Part 21 (PAR) Event # 50439

Rep Org:	CAMERON MEASUREMENT SYSTEMS	**Notification Date / Time:**	09/09/2014 18:37 (EDT)
Supplier:	CAMERON MEASUREMENT SYSTEMS	**Event Date / Time:**	09/09/2014 (PDT)
		Last Modification:	09/09/2014
Region:	4	**Docket #:**	
City:	CITY OF INDUSTRY	**Agreement State:**	Yes
County:		**License #:**	
State:	CA		

NRC Notified by:	ISAAC RAMSINI	**Notifications:**	TODD JACKSON	R1DO
HQ Ops Officer:	DONALD NORWOOD		SCOTT SHAEFFER	R2DO
Emergency Class:	NON EMERGENCY		KENNETH RIEMER	R3DO
10 CFR Section:			RAY AZUA	R4DO
21.21(d)(3)(i)	DEFECTS AND NONCOMPLIANCE		PART 21 GROUP	EMAIL

PART 21 REPORT - DEFECTIVE BARTON DIFFERENTIAL PRESSURE SWITCHES

The following is a synopsis of information received via facsimile:

Cameron Measurement Systems has issued a product advisory concerning nuclear qualified versions of Barton Model 288A, 289A, 580A and 581A differential pressure indicating switches and blind switches and spare switch assemblies shipped from the Cameron factory.

The defect being reported is an out of specification thread on the screws that depress the switch operating plunger which can cause a change in the switch setpoint. The maximum change in screw position observed during testing equates to a switch set point change of approximately 8.4 percent of the instrument's factory calibrated span. The screws of concern did not enter the Cameron stock before February of 2014 for the ones used in the Model 580A and 581A instruments and not before June of 2014 for the ones used in Model 288A and 289A instruments.

Cameron recommends that new switch actuator arm assemblies be replaced on any unit that is evaluated to be a concern by their customers.

Notification to NRC provided by ISAAC RAMSINI, Manager Quality and Safety, (562) 321-9158.

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IE20
NMSS

Measurement Systems

Industrial Products
4040 Capitol Ave.
City of Industry, CA 90601
Tel 562-222-8440
Fax 562-222-8446
Email ms-industrial@c-a-m.com
www.c-a-m.com/flo

CAMERON

NRC Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

September 9, 2014

SUBJECT: Notification of Defect

Cameron Measurement Systems, at 4040 Capitol Ave in the City of Industry, CA 90601, is a supplier of basic components to the commercial nuclear power industry. The components of concern for this Advisory are nuclear qualified versions of the Barton Model 288A and 289A Differential Pressure Indicating Switches, Barton Model 580A and 581A Differential Pressure Indicating and Blind Switches and spare switch assemblies for these products. The defect being reported is an out of specification thread on the screws that depress the switch operating plunger which can cause a change in the switch setpoint.

The attached Product Advisory describes the defect, its applicability and the recommended remedial action.

Cameron recommends that new switch actuator arm assemblies be replaced on any unit that is evaluated to be a concern by our customers. These replacement parts are available in the Cameron stock system and will be supplied free of charge for any of the products included within the scope of this notification.

Best regards,

Isaac Ramsini

562-321-9158

Manager, Quality & Safety

Cameron Measurement Systems

CC: Chuck Rogers

Director- QA & Safety

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PRODUCT ADVISORY

Model 288A, 289A, 580A and 581A Differential Pressure Switch Defect

DATE OF ISSUE: September 9, 2014

DOCUMENT NO.: 210052426.01

ATTENTION: This Advisory is being made in accordance with requirements of 10 CFR Part 21 Reporting of Defects and Noncompliance.

If you have Barton Model 288A, 289A, 580A or 581A Differential Pressure Indicating Switches or spare switch assemblies for these products shipped from the Cameron factory please read the following notice in its entirety.

Cameron Measurement Systems, at 4040 Capitol Ave in the City of Industry, CA 90601, is a supplier of basic components to the commercial nuclear power industry. The components of concern for this Advisory are nuclear qualified versions of the Barton Model 288A and 289A Differential Pressure Indicating Switches, Barton Model 580A and 581A Differential Pressure Indicating and Blind Switches and spare switch assemblies for these products. The defect being reported is an out of specification thread on the screws that depress the switch operating plunger which can cause a change in the switch setpoint.

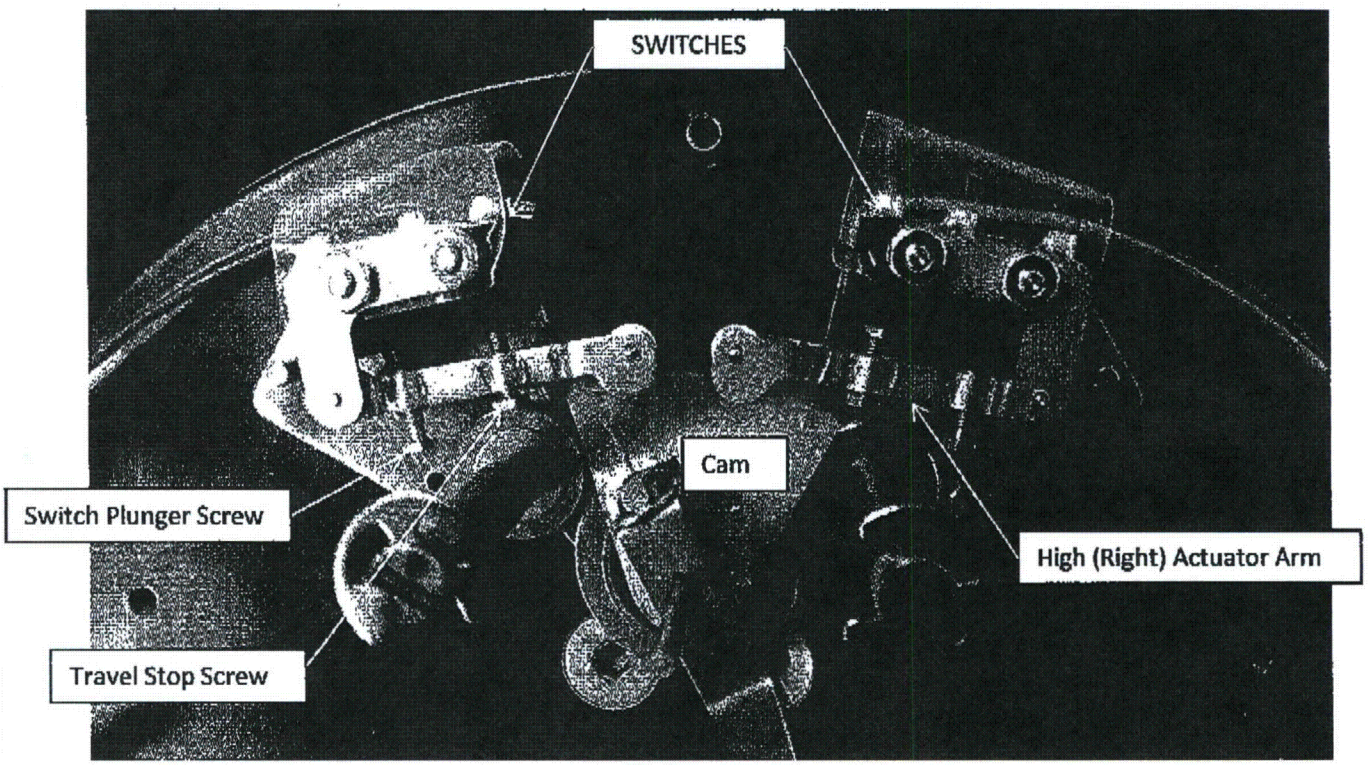
During routine receipt inspection of a recent purchase of the screws in question, some screws with undersized screw threads were discovered. During an investigation into our existing stock, Cameron discovered that the same condition also existed in some of these parts which were procured earlier this year.

Testing performed to evaluate the significance of the of the non-conforming condition revealed that the force of the miniature switch internal operating features can cause the thread "locking" material to be displaced allowing an undersized plunger screw to change its set position resulting in a change in the point where the switch will actuate (change in contact position). Screws with conforming threads did not demonstrate the same issue. The maximum change in screw position observed during this testing effort equates to a switch set point change of approximately 8.4% of the instrument's factory calibrated span.

The screws of concern did not enter the Cameron stock before February of 2014 for the ones used in the Model 580A and 581A instruments and not before June of 2014 for the ones used in Model 288A and 289A instruments. Only instruments shipped from the Cameron factory after those dates are considered to be candidates for concern. Customers with products meeting these criteria will be notified directly with model and serial numbers that may be impacted by this condition.

Cameron recommends that utilities perform increased switch set point verifications on the instruments affected by this notification. It is not possible to determine which of the switches might have nonconforming switch plunger screws. Therefore, Cameron recommends that new switch actuator arm assemblies be replaced on any unit that is evaluated to be a concern by our customers. These replacement parts are available in the Cameron stock system and will be supplied free of charge for any of the products included within the scope of this notification. The P/N's for the replacement assemblies are identified on the following page.

If you have any questions please contact Isaac Ramsini, Quality Assurance Manager, or Jim Geer, Engineering Manager, at (800) 291-3550.



MODEL 288A/289A SWITCH OPERATING MECHANISM MOCKUP
(Model 580A/581A Switch Operating Mechanism is similar)

REPLACEMENT SWITCH ACTUATOR ARM ASSEMBLY PART NUMBERS

P/N	Description
Model 288A & 289A Dual & Single SPDT Switch Actuator Arm Assemblies	
(Mild Environment, Full Functional Qualified Configurations)	
9A-C0251-0014B	Low Switch (#1, Left)
9A-C0251-0015B	High Switch (#2, Right)
Model 288A & 289A Dual & Single DPDT Switch Actuator Arm Assemblies	
(Qualification Limited to Structural / Pressure Boundary Integrity Applications)	
9A-CS401-0005Z	Low Switch (Left)
9A-CS401-0040Z	High Switch (Right)
Model 580A and 581A Switch Actuator Arm Assemblies	
(Limited Harsh Environment, Full Functional Qualified Configurations)	
9A-C0580-1111B	Low Switch (Left) & High Switch (Right)
Model 288A & 289A 3 & 4 Independently Adjustable Switch Actuator Arm Assemblies	
(Qualification Limited to Structural / Pressure Boundary Integrity Applications)	
9A-C0251-0014B	Low Switch (#1, Upper Left)
9A-C0251-0015B	High Switch (#2, Upper Right)
9A-C0251-0014B	Low Switch (#3, Lower Right)
9A-C0251-0015B	High Switch (#4, Lower Left)