American Machining, Incorporated
Fenton, Michigan

AMS-009

CAM SEAL AGITATOR COVER PREVENTATIVE MAINTENANCE AND REPAIR INSTRUCTIONS

Issued: March 20, 2001
Revised: April 5, 2004

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1 Scope

1.1 The intent of this document is to establish the preventative maintenance procedures for Cam Seal agitator covers supplied by American Machining, Incorporated. It is issued to direct this and customer facilities in obtaining and maintaining reliable operation and sealing of intermediate bulk container (IBC) systems. In the development of this specification, utmost priority was given to the enhancement of safety in the operation and maintenance of these containers in conjunction with compliance to Federal, State, and municipal regulation and safety codes. All personnel servicing intermediate bulk containers must comply with the most recent revision of the following specifications:

1.1.1 U.S. Title 49 CFR Parts 178-180
1.1.2 U.S. Title 49 CFR Parts 350-399
1.1.3 U.S. Title 49 CFR Parts 40.1910-1200
1.1.4 U.S. Title 49 CFR Parts 100-177
1.1.5 U.S. Title 29 CFR (OSHA)
1.1.6 MIOSHA, where applicable
1.1.7 CALOSHA, where applicable
1.1.8 NFPA, where applicable
1.1.9 NEC, where applicable
1.1.10 Industry consensus standards, e.g. ANSI, etc., where applicable

Note that the above specifications may require compliance to other specifications not listed

1.2 In addition to the above standards, the specifications contained in this document shall apply. Where similar specifications exist, the most stringent specification shall be utilized.

1.3 It is imperative that service personnel be familiar with proper safety procedures when using small hand tools.

1.4 Read all instructions prior to proceeding.

2 Recommended Tools

2.1 It is recommended that the following tools be available for proper service:

2.1.1 Shaft Concentricity Testing Fixture, American Machining part number 112589

2.1.2 Coupling Test Gauge, American Machining part number 113445

2.1.3 Flange No-Go Gauge, style “A”, American Machining part number 114447

2.1.4 Flange No-Go Gauge, style “B”, American Machining part number 114522

2.1.5 Bearing Removal Tool, style “A”, American Machining part number 111011

2.1.6 Bearing Removal Tool, style “B”, American Machining part number 114391

2.1.7 Drive Mounting Gauge, American Machining part number 114158

2.1.8 Straight Edge, 24” long

2.1.9 0-6” calipers

3 Shaft & Coupling Inspection

3.1 Refer to drawing 114661 for assembly/disassembly procedures.

3.1.1 Remove Cam Seal coupling from shaft and remove shaft from cover assembly.

3.1.2 Visually inspect coupling assembly for any damage. Return coupling to AMI for refurbishment if the coupling shows evidence of damage or wear. Proceed only after acceptable visual inspection.

3.1.3 Mechanically inspect coupling dogs and pilot diameter of coupling using Coupling Test Gauge p/n 113445.

3.1.4 If the coupling assembly passes both the visual and mechanical inspections, the coupling assembly may be re-used.

3.1.5 Visually inspect shaft assembly for any damage. Return shaft to AMI for refurbishment if shaft shows evidence of damage or wear. Proceed only after acceptable visual inspection.

3.1.6 Place shaft into Shaft Concentricity Testing Fixture, p/n 112589

3.1.7 Follow the instructions contained in drawing 112589-INST to check the concentricity of the shaft.

3.1.8 If the shaft run-out exceeds 0.030” it is recommended that the shaft be returned to AMI for straightening.

3.1.9 If the shaft assembly passes both the visual and mechanical inspections, the shaft may be re-used.

4 Cover Inspection

4.1 Refer to drawing 114661 for assembly/disassembly procedures.

4.1.1 Remove bearing from cover using appropriate tool. (111011 / 114391)

4.1.2 Visually inspect cover assembly for any damage including warping, impact damage, or sharp edges which could affect sealing properties. Inspect all accessories such as guards, couplings, and dust covers for damage. Replace as needed.

4.1.3 Use a 24” straight edge to measure flatness of the cover. Return cover to AMI for refurbishment if cover shows evidence of damage, adverse wear, or if flatness deviation exceeds 1/4”.

4.1.4 Proceed only after acceptable preliminary inspection.

4.1.5 Using drive mounting gauge 114158, inspect the drive mounting lugs per instruction sheet 114161. Replace any non-conforming or damaged lugs as needed.

4.1.6 Using appropriate no-go gauge (114447 / 114522) inspect the bearing diameter of the cover flange. No-go gauge should not pass through the hole. If no-go gauge passes through the bearing diameter, the cover and flange assembly must be returned to AMI for repair.

4.1.7 If the cover and flange assembly passes the no-go gauge test, the bearing and inside bearing diameter of the flange must be checked for out-of –roundness. Using 0-6” calipers, measure the inside diameter of the bearing and the bearing area, in at least three places (120° apart). The inside diameter of the bearing should not vary more than 0.005”, or the bearing must be replaced. The inside diameter of the flange bearing area should not vary more than 0.002”, or the cover and flange assembly must be returned to AMI for repair.

5 Re-Assembly

5.1 Refer to drawing 114661 for assembly/dis-assembly procedures.

5.1.1 Replace gaskets and/or o-rings as needed.

5.1.2 Re-assemble shaft assembly per 114661 instruction sheet, paying strict adherence to fastener torque requirements. Re-install any accessories which may have been removed.

5.1.3 Lock shaft into shipping position.