

# APICAL INDUSTRIES, INC.

REPORT NUMBER AI332-4

INFLATION CYLINDER SUBSTANTIATION REPORT

APICAL INFLATABLE EMERGENCY  
HELICOPTER FLOAT KIT  
EUROCOPTER AS332C, L and L1

FAA PROJECT NUMBER ST8539LA-R

PREPARED BY Mike Lonnecker 11/06/00  
Date

CHECKED BY \_\_\_\_\_  
Date

TEST REPORT APPROVED BY \_\_\_\_\_  
Date

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### Log of Revisions

<b>Date</b>	<b>Rev.</b>	<b>Page No.</b>	<b>Description</b>	<b>Approval</b>
11/06/00	N/C	All	Initial Release	D.V. Hitzfield
04/02/02	A	ii	Add 5.0	D.V. Hitzfield
		iii	1. Drop 20413	
		1.1	Revise 1.0	
		4.1	Add Data	
		5.1	Add Attachment "A"	

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### References

1. Apical Dwg 20330
2. Apical Document II332-1 Installation Instructions
3. Apical Document ICA332-1 Instructions for Continued Airworthiness
4. FAR Part 29
5. MIL-HDBK-5F

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**1.0 Scope**

The purpose of supplying this report is to obtain an FAA Supplemental Type Certificate for Apical Industries, Inc.'s (Apical) replacement inflation cylinder. The Apical replacement inflation cylinder, Main Cylinder P/N 20330, are direct replacements for Aerazur's Main Cylinder P/N 158862 for the Eurocopter AS332. The Apical replacement inflation cylinders are dimensionally and functionally identical to the Aerazur cylinders.

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## **2.0 Introduction**

Apical Industries, Incorporated (Apical) currently holds STC's for helicopter inflation cylinders. The replacement inflation cylinders are for installation on the Eurocopter AS332. These cylinders are the same in construction and materials as other cylinders for which Apical has obtained certification.

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**3.0 Method of Showing Compliance**

3.1 29.1301 Function and Installation

(a) thru (d) The Apical replacement cylinders are the same in materials and construction as previously certified cylinders. They have the same functional requirements. The Apical cylinders are Dot and FAA approved for other helicopter applications. Apical will show by comparison that they are dimensionally the same as the Aerazur cylinders.

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#### 4.0 Cylinder Comparison

##### 4.1 Data

TABLE I Dimensional Comparison

CYLINDER	LENGTH	DIAMETER	THREAD	VOLUME	OPERATING	
					Pressure	Weight
AFT CYLINDER						
Apical P/N 20330-2	32.5 in	7.86 in	MS-33649-16	1100 cu. In.	3600 psi	18.45#
Aerazur P/N 158562	32.7 in	7.9 in	MS-33649-16	1100 cu. In.	3000 psi	19.5#

Apical's Aft Cylinder P/N 20330-2 is DOT approved under number DOT E 10915-3600.

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