



Declaration of Conformity

According to Directive 97/23/EC ( PED )

For Pressure Equipment

Catalina Cylinders Inc.

Herewith declares, that the Pressure Equipment

**Seamless Extruded Aluminum Cylinders**

**(Model S80.3, 77.4 cuft, PT 311bar)**

Serial Numbers: GV0005668 – GV0005819

Year of Manufacturing: 2016

Volume: 77.4 cuft

Test Pressure: 311 bar

Test Medium: Water

Conform to the Pressure Equipment Directive 97/23/EC

Type Approval No: USA-11-01-189-002

EC Certificate of Conformity Number: CCA-1266-007-16009

Applied standard: ISO 7866:2012

Notified body engaged for monitoring of the quality system:

Arrowhead Industrial Services Bourne, Lincolnshire UK

Notified Body Number 1266

Certificate Number ACS-20140522-0-PED

Catalina Cylinders Inc. Garden Grove, California, USA

A handwritten signature in black ink, appearing to read 'Miguel Garay'.

Miguel Garay

Quality Assurance Manager

June, 2016

**WORLD CLASS PRODUCTS. FIRST CLASS SERVICE.™**

TEL (714) 890-0999 ♦ FAX (714) 890-1744 ♦

[www.catalinacylinders.com](http://www.catalinacylinders.com)

7300 Anaconda Avenue, Garden Grove, California 92841

# EC Certificate of Conformity

## Certificate Nº

CCA-1266-007-16009

|                                                                       |                                                   |
|-----------------------------------------------------------------------|---------------------------------------------------|
| <b>Manufacturer</b> Catalina Cylinders                                | <b>Manufacturer's Mark</b><br><br><b>CATALINA</b> |
| <b>Address</b> 12452 Monarch/7300 Anaconda Avenue<br>Garden Grove, CA |                                                   |
| <b>Country</b> USA                                                    |                                                   |

|                                               |
|-----------------------------------------------|
| <b>Regulation[s]:</b> PED 97/23/EC            |
| <b>Design Specification:</b> EN ISO 7866:2012 |

|                                                                                  |                                                                                                                |
|----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| <b>Inspection Body [Xa]:</b> Arrowhead Industrial Services Limited               | <b>Inspector's Mark</b><br> |
| <b>Address:</b> Meadow Drove Business Centre, Bourne, Lincolnshire, PE10 0BP, UK |                                                                                                                |
| <b>Identification Number:</b> 1266                                               |                                                                                                                |
| <b>Type Approval Nº:</b> USA-11-02-189-002                                       |                                                                                                                |
| <b>Cylinder Type:</b> Seamless aluminium alloy                                   |                                                                                                                |
| <b>Drawing Nº:</b> S80.3-GV                                                      |                                                                                                                |
| <b>Manufacturing Batch Nº:</b> AN444                                             |                                                                                                                |
| <b>Serial Nº Range:</b> <b>From:</b> GV0005668 <b>To:</b> GV0005819              |                                                                                                                |
| <b>Total Tested:</b> 152 <b>Total Accepted:</b> 152                              |                                                                                                                |

|                                                                                    |
|------------------------------------------------------------------------------------|
| <b>Customer</b> CASCO ANTIGUO COMERCIAL SL ( 1251350 )<br>C/DE LA FORJA, 9 POL IND |
| <b>Address</b> CATALUNA TORREJON DE ARDOZ MADRID 28850                             |
| <b>Country</b> SPAIN                                                               |

The undersigned hereby declare that the Conformity Assessment Requirements of the above referenced Regulations have been carried out satisfactorily and that the cylinders accepted conform to the Design Specification. Test reports are supplied separately.

### General Remarks:

|                                           |                                                                                                          |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------|
| <b>Date of Inspection:</b> June, 2016     | <b>Signature</b><br> |
| <b>IS Body Inspector:</b><br>Miguel Garay |                                                                                                          |

|                                                                                                      |                                                                                                           |                                                                                                                                                                                     |
|------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Approved by:</b><br>Simon Davies<br>Certifying Inspector<br>Arrowhead Industrial Services Limited | <b>Signature</b><br> | Digitally signed by Simon Davies<br>DN: cn=Simon Davies, o, ou=Arrowhead Industrial Services Limited, email=simon.davies@arrowheadis.com, c=GB<br>Date: 2016.06.27 12:24:11 +01'00' |
|------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

DATE: 06-27-16

MODEL: S80.3

**CERTIFICATE OF CONFORMANCE**  
Application of ISO 7866:2012

**Seamless Aluminum Cylinders Model No. S80.3**

**MANUFACTURED FOR:** STOCK

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

**QUANTITY:** 152

**SERIAL NUMBERS:** GV0005668 TO GV0005819

**BATCH NUMBER(S):** AN444 **HEAT NUMBER(S):** TD3

**TECHNICAL DATA:**

**Service Pressure:** 207Bar

**Test Pressure:** 311 Bar

**Nominal Size** 184.2 mm OD

**Minimum Wall:** 12.1 mm

657.9 mm Long (without cap and without valve)

**Nominal Volumetric Capacity:** 11.1 Liters

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

**MATERIAL AND HEAT TREATMENT:** AA Alloy Designation 6061A. Solution Treatment and Artificial Aging to the 6061 T6 Condition

**STAMP MARKING:** Markings as noted on layout attached to this certificate.

I hereby certify that I have determined the cylinders covered by this Certificate of Conformance have been manufactured in accordance with the requirements of ISO Standard EN ISO 7866:2012, and have passed all the inspections and tests required by this ISO Standard.

Remarks:

CATALINA CYLINDERS  
Garden Grove, CA

Signed: \_\_\_\_\_

Inspector

Date: 06-27-16

## PRODUCTION TEST DATA

### Measurement of Cylinders

| Batch No. | Serial Numbers          | Water Capacity                                       | Minimum measured thickness                                    |                                                               |
|-----------|-------------------------|------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------|
| AN444     | GV0005668-<br>GV0005819 | 100% Inspected all<br>capacities 11.1L or<br>greater | 100% Wall Thickness<br>Inspected all above<br>12.1 mm minimum | 100% Base Thickness<br>Inspected all above 18.7 mm<br>minimum |

### Mechanical Testing

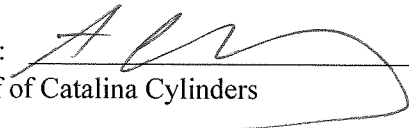
| Batch<br>No. | Serial Numbers            | Cast No. |                       |                         |                 | Flattening<br>Test | Burst Test<br>Serial No. | Burst<br>Test (Bar) | Hardness |
|--------------|---------------------------|----------|-----------------------|-------------------------|-----------------|--------------------|--------------------------|---------------------|----------|
|              |                           |          | Yield Stress<br>(Mpa) | Tensile<br>Stress (Mpa) | Elongation<br>% |                    |                          |                     |          |
| AN444        | GV0005668 to<br>GV0005819 | TD3      | 344.2                 | 358.9                   | 19.3            | OK                 | GV0005722                | 571.6               | OK       |
|              |                           |          | 332.6                 | 360.1                   | 21.7            |                    |                          |                     |          |
|              |                           |          |                       |                         |                 |                    |                          |                     |          |
|              |                           |          |                       |                         |                 |                    |                          |                     |          |
|              |                           |          |                       |                         |                 |                    |                          |                     |          |

### Record of Chemical Analysis of Material for Cylinders

| HEAT NO<br>(HEAT CODE) | TYPE OF ANALYSIS<br>(LADLE OR CHECK) | CHEMICAL ANALYSIS |     |     |     |     |      |     |     |      |      |
|------------------------|--------------------------------------|-------------------|-----|-----|-----|-----|------|-----|-----|------|------|
|                        |                                      | Si                | Fe  | Cu  | Mn  | Mg  | Cr   | Zn  | Ti  | Pb   | Bi   |
| TD3                    | LADLE                                | .61               | .17 | .31 | .02 | .91 | .080 | .00 | .01 | .001 | .000 |
|                        |                                      |                   |     |     |     |     |      |     |     |      |      |

Date: 06-27-16

Place: GARDEN GROVE, CALIFORNIA USA

Signature:   
On behalf of Catalina Cylinders

**RECORD OF RESIDUAL HYDROCARBON TESTING**  
(In Accordance with Fed Spec. RR-C-901C)

| Lot No. | Serial Number | Total Hydrocarbons<br>(mg) | Regulatory Level<br>Allowed (mg) |
|---------|---------------|----------------------------|----------------------------------|
| AN444   | GV0005668     | 4.5                        | 9.00                             |

Certificate of Residual Hydrocarbon Testing are on file at Manufacturer.

Certifying Entity: **South Coast Pollution Control**

This record of Residual Hydrocarbon Testing is provided for informational purposes only, it is not to be considered a part of the Certificate of Compliance and Test Report to which it is attached, and has not been certified or verified by T.H. Cochrane Laboratories, Ltd.

## Record Of Hydrostatic Testing

In accordance CGA Pamphlet C-1

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

Test Date: 23-Jun-16  
Day: Thursday  
Time: 7:39 AM

Cylinder Type: **S80-GV**

Test Station: **# 4 Hydro**

Test Pressure (T/P): **4500**

| Cylinder<br>Serial<br>Number | Cylinder<br>Lot<br>Number | Hydro<br>Jkt<br>Num | Actual<br>T/P<br>(psi) | Total<br>Expan<br>(cc) | Perm<br>Expan<br>(cc) | Ratio<br>Perm/Tot<br>(%) | Empty<br>Weight<br>(lbs) | Full<br>Weight<br>(lbs) | Volume<br>Capacity<br>(cu in) | Pass<br>or Fail |
|------------------------------|---------------------------|---------------------|------------------------|------------------------|-----------------------|--------------------------|--------------------------|-------------------------|-------------------------------|-----------------|
| GV0005668                    | AN444                     | 1                   | 4520                   | 64.4                   | 0.0                   | 0.0                      | 31.28                    | 55.95                   | 684.35                        | PASS            |
| GV0005669                    | AN444                     | 2                   | 4520                   | 64.1                   | 0.0                   | 0.0                      | 31.44                    | 56.05                   | 682.68                        | PASS            |
| GV0005670                    | AN444                     | 3                   | 4520                   | 64.4                   | 0.0                   | 0.0                      | 31.36                    | 56.05                   | 684.90                        | PASS            |
| GV0005671                    | AN444                     | 4                   | 4520                   | 64.3                   | 0.0                   | 0.0                      | 31.36                    | 56.00                   | 683.51                        | PASS            |
| GV0005672                    | AN444                     | 5                   | 4520                   | 64.9                   | 0.0                   | 0.0                      | 31.36                    | 56.00                   | 683.51                        | PASS            |
| GV0005673                    | AN444                     | 6                   | 4520                   | 64.5                   | 0.0                   | 0.0                      | 31.30                    | 56.00                   | 685.18                        | PASS            |
| GV0005674                    | AN444                     | 1                   | 4500                   | 64.3                   | 0.0                   | 0.0                      | 31.30                    | 56.00                   | 685.18                        | PASS            |
| GV0005675                    | AN444                     | 2                   | 4500                   | 64.0                   | 0.0                   | 0.0                      | 31.30                    | 56.00                   | 685.18                        | PASS            |
| GV0005676                    | AN444                     | 3                   | 4500                   | 64.3                   | 0.0                   | 0.0                      | 31.38                    | 56.05                   | 684.35                        | PASS            |
| GV0005677                    | AN444                     | 4                   | 4500                   | 64.4                   | 0.0                   | 0.0                      | 31.30                    | 55.95                   | 683.79                        | PASS            |
| GV0005678                    | AN444                     | 5                   | 4500                   | 64.9                   | 0.0                   | 0.0                      | 31.38                    | 56.00                   | 682.96                        | PASS            |
| GV0005679                    | AN444                     | 6                   | 4500                   | 65.1                   | 0.1                   | 0.2                      | 31.30                    | 55.95                   | 683.79                        | PASS            |
| GV0005680                    | AN444                     | 1                   | 4520                   | 64.6                   | 0.0                   | 0.0                      | 31.26                    | 56.00                   | 686.29                        | PASS            |
| GV0005681                    | AN444                     | 2                   | 4520                   | 64.3                   | 0.0                   | 0.0                      | 31.44                    | 56.15                   | 685.46                        | PASS            |
| GV0005682                    | AN444                     | 3                   | 4520                   | 64.4                   | 0.0                   | 0.0                      | 31.36                    | 56.05                   | 684.90                        | PASS            |
| GV0005683                    | AN444                     | 4                   | 4520                   | 64.4                   | 0.0                   | 0.0                      | 31.36                    | 56.05                   | 684.90                        | PASS            |
| GV0005684                    | AN444                     | 5                   | 4520                   | 64.7                   | 0.0                   | 0.0                      | 31.44                    | 56.05                   | 682.68                        | PASS            |
| GV0005685                    | AN444                     | 6                   | 4520                   | 64.7                   | 0.0                   | 0.0                      | 31.44                    | 56.05                   | 682.68                        | PASS            |
| GV0005686                    | AN444                     | 1                   | 4500                   | 64.4                   | 0.6                   | 0.9                      | 31.40                    | 56.00                   | 682.40                        | PASS            |
| GV0005687                    | AN444                     | 3                   | 4500                   | 64.2                   | 0.0                   | 0.0                      | 31.28                    | 56.00                   | 685.73                        | PASS            |
| GV0005688                    | AN444                     | 4                   | 4500                   | 64.2                   | 0.0                   | 0.0                      | 31.38                    | 56.00                   | 682.96                        | PASS            |
| GV0005689                    | AN444                     | 5                   | 4500                   | 65.3                   | 0.8                   | 1.2                      | 31.30                    | 55.95                   | 683.79                        | PASS            |
| GV0005690                    | AN444                     | 6                   | 4500                   | 65.0                   | 0.3                   | 0.5                      | 31.38                    | 56.15                   | 687.12                        | PASS            |
| GV0005691                    | AN444                     | 1                   | 4500                   | 64.4                   | 0.0                   | 0.0                      | 31.42                    | 55.95                   | 680.46                        | PASS            |
| GV0005692                    | AN444                     | 3                   | 4500                   | 64.2                   | 0.0                   | 0.0                      | 31.30                    | 56.10                   | 687.95                        | PASS            |
| GV0005693                    | AN444                     | 4                   | 4500                   | 64.3                   | 0.0                   | 0.0                      | 31.42                    | 56.20                   | 687.40                        | PASS            |
| GV0005694                    | AN444                     | 5                   | 4500                   | 64.6                   | 0.0                   | 0.0                      | 31.46                    | 56.00                   | 680.74                        | PASS            |
| GV0005695                    | AN444                     | 6                   | 4500                   | 64.7                   | 0.0                   | 0.0                      | 31.36                    | 56.05                   | 684.90                        | PASS            |
| GV0005696                    | AN444                     | 1                   | 4500                   | 64.4                   | 0.0                   | 0.0                      | 31.34                    | 56.05                   | 685.46                        | PASS            |
| GV0005697                    | AN444                     | 3                   | 4500                   | 64.7                   | 0.1                   | 0.2                      | 31.42                    | 55.95                   | 680.46                        | PASS            |
| GV0005698                    | AN444                     | 4                   | 4500                   | 63.8                   | 0.0                   | 0.0                      | 31.36                    | 56.05                   | 684.90                        | PASS            |
| GV0005699                    | AN444                     | 5                   | 4500                   | 65.0                   | 0.0                   | 0.0                      | 31.36                    | 55.95                   | 682.13                        | PASS            |
| GV0005700                    | AN444                     | 6                   | 4500                   | 64.9                   | 0.1                   | 0.2                      | 31.28                    | 55.95                   | 684.35                        | PASS            |
| GV0005701                    | AN444                     | 1                   | 4500                   | 64.5                   | 0.0                   | 0.0                      | 31.28                    | 55.90                   | 682.96                        | PASS            |
| GV0005702                    | AN444                     | 3                   | 4500                   | 63.8                   | 0.0                   | 0.0                      | 31.24                    | 56.10                   | 689.62                        | PASS            |
| GV0005703                    | AN444                     | 4                   | 4500                   | 64.4                   | 0.0                   | 0.0                      | 31.34                    | 56.05                   | 685.46                        | PASS            |
| GV0005704                    | AN444                     | 5                   | 4500                   | 64.2                   | 0.0                   | 0.0                      | 31.26                    | 56.00                   | 686.29                        | PASS            |
| GV0005705                    | AN444                     | 6                   | 4500                   | 64.8                   | 0.1                   | 0.2                      | 31.34                    | 56.00                   | 684.07                        | PASS            |
| GV0005706                    | AN444                     | 1                   | 4500                   | 64.3                   | 0.0                   | 0.0                      | 31.28                    | 56.00                   | 685.73                        | PASS            |
| GV0005707                    | AN444                     | 3                   | 4500                   | 64.2                   | 0.0                   | 0.0                      | 31.28                    | 56.05                   | 687.12                        | PASS            |
| GV0005708                    | AN444                     | 4                   | 4500                   | 63.9                   | 0.0                   | 0.0                      | 31.38                    | 55.95                   | 681.57                        | PASS            |
| GV0005709                    | AN444                     | 5                   | 4500                   | 65.2                   | 0.3                   | 0.5                      | 31.24                    | 56.10                   | 689.62                        | PASS            |

## Record Of Hydrostatic Testing

In accordance CGA Pamphlet C-1

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

Test Date: 23-Jun-16  
Day: Thursday  
Time: 7:39 AM

Cylinder Type: **S80-GV**

Test Station: **# 4 Hydro**

Test Pressure (T/P): **4500**

| Cylinder<br>Serial<br>Number | Cylinder<br>Lot<br>Number | Hydro<br>Jkt<br>Num | Actual<br>T/P<br>(psi) | Total<br>Expan<br>(cc) | Perm<br>Expan<br>(cc) | Ratio<br>Perm/Tot<br>(%) | Empty<br>Weight<br>(lbs) | Full<br>Weight<br>(lbs) | Volume<br>Capacity<br>(cu in) | Pass<br>or Fail |
|------------------------------|---------------------------|---------------------|------------------------|------------------------|-----------------------|--------------------------|--------------------------|-------------------------|-------------------------------|-----------------|
| GV0005710                    | AN444                     | 6                   | 4500                   | 64.3                   | 0.0                   | 0.0                      | 31.40                    | 56.00                   | 682.40                        | PASS            |
| GV0005711                    | AN444                     | 1                   | 4500                   | 64.4                   | 0.0                   | 0.0                      | 31.34                    | 56.00                   | 684.07                        | PASS            |
| GV0005712                    | AN444                     | 3                   | 4500                   | 64.5                   | 0.0                   | 0.0                      | 31.36                    | 55.90                   | 680.74                        | PASS            |
| GV0005713                    | AN444                     | 4                   | 4500                   | 64.4                   | 0.0                   | 0.0                      | 31.24                    | 55.95                   | 685.46                        | PASS            |
| GV0005714                    | AN444                     | 5                   | 4500                   | 64.7                   | 0.0                   | 0.0                      | 31.34                    | 56.00                   | 684.07                        | PASS            |
| GV0005715                    | AN444                     | 6                   | 4500                   | 63.9                   | 0.0                   | 0.0                      | 31.36                    | 56.20                   | 689.06                        | PASS            |
| GV0005716                    | AN444                     | 1                   | 4500                   | 64.1                   | 0.0                   | 0.0                      | 31.42                    | 56.05                   | 683.24                        | PASS            |
| GV0005717                    | AN444                     | 3                   | 4500                   | 64.4                   | 0.0                   | 0.0                      | 31.36                    | 56.10                   | 686.29                        | PASS            |
| GV0005718                    | AN444                     | 4                   | 4500                   | 63.8                   | 0.0                   | 0.0                      | 31.32                    | 56.05                   | 686.01                        | PASS            |
| GV0005719                    | AN444                     | 5                   | 4500                   | 64.5                   | 0.3                   | 0.5                      | 31.42                    | 56.05                   | 683.24                        | PASS            |
| GV0005720                    | AN444                     | 6                   | 4500                   | 64.7                   | 0.0                   | 0.0                      | 31.44                    | 56.00                   | 681.29                        | PASS            |
| GV0005721                    | AN444                     | 1                   | 4500                   | 64.2                   | 0.0                   | 0.0                      | 31.34                    | 56.05                   | 685.46                        | PASS            |
| GV0005722                    | AN444                     | 3                   | 4500                   | 64.4                   | 0.0                   | 0.0                      | 31.34                    | 55.95                   | 682.68                        | PASS            |
| GV0005723                    | AN444                     | 4                   | 4500                   | 64.1                   | 0.0                   | 0.0                      | 31.22                    | 56.10                   | 690.17                        | PASS            |
| GV0005724                    | AN444                     | 5                   | 4500                   | 64.6                   | 0.0                   | 0.0                      | 31.38                    | 56.05                   | 684.35                        | PASS            |
| GV0005725                    | AN444                     | 6                   | 4500                   | 64.6                   | 0.0                   | 0.0                      | 31.38                    | 56.05                   | 684.35                        | PASS            |
| GV0005726                    | AN444                     | 1                   | 4500                   | 64.4                   | 0.1                   | 0.2                      | 31.42                    | 56.00                   | 681.85                        | PASS            |
| GV0005727                    | AN444                     | 3                   | 4500                   | 64.3                   | 0.0                   | 0.0                      | 31.36                    | 55.95                   | 682.13                        | PASS            |
| GV0005728                    | AN444                     | 4                   | 4500                   | 64.6                   | 0.0                   | 0.0                      | 31.34                    | 55.95                   | 682.68                        | PASS            |
| GV0005729                    | AN444                     | 5                   | 4500                   | 65.0                   | 0.0                   | 0.0                      | 31.26                    | 56.00                   | 686.29                        | PASS            |
| GV0005730                    | AN444                     | 6                   | 4500                   | 64.9                   | 0.0                   | 0.0                      | 31.32                    | 55.95                   | 683.24                        | PASS            |
| GV0005731                    | AN444                     | 1                   | 4500                   | 64.4                   | 0.0                   | 0.0                      | 31.24                    | 55.95                   | 685.46                        | PASS            |
| GV0005732                    | AN444                     | 3                   | 4500                   | 64.3                   | 0.0                   | 0.0                      | 31.26                    | 56.00                   | 686.29                        | PASS            |
| GV0005733                    | AN444                     | 4                   | 4500                   | 64.0                   | 0.0                   | 0.0                      | 31.34                    | 56.05                   | 685.46                        | PASS            |
| GV0005734                    | AN444                     | 5                   | 4500                   | 64.4                   | 0.0                   | 0.0                      | 31.42                    | 55.95                   | 680.46                        | PASS            |
| GV0005735                    | AN444                     | 6                   | 4500                   | 64.6                   | 0.0                   | 0.0                      | 31.38                    | 56.05                   | 684.35                        | PASS            |
| GV0005736                    | AN444                     | 1                   | 4500                   | 63.9                   | 0.0                   | 0.0                      | 31.36                    | 56.05                   | 684.90                        | PASS            |
| GV0005737                    | AN444                     | 3                   | 4500                   | 64.1                   | 0.0                   | 0.0                      | 31.40                    | 56.05                   | 683.79                        | PASS            |
| GV0005738                    | AN444                     | 4                   | 4500                   | 64.4                   | 0.0                   | 0.0                      | 31.40                    | 56.00                   | 682.40                        | PASS            |
| GV0005739                    | AN444                     | 5                   | 4500                   | 63.5                   | 0.0                   | 0.0                      | 31.32                    | 56.10                   | 687.40                        | PASS            |
| GV0005740                    | AN444                     | 6                   | 4500                   | 66.2                   | 3.0                   | 4.5                      | 31.32                    | 55.90                   | 681.85                        | PASS            |
| GV0005741                    | AN444                     | 1                   | 4500                   | 63.7                   | 0.0                   | 0.0                      | 31.50                    | 56.10                   | 682.40                        | PASS            |
| GV0005742                    | AN444                     | 3                   | 4500                   | 64.4                   | 0.0                   | 0.0                      | 31.32                    | 56.00                   | 684.62                        | PASS            |
| GV0005743                    | AN444                     | 4                   | 4500                   | 64.4                   | 0.1                   | 0.2                      | 31.50                    | 56.10                   | 682.40                        | PASS            |
| GV0005744                    | AN444                     | 5                   | 4500                   | 64.9                   | 0.0                   | 0.0                      | 31.34                    | 56.15                   | 688.23                        | PASS            |
| GV0005745                    | AN444                     | 6                   | 4500                   | 64.6                   | 0.2                   | 0.3                      | 31.34                    | 56.00                   | 684.07                        | PASS            |
| GV0005746                    | AN444                     | 1                   | 4500                   | 64.1                   | 0.0                   | 0.0                      | 31.48                    | 56.00                   | 680.18                        | PASS            |
| GV0005747                    | AN444                     | 3                   | 4500                   | 64.5                   | 0.0                   | 0.0                      | 31.36                    | 56.00                   | 683.51                        | PASS            |
| GV0005748                    | AN444                     | 4                   | 4500                   | 64.2                   | 0.0                   | 0.0                      | 31.34                    | 55.95                   | 682.68                        | PASS            |
| GV0005749                    | AN444                     | 5                   | 4500                   | 64.7                   | 0.0                   | 0.0                      | 31.32                    | 56.00                   | 684.62                        | PASS            |
| GV0005750                    | AN444                     | 6                   | 4500                   | 64.6                   | 0.1                   | 0.2                      | 31.30                    | 56.00                   | 685.18                        | PASS            |
| GV0005751                    | AN444                     | 1                   | 4500                   | 64.3                   | 0.0                   | 0.0                      | 31.34                    | 56.00                   | 684.07                        | PASS            |



## Record Of Hydrostatic Testing

In accordance CGA Pamphlet C-1

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

Test Date: 23-Jun-16  
Day: Thursday  
Time: 7:39 AM

Cylinder Type: **S80-GV**

Test Station: **# 4 Hydro**

Test Pressure (T/P): **4500**

| Cylinder<br>Serial<br>Number | Cylinder<br>Lot<br>Number | Hydro<br>Jkt<br>Num | Actual<br>T/P<br>(psi) | Total<br>Expan<br>(cc) | Perm<br>Expan<br>(cc) | Ratio<br>Perm/Tot<br>(%) | Empty<br>Weight<br>(lbs) | Full<br>Weight<br>(lbs) | Volume<br>Capacity<br>(cu in) | Pass<br>or Fail |
|------------------------------|---------------------------|---------------------|------------------------|------------------------|-----------------------|--------------------------|--------------------------|-------------------------|-------------------------------|-----------------|
| GV0005752                    | AN444                     | 3                   | 4500                   | 64.4                   | 0.0                   | 0.0                      | 31.36                    | 55.95                   | 682.13                        | PASS            |
| GV0005753                    | AN444                     | 4                   | 4500                   | 64.2                   | 0.0                   | 0.0                      | 31.34                    | 56.15                   | 688.23                        | PASS            |
| GV0005754                    | AN444                     | 5                   | 4500                   | 64.8                   | 0.1                   | 0.2                      | 31.26                    | 56.05                   | 687.67                        | PASS            |
| GV0005755                    | AN444                     | 6                   | 4500                   | 64.8                   | 0.1                   | 0.2                      | 31.36                    | 55.95                   | 682.13                        | PASS            |
| GV0005756                    | AN444                     | 1                   | 4500                   | 64.3                   | 0.0                   | 0.0                      | 31.36                    | 56.05                   | 684.90                        | PASS            |
| GV0005757                    | AN444                     | 3                   | 4500                   | 64.3                   | 0.0                   | 0.0                      | 31.28                    | 55.90                   | 682.96                        | PASS            |
| GV0005758                    | AN444                     | 4                   | 4500                   | 64.4                   | 0.0                   | 0.0                      | 31.42                    | 56.00                   | 681.85                        | PASS            |
| GV0005759                    | AN444                     | 5                   | 4500                   | 65.0                   | 0.2                   | 0.3                      | 31.30                    | 56.05                   | 686.57                        | PASS            |
| GV0005760                    | AN444                     | 6                   | 4500                   | 64.5                   | 0.1                   | 0.2                      | 31.32                    | 56.00                   | 684.62                        | PASS            |
| GV0005761                    | AN444                     | 1                   | 4500                   | 64.4                   | 0.0                   | 0.0                      | 31.34                    | 55.95                   | 682.68                        | PASS            |
| GV0005762                    | AN444                     | 3                   | 4500                   | 64.4                   | 0.0                   | 0.0                      | 31.32                    | 55.95                   | 683.24                        | PASS            |
| GV0005763                    | AN444                     | 4                   | 4500                   | 64.6                   | 0.0                   | 0.0                      | 31.30                    | 56.05                   | 686.57                        | PASS            |
| GV0005764                    | AN444                     | 5                   | 4500                   | 64.9                   | 0.0                   | 0.0                      | 31.30                    | 55.95                   | 683.79                        | PASS            |
| GV0005765                    | AN444                     | 6                   | 4500                   | 64.9                   | 0.3                   | 0.5                      | 31.38                    | 55.95                   | 681.57                        | PASS            |
| GV0005766                    | AN444                     | 1                   | 4500                   | 64.7                   | 0.1                   | 0.2                      | 31.32                    | 56.00                   | 684.62                        | PASS            |
| GV0005767                    | AN444                     | 3                   | 4500                   | 64.1                   | 0.0                   | 0.0                      | 31.30                    | 55.95                   | 683.79                        | PASS            |
| GV0005768                    | AN444                     | 4                   | 4500                   | 64.3                   | 0.0                   | 0.0                      | 31.28                    | 55.95                   | 684.35                        | PASS            |
| GV0005769                    | AN444                     | 5                   | 4500                   | 64.8                   | 0.0                   | 0.0                      | 31.36                    | 56.00                   | 683.51                        | PASS            |
| GV0005770                    | AN444                     | 6                   | 4500                   | 65.1                   | 0.7                   | 1.1                      | 31.30                    | 55.90                   | 682.40                        | PASS            |
| GV0005771                    | AN444                     | 1                   | 4500                   | 64.1                   | 0.0                   | 0.0                      | 31.34                    | 56.05                   | 685.46                        | PASS            |
| GV0005772                    | AN444                     | 3                   | 4500                   | 64.2                   | 0.0                   | 0.0                      | 31.30                    | 56.05                   | 686.57                        | PASS            |
| GV0005773                    | AN444                     | 4                   | 4500                   | 64.4                   | 0.0                   | 0.0                      | 31.40                    | 56.10                   | 685.18                        | PASS            |
| GV0005774                    | AN444                     | 5                   | 4500                   | 64.5                   | 0.0                   | 0.0                      | 31.40                    | 56.05                   | 683.79                        | PASS            |
| GV0005775                    | AN444                     | 6                   | 4500                   | 64.7                   | 0.0                   | 0.0                      | 31.42                    | 55.90                   | 679.08                        | PASS            |
| GV0005776                    | AN444                     | 1                   | 4500                   | 64.2                   | 0.0                   | 0.0                      | 31.36                    | 56.10                   | 686.29                        | PASS            |
| GV0005777                    | AN444                     | 3                   | 4500                   | 64.7                   | 0.0                   | 0.0                      | 31.26                    | 56.00                   | 686.29                        | PASS            |
| GV0005778                    | AN444                     | 4                   | 4500                   | 64.5                   | 0.1                   | 0.2                      | 31.40                    | 56.05                   | 683.79                        | PASS            |
| GV0005779                    | AN444                     | 5                   | 4500                   | 65.0                   | 0.0                   | 0.0                      | 31.30                    | 55.90                   | 682.40                        | PASS            |
| GV0005780                    | AN444                     | 6                   | 4500                   | 64.8                   | 0.0                   | 0.0                      | 31.42                    | 55.95                   | 680.46                        | PASS            |
| GV0005781                    | AN444                     | 1                   | 4500                   | 64.5                   | 0.1                   | 0.2                      | 31.22                    | 55.90                   | 684.62                        | PASS            |
| GV0005782                    | AN444                     | 3                   | 4500                   | 64.2                   | 0.0                   | 0.0                      | 31.30                    | 56.00                   | 685.18                        | PASS            |
| GV0005783                    | AN444                     | 4                   | 4500                   | 64.1                   | 0.0                   | 0.0                      | 31.26                    | 55.95                   | 684.90                        | PASS            |
| GV0005784                    | AN444                     | 5                   | 4500                   | 64.8                   | 0.0                   | 0.0                      | 31.34                    | 55.90                   | 681.29                        | PASS            |
| GV0005785                    | AN444                     | 6                   | 4500                   | 64.8                   | 0.0                   | 0.0                      | 31.30                    | 55.90                   | 682.40                        | PASS            |
| GV0005786                    | AN444                     | 1                   | 4500                   | 64.3                   | 0.0                   | 0.0                      | 31.26                    | 56.00                   | 686.29                        | PASS            |
| GV0005787                    | AN444                     | 3                   | 4500                   | 64.3                   | 0.0                   | 0.0                      | 31.26                    | 55.95                   | 684.90                        | PASS            |
| GV0005788                    | AN444                     | 4                   | 4500                   | 64.4                   | 0.1                   | 0.2                      | 31.36                    | 56.05                   | 684.90                        | PASS            |
| GV0005789                    | AN444                     | 5                   | 4500                   | 64.9                   | 0.1                   | 0.2                      | 31.36                    | 56.00                   | 683.51                        | PASS            |
| GV0005790                    | AN444                     | 6                   | 4500                   | 64.7                   | 0.2                   | 0.3                      | 31.34                    | 55.95                   | 682.68                        | PASS            |
| GV0005791                    | AN444                     | 1                   | 4520                   | 64.7                   | 0.0                   | 0.0                      | 31.28                    | 55.95                   | 684.35                        | PASS            |
| GV0005792                    | AN444                     | 3                   | 4520                   | 64.5                   | 0.0                   | 0.0                      | 31.28                    | 55.95                   | 684.35                        | PASS            |
| GV0005793                    | AN444                     | 4                   | 4520                   | 64.1                   | 0.0                   | 0.0                      | 31.26                    | 56.05                   | 687.67                        | PASS            |

## Record Of Hydrostatic Testing

In accordance CGA Pamphlet C-1

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

Test Date: 23-Jun-16  
Day: Thursday  
Time: 7:39 AM

Cylinder Type: **S80-GV**

Test Station: **# 4 Hydro**

Test Pressure (T/P): **4500**

| Cylinder<br>Serial<br>Number | Cylinder<br>Lot<br>Number | Hydro<br>Jkt<br>Num | Actual<br>T/P<br>(psi) | Total<br>Expan<br>(cc) | Perm<br>Expan<br>(cc) | Ratio<br>Perm/Tot<br>(%) | Empty<br>Weight<br>(lbs) | Full<br>Weight<br>(lbs) | Volume<br>Capacity<br>(cu in) | Pass<br>or Fail |
|------------------------------|---------------------------|---------------------|------------------------|------------------------|-----------------------|--------------------------|--------------------------|-------------------------|-------------------------------|-----------------|
| GV0005794                    | AN444                     | 5                   | 4520                   | 65.0                   | 0.0                   | 0.0                      | 31.32                    | 56.05                   | 686.01                        | PASS            |
| GV0005795                    | AN444                     | 6                   | 4520                   | 65.0                   | 0.2                   | 0.3                      | 31.40                    | 56.00                   | 682.40                        | PASS            |
| GV0005796                    | AN444                     | 1                   | 4500                   | 64.1                   | 0.0                   | 0.0                      | 31.38                    | 55.95                   | 681.57                        | PASS            |
| GV0005797                    | AN444                     | 3                   | 4500                   | 64.4                   | 0.0                   | 0.0                      | 31.26                    | 56.10                   | 689.06                        | PASS            |
| GV0005798                    | AN444                     | 4                   | 4500                   | 64.4                   | 0.0                   | 0.0                      | 31.32                    | 56.05                   | 686.01                        | PASS            |
| GV0005799                    | AN444                     | 5                   | 4500                   | 65.2                   | 0.2                   | 0.3                      | 31.42                    | 56.05                   | 683.24                        | PASS            |
| GV0005800                    | AN444                     | 6                   | 4500                   | 64.6                   | 0.1                   | 0.2                      | 31.42                    | 56.05                   | 683.24                        | PASS            |
| GV0005801                    | AN444                     | 1                   | 4500                   | 64.3                   | 0.0                   | 0.0                      | 31.24                    | 56.05                   | 688.23                        | PASS            |
| GV0005802                    | AN444                     | 3                   | 4500                   | 64.1                   | 0.0                   | 0.0                      | 31.38                    | 55.95                   | 681.57                        | PASS            |
| GV0005803                    | AN444                     | 4                   | 4500                   | 63.9                   | 0.0                   | 0.0                      | 31.36                    | 55.95                   | 682.13                        | PASS            |
| GV0005804                    | AN444                     | 5                   | 4500                   | 65.0                   | 0.1                   | 0.2                      | 31.30                    | 56.05                   | 686.57                        | PASS            |
| GV0005805                    | AN444                     | 6                   | 4500                   | 64.6                   | 0.1                   | 0.2                      | 31.26                    | 56.00                   | 686.29                        | PASS            |
| GV0005806                    | AN444                     | 1                   | 4500                   | 64.4                   | 0.0                   | 0.0                      | 31.36                    | 56.10                   | 686.29                        | PASS            |
| GV0005807                    | AN444                     | 3                   | 4500                   | 64.3                   | 0.0                   | 0.0                      | 31.36                    | 55.95                   | 682.13                        | PASS            |
| GV0005808                    | AN444                     | 4                   | 4500                   | 64.5                   | 0.0                   | 0.0                      | 31.30                    | 55.90                   | 682.40                        | PASS            |
| GV0005809                    | AN444                     | 5                   | 4500                   | 64.9                   | 0.0                   | 0.0                      | 31.42                    | 55.95                   | 680.46                        | PASS            |
| GV0005810                    | AN444                     | 6                   | 4500                   | 64.6                   | 0.0                   | 0.0                      | 31.22                    | 56.05                   | 688.78                        | PASS            |
| GV0005811                    | AN444                     | 1                   | 4500                   | 64.4                   | 0.0                   | 0.0                      | 31.28                    | 55.85                   | 681.57                        | PASS            |
| GV0005812                    | AN444                     | 3                   | 4500                   | 64.3                   | 0.0                   | 0.0                      | 31.36                    | 55.90                   | 680.74                        | PASS            |
| GV0005813                    | AN444                     | 4                   | 4500                   | 63.8                   | 0.0                   | 0.0                      | 31.20                    | 55.95                   | 686.57                        | PASS            |
| GV0005814                    | AN444                     | 5                   | 4500                   | 64.9                   | 0.0                   | 0.0                      | 31.28                    | 55.85                   | 681.57                        | PASS            |
| GV0005815                    | AN444                     | 6                   | 4500                   | 64.8                   | 0.1                   | 0.2                      | 31.34                    | 56.00                   | 684.07                        | PASS            |
| GV0005816                    | AN444                     | 1                   | 4500                   | 64.4                   | 0.0                   | 0.0                      | 31.28                    | 56.00                   | 685.73                        | PASS            |
| GV0005817                    | AN444                     | 3                   | 4500                   | 64.4                   | 0.0                   | 0.0                      | 31.34                    | 55.95                   | 682.68                        | PASS            |
| GV0005818                    | AN444                     | 4                   | 4500                   | 64.6                   | 0.0                   | 0.0                      | 31.34                    | 55.95                   | 682.68                        | PASS            |
| GV0005819                    | AN444                     | 5                   | 4500                   | 65.0                   | 0.0                   | 0.0                      | 31.34                    | 56.00                   | 684.07                        | PASS            |