P/N: S40.2 Rev. A2

Report No.CC11-42847
Date: 05-03-11

CERTIFICATE OF COMPLIANCE AND TEST REPORT

FOR

SEAMLESS ALUMINUM CYLINDERS MANUFACTURED UNDER
U. S. DEPARTMENT OF TRANSPORTATION REGULATIONS.

MANUFACTURED FOR: CATALINA CYLINDERS
7300 ANACONDA AVENUE, GARDEN GROVE, CALIFORNIA 92841

MANUFACTURED BY: CATALINA CYLINDERS
7300 ANACONDA AVENUE, GARDEN GROVE, CALIFORNIA 92841

CONSIGNED TO: CATALINA CYLINDERS
7300 ANACONDA AVENUE, GARDEN GROVE, CALIFORNIA 92841

CYLINDER DESCRIPTION AND DESIGN CRITERIA:

Specification: DOT-3AL3000

Nominal Size **5.25** inches (**133.4** mm) OD
25.2 inches (**640.1** mm) Long

Service Pressure: **3000** psi (**207** BAR)

DOT Test Pressure: **5000** psi

Minimum Wall: **.344** inches (**8.738** mm)

Nominal Volumetric Capacity: **350.4** Cu. In. (**5.76** L)

DOT Calculated Stress at test pressure: **32704** psi.

MANUFACTURING PROCESS:

Construction: Backward Extrusion to Form a Seamless Shell, the open end is closed by swaging.

MATERIAL AND HEAT TREATMENT: 6061 Aluminum. Solution Treatment and Artificial Aging to the 6061 T6 Condition.

REPORT DETAILS:

Quantity: **78**

Cast Code: **NF0**

Lot Numbers: **Y079**

MARKS STAMPED INTO THE SHOULDER OF THE CYLINDER ARE:

Specification and Service Pressure: DOT 3AL3000

Serial Numbers: **FW0000858** to **FW0000935** inclusive

Test Date: 04-11

Inspector's Mark: CL

Manufacturer's Symbol: M4002

Other Marks: CATALINA S40 M25X2 DIVING BREATHING GAS
CE0426 PS200BAR TS-20/+60C PT344BAR 7.3 KG

I hereby certify that I have determined the cylinders described on this report comply with the requirements of the U. S. Department of Transportation Specification 3AL.

Remarks:

T. H. COCHRANE LABORATORIES, LTD.
Milwaukee, WI 53225

Signed: _____
Inspector

Date: MAY 03 2011

NOTE: The cylinders that are the subject of this Test Report have been inspected in accordance with the requirements of the law and the regulations of the Department of Transportation.. This Test Report is not to be taken as an indication that said cylinders are or are not safe for use. THIS TEST REPORT DOES NOT CONSTITUTE AN EXPRESS OR IMPLIED WARRANTY.

SERIAL NUMBER RANGE: **FW0000858** to **FW0000935** inclusive

SIZE: 5.25 O.D. x 25.2 long.

CYLINDER MANUFACTURER: CATALINA CYLINDERS

RECORD OF CHEMICAL ANALYSIS OF MATERIAL FOR CYLINDERS

Alloy	Cast Code	Type of Analysis (Ladle or Cast)	CHEMICAL ANALYSIS									
			Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Bi
6061	NF0	Ladle	.61	.16	.30	.01	.88	.078	.00	.01	.000	.000

Balance AL Other Elements each <.05, Total <.15
Chemical Analysis and Check Analysis are on file at the Manufacturer. Material Manufacturer: ALCAN
The above analysis has been verified to comply with material authorized by the specification.

RECORD OF PHYSICAL TESTS OF MATERIAL FOR CYLINDERS

LOT NO.	TEST BAR	YIELD STRENGTH IN PSI (MPa)	TENSILE STRENGTH IN PSI (MPa)	% ELONGATION	FLATTENING TEST
Y079	0	42,634 psi (294.0 Mpa)	50,669 psi (349.4 Mpa)	19.1	Pass
	180	41,128 psi (283.6 Mpa)	49,224 psi (339.4 Mpa)	18.7	

Signed: _____
INSPECTOR

Date: MAY 03 2011

Location: Garden Grove, California

Record Of Hydrostatic Testing

In accordance CGA Pamphlet C-1

Manufacturer: Catalina Cylinders / Garden Grove
Independent Inspector: T. H. Cochrane Labs

Test Date: 2-May-11
Day: Monday
Time: 8:34 AM

Cylinder Type: **S40.2-FW**

Test Station: **# 4 Hydro**

Test Pressure (T/P): **5000**

Cylinder Serial Number	Cylinder Lot Number	Hydro Jkt Num	Actual T/P (psi)	Total Expan (cc)	Perm Expan (cc)	Ratio Perm/Tot (%)	Empty Weight (lbs)	Full Weight (lbs)	Volume Capacity (cu in)	Pass or Fail
FW0000858	Y079	2	5000	36.6	0.0	0.0	16.20	28.85	350.91	P
FW0000859	Y079	3	5000	36.8	0.0	0.0	16.15	28.90	353.69	P
FW0000860	Y079	4	5000	36.8	0.0	0.0	16.15	28.90	353.69	P
FW0000861	Y079	5	5000	36.4	0.0	0.0	16.15	28.90	353.69	P
FW0000862	Y079	2	5020	36.9	0.0	0.0	16.20	28.85	350.91	P
FW0000863	Y079	3	5020	36.9	0.0	0.0	16.20	28.90	352.30	P
FW0000864	Y079	4	5020	37.1	0.0	0.0	16.15	28.85	352.30	P
FW0000865	Y079	5	5020	36.9	0.0	0.0	16.20	28.85	350.91	P
FW0000866	Y079	2	5000	36.9	0.0	0.0	16.15	28.85	352.30	P
FW0000867	Y079	3	5000	36.9	0.0	0.0	16.15	28.85	352.30	P
FW0000868	Y079	4	5000	36.9	0.0	0.0	16.20	28.90	352.30	P
FW0000869	Y079	5	5000	36.8	0.0	0.0	16.20	28.90	352.30	P
FW0000870	Y079	2	5000	36.7	0.0	0.0	16.20	28.90	352.30	P
FW0000871	Y079	3	5000	36.8	0.0	0.0	16.20	28.90	352.30	P
FW0000872	Y079	4	5000	37.2	0.2	0.5	16.15	28.85	352.30	P
FW0000873	Y079	5	5000	37.1	0.0	0.0	16.15	28.85	352.30	P
FW0000874	Y079	2	5000	36.4	0.0	0.0	16.10	28.90	355.07	P
FW0000875	Y079	3	5000	36.6	0.0	0.0	16.15	28.80	350.91	P
FW0000876	Y079	4	5000	36.7	0.0	0.0	16.15	28.85	352.30	P
FW0000877	Y079	5	5000	36.7	0.0	0.0	16.15	28.85	352.30	P
FW0000878	Y079	2	5000	36.8	0.0	0.0	16.20	28.85	350.91	P
FW0000879	Y079	3	5000	36.5	0.0	0.0	16.15	28.90	353.69	P
FW0000880	Y079	4	5000	36.7	0.0	0.0	16.15	28.85	352.30	P
FW0000881	Y079	5	5000	36.6	0.0	0.0	16.20	28.95	353.69	P
FW0000882	Y079	2	5000	36.6	0.0	0.0	16.10	28.85	353.69	P
FW0000883	Y079	3	5000	36.4	0.0	0.0	16.15	28.85	352.30	P
FW0000884	Y079	4	5000	36.5	0.0	0.0	16.15	28.85	352.30	P
FW0000885	Y079	5	5000	36.4	0.0	0.0	16.15	28.85	352.30	P
FW0000886	Y079	2	5020	36.9	0.0	0.0	16.20	28.85	350.91	P
FW0000887	Y079	3	5020	36.6	0.0	0.0	16.20	28.90	352.30	P
FW0000888	Y079	4	5020	36.9	0.0	0.0	16.15	28.95	355.07	P
FW0000889	Y079	5	5020	36.6	0.0	0.0	16.15	28.95	355.07	P
FW0000890	Y079	2	5000	37.1	0.0	0.0	16.15	28.90	353.69	P
FW0000891	Y079	3	5000	37.0	0.0	0.0	16.15	28.90	353.69	P
FW0000892	Y079	4	5000	37.0	0.0	0.0	16.20	28.90	352.30	P
FW0000893	Y079	5	5000	37.1	0.0	0.0	16.15	28.85	352.30	P
FW0000894	Y079	2	5000	36.9	0.0	0.0	16.20	28.90	352.30	P
FW0000895	Y079	3	5000	36.8	0.0	0.0	16.15	28.85	352.30	P
FW0000896	Y079	4	5000	36.9	0.0	0.0	16.15	28.85	352.30	P
FW0000897	Y079	5	5000	36.8	0.0	0.0	16.15	28.85	352.30	P

Record Of Hydrostatic Testing

In accordance CGA Pamphlet C-1

Manufacturer: Catalina Cylinders / Garden Grove
Independent Inspector: T. H. Cochrane Labs

Test Date: 2-May-11
Day: Monday
Time: 8:34 AM

Cylinder Type: **S40.2-FW**

Test Station: **# 4 Hydro**

Test Pressure (T/P): **5000**

Cylinder Serial Number	Cylinder Lot Number	Hydro Jkt Num	Actual T/P (psi)	Total Expan (cc)	Perm Expan (cc)	Ratio Perm/Tot (%)	Empty Weight (lbs)	Full Weight (lbs)	Volume Capacity (cu in)	Pass or Fail
FW0000898	Y079	2	5020	36.6	0.0	0.0	16.15	28.95	355.07	P
FW0000899	Y079	3	5020	37.1	0.0	0.0	16.20	28.90	352.30	P
FW0000900	Y079	4	5020	37.5	0.0	0.0	16.20	28.90	352.30	P
FW0000901	Y079	5	5020	37.3	0.1	0.3	16.20	28.90	352.30	P
FW0000902	Y079	2	5000	38.5	2.1	5.5	16.15	28.90	353.69	P
FW0000903	Y079	3	5000	37.0	0.0	0.0	16.15	28.85	352.30	P
FW0000904	Y079	4	5000	36.9	0.0	0.0	16.15	28.80	350.91	P
FW0000905	Y079	5	5000	37.1	0.0	0.0	16.15	28.80	350.91	P
FW0000906	Y079	2	5000	36.6	0.0	0.0	16.15	28.80	350.91	P
FW0000907	Y079	3	5000	36.9	0.0	0.0	16.15	28.85	352.30	P
FW0000908	Y079	4	5000	38.6	1.2	3.1	16.15	28.85	352.30	P
FW0000909	Y079	5	5000	36.8	0.0	0.0	16.15	28.85	352.30	P
FW0000910	Y079	2	5020	36.5	0.0	0.0	16.15	28.90	353.69	P
FW0000911	Y079	3	5020	36.7	0.0	0.0	16.15	28.85	352.30	P
FW0000912	Y079	4	5020	36.7	0.0	0.0	16.15	28.85	352.30	P
FW0000913	Y079	5	5020	36.7	0.0	0.0	16.15	28.85	352.30	P
FW0000914	Y079	2	5000	36.7	0.0	0.0	16.20	28.90	352.30	P
FW0000915	Y079	3	5000	37.1	0.0	0.0	16.20	28.85	350.91	P
FW0000916	Y079	4	5000	37.1	0.0	0.0	16.15	28.85	352.30	P
FW0000917	Y079	5	5000	37.1	0.1	0.3	16.20	28.85	350.91	P
FW0000918	Y079	2	5000	36.9	0.0	0.0	16.20	28.85	350.91	P
FW0000919	Y079	3	5000	36.9	0.0	0.0	16.15	28.85	352.30	P
FW0000920	Y079	4	5000	37.0	0.0	0.0	16.15	28.85	352.30	P
FW0000921	Y079	5	5000	36.6	0.0	0.0	16.20	28.90	352.30	P
FW0000922	Y079	2	5020	36.8	0.0	0.0	16.15	28.90	353.69	P
FW0000923	Y079	3	5020	36.8	0.0	0.0	16.15	28.85	352.30	P
FW0000924	Y079	4	5020	37.2	0.0	0.0	16.20	28.90	352.30	P
FW0000925	Y079	5	5020	37.1	0.0	0.0	16.15	28.90	353.69	P
FW0000926	Y079	2	5000	37.1	0.0	0.0	16.20	28.90	352.30	P
FW0000927	Y079	3	5000	37.0	0.0	0.0	16.20	28.90	352.30	P
FW0000928	Y079	4	5000	37.2	0.0	0.0	16.20	28.90	352.30	P
FW0000929	Y079	5	5000	37.1	0.0	0.0	16.15	28.90	353.69	P
FW0000930	Y079	3	5000	37.0	0.0	0.0	16.15	28.85	352.30	P
FW0000931	Y079	4	5000	37.1	0.0	0.0	16.15	28.90	353.69	P
FW0000932	Y079	5	5000	36.9	0.0	0.0	16.15	28.85	352.30	P
FW0000933	Y079	3	5020	37.1	0.0	0.0	16.15	28.85	352.30	P
FW0000934	Y079	4	5020	37.3	0.0	0.0	16.20	28.85	350.91	P
FW0000935	Y079	5	5020	37.1	0.1	0.3	16.15	28.85	352.30	P

T. H. COCHRANE LABORATORIES, LTD.

Signature Page of Certifying Inspector for DOT/TC Certificate of Compliance and Test Report No. CC11-42847.

I hereby certify that I have determined the cylinders described on this report comply with the requirements of the U. S. Department of Transportation Specification 3AL, and Transport Canada Specification 3ALM.

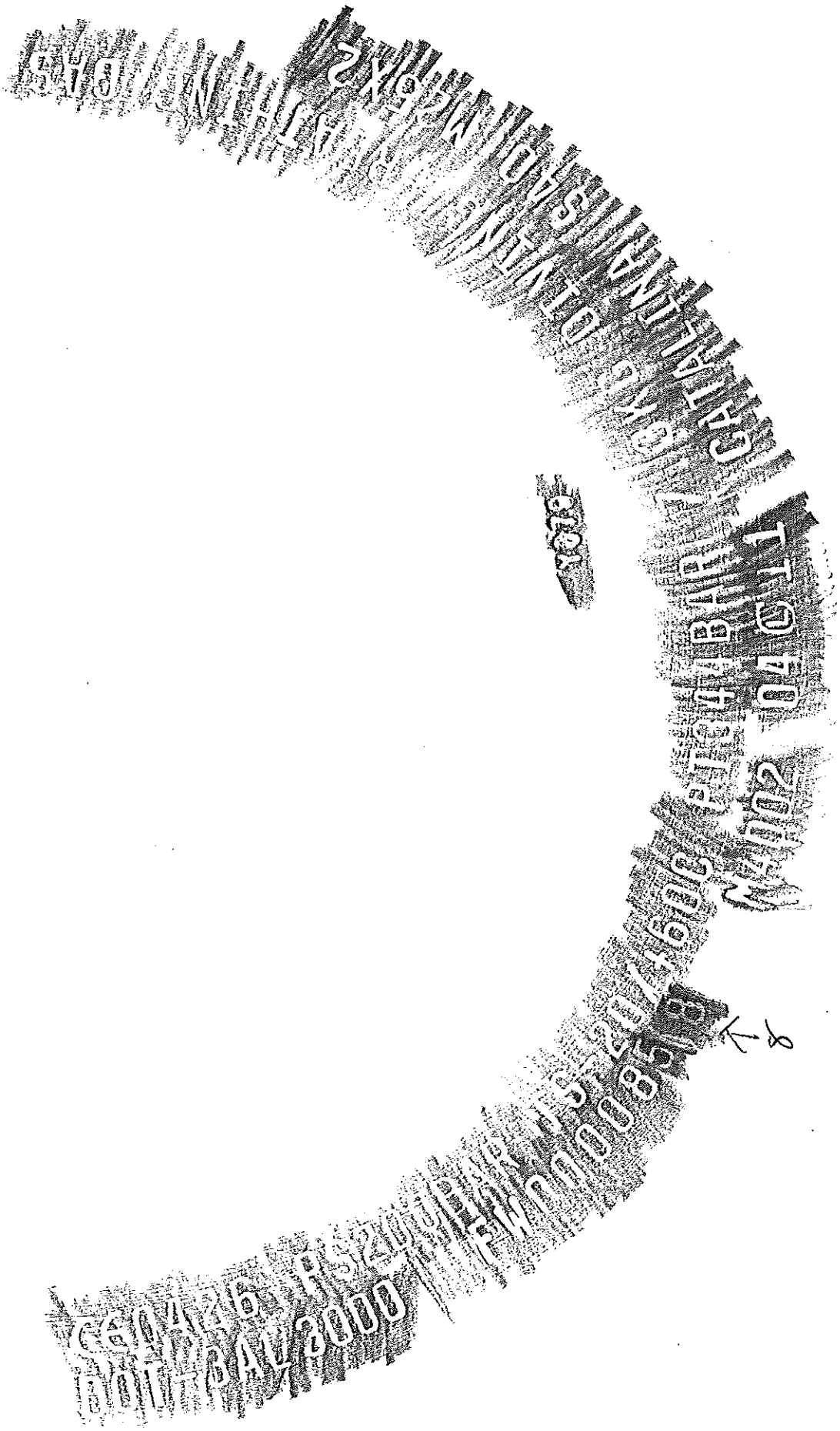
T. H. COCHRANE LABORATORIES, LTD.
Milwaukee, Wisconsin

Signed: _____
Certifying Inspector

LOT#Y079

2.2

540.2

04-29-11

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