ENGINE LOG BOOK



Service Information

Consult the Continental Motors web site at continentalmotors aero for engine related news or announcements. Continental Motors Internet Service contains useful information for Continental Motors engine owners, including electronic versions of the most current engine Instructions for Continued Airworthiness and service documents that may be pertinent to your engine model.

If Internet access is not available, contact our Customer Service Department at:

1-888-826-5465 Toll free in the United States or

1-251-436-8299 International

Engine Returns

Return engines for core credit with this log book to: Continental Motors, Inc. 2039 Broad Street Mobile, AL 36615 USA

Return engines for overhaul with this log book to: Continental Motors, Inc. Factory Service Center 8600 County Road 32

Fairhope, Alabama 36532 USA

USE ONLY FUEL SPECIFIED IN OPERATOR'S MANUAL OR TYPE CERTICATE DATA SHEET USE OF AUTOMOTIVE FUEL IS PROHIBITED



Continental Motors

FAA PRODUCTION CERTIFICATE NO. 508

Printed:09/11/2017

Test Date09/11/2017

This engine model TSI0550K1B, serial number 1034659 was manufactured by Continental Motors, Inc. in accordance with approved design data and the applicable requirements of 14 CFR, Part 21. The approved design data for this engine incorporates all changes required by applicable FAA Airworthiness Directives and Continental Motors Service Bulletins.

Form 6012-03 (Rev Sept

CONTINENTAL MOTORS, INC.



| | Tota | al Time | | nce Last rhaul | Engine | Service | and M | laintenand | ce Record |
|--|--|--|--|------------------------|---|--|---|--|-----------|
| Date | Hours | Min | Hours | Min | | | | ding engine pa ections, Airworth I Service Bulletin: | |
| WEL | t, Inc. | 800 AIRF MUNICII HUTCHII CRS NT2 (620)663- www.wel | R043L 1546 Isac.com | D DRT 67501-1953 | Date 11- Work Order N220VF Flight Time Hobbs Mete Total Time | 17-2017 S8561 S/N 22T-1 26.5 T. 32.7 26.5 | E 622 | cirrus | |
| fuel bowl. Ch up and leak cl | ecked ure pr heck satisfac | ressures Dra etory at this t | uned oil, m | stalled new | CH48108-1 oil fil | ter and (7qts) Pl | ullips 20W50 | the applicable sections is cleaned gascolator in Mineral Oil. Run led in accordance with current restation CRS NTZRO43L. | - |
| I have reviewed the requirements of the Authorized Signature of the Authorized Signature of the second seco | mature | t and the accomplication and the accomplicati | 1 Kes | | | inspection are on file af | this Certified Repai | y Station Cris N12NCoc | |
| WEL | | 800 AIRPO MUNICIP | t043L 546 |) | Date 12- Work Order N220VF Flight Time Hobbs Mete Total Time | S/N 22T-1 42.8 | Ei | ng S/N 1034659 | |
| DHN00112, I.: manual (Septe I have reviewed the I requirements of the F | mber 2017) In on this aircraft ederal Aviation A | 05 Work w | as perionii | ed with refe | reflec to with con | | t was repair/named | P/N 646677, RH S/N nance and overhaul ad in accordance with current Station CRS NT2R043L | |
| Authorized Sig | natureC | had J. Koon | n / CRS Re | clease Auth | ority | | | | |
| WELL Aircraft, | S (c) | WELLS AIR OO AIRPOR MUNICIPAL HUTCHINS CRS NT2R0 620)663-15- WWW.wellsa | RT ROAD L AIRPOR' ON, KS 67: 43L 46 c.com | T 501-1953 | Date: 01-10 Work Order S N220VF Flight Time: Hobbs Meter: Total Time: | 8595 S/N: 22T-162 55.9 66.6 55.9 | Eng | GINE LOG S/N 1034659 | |
| of CDC SR22/22 fuel bowl. Check leak check satisfi | T AMM Re ed tire press actory at this | v. B7. Com sures. Drain s time. | phed with o | lled new Ci | H48108-1 oil filter | and (7qts) Phill | ips 20W50 X | /C. Run-up and | |
| t have reviewed the file requirements of the Fed Authorized Signa | eral Aviation Adm | d the accompany instration and is o | 16h | an io servos re | | r appliance identified we ection are on file at the | as repairinspected s Certified Repair St | in accordance with current ation CRS NT2R043L | |
| | | _ | | | | | | | |
| | | | | | | | | | |
| | + | | - | | | | | | |
| | | | | | | | | | |

1

Time Since Last Engine Service and Maintenance Record **Total Time** Record maintenance actions including engine part removal and Date installation and compliance with inspections, Airworthiness Directives. Hours Min Hours Special Inspections, Modifications and Service Bulletins

Carrie



WELLS AIRCRAFT, INC 800 AIRPORT ROAD MUNICIPAL AIRPORT HUTCHINSON, KS 67501-1953 CRS NI 2R043L (620)663-1546

Date: 03-08-2018 Work Order: S8630 S/N: 22T-1622 N220VF Flight Time: 94.4

Hobbs Meter: 112.5

94.4

Total Time:

ENGINE LOG Eng. S/N 1034659

CIRRUS

www.wellsac.com

Performed Cirrus CMX 100 hour inspection per the CMX 100 hour inspection checklist. Performed engine differential compression test, results as follows - #1 64/80, #3 67/80, #5 48/80, #2 72/80, #4 73/80, #6 70/80, M.O. 46/80. Drained engine oil and collected sample for oil analysis Removed, cut and inspected oil filter element; no discrepancies noted Installed new oil filter P/N CH48108-1 and serviced engine with Phillips 20W50 X/C

- C/W SB2X-79-07 by securing of the affected oil line with the following new P/N's MS21919WDG10, MS21919WDG12, AN3-5A, MS21045-3 & NAS1149FO332P as required by this service document.

All Mandatory Service Bulletins and AD's up to date. Work was performed with reference to applicable sections of CDC Doc. # 13773-002 Rev. 1, CMI Doc # M-0 Chg. 5 & CMI Doc. # M-18 Chg. 0. Post-inspection run-up and leak check was satisfactory at

I have reviewed the file on this arruralt and the accompanying forms. The arruralt, airframe, aircraft engine, propeller, or appliance identified was repair/inspected in accordance with current requirements of the Federal Aviation Admystration and is approved for return to service. Perfinent details of repair/inspection are on file at this Certified Repair Station CRS NTZRO43L Authorized Signature

Nathaniel Hershberger CRS Release Authority



WELLS AIRCRAFT, INC 800 AIRPORT ROAD MUNICIPAL AIRPORT HUTCHINSON, KS 67501-1953 CRS NT2R043L (620)663-1546 www.wellsac.com

Date: 04-19-2018 Work Order: S8658 N220VF S/N: 22T-1622 Flight Time 144.4 Hobbs Meter: 167.9 Total Time 144.4

ENGINE LOG Eng. S/N 1034659

Performed a Curus CMX 50 Hour Inspection with reference to the CMX 50 Hour Inspection checklist, CMI M-16, Table 6-4.3 (100 hour checklist) & applicable sections of CDC SR22/22T AMM Doc. #13773-002 Rev. 1. Drained and cleaned pascolator fuel bowl. Cleaned & reassembled engine fuel drain check valve. Drained oil hot & collected sample for lab analysis. Removed, cutopen & inspected oil filter element, no discrepancies noted. Installed a new AA48108-2 oil filter and service engine with (7qts) Phillips 20W50 X/C. All work was performed with reference to applicable sections of CDC SR22/22T AMM Doc. #13773-002 Rev. 1. Run-up and leak check satisfactory at this time

have reviewed the file on this arcraft and the accompanying forms. The arcraft artrame, arcraft engine, propeller, or appliance identified was repair/inspected in accordance with current requirements of the Federal Aviation Administration and is approved for return to service. Pertinent details of repair/inspection are on file at this Certified Repair Station CRS NT2R043L

Authorized Signature

Chad of Chad J Koelm / CRS Release Authority



WELLS AIRCRAFT, INC 800 AIRPORT ROAD MUNICIPAL AIRPORT CRS NT2R043L (620)663-1546

Date: 06-12-2018 Work Order: S8677 N220VF HUTCHINSON, KS 67501-1953

Flight Time: 192.7 Hobbs Meter 223.0 Total Time : www.wellsac.com

ENGINE LOG Eng. S/N 1034659

S/N 22T-1622



Performed Cirrus CMX 100 & 200 hour inspection per the CMX 100 & 200 hour inspection checklists Performed engine differential compression test, results as follows - #1 60/80, #3 48/80, #5 74/80, #2 70/80, #4 66/80, #6 66/80, M.O. 47/80. Drained engine oil and collected sample for oil analysis Removed, cut and inspected oil filter element, no discrepancies noted. Installed new oil filter P/N AA48108-2 and serviced engine with Phillips 20W50 X/C Checked engine set up, adjusted idle mixture down to 40 RPM rise. All other engine numbers settings are correct. Checked engine data and downloaded files to evaluate RPM surge reported by owner. Nothing noted and RPM is within limits.

All Mandatory Service Bulletins and AD's up to date. Work was performed with reference to applicable sections of CDC Doc. # 13773-002 Rev. 1, CMI Doc. # M-0 Chg. 5 & CMI Doc. # M-18 Chg. 0. Post-inspection run-up and leak check was satisfactory at

orms. The aircraft, airframe, aircraft engine, propeller, or appliance identified was repair/inspected in accordance with current requirements of the Federal Aviation Adra Administration and is apprehised by o return to service Pertinent details of repair/inspection are on file at this Certified Repair Station CRS NT2R043L Authorized Signature

Chad J. Koehn CRS Release Authority

Time Since Last Overhaul Engine Service and Maintenance Record **Total Time** Overhaul Record maintenance actions including engine part removal and Date installation and compliance with inspections, Airworthiness Directives, Hours Min Min Hours Special Inspections, Modifications and Service Bulletins

Flight Time: 249.6

Hobbs Meter: 285.7

Total Time

WELLS

WELLS AIRCRAFT, INC. 800 AIRPORT ROAD MUNICIPAL AIRPORT HUTCHINSON, KS 67501-1953 CRS NT2R-43L

(620)663-1546 www.wellsac.com

ENGINE LOG Date: 08-28-2018 Eng. S/N 1034659 Work Order: S8734 S/N: 22T-1622 N220VF

CIRRUS

Performed a Cirrus CMX 50 Hour Inspection with reference to the CMX 50 Hour Inspection checklist & applicable sections of CDC SR22/22T AMM Doc. #13773-002 Rev. 1. Performed engine oil and filter change. Drained engine oil hot and collected Metal Check sample for oil trend analysis. Removed filter, cut open and inspected filter element; no particles noted at this time. Installed new Tempest oil filter P/N AA48108-2 & serviced aircraft with 7qts of Phillips 20W50 X/C. Work was performed with ref. to CDC SR22 / 22T AMM P/N 13773-002 Rev. 1, Sec. 12-10. Post-run and leak check was satisfactory.

Les FUNDAL FIN 13/13-002 RCV. 1, Sec. 12-10. POST-TUR RIDO IGBS CRICKS WAS SELECTED FOR on the screen from the accompanying forms. The arcraft, surfame, aircraft engine, propeller, or appliance identified was reperfunspeded in accordance with current requirements of the Federal Available Adapting rings and is appropriate or rejurn to service. Perfuner details of repear/inspection are on the all this Certified Reper Station CRS NT2RO43L Authorized Signature

Nathaniel Hershberger / CRS Release Authority



WELLS AIRCRAFT, INC. 800 AIRPORT ROAD MUNICIPAL AIRPORT HUTCHINSON, KS 67501-1953 CRS NT2R043L (620)663-1546

Flight Time: 287.2 Hobbs Meter: 328.0 Total Time: 287.2

S/N 22T-1622

Date: 11-07-2018

N220VF

Work Order: \$8763

ENGINE LOG Eng. S/N 1034659

CIRRUS

www.wellsac.com Performed a 100 Hour Inspection in accordance with FAR 91 409 and the requirements outlined in FAR 43 App. D, with ref. to the Cirrus SR22/22T AMM P/N 13773-002 Rev. B1, Chapter 5 & CMI M-18 (September 2017) Sec. 6-3.4. Performed cylinder differential compression test, results as follows: #1 60/80, #2 66/80, #3 56/80, #4 64/80, #5 10/80, #6 56/80 - M/O 46/80. Drained engine oil after prerun and collected sample for lab analysis (P/N GA001-SP). Removed and inspected oil filter element, no discrepancies noted at this time. Installed new oil filter P/N AA48108-2 & serviced engine with 7 quarts of Phillips 20W50 M. Replaced #3 cylinder assembly S/N AC17FB366 with new P/N 658595A3, S/N AC18DA035. Replaced #5 cylinder assembly S/N AC17FB419 with new P/N 658595A3, S/N AC18CB179. Replaced #6 cylinder assembly S/N AC17FA718 with new P/N 658595A3, S/N AC18DA103. Replaced rocker arm holddown lock tab washers in #3, #5 & #6 cylinder assemblies with (12) new P/N 501868 Replaced four cylinder drain grommets with (4) new P/N 633958. Compression test on cylinders after replacement & post-run was as follows - #3 76/80, #5 75/80, #6 76/80. Replaced #1, #2, & #4 exhaust gaskets with (3) new P/N 652458.

- All applicable AD's have been complied with at this time.

- All applicable SB's have been complied with at this time. All work was performed with ref. to applicable sections of the Cirrus SR22/22T AMM P/N 13773-002 Rev. 1 and CMI TSIO-550-B, C, E, G, K and N Permold series Engine Maintenance and Overhaul Manual, M-18 (September 2017). Post-run and leak check was satisfactory at this

I certify that this Engine (TSIO-550-K, S/N 1034659) has been inspected in accordance with a 100 Hour Inspection and was determined to

be in an Airworthy Condition. I have reviewed the file on this sircraft and the accompanying forms. The aircraft, airframe, aircraft engine, propuler, or appliance identified was repaired / inspected in accordance with current requirements reason and is accorded for rejust to service. Perfinent datalis of the repair / inspection are on the at this Certified Repair Station CRS NT2R043L of the Federal Aviation Administr

Authorized Signature:

Nathaniel Hershberger / CRS Release Authority



WELLS AIRCRAFT, INC. 800 AIRPORT ROAD MUNICIPAL AIRPORT HUTCHINSON, KS 67501-1953 CRS NT2R043L (620)663-1546

www.wellsac.com

Date: 12-06-2018 Work Order: S8802 N220VF S/N 22T-1622 Flight Time: 312.5 Hobbs Meter: 358.1

Total Time: 312.5

ENGINE LOG Eng. S/N 1034659



Complied with 25 CMX hour oil change after cylinder replacement. Drained engine oil hot and collected sample for lab analysis (P/N GA001-SP). Removed and inspected oil filter element; no discrepancies noted at this time. Installed new oil filter P/N AA48108-2 & serviced engine with 7 quarts of Phillips 20W50. All work was performed with ref. to applicable sections of the Cirrus SR22/22T AMM P/N 13773-002 Rev. 1 and CMI TSIO-550-B, C, E, G, K and N Permold series Engine Maintenance and Overhaul Manual, M-18 (September 2017). Post-run and leak check was satisfactory at this time.

These reviewed the file on this arroant end the accompanyin forms. The extrait, extrains, extrait engine, propeler, or appliance identified was repaired / impected in accordance with current requirements of the Federal Antation Administration and Faccor of 1 by fetch of private Periment details of the repair / impection are on file at this Certified Repair Station CRS NTZR043L. crad 11 Authorized Signature:

Chad J Koehn CRS Release Authority

| | Total | Time | Time Sir Over | naui | Engine Service and Maintenance Record |
|------|-------|------|------------------|------|---|
| Date | Hours | Min | Hours | Min | Record maintenance actions including engine part removal and installation and compliance with inspections, Airworthiness Directives, Special Inspections, Modifications and Service Bulletins |

Date: 02-26-2019

Work Order: \$8818

Carrie



WELLS AIRCRAFT, INC. 800 AIRPORT ROAD MUNICIPAL AIRPORT HUTCHINSON, KS 67501-1953

www.wellsac.com

Mad

S/N. 22T-1622 N220VF Flight Time: 361.1 Hobbs Meter: 415.0 CRS NT2R043L Total Time: 361.1 (620)663-1546

ENGINE LOG Eng. S/N 1034659

CIRRUS

Performed a Cirrus CMX 50 Hour Inspection with reference to the CMX 50 Hour Inspection checklist & applicable sections of CDC SR22/22T AMM Doc #13773-002 Rev 1. Performed engine oil and filter change. Drained engine oil hot and collected Metal Check sample for oil trend analysis. Removed filter, cut open and inspected filter element, no particles noted at this time. Removed bottom fitting on oil cooler that was leaking, cleaned and resealed #6 Tanis probe wiring broken, P/N TTP2771-115/50 volt - ordered replacement for next service. Installed new Tempest oil filter P/N AA48108-2 & serviced aircraft with 7qts of Phillips 20W50 X/C. Work was performed with ref to CDC SR22 / 22T AMM P/N 13773-002 Rev 1, Sec 12-10. Post-run and leak check was satisfactory. These reviewed the file on this around and the accompanying forms. The around, arrivance, around engine propeller or appliance identified was repair/inspected in accordance with current requirements of the Federal Aviation Admynigration agail suppoyed for return to service. Pertinent details of repair/respection are on file at this Certified Repair Station CRS NT2ROSL.

Authorized Signature

Chad J. Koehn / CRS Release Authority



WELLS AIRCRAFT, INC. 800 AIRPORT ROAD MUNICIPAL AIRPORT HUTCHINSON, KS 67501-1953 CRS NT2R043L (620)663-1546

www.wellsac.com

Date 06-21-2019 Work Order: S8917 N220VF S/N: 22T-1622 Flight Time: 415.8

Hobbs Meter: 476.1

ENGINE LOG Eng. S/N 1034659



Performed a Cirrus CMX 100 Hour Inspection with reference to the CMX 100 Hour Inspection checklist & applicable sections of CDC SR22/22T AMM P/N 13773-002 Rev 1. Drained engine oil after pre-run and collected Metal Check sample for oil trend analysis. Removed filter, cut open and inspected oil filter element, no particles noted at this time. Installed new Tempest oil filter P/N AA48108-2 & serviced aircraft with 7qts of Phillips 20W50 X/C Replaced #6 cylinder Tanis heater element with new P/N TTP2771-115/50. Replaced left rear engine baffle with new P/N 15473-009 Replaced #6 intake gasket with new P/N 649950. Replaced seal ring on left turbocharger inlet with new P/N 29486-001. Replaced oil pump scavenge hose with new P/N 646644S10S18 00. Cleaned connector contacts at rear engine baffle

- Complied with Continental SB18-08A by inspection and modification of cylinder assemblies as required by this service document. Cylinder head assembly S/N's modified per this service bulletin #1 AC17GA327, #2 AC17GA345, #3 AC18DA035, #4 AC17GA365. #5 AC18CB179 & #6 AC18DA103

Work was performed with reference to applicable sections of CDC SR22/22T AMM P/N 13773-002 Rev. 1, CMI TSIO-550-B, C, E, G, K and N Permold series Engine Maintenance and Overhaul Manual, M-18 (September 2017) & Tanis Aircraft Products Doc. #TN02771, Rev. E. Post-run and leak check was satisfactory at this time.

I have reviewed the file on this arcraft and the accompanying forms. The arcraft arrhame, arcraft engine, propeller, or appliance identified was repair/inspected in accordance with current requirements of the Federal Aviation Administration and in appropriation are in the at the Certified Repear Station CRS NT2RO49.

Authorized Signature

Mathematical Control of CRS NT2RO49.

Authorized Signature

Mathematical Control of CRS NT2RO49.

Authorized Signature

Mathematical Control of CRS NT2RO49.

Authorized Signature

Mathematical CRS NT2RO49.

**M

Nathaniel Hershberger / CRS Release Authority



WELLS AIRCRAFT, INC. 800 AIRPORT ROAD MUNICIPAL AIRPORT HUTCHINSON, KS 67501-1953 CRS NT2R043L (620)663-1546

www.wellsac.com

Date: 08-29-2019 Work Order: S8961 N220VF S/N: 22T-1622

Flight Time: 463.9 Hobbs Meter 530 2

ENGINE LOG Eng. S/N 1034659

CIRRUS

Performed a Cirrus CMX 50 Hour Inspection with reference to the CMX 50 Hour Inspection checklist & applicable sections of CDC SR22/22T AMM P/N 13773-002 Rev. 2. Drained engine oil after pre-run and collected Metal Check sample for oil trend analysis. Removed filter, cut open and inspected oil filter element, no particles noted at this time. Installed new Tempest oil filter P/N AA48108-2 & serviced aircraft with 7qts of Phillips 20W50 X/C.

Work was performed with reference to applicable sections of CDC SR22/22T AMM P/N 13773-002 Rev. 2, CMI TSIO-550-B, C, E, G, K and N Permold series Engine Maintenance and Overhaul Manual, M-18 (September 2017) Post-run and leak check was satisfactory at this time

have reviewed the file on this arrant and the accompanying forms. The arrant, antrame, arrant engine, propeller, or appliance identified was repair/inspected in accordance with current requirements of the Federal Austion Agringrigation and is sproyed for return to service Pertinent details of repeat/respection are on file all this Certified Repeat Station CRS NT2R043L Authorized Signature

Nathaniel Hershberger / CRS Release Authority

| | Total | Time | Time Sir | iiuui | Engine Service and Maintenance Record | | | | | |
|------|-------|------|----------|-------|---|--|--|--|--|--|
| Date | Hours | Min | Hours | Min | Record maintenance actions including engine part removal and installation and compliance with inspections, Airworthiness Directives, Special Inspections, Modifications and Service Bulletins | | | | | |

Carried 1

| 1 | | | End | ine | | | | |
|----------------------------|--------------|------------|----------|---------|--------------|----------|------------|-------|
| A AVIATION | Tail Number: | N220VF | AC SN: | 1622 | Flight Time: | 491.4 | AC TT: | 491.4 |
| SERVICES | Eng PN: | TSIO-550-K | Eng SN: | 1034659 | Eng TSO: | 491.4 | Eng TT: | 491.4 |
| An LLC of Frencher Ag last | | | Prop SN: | | Prop TSO: | 491.4 | Prop TT: | 491.4 |
| 1 0 | | | | | DNI 40 40463 | 4 21 anh | oth magnet | ns |

Removed Ignition hamess. In stalled new harness from Contiental, PN 10-421674-21 on both magnetos replaced right gasket PN 10-357520.

Performed ground run to check for leaks and proper operation. No discrepancies noted at this time.

MAINTENANCE RELEASE

I certify this engine has been inspected/serviced/repaired using Continental Installation Instructions.

Date: 4 October 2019

E. Russell Booher A&P 3809270



WELLS AIRCRAFT, INC 800 AIRPORT ROAD MUNICIPAL AIRPORT HUTCHINSON, KS 67501-1953 CRS N12R043L (620)663-1546

Work Order S9012 N220VF S/N 22T-1622 Hobbs Meter: 586.1 Flight Meter: 512.8 TTAF 512.8 TTE: 512.8

Date: 11-26-2019

ENGINE LOG Eng. S/N: 1034659

Performed a 100 Hour Inspection in accordance with FAR 91 409 and the requirements outlined in FAR 43 App. D; with reference to CDC SR22/22T AMM P/N 13773-002 Rev 2, sec. 5-20 Performed differential compression test; results were as follows: #1 48/80, #2 58/80, #3 66/80, #4 66/80, #5 64/80, #6 62/80 - M/O 45/80 Drained engine oil after pre-run and collected sample for lab analysis. Removed and inspected oil filter element, no discrepancies noted at this time. Serviced engine with 7 quarts of Phillips 20W50 X/C and one AA48108-2 filter Replaced rocker cover gaskets on cylinder #'s 1, 2 & 4 with (6) new P/N 658735. Replaced all spark plugs with (12) new P/N URHB32E Replaced left (S/N D17GA143) & right (S/N D17GA139) magnetos with (2) rebuilt P/N BL-500556-101, S/N's D18LA110R (left) & D19GA319R (right) and (2) new gaskets P/N 649954, timed to engine as required. Replaced #5 cyl. EGT probe with new P/N 24585-001

- Complied with HET ASB No. 081 Rev. A. (Cirrus SA19-18) by visual inspection, replaced hex-nut cotter pin with new P/N MS24665-302 & reinstalled alternator with new gasket P/N 653981.

- All applicable AD's have been complied with at this time.

All work was performed with reference to applicable sections of the Cirrus SR22/22T AMM P/N 13773-002 Rev. 2 & CMI TSIO-550 Permold Series Maintenance & Overhaul Manual M-18 (Sept. 2017). Post-run and leak check was satisfactory at this time. I certify that this Figure (TSIO-550-K(1), S/N 1034659) has been inspected in accordance with a 100 Hour Inspection and was determined to be in an Airworthy Condition.

I have reviewed the file on this arcraft and the accompanying forms. The arcraft, airframe, aircraft engine, propeller, or appliance identified was repaired / inspected in accordance with current requirements of the Federal Availant Admirph 179 and 1 sporcycle for return to service. Pertinent details of the repair / inspection are on the at this Certified Repair Station CRS NT2R043L.

Authorized Signature:

Nathaniel Hershberger / CRS Release Authority



WELLS AIRCRAFT, INC. 800 AIRPORT ROAD MUNICIPAL AIRPORT HUTCHINSON, KS 67501-1953 CRS NT2R043L (620)663-1546

Date: 05-20-2020 Work Order: S9100 S/N: 22T-1622 N220VF Flight Time: 559.3

Hobbs Meter 640.5



Performed a Cirrus CMX 50 Hour Inspection with reference to the CMX 50 Hour Inspection checklist & applicable sections of CDC SR22/22T AMM P/N 13773-002 Rev 3. Drained engine oil after pre-run and collected Metal Check sample for oil trend analysis. Removed filter, cut open and inspected oil filter element; no particles noted at this time. Installed new Tempest oil filter P/N AA48108-2 & serviced aircraft with 7qts of Phillips 20W50 X/C.

Work was performed with reference to applicable sections of CDC SR22/22T AMM P/N 13773-002 Rev. 3, CMI TSIO-550-B. C. E. G. K and N Permold series Engine Maintenance and Overhaul Manual, M-18 (September 2017) Post-run and leak check was satisfactory

I have reviewed the file on this arcraft and the accompanying forms. The arcraft, artrame, arcraft engine, propeller, or appliance identified was repair/inspected in accordance with current requirements of the Federal Availant Administration and is appropriately between Periment details of repair/inspection are on file all this Certified Repair Station CRS NTZROAL Authorized Signature

www.wellsac.com

| | | | Nathaniel I | Hershberger / CRS Release Authority |
|-------|---|---|-------------|-------------------------------------|
| _ | L | ľ | I | 1 |
| | | | | |
| | _ | - | | |
| | 1 | | 1 | |
| | | - | | |
| l . | 1 | | | |
| | | | | |

| | Total | Time | Time Sin | ce Last haul | Engine Service and Maintenance Record |
|--------------|-------------------|----------|----------|-----------------|---|
| Date | Hours | Min | Hours | Min | Record maintenance actions including engine part removal and installation and compliance with inspections, Airworthiness Directives, Special Inspections, Modifications and Service Bulletins |
| ried forward | d —— | → | | | |
| _ | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | - | | |
| | | - | | | |
| | | | - | 1 | |
| | | | | | X |
| | | | | / | |
| | | | | | |
| | | | | | |
| | | | | / | |
| | | | / | | |
| | | | | | |
| | | | / | | |
| | | | 1 | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | $X \rightarrow X$ | | | | |
| | / | | | | |
| -/ | | | | | |
| / | | | - | | |
| - | | | _ | | |
| | | | | | |

| | Total | Time | Time Sir | nce Last rhaul | Engine Service and Maintenance Reco |
|------------------|-------|----------|---------------|-------------------|---|
| Date | Hours | Min | Hours | Min | Record maintenance actions including engine part removal a installation and compliance with inspections, Airworthiness Directive Special Inspections, Modifications and Service Bulletins |
| arried forward - | | → | | | |
| | | | | | |
| 1 | | | | | / |
| \rightarrow | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | / |
| | | | \rightarrow | | / |
| | | | | \forall | |
| | | | | | |
| - | | | | | |
| | | | | | |
| | | | | | |
| | | | / | | |
| | | -/ | | - | |
| | | | | | |
| | | / | | | |
| | 1 | | | | |
| | | | | | |
| | | | | | |
| | / | | | | |
| | / | | | - | <u> </u> |
| | | | | | |
| | - | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Total Time

Time Since Last Engine Service and Maintenance Record



WELLS AIRCRAFT, INC. 800 AIRPORT ROAD MUNICIPAL AIRPORT HUTCHINSON, KS 67501-1953 CRS NT2R043L

Work Order: S9205 S/N 22T-1622 N220VF Hobbs Meter 706.9 Flight Meter 618.2 TTAF 618.2 (620)663-1546 TTE: 618.2

ENGINE LOG Eng S/N 1034659 'al and ectives.

Performed a 100 Hour Inspection in accordance with FAR 91 409 and the requirements outlined in FAR 43 App. D, with reference to Cirrus SR22/22T AMM P/N 13773-002 Rev 3, Chapter 5, sec 5-20. Performed differential compression test, results were as follows: #1 56/80, #2 64/80, #3 50/80, #4 56/80, #5 56/80, #6 60/80 - M/O 45/80. Drained engine oil after pre-run and collected sample for lab analysis Removed and inspected oil filter element, no discrepancies noted at this time. Serviced engine with 7 quarts of Phillips with GA001-SP sample kit, 20W50 X/C and one AA48108-2 filter

Date 11-04-2020

- Complied AD2020-20-11, reference MSB18-08B & Cirrus SA18-11R1. PCW 6/21/2019 at 415.8 hours on S8917.

- All applicable AD's have been complied with at this time to AD2020-16-11.

All work was performed with reference to applicable sections of the Cirrus SR22/22T AMM P/N 13773-002 Rev. 3 & CMI TSIO-550 Permold Series Maintenance & Overhaul Manual M-18 (Sept. 2017). Post-run and leak check was satisfactory at this time. I certify that this Engine (TSIO-550-K(1), S/N 1034659) has been inspected in accordance with a 100 Hour Inspection and was determined to be in an Airworthy Condition.

I have reviewed the file on this arroad and, the accompanying forms. The accordance with current requirements of the Federial Availon Adjustication for the Social Available for the Social Av

Chad J Kochn / CRS Release Authority



WELLS AIRCRAFT, INC. 800 AIRPORT ROAD MUNICIPAL AIRPORT HUTCHINSON, KS 67501-1953 CRS NT2R043L

(620)663-1546 www.wellsac.com Date: 07-28-2021 Work Order S9391 S/N: 22T-1622

N220VF Flight Time 725.7 Hobbs Meter 833.0

ENGINE LOG Eng S/N 1034659

Drained engine oil after pre-run and collected Metal Check sample P/N GA-001SP for oil trend analysis Removed filter, cut open and inspected oil filter element, no particles noted at this time. Installed new Tempest oil filter P/N AA48108-2 & serviced aircraft with

Work was performed with reference to applicable sections of CDC SR22/22T AMM P/N 13773-002 Rev. 3, CMI TSIO-550-B, C, E, G, K and N Permold series Engine Maintenance and Overhaul Manual, M-18 Rev 1, (March 2020) Post-run and leak check was satisfactory at this time

I have reviewed the file on this aircraft as s) he aircraft, airframe, aircraft engine, propeller, or appliance identified was repair/inspected in accordance with current requirements of the Federal Aviation A return to service. Pertinent details of repair/inspection are on file at this Certified Repair Station CRS NT2R043L Chad !

| 1 |
|----------------------------|
| A AVIATION |
| As LLC of Frontier Ag Inc. |

| | | End | ine | | | | |
|--------------|-----------------|----------|---------|--------------|-------|----------|-------|
| Tail Number: | | AC SN: | 1622 | Flight Time: | 670.0 | | |
| Eng PN: | TSIO-550-K | Eng SN: | 1034659 | | | AC TT: | 672.2 |
| Prop PN: | | - | 1034659 | Eng TSO: | 672.2 | Eng TT: | 672.2 |
| | and lower right | Prop SN: | 200 | Prop TSO: | 672.2 | Prop TT: | |

ight cowling. Drained oil, removed, cut open & inspected oil filter for contaminates No abnormalities noted Installed newCH48108-1 and safetied Sent sample to Blackstone Labs for analysis. Serviced engine with 11 qt Phillips 20w-50 X/C.

Installed cowling & test ran engine. No discrepancies noted at this time.

Date: 5 April 2021, Signed

E. Russell Booher A & D 2000270

| | | + | | |
|---|-------------|---|--|----|
| | | | | |
| | | | | |
| | | | | |
| 1 | | | | |
| | | + | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | 27 |
| | | | | |

Total Time

Time Since Last Engine Service and Maintenance Record



WELLS AIRCRAFT, INC 800 AIRPORT ROAD MUNICIPAL AIRPORT CRS NT2R043L

HUTCHINSON, KS 67501-1953 (620)663-1546

Date 12-14-2021 Work Order S9395 S/N 22T-1622 N220VF Flight Meter 758.8 Hobbs Meter 871.5 TTAF 758.8

Eng S/N 1034659 CIRRUS

ENGINE LOG

www.wellsac.com TTE 758.8 Performed a 100 Hour / Annual Inspection in accordance with FAR 91 409 and the requirements outlined in FAR 43 App. D, with reference to Cirrus SR22/22 LAMM P/N 13773-002 Rev. 3, Chapter 5, sec. 5-20 Performed differential compression test; results were as follows: #1 42/80, #2 62/80, #3 48/80, #4 42/80, #5 50/80, #6 62/80 - M/O 44/80, #1, #3, #4 & #5 to be replaced. Replaced LH rear accessory drive seals with (1) each P/N 25102, 653487 & 654012. Removed (4) P/N's 658595A1 cylinders, S/N's #1 AC17GA 327, #3 AC18DA035, #4 AC17GA365 & #5 AC18CB179, installed new cylinders P/N (4) 658815A3, S/N's #1 AC21JA235, #3 AC21IB492, #4 AC21JA231 & #5 AC21JA223 using new gaskets & hardware listed on workorder. Replaced cylinders #1 & #2 exhaust lifters (2) 658077. Updated Compressions after break in are: #1 77/80, #2 64/80, #3 76/80, #4 76/80, #5 75/80, #6 62/80 - M/O 44/80, Drained engine oil after pre-run and collected sample for lab analysis P/N GA001-SP Removed and inspected oil filter element, no discrepancies noted at this time. Serviced engine with 8 quarts of Phillips 20W50M replaced (1) P/N AA48108-2 filter.

C/W AD2020-16-11 by inspecting cylinders on aircraft for compliance with MSB18-08B, Currus SA18-16R1 S/N's #1-AC21JA235, #2 AC17(A345, #3 AC211B492, #4 AC21JA231, #5 AC21JA223 & #6 AC18DA103, #2 and #6 modified per MSB18-08B on SS917 6/21/2019 at 415 8 flight hours #1,#3 #4 & #5 cylinders installed new on 12/3/2021 P/N 658815A3 at 758.8.

All applicable AD's have been complied with at this time to AD2020-20-11.

All work was performed with reference to applicable sections of the Curus SR22/22T AMM P/N 13773-002 Rev 3 & CMI TSIO-550 Permold Series Maintenance & Overhaul Manual M-18 (March 2020) Post-run and leak check was satisfactory at this time. I certify that this Engine (TSIO-550-K(1), S/N 1034659) has been inspected in accordance with a 100 Hour Inspection and was determined to be in an Airworthy Condition

have reviewed the file on this arriraft and the accompanying forms. The aircraft airframe, aircraft engine, propeller or appliance identified was repaired / inspected in accordance with current requirements of the Federal Aviation Approximation and in suproved for return to service. Perfinent details of the repair / inspection are on tile at this Certified Repair Station CRS NT2R043L.

Authorized Signature

for / CRS Release Authority

05-17-2022

Carrie

Airframe Total Time 790 8 Tachometer 789 9

N220VF S/N 22T-1622 Continental TSIO-550-K S/N 1034659

SNEW 789.9

Performed engine oil change. Drained engine oil, removed filter, cut open & visually inspected for foreign materials with no defects noted. Installed new CH48108-1 Champion oil filter & safety wired. Serviced engine w/8 quarts of Phillips 66 X/C 20W50 AD Engine oil. Performed operational ground run/leak check w/no defects noted. Reinstalled cowling & returned aircraft to service.

| SO# | 22-33631 | / | Ross Aviation Fli | ght Maintenanc | e | DATE | 09/15/2022 |
|------|----------|------------|-------------------|----------------|-------|----------------------------|------------|
| REG. | N220VF | | Lincoln Municip | , | ACTT | | |
| MAKE | TCM | MODEL | TSIO-550-K | ETT: | 837.1 | ACTT 837.1 FLIGHT 837.1 | |
| | | SERIAL NO. | 1034659 | ETSOH: | N/A | HOUR | 962.4 |

Maintenance Engine Record

- 1. Performed 100 hour / 12 month inspection. Ran engine to check for function. Took cylinder compressions MO 47/80, #1 72, #2 68, #3 72, #4 73, #5 78, #6 60. Removed, cleaned, inspected, gapped, tested, rotated, and reinstalled spark plugs. Drained oil and removed oil filter. Cut open filter to inspect for contaminants with no defects noted at this time. Installed new filter P/N AA48108-2 and added 7 quarts of Phillips X/C 20w50 oil. Ran engine to check for leaks and function with no defects noted. Reference Cirrus SR22T Maintenance Manual Chapter 5-20. Next due at 937.1 hours total time or Sep 2023.
- 2. Performed 100 hour lubrication schedule. Reference Cirrus SR22T Maintenance Manual Chapter 12-20. Next due at 937.1 hours total time

| I certify this (aircraft) (engine) (propeller) has been inspected in accordance with a/an inspection as per 14 CFR part 91.409(a)(1) determined to be in an airworthy condition. | and was |
|--|-----------|
| Dated September 15, 2022 W.O. 22-33631 Signed Regiamin Taylor | , wid was |
| Ross Aviation Flight Maintenance CRS# LNKR128E | |
| Lincoln NE 68524 | |

| | Total | Time | Time Sin Over | | Engine Service and Maintenance Record | | |
|----------------|-------|------|------------------|-----|---|--|--|
| Date | Hours | Min | Hours | 100 | Record maintenance actions including engine part removal and installation and compliance with inspections, Airworthiness Directives, Special Inspections, Modifications and Service Bulletins | | |
| Carried forwar | d — | - | | | | | |

| | | | - 1-41-E | light Maintenance | е | DATE | 09/30/2022 | |
|------|----------|-------|------------------|-------------------|---------|--------|------------|---|
| SO# | 22-33727 | | Ross Aviation Fi | pal Airport [LNK] | , | ACTT | 841.9 |] |
| REG. | N220VF | | | SERIAL NO. | 1034659 | HOBBS | 841.9 | 1 |
| MAKE | TCM | MODEL | TSIO-550-K | SERIAL NO. | 1001000 | CYCLES | 969.4 | 1 |
| | | | | | | | | 7 |

- Performed fuel pump setup procedures. Adjusted manifold pressure so manifold pressure and fuel flow were within Cirrus' range and customer's desired limits. At 83 degrees Fahrenheit outside air temperature and oil temperature 180 degrees Fahrenheit, idle RPM was 750 with a mixture rise of 30 RPM and un-metered fuel pressure at 7.5 psi. At 2500 RPM, un-metered fuel pressure was 24.5 psi, MAP was 37.5 mg", and fuel flow was 41.8 gph. Reference Cirrus SR22T Maintenance Manual Chapter 73-20.
- Performed oil pressure adjustment so oil pressure is within TCM's oil pressure range and customer's desired limits of 60 psi at 180 degrees Fahrenheit oil temperature. Reference Continental Standard Practices Component Maintenance Manual M-0 Section 6-4.10.1.

I certify this maintenance was inspected and is determined to be in an airworthy condition. Pertinent details are on file under the noted shop order number: 22-33727 Date: September 30, 2022

Signed: Benjamin Taylor

| Ross Aviatio | on Flight | Maintenance | CKSB | u |
|--------------|-----------|-------------|------|---|
| Lincoln, NE | 68524 | | | |

| SO# | 22-33906 Ross Aviation Flight Maintenance | | | | | DATE | 10/27/2022 |
|------|---|-------|---------------------------------|------------|---------|--------|------------|
| REG. | N220VF | | Lincoln Municipal Airport [LNK] | | | | 854.5 |
| MAKE | TCM | MODEL | TSIO-550-K | SERIAL NO. | 1034659 | FLIGHT | 854.5 |
| | | | | | | HOBBS | 992.2 |

1. Drained oil and removed filter, cut and inspected filter with no discrepancies at this time. Installed new oil filter P/N AA48108-2 and serviced engine with 7 quarts Phillips XC 20W50 oil. Performed engine run with no leaks noted at this time, referencing Cirrus airplane maintenance manual chapter 12-10.

I certify this maintenance was inspected and is determined to be in an airworthy condition. Pertinent details are on file under the noted shop order number: ____23-33906 __Date: ___October 27, 2022 ___,

Signed: Benjamin Taylor

Ross Aviation Flight Maintenance CRS# LNKR128E

| TAIL | N220VF | MODEL | TSIO-550-K | SERIAL NO. | 1034659 | DATE | 1/15/23 |
|------|--------|-------|------------|------------|---------|--------|---------|
| MAKE | TCM | | | | | FLIGHT | 904.8 |
| | | | | | | HOBBS | 1042.6 |

Drained oil and removed filter, cut and inspected filter with no discrepancies at this time. Installed new oil filter P/N AA48109 and serviced engine with 7 quarts of Phillips XC 20W50 oil. Performed engine run with no leaks noted at this time, referencing Cirrus airplane maintenance manual chapter 12-10.

Tony Underwood

Owner, pilot license #3C81427



| D . | Total | Total Time | | ice Last haul | Engine Service and Maintenance Record | | |
|-----------------|-------|------------|-------|------------------|---|--|--|
| Date | Hours | Min | Hours | Min | Record maintenance actions including engine part removal and installation and compliance with inspections, Airworthiness Directives, Special Inspections, Modifications and Service Bulletins | | |
| Carried forward | | - | | | | | |

| TAIL | N220VF | MODEL | TS1O-550-K | SERIAL NO. | 1034659 | DATE | 2/14/23 |
|------|--------|-------|------------|------------|---------|--------|---------|
| MAKE | TCM | | | | | FLIGHT | 929.2 |
| | | | | | | HOBBS | 1069.9 |

Drained oil and removed filter, cut and inspected filter with no discrepancies at this time. Installed new oil filter P/N AA48109 and serviced engine with 7 quarts of Phillips XC 20W50 oil. Performed engine run with no leaks noted at this time, referencing Cirrus airplane maintenance manual chapter 12-10.

Tony Underwood

| Owner, pilot lie | cense #3C | 81427 | | _ |
|------------------|-----------|-------|------|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | - | | | |
| | | | | |

| The winds the second state of the second | | | |
|--|------------------------|--|--|
| Engine Mode | TSIO-550K1B | | |
| Serial# | 1034659 | | |
| Test Document | TH-3223 Rev G | | |
| Software/Form Release# | 2.03, 05/12/17 | | |
| Start Time | 9/8/2017, 13:44:19 | | |
| Accepted Time | 9/8/2017, 16:47:01 | | |
| Cell# & Operator | 3, 40204 | | |
| Sea Level Power | 315 HP @ 2500 Prop RPM | | |
| Vapor Pressure | 0.49 in HG | | |
| Temp, Wet Baro | 81.25 F, 30.01 in HG | | |



Continental Motors

Aircraft Engine Standard Acceptance Test Log (Form TH-125)

| The state of the s | STATE OF THE PERSON NAMED IN COLUMN 2 IS NOT THE OWNER. |
|--|---|
| Test Club# | C2245A |
| Rqrd Pitch | 23° ± .5° |
| Actual Pitch | 23.0° |
| Mixture Check | Pass |
| Alternator Check | |
| | |

| Mag Data | Required | jual | |
|------------------|----------|------|--|
| Eng Speed Both | 1700 | 03 | |
| Eng Speed Right | N/A | 1632 | |
| Right Mag Drop | 150 | 71 | |
| Eng Speed Left | N/A | 1654 | |
| Left Mag Drop | 150 | 49 | |
| Mag Drop Spread | 50 | 22 | |
| Fuel Flow (Ref.) | 81 | 43 | |

Note: Magneto check between Run 2 & 3

| Run Information | Run 1 | Run 2 | Run 3 | Run 4 | Run 5 | Run 6 | Run 7 | Run 8 |
|--------------------------------------|-----------|-----------|-----------|-------------|-------------|----------|-------------|-----------|
| Time Of Day | 13:53:47 | 13:55:46 | 14:31:42 | 14:59:17 | 15:10:42 | 15:26:44 | 15:58:18 | 16:29:55 |
| Run Time Rqd (MM:SS) | 01:00 | 01:00 | 01:00 | 10:00 | 10:00 | 01:00 | 01:00 10:00 | |
| Run Time | 01:14 | 01:45 | 02:05 | 10:00 | 10:00 | 03:27 | 10:00 | 05:00 |
| Prop Speed Rqd (RPM) | 1175-1225 | 1675-1725 | 2275-2325 | 2503-2553 | 2287-2312 | 575-625 | 2288-2313 | 2288-2313 |
| Prop Speed | 1217 | 1700 | 2299 | 2541 | 2299 | 617 | 2301 | 2299 |
| Manifold Press Rqd (inHg) | N/A | N/A | N/A | 37.3-37.7 | 33.5 REF | 18.5 MAX | 33.5 REF | 33.5 REF |
| Manifold Press | 13.1 | 18.5 | 28.6 | 37.4 | 31.6 | 18.5 | 32.1 | 32.0 |
| Turbo Dis Press Rqd (inHg) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Turbo Dis Press | 30.4 | 30.7 | 32.3 | 38.0 | 34.6 | 30.3 | 34.7 | 34.6 |
| Fuel Flow Rqd (lb/hr) | N/A | N/A | N/A | 210.9-220.9 | 126.4-162.4 | N/A | N/A | N/A |
| Fuel Flow | 18.0 | 44.4 | 115.8 | 211.0 | 144.4 | 14.6 | 168.0 | 164.3 |
| Nozzle Press Rqd (PSID) | N/A | N/A | N/A | 12.6-13.2 | 8.8-10.0 | N/A | N/A | N/A |
| Nozzle Press | 3.7 | 4.7 | 7.7 | 12.8 | 8.8 | 3.4 | 10.2 | 10.1 |
| Fuel Pump Press Rqd (PSIG) | N/A | N/A | N/A | 27.5 REF | N/A | 7.0-9.0 | N/A | N/A |
| Fuel Pump Press | 8.7 | 11.8 | 16.4 | 22.6 | 19.7 | 8.5 | 23.6 | 23.3 |
| Fuel Temp Rqd (°F) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Fuel Temp | 82 | 84 | . 88 | 99 | 99 | 92 | 91 | 92 |
| Ambient Temp Rqd (°F) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Ambient Temp | - 85 | 86 | 90 | 101 | 100 | 96 | 92 | 93 |
| Eng Inlet Oil Temp Rqd (°F) | 120-240 | 150-240 | 180-240 | 180-240 | 180-240 | 130-240 | 180-240 | 180-240 |
| Eng Inlet Oil Temp | 120 | 150 | 180 | 215 | 184 | 203 | 180 | 180 |
| Eng Oil Press Rqd (PSIG) | 30.0 MIN | 30.0 MIN | 30.0 MIN | 37.8-48.8 | 30.0 MIN | 11.8 MIN | 30.0 MIN | 30.0 MIN |
| Eng Oil Press | 39.1 | 70.5 | 55.8 | 48.4 | 52.3 | 15.2 | 53.8 | 54.3 |
| Min Cylinder Temp Rqd (°F) | 175 MIN | 225 MIN | 250 MIN | 250 MIN | 250 MIN | N/A | 250 MIN | 250 MIN |
| Max Cylinder Temp Rqd (°F) | 460 MAX | 460 MAX | 460 MAX | 460 MAX | 460 MAX | 460 MAX | 460 MAX | 460 MAX |
| Cylinder 1 Temp | 215 | 282 | 360 | 411 | 379 | 313 | 346 | 335 |
| Cylinder 2 Temp | 231 | 312 | 383 | 407 | 374 | 276 | 364 | 357 |
| Cylinder 3 Temp | 204 | 246 | 341 | 366 | 316 | 291 | 323 | 317 |
| Cylinder 4 Temp | 226 | 306 | 402 | 425 | 380 | 294 | 379 | 370 |
| Cylinder 5 Temp | 216 | 271 | 357 | 370 | 370 | 227 | 329 | 325 |
| Cylinder 6 Temp | 199 | 252 | 323 | 338 | 340 | 225 | 298 | 291 |
| Collar Press Differential Rqd (PSID) | N/A | N/A | N/A | 11.4 MAX | N/A | N/A | N/A | N/A |
| Collar Press Differential | -0.0 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 |

Customer Copy



Form No. QA-85A (Rev Sept 2014)



(ES

Continental Motors Engine Component Information Sheet

Printed: 09/11/2017

Serial:1034659

Spec:TSI0550K1B

New/Rebuilt: (NEW)

Assembled: 09/07/2017

Shipped: / /

Packed: 09/11/2017

Customer Name: CIRRUS DESIGN CORPORATION Shipping Address: DULUTH INTERNATIONAL AIRP

| Component | Serial Number | Component | Serial Number |
|----------------|---------------|--------------|---------------|
| CAMSHAFT | 362171 | L. TURBO | H-UFL00137 |
| CRANKSHAFT | N17FA037 | R. TURBO | H-UFL00066 |
| CRANKCASE | R17FA099 | WASTEGATE | H-TKN00083 |
| CONNROD | AE17GA729 | OIL COOLER | H17-14006-376 |
| CONNROD | AE17GA730 | CYLINDER-1 | AC17GA327 |
| DNNROD | AE17GA677 | CYLINDER - 2 | AC17GA345 |
| CONNROD | AE17GA679 | CYLINDER - 3 | AC17FB366 |
| CONNROD | AE17GA752 | CYLINDER - 4 | AC17GA365 |
| CONNROD | AE17GA751 | CYLINDER - 5 | AC17FB419 |
| L MAGNETO | D17GA143 | CYLINDER - 6 | AC17FA781 |
| R MAGNETO | D17GA139 | NOZZLE - 1 | 1515 |
| FUEL PUMP | B17EA145 | NOZZLE - 2 | 2531 |
| MANIFOLD VALVE | C17HA069 | NOZZLE - 3 | 3531 |
| METERING UNIT | A17HA121 | NOZZLE - 4 | 4531 |
| STARTER | H-R030301 | NOZZLE - 5 | 5520 |
| ALTERNATOR | H-R072266 | NOZZLE - 6 | 6526 |
| | | | |



Pack Inspection Stamp _

CMI 10

All of the information provided herein is subject to verification by the user.

Continental Motors, Inc. makes no representation or warranty concerning the accuracy or

completeness of the information and assumes no responsibility with respect thereto.



Hutter & America

Department of Transportation Federal Aviation Administration

Supplemental Type Certificate

Number SA01708SE

This certificate, issued to:

Precise Flight, Inc. 63354 Powell Butte Road Bend, OR 97760

certifies that the change in the type design for the following product with the limitations and condition. therefore as specified hereon meets the autworthines requirements of Part 23 of the Federal Aviation Regulations.

Original Freduct - Type Certificate Sumber:

Cirrus Design Corporation

SR22 SR22T

Description of the Type Tesign & hunge: Fabrication of the fixed oxygen system in accordance with Precise Flight Engineering Drawing Lists

| 400110000 | | T | | | |
|-----------|-------------|-----------|---------------|-----------|----------------|
| 102N0000 | Revision F | 100N0000 | Revision AH | 051A0000 | Revision B |
| 027N0000 | D = = | 222112 | 1101101111111 | 03170000 | Kevision B |
| 02/140000 | Revision E | 026N0000 | Revision E | 020N0000 | Revision G |
| 010N0000 | Da | 040010000 | | 020110000 | ILEVISION G |
| 010140000 | Revision H | 016N0000 | Revision C | 012N0000 | Revision IR |
| 011N0000 | Revision A | 04040000 | | | TYC VISION IIV |
| | INEVISION A | 010A0000 | Revision IR | 009N0000 | Revision C |
| FAA | | | 110110111111 | 003140000 | Kevisidil C |

or later FAA-approved revisions Installation in accordance with Precise Flight Engineering Drawing List 102N0000, Revision F, or later FAA-approved revision. Maintained in accordance with the Instructions for Continued Airworthiness (ICA) Precise Flight Document 102NMAN0003, Revision E, dated February 23, 2010, or later FAA-approved revision or document

Limitations and Conditions. Approval of this change in type design applies to the above model aircraft only This approval should not be extended to other aircraft of these models on which other previously approved modifications are incorporated unless it is determined that the relationship between this change and any of those other previously approved modifications, including changes in type design, will introduce no adverse effect upon the airworthiness of that aircraft (See Continuation Sheet on Page 3)

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator of the Tederal Soution Solministration.

Fale of application. August 01, 2006

Sale resound

Sute amended: October 12 2007, May 30, 2008, April 13, 2010



By direction of the Administrator

Acting Manager, Seattle Aircraft Certification Office

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both

This certificate may be transferred in accordance with FAR 21 47

FAA FORM 8110-2 (10-68)

PAGE 1 OF 3 PAGES







Document Number:

102NMAN0003

Revision Number:

G

Aircraft Serial

Number: 1622

63354 POWELL BUTTE ROAD BEND, OR 97701, USA 800-547-2558 www.precsieflight.com

Instructions for Continued Airworthiness Cirrus SR22/SR22T Built-In Oxygen System

STC Number SA01708SE



NOTICE

The Airworthiness Limitations Section (Section 2.6) is FAA Approved and specifies maintenance required under Sections 43.16 and 91.403 of the Federal Aviation Regulations, unless an alternative program has been FAA Approved.

These documents must be kept with the aircraft records.

THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION OF THE PRECISE FLIGHT, INC. (PFI) COMPANY, AND ITS RECEIPT OR POSSESSION DOES NOT CONVEY ANY RIGHTS TO REPRODUCE, DISCLOSE ITS CONTENTS, OR TO MANUFACTURE, USE, OR SELL ANYTHING IT MAY CONTAIN OR DESCRIBE IN ANY WAY. REPRODUCTION, DISCLOSURE, OR USE WITHOUT SPECIFIC PRIOR WRITTEN CONSENT OF PFI IS STRICTLY PROHIBITED.



63354 POWELL BUTTE ROAD BEND, OR 97701 800-547-2558

www.preciseflight.com

Revision Number:

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS - STC SA01708SE

Cirrus Design SR22/SR22T Built-In Oxygen System

REVISION HISTORY

| Rev. | DESCRIPTION OF CHANGES | Author | Date | Approved By | Approved Date | |
|------|--|------------------------|------------|----------------|------------------------|--|
| | Original Release | STP | 9/7/2006 | JNS | 9/7/2006 | |
| Α | Revised document to include remote filler, and final oxygen system wire routing. | JNS | 9/27/2006 | JNS FAA | 9/27/2006 10/3/2006 | |
| В | Revised document to include the A5 constant flowmeter, the PreciseFlow® Oxygen Conserver, added Section 2.7.1 inspection checklist for ease of maintenance, updated wire schematics adding the remote Annunciator option, added Section 3.0 IPC to this document for ease of maintenance for Cirrus Customers and Service Centers. | JNS | 4/27/2007 | JNS/FAA | 7/23/2007 | |
| С | Added section 2.4.7 for either ground or flight testing of the O2 Required Pressure Sensor, added a ground test procedure for sensor test, allowed the owner/pilot to perform the 50, 200, and 500hr inspections on the breathing equipment. Corrected typo on item 1, Figure 19 for the Bottle Assembly. Added Trouble Shooting Flow Charts figures 5-11. | JNS | 2/8/2008 | JNS | 2/8/2008 | |
| D | Removed owner/pilot notes for 50, 200, and 500hr inspections on the breathing equipment as required per the FAA. Corrected page numbering error do to formatting. | JNS | 3/21/2008 | JNS | 3/21/2008 | |
| Е | Updated ICA for Cirrus Perspective Installations; Added new SR22T model throughout document; changed Hydrostatic pressure test to every 5 yrs. (was: 3 yrs.); | W. Ashforth | 2/22/10 | CRB | 2/23/10 | |
| F | Added 5 port manifold data, changed CPC O-ring service interval to 5 years, removed A4 from IPC, corrected typos. | R. Norris | 5/27/2011 | CRB | 6/22/11 | |
| G | Corrected typo in table 1 of section 2.7. Updated system wire diagram section 2.8. Added 051A0330-2 to BOM section 3.7.3. Added 102N0420-2 to BOM section 3.8 fig 25. Added 102N0401 (3.8.1) to section 3.8. Added renamed conserver X3 to all sections. | J. Noland R. Norris | 02/04/2016 | CRB | 02/15/2016 | |

Title Page Rights Apply

Document Number: G

102NMAN0003

63354 POWELL BUTTE ROAD BEND, OR 97701 800- 547-2558 www.preciseflight.com

Document Number:

102NMAN0003

Revision Number:

G

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS - STC SA01708SE Cirrus Design SR22/SR22T Built-In Oxygen System

| TABLE OF CONTENTS | _ |
|--|------|
| Revision History | 2 |
| Table of Contents | 3 |
| 1.0 Overview | J |
| 1 1 Purpose | Э |
| 12 ICA Pavisions | O |
| 2.0 Instructions for Continued Airworthiness | 0 |
| 2.1 Introduction | . 6 |
| 2.2 System Description | . b |
| 2.3 Special Tools Required | ., 8 |
| 2.4 Maintenance Instructions | . 8 |
| 2.4.1 Bottle Removal and Replacement | . 8 |
| 2.4.2 Filler Station Cleaning | . 9 |
| 2.4.3 Line Cleaning | . 9 |
| 2.4.4 Functional Test | . 9 |
| 2.4.5 Oxygen System Installation. | 10 |
| 2.4.6 Oxygen System Bleed-Down (Purging) | 10 |
| 2.4.7 Oxygen Required Pressure Calibration Check | 10 |
| 2.4.7.1 Flight Test (Method A) | 11 |
| 2.4.7.2 Ground Test (Method B) | 11 |
| 2.5 Trouble Shooting Guide | 13 |
| 2.5.1 Oxygen System Fails to Operate | 13 |
| 2.5.2 Oxygen System Trouble Shooting Flow Chart | 13 |
| 2.5.3 Additional Technical Assistance | 17 |
| 2.6 Airworthiness Limitations | 17 |
| 2.7 Scheduled Maintenance Intervals and Overhaul Intervals for Inspections for Continued | |
| Airworthiness | 18 |
| 2.7.1 Scheduled Maintenance Checklist | 19 |
| 2.8 System Wiring Diagram | 22 |
| | 23 |
| 3.0 Illustrated Parts Catalog | 24 |
| 3.1 Purpose | 25 |
| 3.2 Overview | 25 |
| 3.3 Breathing Stations | 25 |
| 3.3.1 Constant Flow Breathing Equipment | 25 |
| 3.3.2 PreciseFlow or X3 Demand Flow Breathing Equipment | 26 |
| 3.4 Overhead Distribution Manifold Installation | 27 |
| 3.5 Oxygen Low Pressure Line Installation | 28 |
| 3.6 Oxygen Bottle Installation | 29 |
| 3.7 Display/Logic Assembly Installation | 30 |
| 3.7.1 Display and Controller Installations - Standard Installation | 30 |
| 3.7.2 Display and Controller Installations - Ribbon Cable | 31 |
| 3.7.3 Display and Controller Installation – Cirrus Perspective | 32 |
| 3.7.4 OPTIONAL – Remote Annunciator (OPTIONAL) | 33 |
| 3.8 Filler Port and Line Installation | 34 |
| 3.8.1 Alternate Filler Port and Line Installation | 35 |
| Title Page Rights Apply | |

63354 POWELL BUTTE ROAD BEND, OR 97701

800-547-2558 www.preciseflight.com Document Number:

102NMAN0003

Revision Number:

G

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS - STC SA01708SE

Cirrus Design SR22/SR22T Built-In Oxygen System

2.0 Instructions for Continued Airworthiness

2.1 Introduction

The contents of this section provide the instructions for continued airworthiness for the Cirrus SR22/SR22T Built-In Oxygen System. The majority of the installation does not affect the standard airworthiness of the aircraft; only the key Oxygen System items that exist different are noted in this section. All structure and general maintenance must be performed in accordance with existing approved maintenance practices, the aircraft maintenance manual or other FAA Approved document(s).

2.2 SYSTEM DESCRIPTION

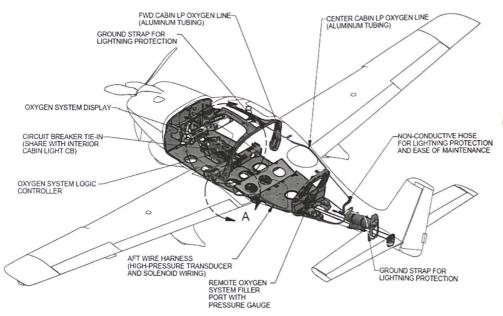


Figure 1 - SR22/SR22T Built-In Oxygen System Overivew

Title Page Rights Apply

FAA Approval Date: 1/31/2017

Page 6 of 36

63354 POWELL BUTTE ROAD BEND, OR 97701 800-547-2558

Document Number: Revision Number:

102NMAN0003

www.preciseflight.com

G

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS - STC SA01708SE

Cirrus Design SR22/SR22T Built-In Oxygen System

The Built-In Oxygen System consists of a few simple components for supplying sufficient oxygen to the crew and passengers of the Cirrus SR22/SR22T aircraft. These components follow:

Oxygen Bottle

- Stores 77 cu Ft. of Oxygen at 1800 psig

Regulator Assembly

- Converts the high bottle pressure to a usable 70 psig for cabin distribution. This is actuated through a latching solenoid assembly with an electrical connection to the aircraft cockpit. The regulator assembly allows the bottle to be filled through a separate fill port and a fill gage. The fill gage allows the maintenance personnel to monitor the fill operation. An overpressure burst disc is incorporated to dissipate excess pressure and protect the bottle. A high pressure transducer electrically transmits bottle pressure to the cockpit display.

Oxygen Remote Filler Station

- Allows for easy filling of the oxygen system and incorporates a manual pressure gage for filling, and preflight. Located for convenient access through the baggage door on the left hand side of the aircraft, just above the floor on the center of the baggage compartment aft wall. An easy access door covers the filler port to prevent damage to the filler from shifting baggage.

Oxygen Distribution Lines and Electrical Wiring Connections

The oxygen distribution lines allow oxygen to safely enter the aircraft cabin. The electrical connections allow the bottle and oxygen cabin pressure to be transmitted to the cockpit and for cockpit selection of oxygen in the aircraft cabin.

Oxygen Distribution Manifold

- Allows the crew and passengers to connect to the Oxygen System with four (4) or five (5) quick disconnect fittings with the capability of sealing oxygen flow to the cabin when disconnected.

Oxygen System Display and Display-Logic Controller (DLA)

 The Oxygen System display provides control over the oxygen delivery to the aircraft cabin. This display supports an Annunciator to indicate when oxygen is to be used (above 12,000 Ft. PA) and an indication of cabin oxygen or electrical actuation fault. The cabin oxygen flashing fault illuminates if cabin oxygen is not - between 60 psig and 85 psig. The electrical actuation fault illuminates if there is an electrical short or open circuit to the latching solenoid at the regulator. The oxygen controller supports these functions and ensures a short duration signal to drive the latching solenoid.

Breathing Equipment

 The breathing equipment can consist of either constant flow and/or demand flow regulator breathing stations. Both use a connection to the distribution manifold. Precise Flight A4 or A5 constant flow devices or "Flowmeters" indicate the flow of oxygen with an integral valve to control the quantity of oxygen reaching the crew or passenger. The PreciseFlow or X3 demand flow conservers are calibrated and adjusted by the user for altitude to supply oxygen to either dual lumen cannulas up to 18,000ft, or dual sensing masks. The flow indicator on this flow device is labeled with appropriate oxygen flow for increasing aircraft altitude. The constant flowmeter or demand regulator is attached to the appropriate approved mask or cannula to deliver oxygen to the crew or passengers.

Title Page Rights Apply

FAA Approval Date: 1/31/2017

63354 POWELL BUTTE ROAD BEND, OR 97701 800-547-2558

www.preciseflight.com

Document Number:

102NMAN0003

Revision Number:

G

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS - STC SA01708SE

Cirrus Design SR22/SR22T Built-In Oxygen System

2.3 SPECIAL TOOLS REQUIRED

- -Plastic reservoir hand pump
- -Chemical-resistant gloves
- -Protective eyewear with side shields

Refer to the installation instructions, or drawings for the Precise Flight Built-In Oxygen System.

2.4 MAINTENANCE INSTRUCTIONS

CAUTION: INSTALL PROTECTIVE COVERS ON ALL OPEN LINES AND COMPONENT FITTINGS IMMEDIATELY AFTER THEY ARE DISCONNECTED.

Maintain aircraft structure and wiring in accordance with aircraft maintenance manual and FAA AC43.13.

Precise Flight Inc., www.preciseflight.com, is the approved Overhaul Facility

2.4.1 BOTTLE REMOVAL AND REPLACEMENT

The Built-In Oxygen System bottle removal and replacement procedure follows:

WARNING: OXYGEN SYSTEM MUST BE BLED TO ZERO PSI BEFORE ANY MAINTENANCE.

Bleeding Procedure:

- 1. Aircraft battery power ON, oxygen display panel ON.
- 2. Connect Flowmeter breathing device to overhead distribution panel and turn Flowmeter to full flow until oxygen is purged from the System and the flashing red 200 PSI quantity LED has been illuminated for 10 minutes and no more oxygen is flowing through the breathing device.
- 3. Oxygen panel display OFF, aircraft power OFF.

Bottle Removal Procedure:

- 1. Remove aft fuselage access panel fasteners.
- 2. Remove and store access panel in a safe location.
- 3. Detach flexible oxygen line and cap both lines.
- 4. Disconnect electrical harness.
- 5. Release the two band clamp restraints.
- 6. Remove bottle and regulator assembly by first moving the assembly forward and to the left. Remove bottle and regulator assembly aft end of the bottle first.
- 7. Installation is opposite of removal Tighten wing nuts until snug and then two more turns to ensure proper tension on clamp bolt.
- 8. Perform a functional system check following installation (purging per next step can be accomplished during the functional test).
- 9. Purge the oxygen system by filling the main tank to a minimum of 500psig and bleeding the system down between 50-100psig by following the bleeding procedure prior to filling the system for use.

63354 POWELL BUTTE ROAD BEND, OR 97701 800-547-2558 www.preciseflight.com

Document Number:

102NMAN0003

Revision Number:

G

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS - STC SA01708SE

Cirrus Design SR22/SR22T Built-In Oxygen System

2.4.2 FILLER STATION CLEANING

The filler port requires cleaning periodically, and prior to filling, to keep clean of dirt, dust, and oils to prevent fire.

2.4.3 LINE CLEANING

Line Cleaning Procedure:

- Preparation
 - a. Obtain a suitable container for collecting fluid waste.
 - b. Wear protective gloves and eyewear.
 - c. Assemble a reservoir pump and drain line, see Fig 1.
- 2. Flushing
 - a. Fill 2 qt reservoir with 1% Alconox or Liquinox detergent solution. www.alconox.com
 - b. Attach reservoir pump to cabin oxygen line.
 - c. Pump 2 at Alconox or Liquinox through oxygen line.
 - d. Undo pump connection and rinse pump with clear water.
 - e. Fill 2 qt reservoir with clear tap water.
 - f. Attach reservoir pump to cabin oxygen line.
 - g. Pump 2 qt water through oxygen line.
 - h. Repeat steps A through D, rinsing the pump with the next cleaning material.
 - Pump 1 qt Methyl Alcohol through oxygen line.
 - Pump 1 qt ASAHIKLIN AK-225 through oxygen line. www.agcchem.com
 - k. Purge the line of AK-225 by passing clean dry air through the line.
 - I. With the air still flowing, sniff the air exiting the drain line. The absence of odors will verify the line is free of AK-225.
 - m. Reconnect lines and restore System to service.

2.4.4 Functional Test

The following test procedure will evaluate the Built-In Oxygen System installation in the aircraft:

- 1. Check wiring and connections before applying aircraft battery power.
- 2. Fill Oxygen System with aviators oxygen (see Maintenance Manual or Flight Manual Supplement), leave access panel open.
- 3. Switch the Oxygen System ON at the oxygen control panel and verify that the Oxygen System quantity display indicates the same oxygen pressure shown at the aft fill port gauge.
- 4. Connect Flowmeter breathing device to overhead distribution panel.
- 5. Ensure oxygen flow through a breathing device.
- 6. Switch the Oxygen System OFF at the oxygen control panel.
- 7. Turn aircraft battery power off.

FAA Approval Date: 1/31/2017

Document Number:

102NMAN0003

Revision Number:

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS - STC SA01708SE Cirrus Design SR22/SR22T Built-In Oxygen System

2.4.5 Oxygen System Installation

Refer to Precise Flight Inc. drawing list 102N0000 Cirrus Design Built-In Oxygen System for installation and removal of the oxygen system components.

2.4.6 Oxygen System Bleed-Down (Purging)

Use the following procedure to bleed-down the oxygen system should any of the hard lines, nonconductive line be opened, or bottle removed and re-installed/replaced. This procedure is required to prevent contamination, or moisture inside the system.

- 1. Attach the filler line to the filler port, making sure to purge the line prior to attaching to the aircraft.
- 2. With the System ON, and flowmeters (or open Connectors) installed in the distribution ports, initiate flow for 1-2min.
- Remove the flowmeters from the distribution port, and turn the oxygen System OFF, and fill to 650psig.
- 4. Perform leak checks as required.
- 5. Turn the System ON and using flowmeters (or open connectors) installed in the distribution ports; bleed the system down to below 50psig (but above 0psig).
- 6. Repeat steps 3-5 once. (Leak check not required on second purge)
- 7. Remove the flowmeters from the distribution port, and turn the oxygen System OFF, and fill to
- 8 Perform Final leak check.
- 9. Fill System to 1800-2000psig as required.

2.4.7 Oxygen Required Pressure Calibration Check

The Precise Flight, Inc. Fixed Oxygen System is designed with an additional safety feature to indicate O2 is required if the system is off, or there is no pressure at the outlet, when the cabin pressure is at 12,000ft Pressure Altitude (PA). This pressure sensor is internal to the Display Logic Controller (DLA). To ensure this safety feature is functioning properly a check of its function is required during the annual inspection. This may be done by a flight test to altitude, or by a ground test.

The Altitude Sensor in the Oxygen System Display Logic Assembly is NOT connected Note: to the aircraft static system.

Not All aircraft are equipped with a Display Logic Assembly where a test port is available. In these cases the flight test is the only approved method for testing the calibration.

63354 POWELL BUTTE ROAD BEND, OR 97701 800-547-2558 www.preciseflight.com

Document Number:

102NMAN0003

Revision Number:

G

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS - STC SA01708SE

Cirrus Design SR22/SR22T Built-In Oxygen System

2.4.7.1 Flight Test (Method A)

Method A of checking the calibration is by flight test. This flight is intended to be done during the maintenance release flight following the annual inspection. The procedure is to fly to 11,000ft PA (alt setting of 29.92inHg) and during the climb to 12,500ft PA with the oxygen system OFF, note the altitude which the O2 Required Amber light begins to flash. This should occur between 11,500ft PA and 12,500ft PA if the system is operating normally.

2.4.7.2 Ground Test (Method B)

Method B for checking the calibration is by ground test. The ground test requires the removal of pilots side Aft Trim Panel to gain access to the Display Logic it Controller (DLA), and is recommended that this be performed with the seats removed, and the LH (Pilots) side Aft Trim Panel must be removed.

This should be performed during the Cabin Group Inspection as part of the Annual inspections. In the case of a progressive Maintenance Program, this test should be accomplished as close to once every year, not to exceed 18months.

Use the flowing procedure for the ground test method for the DLA pressure calibration check:

- 1. Remove the Pilot Seat if not already removed as part of the annual maintenance check, cabin
- 2. Remove the LH Aft Trim Panel if not already removed as part of the annual maintenance check, cabin group to gain access to the DLA. (See Figure 2)

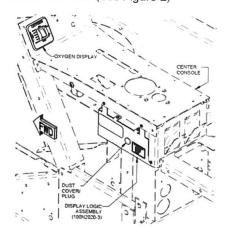


Figure 2 - Location of Oxygen System Display Logic Controler

- 3. Check general condition of the wiring, and DLA.
- 4. Remove the Dust Cover/Plug. (See Figure 3)

Title Page Rights Apply

FAA Approval Date: 1/31/2017

Page 10 of 36

9 102NMAN0003

Number: Document

800-547-2558 **BEND, OR 97701** 63354 POWELL BUTTE ROAD

www.preciseflight.com Revision Number:

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS - STC SA01708SE

Cirrus Design SR22/SR22T Built-In Oxygen System

- 9. Verify the altitude where the indication first occurred:
- b. If the indication is outside of this range, re-verify the indication. If the DLA fails a second a. If indication is between 11,500ft PA and 12,500ft PA, then proceed to the next step.
- time, remove the DLA and replace, or contact PFI for re-adjustment.
- 11. Remove the pressure tubing taking extra care not to damage the DLA pressure transducer. Turn Aircraft power off.
- Re-install the dust cover/plug.
- 13. Note passing test as required.

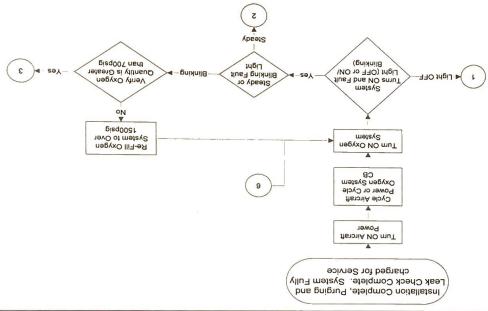
2.5 TROUBLE SHOOTING GUIDE

- 2.5.1 Oxygen System Fails to Operate
- b. Check connector plugs for security and contact insertion. a. Check circuit breaker.
- c. Check wiring diagram against aircraft installation. See Section 2.8.
- d. Check the system function per section 2.5.2.

2.5.2 Oxygen System Trouble Shooting Flow Chart

parts returned, please copy steps taken for reference. This section is for reference when troubleshooting the PFI Fixed Oxygen System, if used, and

transducer and will require the transducer to be replaced. CAUTION: Pressures above 105psig on the low-pressure side will damage the low-pressure



Title Page Rights Apply Figure 5 - Trouble Shooting Flow Chart (6)

Page 13 of 36 FAA Approval Date: 1/31/2017

Page 12 of 36

Number: 102MMAN0003 Document

9

Revision Number:

moo.thgifleeiserg.www 800-547-2558 **BEND, OR 97701 63324 POWELL BUTTE ROAD**

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS - STC SA01708SE

Cirrus Design SR22/SR22T Built-In Oxygen System

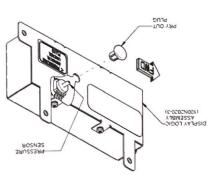


Figure 3 - Removal of the Dust Cover Plug

pressure sensor nipple, and the other to the static line on a Pitot-Static Test system with pump. 5. Using a soft rubber or similar tube with an inside diameter (ID) of 7/64in, connect one end to the

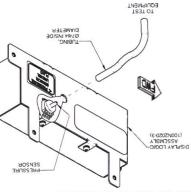


Figure 4 - Allachment of the Static Test Hose

REMOVAL OR DAMAGE WILL OCCUR AND THE UNIT MUST BE REPLACED. CONTROLLER CIRCUIT. DO NOT YANK, OR PULL EXCESSIVELY DURING THE INSIDE DIAMETER TUBING TO PREVENT DAMAGE TO THE SENSOR AND/OR THE CAUTION: CARE MUST BE TAKEN DURING THE INSTALLATION AND REMOVAL OF THE 7/64"

- 6. With the sircraft in a safe condition to power up the Main Bus 2, turn ON the main bus 2 with the
- ensure flow is present. With the system OFF, let the oxygen 'bleed down' prior to removing the 7. Cycle the system ON and OFF to ensure the system is functioning, use a breathing device to oxygen system off.
- signified on the display by the flashing amber LED. Note the altitude which this occurred. PA. Continue increasing the altitude and note when the display indicates "O2 required" as 8. Using the static portion of the Pitot-Static tester, increase the static altitude slowly to 11,000ft breathing device.

Title Page Rights Apply

FAA Approval Date: 1/31/2017

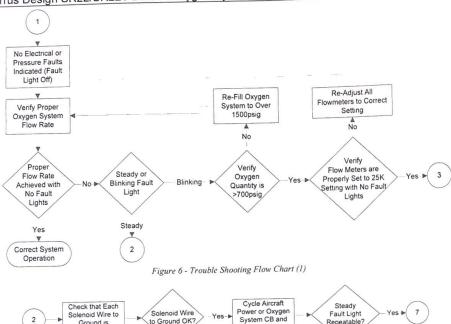
Document Number: 102NMAN0003

Revision Number:

G

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS - STC SA01708SE

Cirrus Design SR22/SR22T Built-In Oxygen System



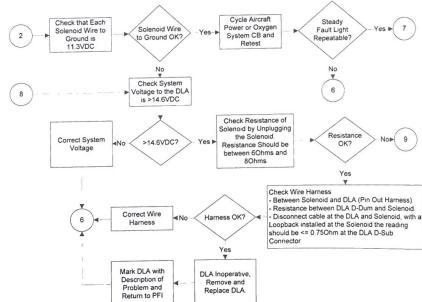


Figure 7 - Trouble Shooting Flow Chart (2 & 8)

Title Page Rights Apply

FAA Approval Date: _1/31/2017

Page 14 of 36

63354 POWELL BUTTE ROAD BEND, OR 97701 800- 547-2558 www.preciseflight.com

Document Number:

102NMAN0003

Revision Number:

Return Defective

Transducer or

Distribution

Manifold to PFI

with Description of

Problem

G

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS - STC SA01708SE

Cirrus Design SR22/SR22T Built-In Oxygen System

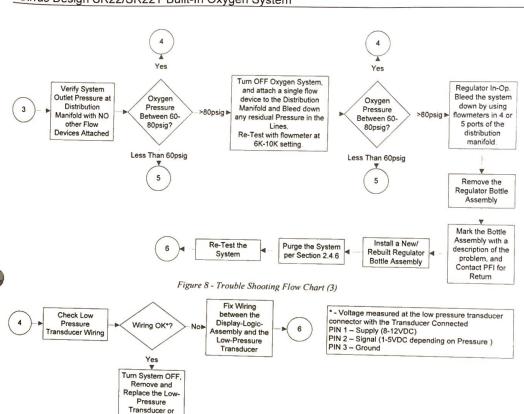
Distribution

Manifold

Turn ON the

System and Re-

Test



Steady or
Blinking Fault
Light?

Blinking Fult

Blinking
Blinki

Purge the System

and Perform a

Leak Check

Figure 9 - Trouble Shooting Flow Chart (4)

Title Page Rights Apply

2

Fault Light?

Document 102NMAN0003

Warm and Dry

Soleoid and

Regulator

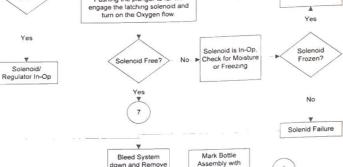
6

Number: Revision Number:

6

G

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS – STC SA01708SE



Paperwork

indicating Problem

and Return

Figure 10 - Trouble Shooting Flow Chart (5)

and Replace

Regulator-Bottle

Assembly

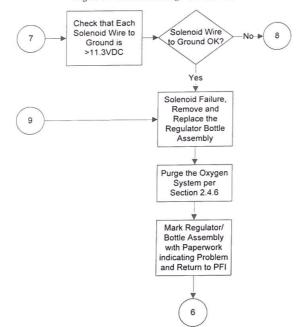


Figure 11 - Trouble Shooting Flow Chart (7 & 9)

Title Page Rights Apply

FAA Approval Date: __1/31/2017

Page 16 of 36

63354 POWELL BUTTE ROAD BEND, OR 97701 800- 547-2558 www.preciseflight.com

Document Number:

102NMAN0003

Revision Number:

G

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS – STC SA01708SE Cirrus Design SR22/SR22T Built-In Oxygen System

2.5.3 Additional Technical Assistance

Please call Precise Flight, Inc., www.preciseflight.com, 800-547-2558 or 541-382-8684.

2.6 AIRWORTHINESS LIMITATIONS

This Airworthiness Limitations Section is FAA Approved and Specifies maintenance required under Sections 43.16 and 91.403 of the Federal Aviation Regulations, unless an alternative program has been FAA Approved.

None – The operation of the Built-In Oxygen System does not impact the airworthiness limitations, and is not required for normal flight.

To maintain the altitude capability of the aircraft, the Scheduled Maintenance Intervals and Inspections must be maintained.

Title Page Rights Apply

FAA Approval Date: 1/31/2017

Document Number:

102NMAN0003

Revision Number:

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS - STC SA01708SE

Cirrus Design SR22/SR22T Built-In Oxygen System

2.7 SCHEDULED MAINTENANCE INTERVALS AND OVERHAUL INTERVALS FOR INSPECTIONS FOR CONTINUED **AIRWORTHINESS**

For this section, the 50hr, 200hr, and 500hr are time of oxygen system in use. Annual and yearly inspection intervals are calendar intervals. Section 2.7.1 and Table 2 provides a checklist version of this for maintenance work.

Table 1 - Scheduled Maintenance Intervals and Inspections

| | 15 YEARS | | | | | | _ | |
|------|---|----|----|----------|----------|----------|----------|---|
| | 5 YEARS | | | | | | - 1 | |
| | 3 YEARS | | | | | | - 1 | |
| | ANNUALLY | | | | . 1 | | ١ | |
| | EACH 500 HOURS OF USE | | | | | | | |
| | EACH 200 HOURS OF USE | | | 1 | | | | |
| | EACH 50 HOURS OF USE | | 1 | | | | | |
| | | 7 | 1 | | | | | |
| Cirr | us Design SR22/SR22T | 1 | 1 | 1 | 1 | | | |
| RIII | I T-IN OXYGEN SYSTEM | + | ⊢ | ⊢ | | \vdash | \vdash | - |
| 1. | Check flexible lines for security of connections, kinks or tube discoloration. | · | ⊢ | ⊢ | ŀ | \vdash | | ۲ |
| 2. | Replace oxygen cannulas and/or oxygen masks. | ₩ | ŀ | \vdash | \vdash | \vdash | \vdash | H |
| | Replace or overhaul microphone oxygen mask. | +- | ⊢ | ŀ | + | \vdash | - | H |
| 4. | Perform functional test per Section 2.4.3. Follow Cirrus Maintenance Manual and this document for general aircraft wiring system checks and headliner removal. Oxygen Wiring Diagram is in the Appendix. Check security of oxygen bottle mounting; re-torque wing nuts to snug and two turns tight. If contamination is found, clean oxygen lines, See 2.4.2. Check security of oxygen lines, and check bonding continuity on cabin oxygen line to ensure resistance to aircraft ground is no more than 0.0025Ω (2.5mΩ) between any metal to metal connections on the System. Clean and check condition of the filler port and ensure filler cap or rubber pad is present. Confirm that "02 REQ'D" annunciator illuminates at 12,000 Ft. ±500 Ft. Pressure Altitude | | | | | | | |
| 5. | Replace O-Ring in CPC Connector Assembly on the breathing stations | +- | ╀- | ⊢ | - | ⊢ | ŀ | ł |
| 6. | Purge Oxygen System. See Maintenance Manual. Remove and hydrostatically test the oxygen cylinders from date marked on cylinder. Overhaul regulator/valve assembly – replace O-Rings, verify regulator pressure setting. If contamination is found, clean oxygen lines. See 2.4.2. Inspect oxygen lines and fittings for leaks, cracks or damage. Leak check with Snoop or equivalent. wwww.swagelok.com. Replace flexible oxygen lines on breathing stations. Replace O-Ring in CPC connector assembly identified on the breathing stations. Overhaul A4 and/or A5 Constant Flowmeters. | | | | | | | |
| 7. | Replace composite wrapped oxygen cylinder. Overhaul regulator/valve assembly — replace O-Rings, verify regulator pressure setting. Replace non-conductive low-pressure oxygen line between the regulator and the AL hard-lines Inspect oxygen lines and fittings for cracks, leaks or damage. Leak check with Snoop or equivalent. wwww.swagelok.com. Purge Oxygen System. Replace flexible oxygen lines on breathing stations. Replace O-Ring in CPC connector assembly identified on the breathing stations. Overhaul A4, and/or A5 Constant Flowmeters and PreciseFlow or X3 Demand Conservers. | | | | | | | |

Notes:

- 1. Applicable to aircraft with Solid Green (Kevlar) Oxygen Bottle (PFI P/N 026N2001-3)
- Applicable to aircraft with Striped Green (Carbon) Oxygen Bottle (PFI P/N 026N2003-3)

Title Page Rights Apply

FAA Approval Date: 1/31/2017

Page 18 of 36

63354 POWELL BUTTE ROAD BEND, OR 97701 800-547-2558 www.preciseflight.com

Document Number:

102NMAN0003

Revision Number:

G

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS - STC SA01708SE

Cirrus Design SR22/SR22T Built-In Oxygen System

2.7.1 Scheduled Maintenance Checklist

For this section, the 50hr, 200hr, and 500hr are time of oxygen system in use. Annual and yearly inspection intervals are calendar intervals.

| Aircraft Registration Number | Aircraft Serial Number | Total Time | Hobbs Time | Inspection Completion Date |
|------------------------------------|---------------------------|------------|------------|-------------------------------|
| | | | | |

Table 2 - Scheduled Maintainance Checklist

| _ | Table 2 - Scheduled Maintainance Checklis | | | | | | | |
|------|--|------|-------|-------|--------|--------|--------|---------|
| Item | Inspection Criteria | 50hr | 200hr | 500hr | Annual | 3 Year | 5 Year | 15 Year |
| | Breathing Station Group | | | | | | | |
| 1 | Check Breathing Stations a) Check tubing connections for security b) Check tubing for kinks or discoloration and general cleanliness c) Check condition of flowmeters or PreciseFlow or X3 d) Check flow indicator on PreciseFlow or X3 for cracks, stickiness, general condition | • | | | | | | |
| 2 | e) Check Cannulas and Masks for general condition, cleanliness, or discoloration Initials: Date: Replace Oxygen Cannulas and Standard (Clear) Masks | | | | | | | |
| | a) Replace Standard Cannula as required and mark inservice date on new part. b) Replace Oxymizer Cannula as required and mark inservice date on new part. | | • | | | | | |
| | c) Replace PreciseFlow or X3 Dual Lumen Cannula as required and mark in-service date on new part. d) Replace Standard (Clear) Facemask as required and mark | | | | | | | |
| | in-service date on new part. e) Replace Standard (Clear) PreciseFlow or X3 Facemask as required and mark in-service date on new part. Initials: Date: | | | | | | | |
| 3 | Replace/Overhaul Oxygen Facemasks with Microphone (Blue) a) Replace or Overhaul Facemask with Microphone (Blue) as required and mark in-service date on New or Overhauled part. b) Replace or Overhaul PreciseFlow or X3 Facemask with Microphone (Blue) as required and mark in-service date on New or Overhauled part. | | | • | | | | |
| 4 | Initials: Date: | | | | | | • | |

Title Page Rights Apply

FAA Approval Date: __1/31/2017

63354 POWELL BUTTE ROAD BEND, OR 97701

Document Number: Revision Number: 102NMAN0003

800- 547-2558 www.preciseflight.com

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS – STC SA01708SE Cirrus Design SR22/SR22T Built-In Oxygen System

| | rus Design SR22/SR221 Built-in Oxygen Gystem | T | | | | | . | - 1 |
|----|--|------|-----|------|------|------|---------------|--------|
| 5 | Replace/ Overhaul A4 and or A5 Constant Flowmeters and | | | | | | 1 | - 1 |
| | PreciseFlow or X3 Oxygen Conservers | | | | | | | - 1 |
| 1 | a) Replace or Overhaul A4 or A5 Constant Flowmeters as | | | | | | | - 1 |
| 1 | required and mark in-service date on New or Overhauled | | | | | | | - 1 |
| 1 | part. | | | | | | | - 1 |
| 1 | b) Replace or Overhaul PreciseFlow or X3 Oxygen | | | | | | | - 1 |
| 1 | Conservers as required and mark in-service date on New | | | | | | - 1 | - 1 |
| 1 | or Overhauled part. | | 10 | | | | | - 1 |
| 1 | c) Replace flexible oxygen lines on breathing stations, part of | | | | | | | - 1 |
| 1 | replacement or overhaul. | | | | | | | |
| | Initials: Date: | | | | | | | \neg |
| | Oxygen System Installation G | roup | _ | | | | \neg | \neg |
| 6 | Functional Check | | | | • | | | - 1 |
| 1 | a) Perform a functional check per section 2.4.4 of this | | | | | | | - 1 |
| l | document. | | | | | | | |
| | Initials:Date: | _ | _ | - | _ | | \neg | |
| 7 | Check Wiring | | | | • | | | |
| | a) Using the Cirrus Maintenance Manual and this document, | | | 1 | | | | |
| | check the general wiring system including the portion of | | | | | | | - 1 |
| | the oxygen system behind interior panels. | | | | | | | - 1 |
| | See section 2.8 for oxygen system wiring schematic. | | | | | | | |
| | Initials: Date: | - | - | - | | | $\overline{}$ | |
| 8 | Check Oxygen System | | | 1 | • | | | - |
| | a) Check the security and condition of the oxygen bottle | | | | | | - 1 | - 1 |
| | assembly in the tail of the aircraft. If contamination is | | | | | | | - 1 |
| | found in oxygen lines, clean oxygen lines per section | | | | | | - 1 | - 1 |
| | 2.4.3. Normal checks do not require the oxygen lines to | | | | | | | |
| 2 | be opened for inspection. | | | | | | | - 1 |
| | Re-torque nuts for bottle mounting to 8in-lbs as required | | | 1 | | | | - 1 |
| | c) Check the security of oxygen lines and verify electrical | | | | | | | - 1 |
| | continuity. Must be less than 0.0025Ω ($2.5m\Omega$) between | 1 | | | | | | - 1 |
| | any connections. IE: tube to fitting, fitting to tube. | 1 | | | | | | - 1 |
| | d) Clean and check filler port and insure filler cap is present. | | | | | | | - 1 |
| | Initials:Date: | - | | | | | - | - |
| 9 | Check Altitude Annunciator (Refer to Section 2.4.7) | | | | • | | | - 1 |
| | a) Verify that the "O2 REQ'D" indicator light on the display | | | | | | | - 1 |
| | and if present the "OXYGEN REQUIRED" panel mount | | | | | | | - 1 |
| | illuminate if the oxygen system is in the OFF position and | | | | | | - 1 | - 1 |
| | the aircraft is at 12,000ft ± 500ft Pressure Altitude. | | | | | | | - 1 |
| | Initials:Date: | | | | | | | |
| | Aircraft with Solid Green (Kevlar) Oxygen Bottle | (PFI | P/N | 0261 | 1200 | 1-3) | | |
| 10 | Hydrostatic Test Oxygen Bottle | | | | | | • | |
| | a) Remove Oxygen Bottle Assembly and return to Precise | | | | | | | |
| | Flight Inc. for Bottle Hydrostatic test and Regulator | | | | | | - 1 | - 1 |
| | Overhaul. | | | | | | | |
| | a. Overhaul regulator/valve assembly – Clean | | | | | | | |
| | regulator, replace O-Rings, and verify regulator | | | | | | | - 1 |
| | pressure. | | | | | | | |
| | b. Hydrostatic test the bottle and replace as required. | | | | | | | J |
| | b) Cap oxygen lines to prevent contamination. If oxygen | | | | | | | 6 |
| | lines become contaminated, or contamination found, clean | | | | | | | T |
| | lines per Section 2.4.3 of this report. | | | | | | | ı |
| | | | _ | | | | - 1 | |

| | _ | - | |
|-------|------|--------|-------|
| Title | Page | Rights | Annly |

| FAA Approval Date: | 1/31/2017 | |
|--------------------|-----------|--|
| | | |

Page 20 of 36

63354 POWELL BUTTE ROAD BEND, OR 97701 800-547-2558

www.preciseflight.com

Document Number:

102NMAN0003

Revision Number:

G

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS - STC SA01708SE

| Cirrus Design SR22/SR221 | Built-In Oxygen System |
|--------------------------|------------------------|
|--------------------------|------------------------|

| | C) | Re-Install Overhauled Regulator Valve Assembly and New |
|-----|--------|--|
| | | Bottle. |
| | d) | |
| | e) | Perform a functional check per section 2.4.4 of this |
| | | document. |
| | | Initials:Date: |
| | A | ircraft with Striped Green (Carbon) Oxygen Bottle (PFI P/N 026N2003-3) |
| 1 | Hydros | static Test Oxygen Bottle |
| | a) | Remove Oxygen Bottle Assembly and return to Precise |
| | | Flight Inc. for Bottle Hydrostatic test and Regulator |
| | | Overhaul. |
| | | a. Overhaul regulator/valve assembly – Clean |
| | | regulator, replace O-Rings, and verify regulator |
| | | pressure. |
| | | b. Hydrostatic test the bottle and replace as required |
| 0 | b) | Cap oxygen lines to prevent contamination. If oxygen |
| | | lines become contaminated, or contamination found, clean |
| | | lines per Section 2.4.3 of this report. |
| | c) | Re-Install Overhauled Regulator Valve Assembly and New |
| | | Bottle. |
| | d) | Bleed Down (Purge) Oxygen System per Section 2.4.6. |
| - 1 | e) | Perform a functional check per section 2.4.4 of this |
| | | document. |
| | | Initials: Date: |

| | | All Aircraft | | |
|-----|--------|---|--|--|
| 2 | Replac | e Oxygen Bottle | | |
| | a) | Remove Oxygen Bottle Assembly and return to Precise Flight Inc. for Bottle replacement and Regulator Overhaul. a. Overhaul regulator/valve assembly – Clean regulator, replace O-Rings, and verify regulator pressure. | | |
| | b) | Cap oxygen lines to prevent contamination. If oxygen lines become contaminated, or contamination found, clean lines per Section 2.4.3 of this report. | | |
| | c) | Re-Install Overhauled Regulator Valve Assembly and New Bottle. | | |
| - 1 | d) | Bleed Down (Purge) Oxygen System per Section 2.4.6. | | |
| | e) | Perform a functional check per section 2.4.4 of this document. | | |
| | | Initials: Date: | | |

- End of Checklist -

Document Number: 102NMAN0003

Revision Number:

-

C

www.preciseilight.com

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS – STC SA01708SE Cirrus Design SR22/SR22T Built-In Oxygen System

2.8 SYSTEM WIRING DIAGRAM

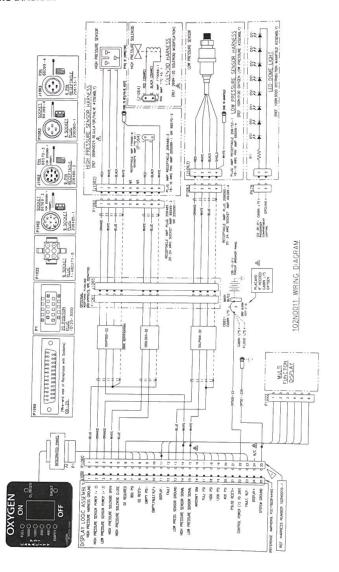


Figure 12 Typical System Wire Diagram (Standard Installation)

Title Page Rights Apply

FAA Approval Date: _1/31/2017

Page 22 of 36

63354 POWELL BUTTE ROAD BEND, OR 97701 800- 547-2558 www.preciseflight.com Document Number: 102NMAN0003

Revision Number:

G

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS – STC SA01708SE Cirrus Design SR22/SR22T Built-In Oxygen System

OXYGEN FULLO ON 1200 🔾 8000 02 FAULT ANNUNCIATOR LED OFF DISPLAY LOGIC ASSEMBLY 11080 HICH PRESSURE SENSOR POWER (+12) LOW PRESSURE SENSOR POWER (+12) HIGH PRESSURE SOLENOID OPEN HIGH PRESSURE SOLENDED CLOSE RETURNING SHELD (CROUND) D2 REO'D EMPTY, FAULT, VLP+ LED ANNUNCIATOR DISPLAY-DRIVER MODULE LOW PRESS. SENSOR CROLING HICH PRESSURE SENSOR SICINAL LOW PRESSURE SENSOR SICHAL PSLOZ RED'D+

Figure 13 - OPTIONAL - Remote Annunciator Wire Diagram

Document Number:

102NMAN0003

Revision Number:

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS - STC SA01708SE

Cirrus Design SR22/SR22T Built-In Oxygen System

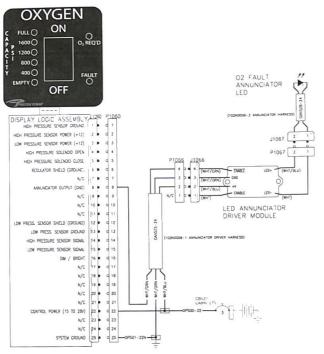


Figure 14 - OPTIONAL - Remote Annunciator Wire diagram (Ribbon Cable Installations)

Title Page Rights Apply

FAA Approval Date: _1/31/2017

Page 24 of 36

63354 POWELL BUTTE ROAD BEND, OR 97701

800-547-2558 www.preciseflight.com Document 102NMAN0003

Number: Revision Number:

G

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS – STC SA01708SE

Cirrus Design SR22/SR22T Built-In Oxygen System

3.0 ILLUSTRATED PARTS CATALOG

3.1 PURPOSE

This section is not FAA accepted or FAA Approved and is for information only to aid in the maintenance and ordering replacement parts for the Precise Flight Built-In Oxygen System.

3.2 OVERVIEW

See Figure 1 for system overview picture.

3.3 BREATHING STATIONS

This section lists the replacement breathing station equipment available for the Cirrus SR22/SR22T Built-In Oxygen System.

3.3.1 Constant Flow Breathing Equipment

NOTE:

The original Precise Flight, Inc. A4 Constant Flowmeter has been replaced by the A5 Constant Flowmeter for replacement parts. The Masks and Cannulas are interchangeable between the Constant Flow Meters Only.

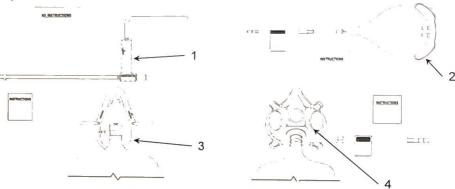


Figure 15 - Replacement Constant Flow Breathing Equipment

| Fig. | Item | PFI Part Number* | Nomenclature | Effective |
|-----------|-------|------------------|---|-----------|
| Figure 15 | 1 | 027N0003-1 | A5 Flowmeter with CPC Connector | |
| Figure 15 | 2 | 020N0001-1 | Oxymizer Cannula | All |
| Figure 15 | 3 | 020N0002-1 | Face Mask | All |
| Figure 15 | 4 | 020N0005-1 | | All |
| | alent | foreign language | Face Mask with Microphone "Blue" version. | All |

| PFI Kit Part Number | Fig. | Item | Qty. | PFI Part Number | Nomenclature |
|------------------------|-----------|------|------|--------------------|--|
| 027N0305-1 | - | - | - | - | A5 Assembly with Connuts For Many |
| | Figure 15 | 1 | 1 | 027N0003-1 | A5 Assembly with Cannula - Face Mask, CPC, Kit A5 Flowmeter with CPC Connector |
| | Figure 15 | 2 | 1 | 020N0001-1 | Oxymizer Cannula |
| E | Figure 15 | 3 | 1 | 020N0002-1 | Face Mask |
| 027N0306-1 | - | - | - | - | A5 Assembly with Cannula - Face Mask with |
| y | Figure 15 | 1 | 1 | 027N0003-1 | Microphone, CPC, Kit |
| | Figure 15 | 2 | 1 | 020N0001-1 | A5 Flowmeter with CPC Connector |
| | Figure 15 | 4 | 1 | 020N0005-1 | Oxymizer Cannula Face Mask with Microphone "Blue" |

Document Number:

102NMAN0003

Revision Number:

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS - STC SA01708SE Cirrus Design SR22/SR22T Built-In Oxygen System

3.3.2 PreciseFlow or X3 Demand Flow Breathing Equipment

Item PFI Part Number*

The Cirrus Built-In Oxygen System requires the PreciseFlow or X3 with CPC and In-Line Regulator. The PFI Semi-portable oxygen systems use a different pressure and are not compatible with the Built-In Oxygen System.

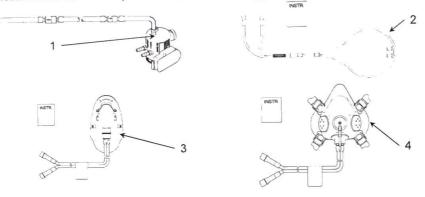


Figure 16 - Replacement PreciseFlow Demand Breathing Equipment

Nomenclature

| rig. | item | PFIPan | Number | | | Nomenciature | Ellective |
|-----------|------------------------|------------|---------|---------|---------------------|--|--------------|
| Figure 16 | 1 | 027N100 | 02-1 | Conser | ver and Inline | Regulator Assembly, CPC | All |
| Figure 16 | 2 | 020N008 | 50-1 | | | All | |
| Figure 16 | 3 | 020N006 | 50-1 | Conser | Conserver Face Mask | | All |
| Figure 16 | 4 | 020N007 | 70-1 | Conser | ver Face Mask | k with Microphone | All |
| Or equiva | alent | foreign la | anquage | version | | | |
| | PFI Kit Part Fig. Item | | Item | Qty. | PFI Part Number | Nomenclature | |
| 027N1101- | -6 | 5 3 | - | - | . | Conserver with Cannula/Face Masl Regulator Kit | k, Inline |
| | | Figure 16 | 1 | 1 | 027N1002-1 | Conserver and Inline Regulator Assembly, (| CPC |
| | | Figure 16 | 2 | 1 | 020N0050-1 | Conserver (Dual Lumen) Cannula | ., 0 |
| | | Figure 16 | 3 | 1 | 020N0060-1 | Conserver Face Mask | |
| 027N1102- | -6 | - | - | - | - | Conserver with Cannula/Microphon Inline Regulator, Kit | e Face Mask, |
| | | Figure 16 | 1 | 1 | 027N1002-1 | Conserver, Inline Regulator Assembly, CPC | |
| | | F: 40 | 2 | 1 | 020N0050-1 | Conserver (Dual Lumen) Cannula | |
| | | Figure 16 | 2 | | | | |

Title Page Rights Apply

FAA Approval Date: __1/31/2017

Page 26 of 36

Effective

63354 POWELL BUTTE ROAD BEND, OR 97701 800-547-2558 www.preciseflight.com

Document Number:

102NMAN0003

Revision Number:

G

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS – STC SA01708SE

Cirrus Design SR22/SR22T Built-In Oxygen System

3.4 OVERHEAD DISTRIBUTION MANIFOLD INSTALLATION

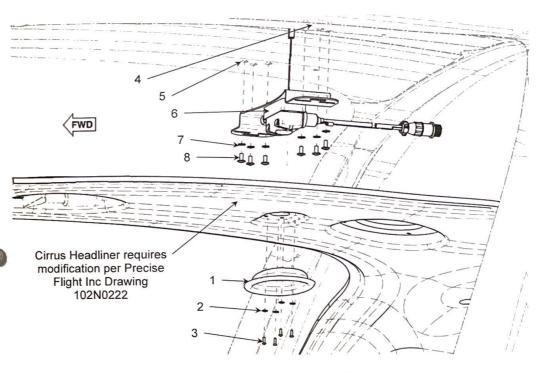


Figure 17 - Overhead Distribution Manifold

| Fig. | Item | PFI Part Number | Nomenclature | Effective |
|-----------|------|---------------------------|---|------------|
| Figure 17 | 1 | 102N0221-1 | Manifold Trim Ring | All |
| Figure 17 | 2 | HD 07091 | #4 Black Oxide Washer | All |
| Figure 17 | 3 | HD 07090 | 4-40 x 3/8 Button Head Cap Screw, Black Oxide | All |
| Figure 17 | 4 | EL 03046 CDC 50379-002 | Copper Foil Tape, Tin Plated 4" | All |
| Figure 17 | 5 | NAS1329A3-80 | Insert | All |
| Figure 17 | 6 | 102N0232-1 OR | 4 port Manifold and Bracket Assembly | 4 port A/C |
| | | 102N0235-1 | 5 port Manifold and Bracket Assembly | 5 port A/C |
| Figure 17 | 7 | MS 35335-32 | #10 Ext. Star Lock Washer | All |
| Figure 17 | 8 | AN525-10R7 | 10-32 x 7/16 Washer Head Machine Screw | All |

Document Number: 102NMAN0003

Revision Number:

G

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS - STC SA01708SE

Cirrus Design SR22/SR22T Built-In Oxygen System

3.5 OXYGEN LOW PRESSURE LINE INSTALLATION

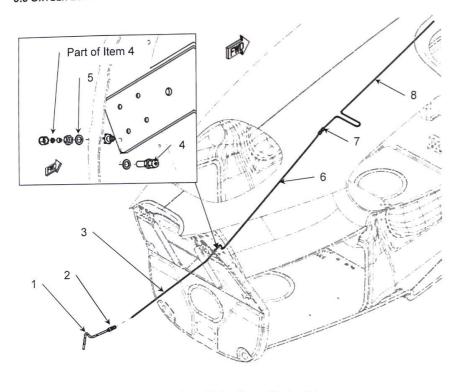


Figure 18 - Low Pressure Line Installation

| Fig. | Item | PFI Part Number | Nomenclature | Effective |
|-----------|------|------------------------|---------------------------------|-----------|
| Figure 18 | 1 | 102N0253-1 | Flexible Tubing Sub-Assembly | All |
| Figure 18 | 2 | HD 07107 | Fitting, Reducing Union | All |
| Figure 18 | 3 | 102N0252-1 | Aft Fuselage Low Pressure Line | All |
| Figure 18 | 4 | HD 06057 | Bulkhead Union Fitting | All |
| Figure 18 | 5 | NAS1149F0632P | 3/8ID x 5/8OD Washer | All |
| Figure 18 | 6 | 102N0251-2 | Aft Cabin Low Pressure Line | All |
| Figure 18 | 7 | HD 07094 | Fitting, 3/16 Comp Union | All |
| Figure 18 | 8 | 102N0251-1 | Forward Cabin Low Pressure Line | All |

Title Page Rights Apply

FAA Approval Date: _1/31/2017

Page 28 of 36

63354 POWELL BUTTE ROAD BEND, OR 97701 800- 547-2558

800- 547-2558 www.preciseflight.com 102NMAN0003

Number: Revision Number:

Document

G

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS – STC SA01708SE

Cirrus Design SR22/SR22T Built-In Oxygen System

3.6 OXYGEN BOTTLE INSTALLATION

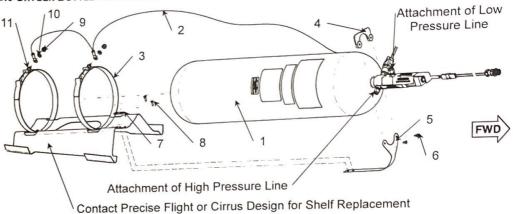


Figure 19 - Bottle Installation

| Ei. | Item | Part Number | Nomenclature | Effective |
|-------------------|------|------------------|--|-------------|
| Fig. Figure 19 | 1 | 100N0020-4 w/ | Bottle Assembly, 77cuft, Remote Fill, 70psig1 | 4 port |
| rigule 19 | - 1 | 099N0024-1 or | Bottle / Boernery; 11 card, 11 | manifold |
| | | 100N1020-4 | | A/C only |
| | | Regulator | | |
| Figure 19 | 1 | 100N0020-5 w/ | Bottle Assembly, 77cuft, Remote Fill, SAE, 70psig1 | 4 port |
| rigure 15 | | 099N0025-1 or | | manifold |
| | | 100N1020-5 | | A/C only |
| | | Regulator | | |
| Figure 19 | 1 | 100N0020-4 w/ | Bottle Assembly, 77cuft, Remote Fill, 70psig1 | 4 or 5 port |
| i igaio io | • | 099N0024-2 | ,, | manifold |
| | | Regulator | | |
| Figure 19 | 1 | 100N0020-5 w/ | Bottle Assembly, 77cuft, Remote Fill, SAE, 70psig1 | 4 or 5 port |
| 3 | | 099N0025-2 | 50.000 | manifold |
| | | Regulator | | |
| Figure 19 | 2 | 102N0006-1 | Cirrus Fixed Oxygen System – Ground Strap | All |
| Figure 19 | 3 | 102N0120-1 | Band Clamp Assembly, 77cuft Bottle | All |
| Figure 19 | 4 | CDC 16524-002 | U-Clamp, Oxygen Bottle | All |
| Figure 19 | 5 | CDC 16523-001 | Strap, Oxygen Bottle | All |
| Figure 19 | 6 | MS27039-0805 | Screw, Pan Head Structural #8-32 | All |
| _ | | NAS1149FN832P | Washer, 0.32" Thick | |
| Figure 19 | 7 | CDC 16522-001 | Pad, Aluminum, Oxygen Bottle | All |
| Figure 19 | 8 | MS24694S5 | Screw, Counter Sunk, Structural #8-32 | All |
| | | MS21083N08 | Nut, #8-32 | |
| | | NAS1149FN832P | Washer, 0.32" Thick | |
| Figure 19 | 9 | (Part of item 3) | 1/4-28 Nylock Nut | All |
| Figure 19 | 10 | (Part of item 3) | AN960-4R - 1/4 Washer | All |
| Figure 19 | 11 | (Part of item 3) | AN316-4R - 1/4-28 Nut | All |

63354 POWELL BUTTE ROAD BEND, OR 97701 800-547-2558

Document Number:

102NMAN0003

www.preciseflight.com

Revision Number:

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS - STC SA01708SE

Cirrus Design SR22/SR22T Built-In Oxygen System

1 – Bottle assembly is available in NPT or SAE ports for the filler line and low pressure outlet connections, and standard or high flow regulators. Verify part number prior to ordering a replacement.

3.7 DISPLAY/LOGIC ASSEMBLY INSTALLATION

NOTE:

The Cirrus Built-In Oxygen System has three (3) display/controller configurations. When replacing components take extra care to make sure the correct part is ordered or replaced per the Precise Flight, Inc. installation drawings.

3.7.1 DISPLAY AND CONTROLLER INSTALLATIONS - STANDARD INSTALLATION

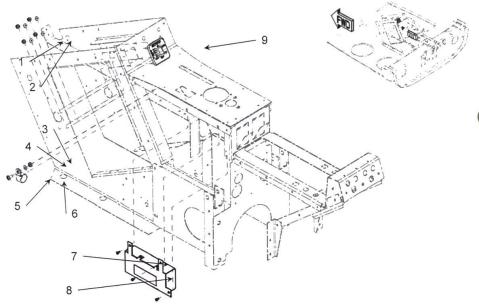


Figure 20 - Display and Logic Assembly Installation

| Fig. | Item | PFI Part Number | Nomenclature | Effective |
|-----------|------|-----------------|--|-----------|
| Figure 20 | 1 | AN365-632A | 6-32 Nylock Nut | All |
| Figure 20 | 2 | AN960-6 | #6 Flat Washer | All |
| Figure 20 | 3 | AN365-1032A | 10-32 Nylock Nut | All |
| Figure 20 | 4 | AN960-10L | #10 Flat Washer 0,032 THK. | All |
| Figure 20 | 5 | AN525-10R7 | 10-32 x 0.4375L Washer Head Machine Screw | All |
| Figure 20 | 6 | MS21919-DG6 | #6 Adel Clamp With Cushion | All |
| Figure 20 | 7 | 100N2020-3 | Display Logic Assembly, Remote - Low Profile | All |
| Figure 20 | 8 | MS35206-213 | Screw 4-40 x 1/4 PH HD | All |
| Figure 20 | 9 | 100N2120-2 | Display Assembly, Low Resolution | All |

Special care must be taken when replacing the Display Logic Assembly, and/or the Display Assembly to make sure they are compatible with the wire harness.

Title Page Rights Apply

FAA Approval Date: _1/31/2017

Page 30 of 36

63354 POWELL BUTTE ROAD BEND, OR 97701 800-547-2558 www.preciseflight.com

Document Number:

102NMAN0003

Revision Number:

G

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS - STC SA01708SE

Cirrus Design SR22/SR22T Built-In Oxygen System

3.7.2 DISPLAY AND CONTROLLER INSTALLATIONS - RIBBON CABLE

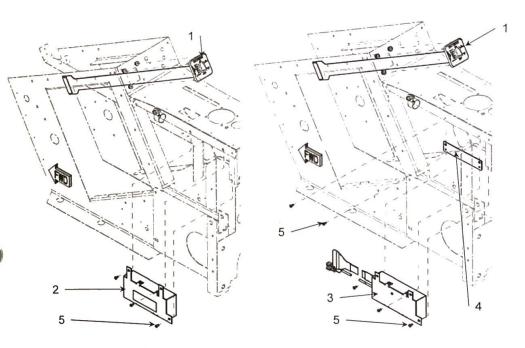


Figure 21 - Alternate Display and Logic Assembly Installations

| Fig. | Item | PFI Part Number | Nomenclature | Effective |
|-----------|------|-----------------|--|-----------|
| Figure 21 | 1 | 100N2120-1 | Display Assy, Low Resolution, with Ribbon Cable | All |
| Figure 21 | 2 | 100N2020-3 | Display Logic Assy, Remote - Low Profile | All |
| Figure 21 | 3 | 100N2020-1 | Display Logic Assy, Remote - Low Profile, Slide Lock | All |
| Figure 21 | 4 | 102N0320-1 | Spacer Plate Adapter | All |
| Figure 21 | 5 | MS35206-213 | Screw, 4-40 x 1/4 PH HD | All |

Special care must be taken when replacing the Display Logic Assembly, and/or the Display Assembly to make sure they are compatible with the wire harness. If a direct part number replacement is not available, contact Precise Flight Inc. with part numbers for the Wire Harness, Display, and Display Logic Assembly. (New installations are in the Figure 20 configuration)

Document Number:

102NMAN0003

Revision Number:

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS - STC SA01708SE

Cirrus Design SR22/SR22T Built-In Oxygen System

3.7.3 DISPLAY AND CONTROLLER INSTALLATION - CIRRUS PERSPECTIVE

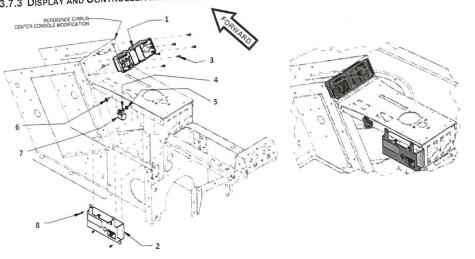


Figure 22 - Display and Logic Assembly Installations - Cirrus Perspective

| | | 251 2 4 November | Nomenclature | Effective |
|------------|------|------------------|--------------------------------------|------------|
| Fig. | Item | PFI Part Number | | See Note 1 |
| | | 051A0330-1 | IFS Panel Assy 104 - Flap, Oxygen | |
| Figure 22 | 1 | OR | | See Note 2 |
| i iguio == | | 051A0330-2 | IFS Panel Assy., 110 - Flap, Oxygen | |
| Figure 22 | 2 | 100N2030-1 | Display Logic Assembly, MFD | All |
| | 2 | MS24693BB28 | 6-32 x 1/2" 100° Black Machine Screw | All |
| Figure 22 | 3 | AN960-10L | #10 Flat Washer 0.32 Thk. | All |
| Figure 22 | 4 | | 10-32 Nylock Nut | All |
| Figure 22 | 5 | AN364-1032A | 10-32 Nylock Nut | All |
| Figure 22 | 6 | AN525-10R7 | Screw, 10-32 x 7/16 Washer HD | All |
| Figure 22 | 7 | NAS1712D4-19S | Clamp, Cushioned Loop | |
| Figure 22 | 8 | MS35206-213 | Screw, 4-40 x 1/4 PN HD | All |

Notes:

- 1. MODEL SR22T S/N's 0001 THRU 0441 MODEL SR22 S/N's 3026 THRU 3914
- 2. MODEL SR22T S/N's 0442 & SUBSEQUENT MODEL SR22 S/N's 3915 & SUBSEQUENT
- 3. Special care must be taken when replacing the Display Logic Assembly, and/or the Display Assembly to make sure they are compatible with the wire harness. If a direct part number replacement is not available, contact Precise Flight Inc. with part numbers for the Wire Harness, Display, and Display Logic Assembly.

Title Page Rights Apply

FAA Approval Date: 1/31/2017

Page 32 of 36

63354 POWELL BUTTE ROAD BEND, OR 97701 800-547-2558 www.preciseflight.com

Document Number:

102NMAN0003 G

Revision Number:

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS – STC SA01708SE

Cirrus Design SR22/SR22T Built-In Oxygen System

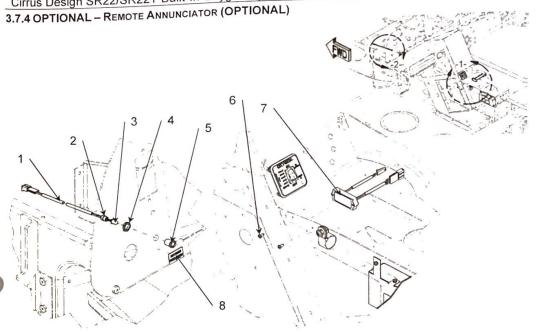


Figure 23 - Remote Annuciator

| Fig. | Item | PFI Part Number | Nomenclature | Effective |
|-----------|------|------------------------|---|-----------|
| Figure 23 | 1 | 102N0008-2 | Annunciator Wire Harness | All |
| Figure 23 | 2 | Part of Item 1 | LED Lamp Holder, Black, Holder Retainer | All |
| Figure 23 | 3 | Part of Item 1 | LED, Amber (EL03021) | All |
| Figure 23 | 4 | Part of Item 1 | LED Lamp Holder, Black, Nut | All |
| Figure 23 | 5 | Part of Item 1 | LED Lamp Holder, Black, Bezel | All |
| Figure 23 | 6 | MS 35206-213 | Screw, 4-40 x 1/4 PN HD | All |
| Figure 23 | 7 | 010A0101-1 | LED Annunciator, Driver Assembly | All |
| Figure 23 | 8 | 102N0051-1 | Placard, Annunciator Dash, Oxygen Required | All |
| Figure 23 | - | 010A0101-1 | Annunciator Driver Wire Harness (NOT SHOWN) | All |

Document Number:

102NMAN0003 G

Revision Number:

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS – STC SA01708SE

Cirrus Design SR22/SR22T Built-In Oxygen System

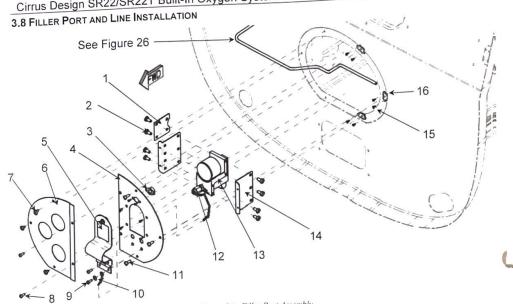


Figure 24 - Filler Port Assembly

| | | | Nomenclature | Effective |
|------------------------|----------|--------------------------|--|-----------|
| Fig. | Item | PFI Part Number | Bracket, TKS Proportioning Valve (OPTIONAL) | All |
| Figure 24 | 1 | 102N0414-1 MS 07084, | Screw, 10-32 x 3/8 WH, Cd Stl (AN525-10R6) Screw, 10-32 x ½, PHP, SS (MS51958-63) | All |
| Figure 24 | 2 | MS 07052, Or MS 07060 | Screw 10-32 x 7/16, PHP, SS (MS51958-62) | All |
| Figure 24 | 3 | HD 07104 | Receptacle, Camloc (212-12N) | All |
| Figure 24 | 4 | 102N0412-1 | Access Panel Oxygen | All |
| Figure 24 | 5 | 102N0415-1 | Door Assembly, Oxygen Filler | All |
| Figure 24 | 6 | 102N0411-1 | Access Panel, Modification See Cirrus IPC for Access Panel Screws | All |
| Figure 24 | 7 | - | Screw, 6-32 x 3/8 PHP (MS35206-228) | All |
| Figure 24 | 8 | MS 01513 | Screw, 6-32 x 3/8 PHP (MS35206-228) | All |
| Figure 24 | 9 | MS 01513 | Flat Washer, #6 (AN960-6 or NAS1149FN616P) | All |
| Figure 24 Figure 24 | 10 11 | MS 01099 MS 01708 | Screw, 8-32 x 7/16, PHP (MS35206-244) | All |
| | | Or MS 01743 | Filler Check Valve (MS22066-3) | All |
| Figure 24 | 12 | OX MI124 102N0450-1 | Remote Filler with Pressure Gage Assembly | All |
| Figure 24 | 13 | | Bracket, Remote Filler | All |
| Figure 24 | 14 | 102N0413-1 | Rivet, Blind (CCR264xS-3-0x) | All |
| Figure 24 Figure 24 | 15 16 | MS 07064 MS 01338 | Nutplate, 8-32 Floating (MS21059-L08) | All |

Title Page Rights Apply

FAA Approval Date: 1/31/2017 FAA Approval Date: 1/31/201/

Page 34 of 36 Page 32 of 36

63354 POWELL BUTTE ROAD BEND, OR 97701 800-547-2558 www.preciseflight.com

Document Number:

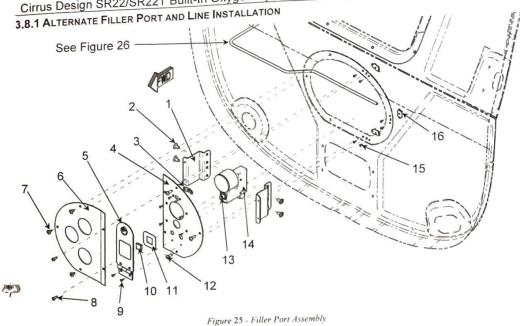
102NMAN0003

Revision Number:

G

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS – STC SA01708SE

Cirrus Design SR22/SR22T Built-In Oxygen System



| Table 3 | | | Nomenclature | Effective |
|-----------|------|-----------------|--|-----------|
| Fig. | Item | PFI Part Number | | All |
| Figure 25 | 1 | 035N1413-1 | Bracket, Remote Filler | |
| . 3- | | MS 07084, | Screw, 10-32 x 3/8 WH, Cd Stl (AN525-10R6) | All |
| Figure 25 | 2 | MS 07052, | Screw, 10-32 x ½ PHP, SS (MS51958-63) | |
| | | Or MS 07060 | Screw, 10-32 x 7/16 PHP, SS (MS51958-62) | All |
| Figure 25 | 3 | HD 07276 | Recept, 1/4 Turn, Southco (82-35-295-15 or 82-35-295-20) | All |
| Figure 25 | 4 | 102N0453-1 | Access Panel, Oxygen, Flat Door | All |
| Figure 25 | 5 | 035N0415-1 | Door Assembly, Flat - Oxygen Filler | All |
| Figure 25 | 6 | 102N0411-2 | Access Panel, Modification, wide | All |
| Figure 25 | 7 | - | See Cirrus IPC for Access Panel Screws | All |
| Figure 25 | 8 | MS 01513 | Screw, 6-32 x 3/8 PHP (MS35206-228) | All |
| Figure 25 | 9 | MS 01350 | Rivet, 3/32 x 1/4 (MS20426AD3-4) | All |
| Figure 25 | 10 | HD 07277 | Bumper, square, silicone (3592K6) | All |
| Figure 25 | 11 | 035N0425-1 | Placard, Bumper Locator | All |
| | | MS 01708 | Screw, 8-32 x 1/2 Washer Head (AN525-832R8) | All |
| Figure 25 | 12 | Or MS 01743 | Screw, 8-32 x 7/16 PHP (MS35206-244) | |
| Figure 25 | 13 | OX 020245 | Filler Check Valve (MS22066-1) | All |
| Figure 25 | 14 | 035N0210-1 | Remote Filler with Pressure Gage Assembly | All |
| Figure 25 | 15 | MS 07064 | Rivet, Blind (CCR264xS-3-0x) | All |
| Figure 25 | | MS 01338 | Nutplate, 8-32 Floating (MS21059-L08) | All |

Document Number: Revision Number: 102NMAN0003

G

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS – STC SA01708SE

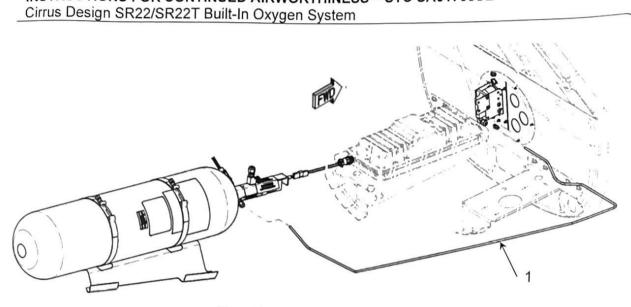


Figure 26 - High-Pressure Line Installation

| | Fig. Figure 26 | 1 | Or | Nomenclature High Pressure Oxygen Line Note: 102N0421-1 replaces 102N0420-1 and 102N0420-2. Cable tie mounts may need to be relocated for a new line installation. | Effective All |
|---|-------------------|---|------------|---|------------------|
| 8 | | | TUZNU421-1 | | 1 |

Title Page Rights Apply

FAA Approval Date: 1/31/2017



Continental Motors, Inc.