



U.S. Department
of Transportation

Federal
Aviation
Administration

Airworthiness Concern Sheet

Date: August 14, 2026

Reply to: Name: Ramanpreet Singh Title: Aviation Safety Engineer Office: AIR-755 Street Address: 1701 Columbia Ave City, State, ZIP: College Park, GA 30337 Telephone: (516) 228-7300 Electronic Mail: ecb-cos@faa.gov	Make: Tempest Aero Group Model / Series: N/A Serial Numbers: N/A Reason for Airworthiness Concern: Cracking of Tempest Spark Plugs at Hot lock Assembly
Federal Aviation Administration (FAA) Description of Airworthiness Concern On July 27, 2026, the FAA received notification of a failed Tempest spark plug, part number (PN) UREM38E, which was discovered following an event of engine roughness and subsequent partial loss of power. Service Difficulty Report (SDR) ECPR20260731001 is enclosed for reference. Further inspection by the operator revealed full separation between the spark plug's seat and hexagonal nut, also known as the hot lock assembly. The FAA identified similar SDRs which were recently submitted to report circumferential cracking on new or low time Tempest spark plugs. Upon notification of the issue, Tempest released <u>Service Bulletin (SB)-012</u> dated August 7, 2026, which is also provided as an enclosure. The service bulletin recommends immediate visual inspection before further flight of Tempest spark plugs manufactured between May 5, 2026 through July 29, 2026, and provides a list of suspect part and lot numbers. The service bulletin also provides illustrations of the suspect area to inspect for cracking, which is also shown in Figure 1. Failed spark plugs may lead to damage to the engine, possible loss of power, and subsequent loss of control of the aircraft. The FAA is currently investigating this concern.	
Request for Information The FAA is interested in receiving information related to both positive and negative findings of Tempest spark plug cracks following inspections detailed in SB-012. Please report your findings to the FAA point of contact, including: • Tempest spark plug PN, lot number, and date of manufacture • Time in service of the spark plug (hours and cycles, if any) • Description of any cracks found, including the location and photographs • Recommended inspection techniques to locate the cracks • Engine installation details, including make and model Please also provide any additional information that may assist in our evaluation of this issue	

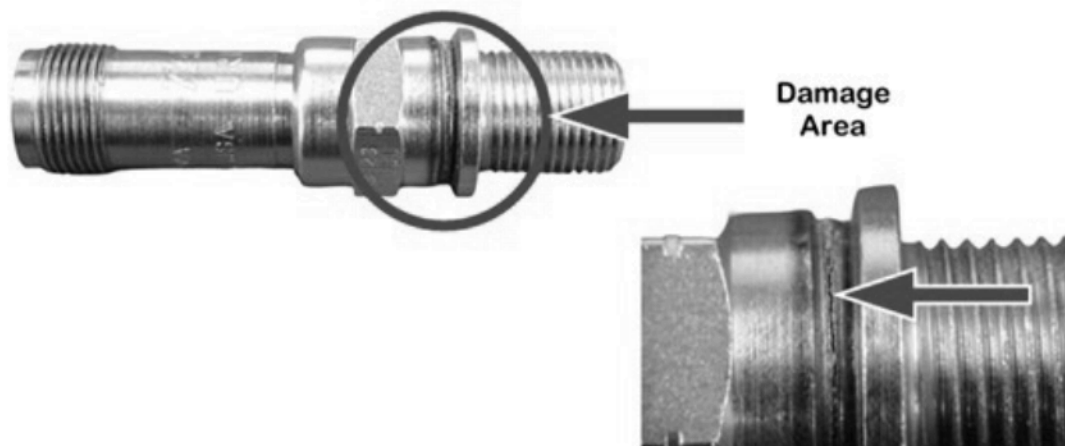


Figure 1: The suspected area of damage on the spark plugs

This Airworthiness Concern Sheet (ACS) is intended as a means for FAA Aviation Safety Engineers to coordinate airworthiness concerns with aircraft owners/operators through associations and type clubs. At this time, the FAA has not made a determination on what type of corrective action (if any) should be taken. The resolution of this airworthiness concern could involve Airworthiness Directive (AD) action or a Special Airworthiness Information Bulletin (SAIB), or the FAA could determine that no action is needed at this time. The FAA's final determination will depend in part on the information received in response to this ACS. The FAA endorses dissemination of this technical information to all manufacturers and requests association and type club comments.

Attachments:

- ☒ Service Difficulty Report
- ☐ Accident/Incident Data System
- ☒ Service Letter / Bulletin
- Special Airworthiness Information Bulletin
- ☐ Federal Aviation Administration or National Transportation Safety Board Safety Recommendation
- ☐ Airworthiness Directive
- ☐ Alternate Means of Compliance
- ☐ Risk Analysis

Transmittal:

- ☒ Federal Aviation Administration
- ☒ Airplane Owners and Pilots Association
- ☒ Experimental Aircraft Association
- ☒ Type Club
- ☒ Type Certificate Holder
- ☐ Other:

Response Requested By:

- ☒ Emergency (10 days)
- ☐ Alert (30 days)
- ☐ Information (90 days)

Service Difficulty Report

1. Submitter Information

(a) Unique Control #: ECPR20260731001 (b) Difficulty Date: 07/27/2026
(c) Registration # : 555PU (d) Submitter Type : B - REPAIR STATION PART 145
(e) Submitter Designator: ECPR (f) Submission Date: 7/31/2026 2:31:49 PM

2. Codes

(a) Operator Designator : ECPS (b) Operator Type : General Aviation
(c) JASC/ATA Code : 7421
(d) Stage of Operation : IN - INSP/MAINT
(e) How Discovered : V - Visual
(f) Nature of Condition : O - OTHER
(g) Precautionary Procedures: K - NONE
(h) FAA Region : SO (i) District Office : 15

3. Major Equipment Identity

	Manufacturer	Model	Serial Number	Total Time	Total Cycles
(a) Aircraft	PIPER	PA28161	2842092	17951	
(b) Engine	LYC	O320D3G	RL1006039E	5668	
(c) Propeller	SNSNCH	74DM	A63582	5422	

4. Problem Description

A SPARK PLUG WAS REPLACED DURING A SCHEDULED MAINTENANCE INSPECTION. DURING THE POST-MAINTENANCE OPERATIONAL CHECK, THE ENGINE SUDDENLY DEVELOPED ROUGHNESS AND A PARTIAL LOSS OF POWER. SUBSEQUENT INSPECTION FOUND THE SPARK PLUG HAD COMPLETELY SEPARATED INTO TWO PIECES AT A POINT BETWEEN THE SPARK PLUG GASKET BOSS AND THE HEXAGONAL NUT PORTION (WHAT TEMPEST REFERS TO AS THE HOT LOCK ASSEMBLY). THIS CAUSED A LOSS OF COMPRESSION ON THAT CYLINDER AND IGNITION FAILURE OF THAT SPARK PLUG. A PRECAUTIONARY CHECK OF SPARK PLUGS IN HELD IN STOCK DISCOVERED FOUR SPARK PLUGS WITH CRACKING IN THIS AREA (STILL SEALED IN SEALED FACTORY PLASTIC SLEEVES. THE SPARK PLUGS WERE FROM LOT # 1VGM.

5. Specific Part or Structure Causing Difficulty

(a) Part Name : SPARK PLUG (b) Manufacturer's Name :
(c) Part Number : UREM38E (d) Serial Number :
(e) Part Condition: CRACKED (f) Part/Defect Location: ZONE 400
(g) Total Time : (h) Total Cycles :
(i) Time Since : INSPECTION

6. Component/Assembly That Includes Defective Part

(a) Component Name: CYLINDER (b) Manufacturer's Name : LYC
(c) Part Number : LW12416 (d) Serial Number :
(e) Model Number : (f) Location : ENGINE
(g) Total Time : 5668 (h) Total Cycles :
(i) Time Since : INSPECTION

7. Structure Causing Difficulty

(a) Body or Fuselage Station - From/At: To:
(b) Water Line - From/At: To:
(c) Crack Length : (d) Number of Cracks:
(e) Stringer - From/At: To:
(f) Butt Line - From/At: To:
(g) Wing Station - From/At: To:
(h) Structural Other: (i) Corrosion Level :

----- End Of Report -----

SERVICE BULLETIN SB-012**August 7th, 2026**

Procedures specified in this service bulletin must be accomplished in accordance with accepted methods of aircraft maintenance and applicable government regulations. Appropriate logbook entries must be made.
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TO: Aircraft Owners and Operators, Engine Overhaul Facilities, Engine Maintainers, Engine Manufacturers

SUBJECT

This Service Bulletin describes a potential cracking problem in specific lot numbers of Tempest® Spark Plugs manufactured between May 5, 2026 and July 29, 2026. It recommends immediate inspection of the affected spark plugs prior to your next flight and replacement of any cracked spark plugs. No action is required for Tempest® Spark Plugs purchased prior to May 5, 2026.

REASON

There have been limited reports of spark plugs exhibiting cracks. Failure to detect and replace a cracked spark plug could potentially result in damage to the airplane engine and possible loss of power.

SCOPE

This Service Bulletin applies to all Tempest® spark plugs bearing the part numbers and corresponding lot codes listed in Table 1 (page 2), regardless of date of installation, engine model, or airframe application. This is the original issue of SB-012.

BACKGROUND

There have been field reports of cracks in Tempest® spark plugs. The area of damage is shown in Figures 1 & 2.

This condition has not previously been observed or reported in our production history. Upon notification of the issue, Tempest Aero Group initiated an investigation and identified the root cause. Tempest Aero Group has implemented the necessary corrective action to the manufacturing and inspection processes and is issuing this Service Bulletin to address any affected in-service spark plugs.

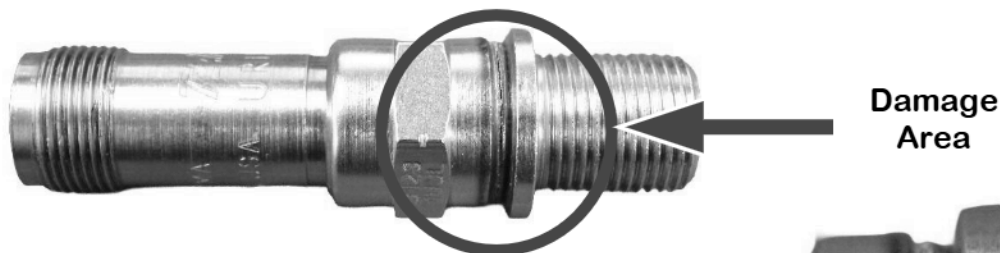


Figure 1

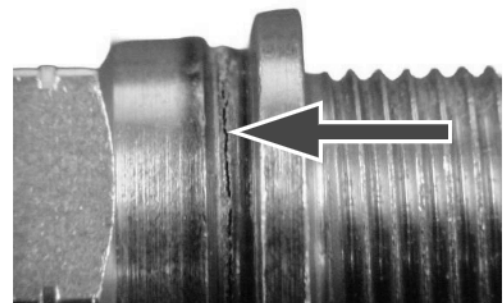


Figure 2

SERVICE BULLETIN SB-012

August 7th, 2026

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PART NUMBERS AFFECTED

Table 1 below contains potentially affected lot codes.
Confirmed cracks have been identified in boxed lot codes.

Part Number	Lot Number
UREB36S	1UJM
UREB37E	1VA1
UREM37BY	1UJG, 1UY9
UREM38E	1UVU, 1VGM, 1VX7
UREM38S	1U6U, 1VU5
UREM40E	1V42, 1VYR, 1V8X
URHB32E	1VA3, 1VF6
URHB32HS	1U70
URHB32S	1UJH
URHB36S	1UJL, 1V7R
URHB37E	1VGN
URHM38E	1UHG, 1UNL
URHM38S	1U6W
URHM40E	1V39, 1VRC

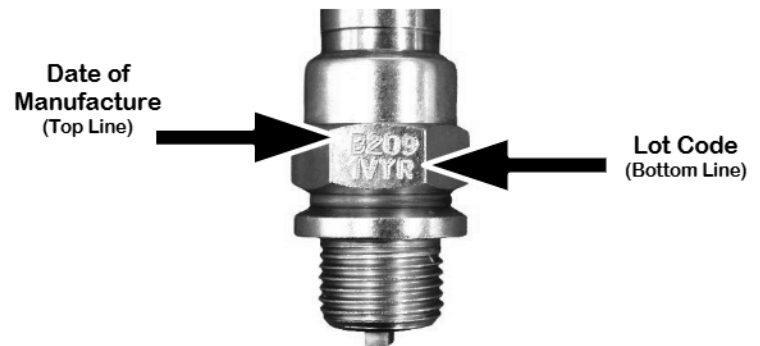


Figure 3

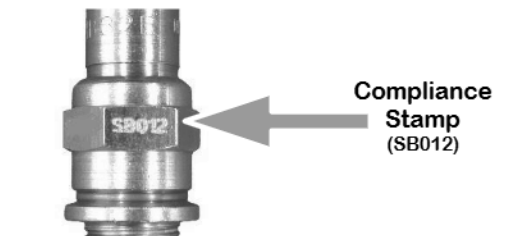


Figure 4

IDENTIFICATION METHODS

Visually inspect the spark plug for lot code per Figure 3. The lot code is stamped on the hex of the spark plug body as shown. Compare the stamped lot code to the affected part numbers and lot numbers listed in Table 1. Physical inspection of spark plugs is required. Remove from engine as required to confirm part number a lot code.

COMPLIANCE

Tempest strongly recommends immediate compliance with this Service Bulletin prior to any further flights.

Inspections and maintenance must be accomplished in accordance with any applicable aviation regulations, aircraft maintenance manuals, engine manuals, and Tempest® Spark Plugs Installation and Maintenance Manual document 1710A Revision E (or later).

ESTIMATED COMPLIANCE TIME

Estimated time to accomplish this Service Bulletin is 1.5 hours for 4-cylinder engines and 2 hours for 6-cylinder engines including removal, inspection, and reinstallation. Actual time may vary by aircraft/engine installation.

APPROVAL

Technical portions are FAA approved.



Tempest Aero Group
2208 Air Park Drive
Burlington, NC 27215
800.822.3200 (Toll Free)
336.449.5054 (Outside USA)

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INSTRUCTIONS

1. Determine if a spark plug is included in the affected lots (Table 1) using a visual inspection as shown in Figure 3 or by referencing an FAA 8130 from the latest spark plug installation as shown in Figure 5.
2. If no affected spark plugs are found to be installed or in inventory, make a log entry in the aircraft's maintenance records noting compliance with this Service Bulletin and stating that no affected spark plugs were discovered.
3. If an affected spark plug is found to be installed, remove the affected spark plug(s) from the engine and visually inspect for cracks as shown in Figures 1 and 2. Similarly, inspect any affected spark plugs in inventory.
4. If no cracks are found, reinstall spark plug(s), return the aircraft to service via the appropriate maintenance manuals and make a log entry noting compliance with this Service Bulletin.
5. If cracks are found, replace the spark plug(s). If replacing with new Tempest® spark plug(s), verify the new spark plugs carry compliance stamp SB012 as shown in Figure 4 or are outside the part number and lot numbers listed in Table 1 above.
6. Return the aircraft to service via the appropriate maintenance manuals and make a log entry noting compliance with this Service Bulletin.

1. Approving Civil Aviation Authority/Country FAA / UNITED STATES		2. AUTHORIZED RELEASE CERTIFICATE FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG				3. Form Tracking Number: 113137	
4. Organization Name and Address: Aero Accessories, LLC - 2208 Air Park Drive - Burlington NC 27215 FAA-PMA PQ1208CE YV4R688M						5. Page 1 of 1	
6. Item 1	7. Description See Block 12	8. Part Number See Block 12	9. Quantity See Block 12	10. Serial Number None - Block 12	11. Status / Work NEW		
12. Remarks PARTS LISTED ARE NOT CRITICAL COMPONENTS. Quantity Description Part Number Serial # or Lot # 200 5/8 24 TIT ROAD MASSIVE ELECTRODE UREM37BY 1W7K							
13a. Certifies the items specified above were manufactured in conformity to: ☒ Approved design data and are in condition for safe operation ☐ Non-approved design data specified in Block 12							
13b.		13c.					
13d.		13e. Date (dd/mm/yyyy) 20/Aug/2026					
It is important to understand that the issuance of this document alone does not automatically constitute authority to install the aircraft engine component listed. When the user/installer performs work in accordance with the national regulations of airworthiness authority different from the aircraft base authority of the country specified in Block 1, it is assumed that the user/installer assumes that the national authority accepts aircraft engine(s) production/article(s) from the aircraft base authority of the country specified in Block 1. Statement in Blocks 13a and 14a do not constitute installation certification in a "home state", maintenance record must be in the state/country of origin, issued in accordance with the national regulations by the user/installer before the aircraft may be flown.							

FAA Form 8130-3 (7-14)

Rev. 0052-00-012-0005

Figure 5



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RETURN OF PARTS

Our top priority is to get customers back flying. Please reach out to the SB012 Customer Service Hotline at 336-551-2182 with confirmation of lot code to request replacement spark plugs upon identifying cracks.

Cracked spark plugs must be returned directly to Tempest Aero Group. Reasonable labor costs to remove and replace spark plugs affected by this Service Bulletin and shipping costs to return product will also be reimbursed to the customer. By receiving replacement spark plugs in advance, customer agrees to return cracked spark plugs within 30 days. Failure to do so could result in billing for provided replacement spark plugs.

Tempest Aero Group
ATTN: SB-012 Compliance
2208 Airpark Drive
Burlington, NC 27215.

Please fill out the attached replacement form contained in Appendix 1 and submit along with a copy of completed logbook entry, labor invoice, and shipping receipts to SB012@tempestaero.com. Alternatively, you can fill out the form and upload the log entry, labor invoice, and shipping receipts at <https://aeroaccessories.com/SB012reimbursementform>. Reimbursement will be processed within 30 days of receipt of cracked spark plugs and completed form. Failure to complete form could result in delays with payment processing.

POINT OF CONTACT

To request replacement product or for questions related to returns or return processing/status, please contact the SB012 Customer Service Hotline at 336-551-2182.

For technical questions regarding this Service Bulletin, please contact SB012 Technical Support Hotline at 336-551-2183 or email the SB012 Technical Support Team at SB012@tempestaero.com.

DISTRIBUTION

This service bulletin has been distributed to various aviation publications and to all customers for whom Tempest Aero Group has sales records indicating the purchase of affected parts. All Tempest Aero Group bulletins may be found at www.tempestaerogroup.com. Please forward this urgent information to the current owner or operator of the affected aircraft. All persons are free to copy this information if it is copied in its entirety with no alterations or additions.