



BY JOHNSON CONTROLS

Service Information

File In/With: N/A

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New

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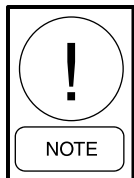
Equipment Affected: CYK and OM Chillers

Field Replacement of 150 lb and 300 lb Sight Glass Kits

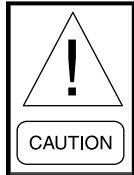
GENERAL

The following information applies to the 6" sight glass and gaskets that are used on the CYK Compounded Chiller and OM Titan Chillers. This service information letter serves to update the service technician on the installation instruction for field replacement of the 150 lb (P/N 026-37696-000) & 300 lb (P/N 026-37697-000) sight glass kit components.

Prior to this service information letter, the respective sight glass was to be installed as a kit only that included gaskets and a new sight glass. The revised procedure allows sight glass gaskets to be replaced if needed, without the need to replace the sight glass, **providing the sight glass shows no signs of wear, damage, or cracks on the sealing surfaces or glass.** This service information letter also provides revised torque values for installing the sight glass and gaskets.



This service information letter revises the torque values and NOTES on the Instruction Bolt Torque drawing 077-10989-000, located in the job specific equipment manual, that has a revision date prior to August 6, 2010 (rev E). Refer to the Revision Record located at the bottom of the drawing for this information.



New gaskets must always be installed on the sight glass if disassembled; however, the sight glass may be reinstalled if it shows no signs of wear, damage or cracks on the sealing surfaces or glass.

INSTALLATION NOTES

1. Specified torque values were calculated assuming mating flange surfaces are parallel so the gasket contact surfaces bear uniformly on the gasket when torque is applied. If a leak tight joint cannot be achieved using maximum torque values, check installation for parallelism.
2. The minimum torque values shown in Tables 2 and 4 of this service information letter are the minimum required to seat the gasket and provide a leak-tight joint.
3. Torque values for the 6"-150 lb. and 6"-300 lb. pressure vessel sight glasses in Tables 2 and 4 are based on Garlock IFG 5500 cushion gasket and Gylon 3545 seal gasket. **All gaskets are to be installed dry. All threads and nut surfaces are to be clean (non-painted surfaces) and lubricated with Loctite C-5A (P/N 013-01690-000) or equivalent copper or molydisulfide based lubricant or anti-seize.**
4. Install the gaskets and sight glass as shown in Figure 1, cross referencing items and part numbers in Tables 1 or 3.
5. Torque the sight glasses per Table 2 (150 lb.) or Table 4 (300 lb.) using the circular cross-pattern and tightening sequence. Field re-torquing is not required on sight glasses as received installed on the condenser from the factory; however, if a new sight glass and/or gaskets are installed in the field, the bolts must be re-torqued after the first pressure/leak test.

6. A torque wrench must be used for the installation process. Bolt tightening must progress in a crisscross manner (see Figure 2). Torque shall be applied in two steps to avoid uneven gasket compression. The first step is to be 25% of the total value. For example, if the final value is 73 ft-lbs / 99 Newton-meter, the first step would be 18 ft-lbs / 24 Newton-meter. The second step would be 100% of the torque value.
7. Re-torque the bolts after a period of 12 to 24 hours to insure a tight joint and avoid the loosening effects associated with gasket creep.



Torque values are based on all threads and nut surfaces being clean (non-painted bolts/nuts) and lubricated with Loctite C-5A (P/N 013-01690-000) or equivalent copper or molydisulfide based lubricant or anti-seize. Failure to have clean bolt/nut surfaces will result in incorrect torque values and could result in loss of refrigerant charge and equipment damage.

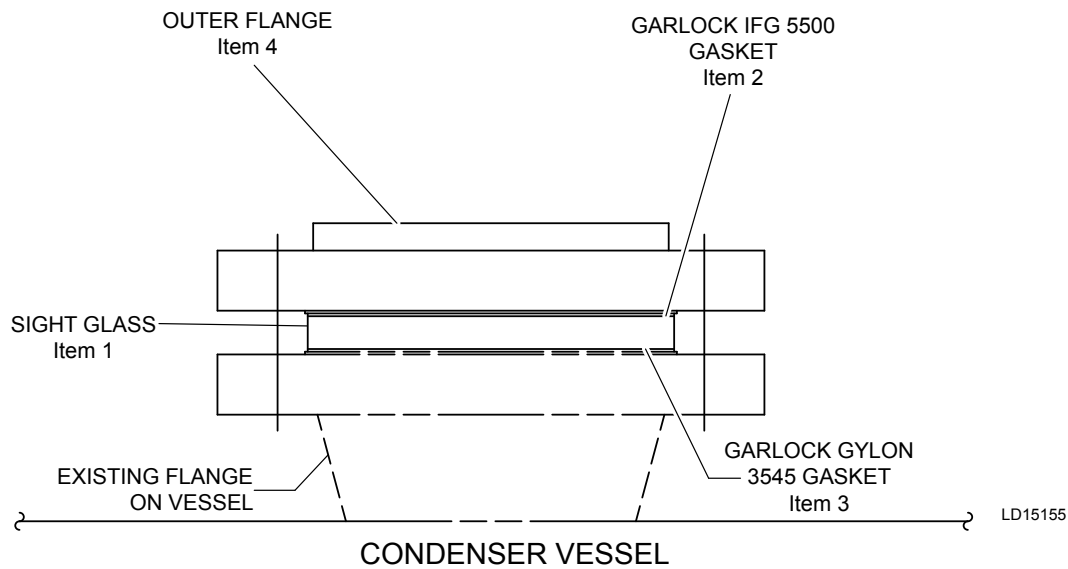
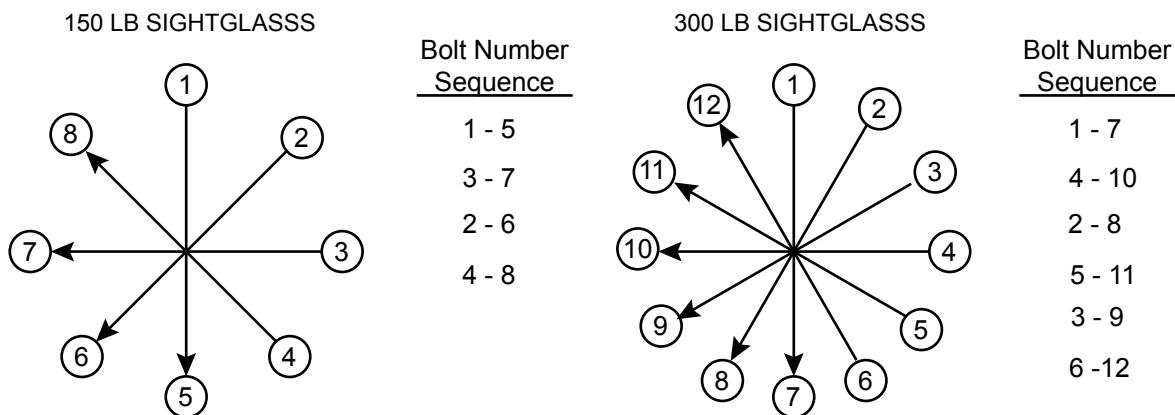


FIGURE 1 - SIGHT GLASS KIT, 150 LB (TABLE 1) AND 300 LB (TABLE 3)



LD15157

FIGURE 2 - CROSS-PATTERN TIGHTENING SEQUENCE

150 LB PART NUMBERS AND TORQUE SPECIFICATIONS**TABLE 1 - SIGHT GLASS KIT, 150 LB, PART NUMBER 026-37696-000**

PART NO.	ITEM	QUANTITY PER UNIT	DESCRIPTION
026-38134-000	1	1	SIGHT GLASS
028-14577-000	2	1	GASKET, GARLOCK IFG 5500
028-14578-000	3	1	GASKET, GARLOCK GYLON 3545
023-02360-000	4	1	FLANGE,WELD SLIP-ON 6-150 LB

TABLE 2 - PRESSURE VESSEL SIGHT GLASSES, 150 LB. FLANGES

NOMINAL SIZE	BOLT SIZE	QTY	APPLIED TORQUE IN FT.-LBS.		APPLIED TORQUE IN NEWTON-METER	
			MINIMUM	MAXIMUM	MINIMUM	MAXIMUM
6"	3/4"-10	8	61	81	83	109

300 LB PART NUMBERS AND TORQUE SPECIFICATIONS**TABLE 3 - SIGHT GLASS KIT, 300 LB, PART NUMBER 026-37697-000**

PART NO.	ITEM	QUANTITY PER UNIT	DESCRIPTION
026-38135-000	1	1	SIGHT GLASS
028-14579-000	2	1	GASKET, GARLOCK IFG 5500
028-14580-000	3	1	GASKET, GARLOCK GYLON 3545
023-03359-000	4	1	FLANGE, WELD SLIP-ON 6-300 LB

TABLE 4 - PRESSURE VESSEL SIGHT GLASSES, 300 LB. FLANGES

NOMINAL SIZE	BOLT SIZE	QTY	APPLIED TORQUE IN FT.-LBS.		APPLIED TORQUE IN NEWTON-METER	
			MINIMUM	MAXIMUM	MINIMUM	MAXIMUM
6"	3/4"-10	12	61	81	83	109

