

# BERENFIELD CONTAINERS

## DOT 178 NOTICE

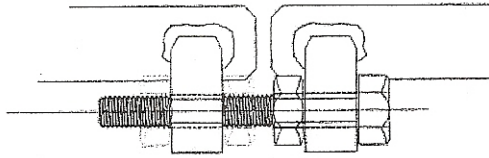
### CLOSURE REQUIREMENTS FOR STEEL DRUMS

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*IN REGULATION 49 CFR 178.2 (C), THE DEPARTMENT OF TRANSPORTATION REQUIRES DRUM MANUFACTURERS TO INFORM THEIR CUSTOMERS OF HOW TO CLOSE DRUM FITTINGS AND CLOSURE RINGS IN ORDER TO ENSURE THE DRUM WILL PERFORM TO THE MARKING LEVEL INDICATED THEREON. PLEASE SEE THAT THIS INFORMATION IS AVAILABLE TO THOSE RESPONSIBLE FOR CLOSING THE DRUMS AFTER FILLING. THE USE OF NON-SPARKING TOOLS IS RECOMMENDED TO CLOSE DRUMS CONTAINING HAZARDOUS MATERIALS*

#### CLOSING RINGS

#### BOLT LOCKING RINGS



1. COVERS MUST BE FIRMLY SEATED ON THE TOP OF THE DRUM WITH THE GASKET IN PLACE. CARE MUST BE TAKEN TO ENSURE THAT THE GASKET HAS NOT BECOME DISLODGED, LOOPED, OR TWISTED DURING EITHER REMOVAL OR PLACEMENT OF THE COVER.
2. SNAP THE CLOSING RING OVER THE COVER AND CURL AREA OF THE DRUM, MAKING SURE THAT IT IS SEATED OVER THE ENTIRE PERIMETER – FOR DRUMS WITH 12 GAUGE FORGED LUG RINGS, USE OF A MECHANICAL HEAD COMPRESSING DEVICE IS REQUIRED TO ASSURE PROPER GASKET COMPRESSION. RING BOLTS SHOULD BE TIGHTENED WHILE THE COVER/GASKET IS BEING COMPRESSED. DRUMS ASSEMBLED WITHOUT USING A MECHANICAL HEAD COMPRESSING DEVICE MAY NOT PERFORM TO THE CERTIFIED LEVEL.
3. WHILE A HEAD COMPRESSING DEVICE IS PREFERRED FOR ALL RINGS, FOR RINGS LIGHTER THAN 12 GAUGE IT IS ACCEPTABLE TO TIGHTEN THE RING BOLT WHILE SIMULTANEOUSLY TAPPING THE OUTSIDE OF THE CLOSING RING AROUND THE ENTIRE PERIMETER WITH A NON-SPARKING Mallet IN ORDER TO COMPRESS THE GASKET UNIFORMLY. IF A HEAD COMPRESSING DEVICE IS USED, MAKE SURE THAT THE COVER IS CENTERED ON THE DRUM CURL. CHECK TO SEE THAT THE COVER AND DRUM CURL ARE PINCHED TOGETHER AND WITHIN THE RECESS OF THE RING.
4. TORQUE THE BOLT AND NUT UNTIL THE GAP BETWEEN THE CLOSING RING ENDS IS ¼” OR LESS BUT WITH NO BENDING OF THE LUGS. AIM FOR 1/8” GAP. FOR DRUMS WITH POLY LINER “BAGS” THE GAP SHOULD BE ½” OR LESS WHILE ENSURING THAT THE LINER IS SEATED UNIFORMLY OVER THE CURL OF THE DRUM AND PROTRUDING OUT FROM UNDER THE COVER. ON RINGS SUPPLIED WITH A JAM NUT, TIGHTEN THE

NUT SECURELY AGAINST THE UNTHREADED LUG. RINGS SUPPLIED WITHOUT A JAM NUT MAY LOOK VERY SIMILAR TO THOSE SUPPLIED WITH A JAM NUT; HOWEVER, THESE ARE NOT INTERCHANGEABLE. IT IS IMPORTANT THAT JAM NUTS BE USED WITH THE RINGS WITH WHICH THEY ARE SUPPLIED, AND THAT JAM NUTS NOT BE USED WITH RINGS FOR WHICH THEY ARE NOT SUPPLIED. THE CLOSING RING ENDS MUST NOT TOUCH WHEN THE RING BOLT HAS BEEN FULLY TORQUED.

5. PRIOR TO SHIPMENT OF FILLED DRUMS, BOLT TORQUE SHOULD BE VERIFIED, AND BOLTS RETIGHTENED IF NECESSARY.
6. RECOMMENDED TORQUE VALUES ARE AS FOLLOWS, HOEVER, PLEASE NOT THAT THE RING GAP IS CRITICAL, AND TORQUE VALUES OUTSIDE THOSE LISTED MAY BE REQUIRED TO ACHIEVE THE PROPER GAP:

<u>BERENFIELD PLANT SUPPLYING</u>	<u>DRUM CONFIGURATION</u>	<u>APPLIED TORQUE</u>
MASON/PINE BLUFF/CLARENDON*	55-GALLON 12 GA. FORGED LUG RING W/5/8" BOLT	60 TO 65 FT.-LBS.
*ON 55 GALLON DRUMS WITH 1.4 MM COVERS, SUPPLIED FROM CLARENDON, THE RING GAP SHOULD BE 1/8" OR LESS, AND THE APPLIED TORQUE 80-85 FT.-LBS.		
HARRISBURG	55-GALLON 12 GA. FORGED LUG RING W/5/8" BOLT	35 TO 45 FT.-LBS.
ALL	55-GALLON, 5/16" AND 3/8" BOLTS	NOT LESS THAN 15 FT.-LBS.
ALL	INTERMEDIATE DRUMS, 12 GA. FORGED LUG RING	NOT LESS THAN 50 FT.-LBS.
ALL	INTERMEDIATE DRUMS, ALL OTHER BOLT RINGS	NOT LESS THAN 8 FT.-LBS.

### LEVER RINGS

1. COVERS MUST BE FIRMLY SEATED ON THE TOP OF THE DRUM WITH THE GASKET IN PLACE. CARE MUST BE TAKEN TO ENSURE THAT THE GASKET HAS NOT BECOME DISLODGED, LOOPED, OR TWISTED DURING EITHER REMOVAL OR PLACEMENT OF THE COVER.
2. SNAP THE CLOSING RING OVER THE COVER AND CURL AREA OF THE DRUM, MAKING SURE THAT IT IS SEATED OVER THE ENTIRE PERIMETER. IN ORDER TO COMPRESS THE GASKET UNIFORMLY, TAP AROUND THE ENTIRE PERIMETER OF THE RING. FOR SOME RING/GASKET COMBINATIONS, A MECHANICAL HEAD COMPRESSING DEVICE MAY BE NECESSARY TO ACCOMPLISH THIS WHILE CLOSING THE LEVER ASSEMBLY (HANDLE)
3. FOR SIDE LEVER LOCKING RINGS, THE RING LATCH MUST BE SNAPPED SECURELY IN PLACE. FOR TOP LEVER LOCKING RINGS, THE TOP LEVER MUST BE FULLY LOCKED IN PLACE UNDER THE SECURING BAR.
4. SEALING THE EYELETS OF LEVER RINGS IS NECESSARY NOT ONLY FOR EVIDENCE TAMPERING, BUT FOR THE INTEGRITY OF THE CLOSURE.