Buttons	2
AEL14077-1	Pin, Piston	1
AEL12032-SC	Gasket Set	1
X-658862	Rocker Cover	1

V. SERVICE INSTRUCTIONS

1. Refer to the instructions in the latest revision of SIL002 for cylinder bore honing instructions.
2. Refer to the instructions in the latest revision of SIL007 for cylinder fits & limits.
3. Refer to the instructions in the latest revision of SIL004 for checking piston ring gap and piston ring installation.
4. Refer to the instructions in E-SB003 for Engine Break-in Instructions after Cylinder Replacement.

VI. OBSOLETE PARTS/PART NUMBERS

NiC3 nickel plated cylinders will be depleted within the next year. There will be no NiC3 cylinders available to the aftermarket as service spares/replacements. All cylinder assemblies with the TISN (TISN04.0X18, TISN04.0X14, TISN12.0X18, TISN12.0X14) prefix will be inactive and no longer available. Cylinder assemblies with 14 in the last two digits have also been discontinued - order the assembly with the 18 suffix as replacements and use a 14mm spark plug adapter, available from the ignition system manufacturer.

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