

CLOSING INSTRUCTIONS

UN 1A1 Non-Removable Head Steel Drums / UN 1A2 Removable Head Steel Drums

FOR ALL REMANUFACTURED AND RECONDITIONED DRUMS

The person responsible for filling and closing these containers for shipment must have a copy of these instructions.

Pursuant to U.S. Department of Transportation Regulations given in Title 49 Code of Federal Regulations Part 178. Specifications for Packages §178.2(c)(1)(i) Seller must notify each person to whom a packaging is transferred of the type and dimensions of any closures, including gaskets, needed to satisfy performance test requirements. This notification is to include tightening instructions for closures. **Note:** Paragraph 178.2(c) cited above requires you to provide closing information to any person to whom this package is transferred who may need to close the packaging prior to reshipment.

Closing Instructions for Head Fittings:

All non-removable head, UN 1A1 Steel drums, all fully removable head UN 1A2 Steel drums, that are supplied with plugs and gaskets, must be closed for shipment using only the plugs and gaskets supplied and specified in the design qualification test for the drum as indicated below:

- T/S Plugs: 2-inch and 3/4-inch steel and plastic, installed in T/S steel-flanges of corresponding size and tightened to the torque recommended by the manufacturer for the plug and gasket used as indicated below.
- Rieke® Plugs: 2-inch and 3/4-inch steel and plastic, installed in the appropriate Rieke® steel or plastic flange of corresponding size and tightened to the torque recommended by the manufacturer as indicated below.
- Equivalent Plugs: 2-inch and 3/4-inch steel and plastic, installed in the appropriate equivalent Steel flange of corresponding size and tightened to the torque recommended as indicated below.

Note: Equivalent plugs and T/S plugs may be used interchangeably in the octagonal design fittings.

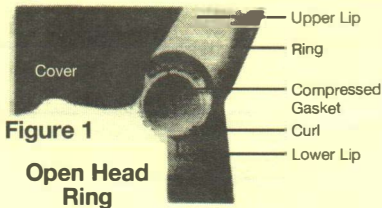


Figure 1
Open Head
Ring

Open Head Ring and Bolt

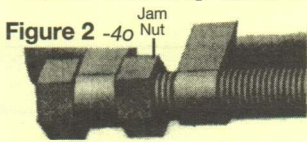


Figure 2 -40

Ring Gap 1/2 inch to 3/8 inch

Closing Instructions for Open Head Covers

All removable head, UN 1A2, Steel drums supplied with bolt rings, bolts, gaskets and lids must be closed for shipment using only the components supplied.

- Place drum head, with gasket in place as supplied, on the curl at the top of the drum body. (See Figure 1)
- Place bolt ring around drum head and curl. (Note: Preferred orientation is with the ring gap in line with the 2" fitting.)
- Using a head compressor, apply force to the top of the drum head assembly to compress head gasket.
- Drive bolt into lug until the ends of the bolt ring are as follows: (See Figure 2)

Note: If prescribed ring gap cannot be achieved, torque ring to 75 ft. lbs. (+/- 5 ft. lbs.)

If head compressor is not available, start bolt into lug, alternate tapping of ring with a mallet and drive bolt with wrench, until bolt ring ends meet requirements.

When ring has been tightened as required, the jam nut must be tightened against the unthreaded lug to prevent the bolt from backing out of the closing ring.

Ring ends should not touch. Note: If ring ends touch after 75 ft. lbs. have been achieved, contact Penn Barrel, Inc. for replacement rings. Drum Thickness 1.1/.8/1.1 minimum.

Prescribed Closure Torques for Steel Drums (ft. lbs.)

***** Note: All Rubber Gaskets are Buna**

Item	T/S STYLE CLOSURES	3/4" (ft. lbs.)	2" (ft. lbs.)
T/S Steel Plugs			
Rubber Gaskets		12	20
Polyethylene, Teflon® Gaskets		20	30
T/S Zinc Die Cast Plugs			
Rubber Gaskets		12	20
Polyethylene, Teflon® Gaskets		20	30
T/S Polypropylene 7 Nylon Plugs			
Rubber Gaskets		8	20
Polyethylene Gaskets		8	30
T/S Polyethylene Plug, High Density			
Rubber Gaskets		8	15
VS Self Gasketing Polyethylene Plugs			
		5	12

RIEKE® OR EQUIVALENT CLOSURES	Steel Flanges Nylon Flanges			
	3/4"	2"	3/4"	2"
	(ft. lbs.)	(ft. lbs.)	(ft. lbs.)	(ft. lbs.)

Rieke® Steel Plugs

Rubber Gaskets	15	30	--	--
Polyethylene Gaskets	20	40	--	--

Rieke® Plastic Poly-ViseGrip® Plugs

Rubber Gaskets	9	20	9	20
Polyethylene Gaskets	9	20	9	20

Rieke® Poly-ViseGrip

Plug with Built-In Gasket	9	20	9	20
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Recommended torque tolerance: +6,-2 ft. lbs.

I have received the attached Closure Notification Instructions. Please sign and date.

X

Signature

X

Date

X

Company Name