

Number: SB2X-95-27R3

Issued: 09 Jun 2021

Revised: 14 Oct 2022

SNS SUBJECT: 95-00 SPECIAL PURPOSE EQUIPMENT - Replacement of CAPS Rocket Igniter

1. COMPLIANCE

Mandatory: Cirrus considers this Service Bulletin to be MANDATORY. Accomplish this Service Bulletin within 25 flight hours or at next scheduled maintenance, whichever occurs first. Compliance time begins upon receipt of this Service Bulletin.

This Service Bulletin was revised to update Compliance, Effectivity, Material Information, and Accomplishment Instructions. Operators who have successfully complied with the original release of this Service Bulletin, dated 09 Jun 2021, or subsequent revisions, or Field Repair/Alteration 00017186, need take no further action.

WARNING: Compliance with this Service Bulletin requires maintenance of the Cirrus Airframe Parachute System (CAPS). CAPS contains explosives capable of launching projectiles, and must be serviced and maintained by trained CAPS parachute system technicians only. Failure to do so may result in damage to aircraft, serious injury to personnel, or death.

2. EFFECTIVITY

SR20 Serials 1233, 1332, 1609, 1631, 1633, 1664, 1677, 1678, 1680, 1686, 1689, 1690, 1692, 1693, 1695, 1700, 1706, 1707, 1709, 1711, 1713, 1714, 1716, 1720, 1721, 1723, 1738 thru 1741, 1743, 1744, 1747, 1763, 1764, 1767, 1782, 1787, 1788, 1790, 2290, 2327, 2328, 2330 thru 2370, and all serials that completed a parachute replacement, or replaced the rocket, from 19 May 2016 to 10 Aug 2017

SR22 Serials 1006, 1119, 1338, 1340, 1387, 1415, 1520, 1680, 1761, 1796, 1805, 1828, 1833, 1858, 1873, 1893, 1899, 1910, 1918, 1924, 1929, 1931, 1935, 1958, 1963, 1965, 1972, 1976, 1977, 1980, 1987, 1988, 1995, 1996, 2003 thru 2005, 2007, 2010, 2015, 2019, 2021, 2030, 2032, 2034, 2035, 2037, 2039, 2040, 2043, 2045, 2047, 2050, 2051, 2053, 2055, 2059 thru 2062, 2064, 2065, 2070, 2072, 2080, 2081, 2088, 2091 thru 2094, 2099 thru 2101, 2104, 2105, 2107 thru 2110, 2112, 2113, 2122, 2123, 2127, 2129, 2131, 2132, 2134, 2135, 2137, 2140, 2143, 2146, 2148, 2149, 2151, 2154 thru 2156, 2158, 2159, 2162, 2165, 2167 thru 2169, 2172, 2175, 2176, 2178, 2179, 2183 thru 2185, 2188, 2189, 2192 thru 2197, 2201, 2207, 2208, 2212, 2214, 2217, 2219 thru 2221, 2223, 2229, 2230, 2231, 2235, 2243, 2249, 2254, 2258, 2261, 2263 thru 2265, 2271, 2273, 2274, 2290, 2302, 2303, 2305, 2307, 2309, 2312, 2314, 2317, 2348, 2360, 2365, 2371, 2376, 2390, 2399, 2406, 2413, 2417, 2581, 3230, 3417, 3466, 4329, 4332, 4350 thru 4367, 4369 thru 4432, 4434 thru 4441, 4443 thru 4445, 4447 thru 4476, 4478 thru 4480, 4482, 4485 thru 4498, 4500 thru 4511, 4513 thru 4523, 4527, 4544, 4638, and all serials that completed a parachute replacement, or replaced the rocket, from 19 May 2016 to 10 Aug 2017

SR22T Serials 1347, 1348, 1350 thru 1352, 1354 thru 1356, 1361, 1364, 1369 thru 1371, 1377 thru 1381, 1383, 1384, 1386 thru 1390, 1392, 1393, 1396, 1397, 1402 thru 1404, 1406, 1408 thru 1412, 1417, 1419 thru 1423, 1425, 1429, 1431, 1433 thru 1435, 1437, 1438, 1441, 1443 thru 1468, 1470 thru 1472, 1475 thru 1513, 1515 thru 1523, 1525, 1527 thru 1553, 1555 thru 1558, 1560 thru 1563, 1566 thru 1570, 1572 thru 1583, 1585, 1587 thru 1596, 1620, and all serials that completed a parachute replacement, or replaced the rocket, from 19 May 2016 to 10 Aug 2017

3. APPROVAL

FAA approval has been obtained on all technical data in this Service Bulletin that affects type design.

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4. PURPOSE

Cirrus Aircraft has become aware of a possible condition associated with the Cirrus Airframe Parachute System (CAPS) equipped with electronic ignition system, introduced in 2013, that may affect its operation. This Service Bulletin reflects Cirrus Aircraft’s long-standing commitment to safety and transparency.

On affected aircraft, the CAPS rocket igniter assembly must be inspected for voltage / resistance readings, and replaced.

5. DESCRIPTION

This Service Bulletin contains instructions for the inspection and subsequent replacement of the CAPS rocket igniter assembly.

6. WARRANTY INFORMATION

Cirrus will cover all parts and labor costs for this Service Bulletin if the work is accomplished within the Compliance time period and the work is performed at a Cirrus Authorized Service Center. **The Warranty Claim Form, along with the Electrical Readings Worksheet linked below in Step 11.K, must be properly filled out and submitted to Cirrus in order to obtain a warranty credit.**

7. MANPOWER REQUIREMENTS

4.0 man-hours

8. OTHER PUBLICATIONS AFFECTED

N/A

9. WEIGHT AND BALANCE

N/A

10. MATERIAL INFORMATION

The following part is required to comply with this Service Bulletin. Part can be obtained from a Cirrus Authorized Service Center or Parts Distributor. Obtain the following part.

Item No.	Description	P/N or Spec.	Supplier	Quantity
1	CAPS Rocket Igniter Assembly	29556-001	Cirrus	1
2	Aluminum Screws	21914-001	Cirrus	2
3	Nylon Screws	26675-001	Cirrus	3
4	O-ring	53184-021	Cirrus	1

11. ACCOMPLISHMENT INSTRUCTIONS

A. Acquire necessary tools, equipment, and supplies.

Description	P/N or Spec.	Supplier	Purpose
Catch Cloth	-	Any Source	Protect work area.
Nitrile Gloves	-	Any Source	Handle CAPS rocket igniter assembly.

B. Remove key from ignition.

C. Set BAT 1, BAT 2, and AVIONICS switches to OFF positions.

CAUTION: Ensure hands are clean while working with interior trim components.

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- D. Remove CAPS handle access cover and install safety pin.
- E. Remove bulkhead 222 trim panel and carpet. (Refer to AMM 25-10)
- F. Remove access panel CB6 and CB7 from bulkhead 222. (Refer to AMM 6-00)
- G. Remove access panel RE3. (Refer to AMM 6-00)
- H. To prevent debris and components from falling into bottom of empennage, place catch cloth below rocket and parachute assembly.

WARNING: Activation of rocket igniter requires 25 lb (11.25 kg) pull force. Use caution during procedures to not introduce any unnecessary pulling force on the activation cable. Activation of the rocket igniter may result in damage to aircraft, serious injury to personnel, or death.

- I. Perform "Electric Ignition Checkout Procedure" detailed in Inspection/Check - Cirrus Airplane Parachute System. (Refer to AMM 95-00)

Note: Document all readings taken during the Electric Ignition Checkout Procedure. Results should be provided to Cirrus following performance of this Service Bulletin.

To facilitate data collection, print the worksheet linked below and fill in the blank fields as directed by the AMM.

- J. Inspect CAPS rocket shelf for presence of ground wire installed in accordance with SB2X-95-24 or during manufacturing.
- K. Submit results of electric ignition checkout inspection and ground wire inspection to Cirrus at:
https://cirrusaircraft.formstack.com/forms/worksheet_service_bulletin_sb2x9527
- L. Replace CAPS rocket igniter assembly.

WARNING: CAPS contains explosives capable of launching projectiles, and must be serviced and maintained by trained CAPS parachute system technicians only. Failure to do so may result in damage to aircraft, serious injury to personnel, or death.

Airframe and Powerplant license alone is not sufficient credentials for performing CAPS maintenance.

The rocket assembly is a life limited component. Replacement of the CAPS rocket igniter assembly does NOT restart life limit of the entire rocket assembly.

Note: Document all serial/lot numbers identified during CAPS rocket igniter assembly replacement. Information should be provided to Cirrus following performance of this Service Bulletin.

- (1) Remove CAPS rocket. Discard existing aluminum and nylon screws. (Refer to CAPS CMM 95-01-01)
 - (2) Remove, shunt, and retain CAPS rocket igniter assembly. (Refer to CAPS CMM 95-01-01)
 - (3) Install new CAPS rocket igniter assembly ([item 1](#)) and o-ring ([item 4](#)). (Refer to CAPS CMM 95-01-01)
 - (4) Install CAPS rocket using new aluminum ([item 2](#)) and nylon ([item 3](#)) screws. (Refer to CAPS CMM 95-01-01)
 - (5) Perform Inspection/Check - Cirrus Airplane Parachute System. (Refer to AMM 95-00)
- M. Remove catch cloth from below CAPS compartment.
 - N. Visually inspect CAPS compartment for security, leaks, loose or missing hardware, moisture, and general condition. (Refer to AMM 5-20)
 - O. Install access panel RE3. (Refer to AMM 6-00)

- P. Install access panel CB6 and CB7 to bulkhead 222. (Refer to AMM 6-00)
- Q. Install bulkhead 222 trim panel and carpet. (Refer to AMM 25-10)
- R. Return removed CAPS rocket igniter assembly to Vulcan Systems, Inc. as follows:

CAUTION: Do not render the igniter inert (fired) prior to shipment. Doing so will negate any testing to be performed by Vulcan Systems, Inc.

- (1) Retain all internal and external packaging that was received from Cirrus with replacement igniter.

WARNING: To avoid skin irritation, wear nitrile gloves while handling the igniter as it is possible, but unlikely, that slight residue of BKNO3 dust may exist on the surface of the piccolo tube portion of the igniter.

- (2) Once CAPS rocket igniter assembly has been removed from bulkhead end of rocket motor, ensure igniter electrical wires are shunted to facilitate safe handling and transport of igniter.

WARNING: Do not disassemble any portion of CAPS rocket igniter assembly. Disassembly may inadvertently ignite the propellant, which may result in burns to personnel.

- (3) Using packaging from Cirrus that accompanied replacement CAPS rocket igniter assembly:
- Place igniter into pink anti-static sleeve.
 - Place sleeve into cardboard tube.
These are "inner pack" requirements to ship igniter.
- (4) Re-use UN 4G/4GV outer box from Cirrus and place tube containing igniter into outer box.
- (5) Seal packaging as specified by instructions on box.
- (6) Ensure orange 1.4G placard is intact (or replace as needed) and label as standard Hazmat shipment.
- (7) Ensure shipping documents provided to driver and attached to box include:
- Vulcan Systems SDS for igniter (See attached copy)
 - Vulcan Systems DOT Competent Authority (See attached copy)
- (8) Ensure Competent Authority and UN Numbers referenced on your FedEx Hazmat declarations and labels are:
- EX Number: EX-1998090143
 - UN Number: UN-0325: Igniters
- (9) Ensure net explosives weight for shipment is 0.1 lb (45.4 g).
- (10) Return shipment to:
ATTN: Mark Thomas
Vulcan Systems, Inc.
255 Moore Drive
Florence, CO 81226

- S. Complete airplane records by noting compliance with SB2X-95-27R3 in Aircraft Logbook.

To submit a Technical Publication change request, visit:
http://servicecenters.cirrusdesign.com/tech_pubs/SR2X/serviceform.asp