

DIVERSIFIED MACHINE COMPONENTS, LLC

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6346 Eastland Road  
Brook Park, Ohio 44142  
Phone (440) 942-5701

9/2/22

US Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555-0001

Subject: This Part 21 initial notification is being submitted pursuant to the requirements of 10CFR21.21 (d)(3)(i). The following information is provided to report a defect that could lead to a potential safety hazard.

**Name and address of the individual or individuals informing the Commission.**

Diversified Machine Components  
6346 Eastland Road  
Brook Park, Ohio 44142  
Phone (440) 942-5701  
United States Of America

Howden USA Company  
2475 George Urban Blvd.  
Suite 120  
Depew, NY 14043  
United States of America

Identification of the manufacturer of the component that contains the defect

Diversified Machine Components-  
Howden Part Number 00900490-00114N  
LOCKNUT/NYLON  
INSERT 1-1/8-12 STL-ZINC NUCLEAR  
Howden PO075865

**Nature of the defect or failure to comply and the safety hazard which is created or could be created by such defect or failure to comply.**

During assembly of the nuts onto a rotor, Westinghouse stripped a nut. After removal it was discovered that the nut that stripped had a machined bore with incorrect thread length. The nuts supplied on the above purchase order were all supplied from one heat. Diversified Machine Components and Howden have been and continue to be in communication on this matter. The nuts on PO075685 have been returned to Howden for evaluation and remain on hold as nonconforming product.

**The date on which the information of such defect or failure to comply was obtained.**

Howden issued NCR 3589 for Part Number 00900490-00114N Lock Nut which was received by Diversified Machine on 8/31/22. Howden has also issued Corrective Action request #HACAR336 also received by Diversified Machine on 8/31/22.

**In the case of a basic component which contains a defect or fails to comply, the number and location of these components in use at, supplied for, being supplied for, or may be supplied for, manufactured, or being manufactured for one or more facilities or activities subject to the regulations in this part.**

At this time, based on initial evaluations Diversified Machine Components has supplied Howden with a total of five purchase orders which have been identified and submitted to Howden for review. The five purchase orders identified are: 16 Pcs. on PO052609, 16 pcs on PO052645, 16 pcs on PO056804, 16 pcs on PO068879 and 16 pcs on PO075685. The nuts on PO075685 have been segregated and the returned to Howden for evaluation.

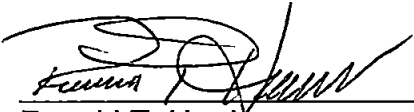
**The corrective action which has been, is being, or will be taken; the name of the individual or organization responsible for the action; and the length of time that has been or will be taken to complete the action.**

A Nonconformance Report has been issued which describes with as much information as possible to give a clear understanding and description of the nonconforming condition as found. The evaluation of the nonconformance report and the corrective action to be taken shall be completed by authorized personnel at Diversified Machine in a timely manner.

Written notification to the NRC will follow in accordance with 21.21 (3)(ii).

Diversified Machine shall continue to communicate with Howden as required. If there are any questions pertaining to this communication, please feel free to contact me at 440-942-5701.

Very Truly Yours,

  
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Ronald T. Harris                      Date: 9/2/22  
President  
Diversified Machine Components, LLC

**A. Name and address of individual or individuals informing the NRC**

Diversified Machine Components  
6346 Eastland Rd.  
Brook Park, OH 44142  
United States Of America

Howden USA Company  
2475 George Urban Blvd.  
Suite 120  
Depew, NY 14043  
United States Of America

**B. Identification of the basic component containing the defect**

The basic component that contains the defect is a lock nut, Howden part number 00900490-00114N. The lock nut has been machined with a counterbore removing half of the threads from the nut.

**C. Identification of the manufacturer of the component that contains the defect**

The nut was supplied by Howden USA Company to the end user. It was procured by Howden USA Company from Diversified Machine Components.

**D. Nature of the defect or noncompliance, and the safety hazard that it could create**

The 00900490-00114N Nut is counterbored and missing half of the threads. As a result of the defect the nut could fail.

**E. Date when the information of the defect or failure to comply was obtained**

- Westinghouse notified Howden USA Company (HUSA) on 7/11/2022.
- HUSA received formal non-conformance report on 7/29/2022.
- HUSA notified Diversified Machine Components on 8/2/2022.

**F. The number and location of such components that could contain such defects**

A031226 – 16 pcs – DMC PO052609 – DMC SO 13922 dated 7/31/2017 – Continental-Aero Heat Number 380168

Ameren Callaway Containment Cooler Fan Rebuild, Fan Model 66-26-1170/580, unit 525180-14, S/N GF-20974; Motor P/N 600287-43, 150/75 HP, 1185/595 RPM, RCP-206, Frame 5005, ID# 1XF882394A3-ND; Rotor (Per fan BOM) P/N 525211-273 tip diameter 65.680".

A031228 – 16 pcs – DMC PO052645 – DMC SO 13932 dated 7/31/2017 – Continental-Aero Heat Number 380168

Ameren Callaway Hydrogen Mixing Fan Rebuild, Fan Model 66-26 ½-870/430, Unit 525180-56, S/N GF-22247; Motor P/N 600287-80, 50/25 HP, 890/440 RPM, RCP-206, Frame 445TCZ, ID# SYZ01212-A1-SU; Rotor (Per the fan BOM) P/N 525154-263 tip diameter 65.680".

A033664 – 16 pcs – DMC PO056804 – DMC SO 14236 dated 4/30/2018 – Continental-Aero Heat Number 380168

Ameren Callaway Hydrogen Mixing Fan Rebuild, Fan Model 66-26 ½-870/430AF, Unit 525180-56, S/N GF-22249; Motor P/N 600287-80, 50/25 HP, 889/442 RPM, RCP-206, Frame 445TCZ, ID# 1XF882913-A6-TG; Rotor (Per the fan BOM) P/N 525154-263 tip diameter 65.680".

A035433 – 16 pcs – DMC PO068879 – DMC SO 14970 dated 6/9/2020 – Continental-Aero Heat Number 380168 Ergytech – ASCO I / II NPP (Spain) Blades Machined, Nuts and washers (Howden could not provide new 525210-260 rotor in time for outage) – For fan Model 54-26-1475/725, Unit 500722-132, FF-15047, S/N GF-20909 – GF-20916, Ref Drawing FF-15407; Rotor P/N 525153-260 (per Customer PO and fan BOM). Note: Diversified PO068879 was shipped to Medina, .

A042849 – 16 pcs – DMC PO075685 – DMC SO 15635 dated 6/23/2022 – Continental-Aero Heat Number 380168 (order with "failed" nut). This order has not shipped to the customer. This assembly has not shipped to the customer.

**G. The corrective action that has been, is being, or will be taken by Howden, Inc., and the length of time that has been or will be taken to complete the action**

HUSA has issued HA CAR 336 to Diversified Machine Components to address the corrective actions. The corrective actions will be completed within 60 days from the date the CAR was generated.

HUSA has issued HA CAR 338 internally to address the corrective actions. The corrective actions will be completed within 60 days from the date the CAR was generated.

**H. Any advice relating to the defect or noncompliance that has been, is being, or will be given to purchasers of the component**

Project A042849 (in progress, not shipped): used locknuts do not comply with Howden standard S4-8. Locknuts must be scrapped and replaced per the correct ones P/N 900490-114N, fully threaded. It is also recommended to replace the corresponding washers per project specific requirements.

For other project identified with the same defective locknuts: It has been found that the locknuts do not comply with Howden standard S4-8 (series 900490 locknuts with nylon insert, Class 3 threads, 1.125"-12 steel zinc plated, -114 dash number, reference ESNA P/N 41NE-182). Due to the non-compliance, locknut thread failure (stripping) may occur. Testing was conducted on a noncomplying locknut from the same lot. The test results do not comply with Howden requirements as the threads failed at a reduced load. Based on the above finding, Howden Engineering disposition is that the use of the non-compliant locknuts is not acceptable. There will need to be communications with the customers to help estimate the risk profile for each unit with the information that is available. For the above referenced equipment, locknuts shall be removed, scrapped and replaced by new sets of locknuts and washers on all blades and torqued per Howden design. Fan rotor must be balanced after the new set of hardware is installed.