



HOSHIZAKI AMERICA, INC.

SERVICE BULLETIN

SB20-0015

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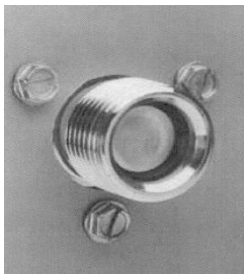
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Subject: Installation of Quick Connect Fittings
(This bulletin supersedes SB08-0004R)

We continue to see issues with the installation of the quick connect fittings on remote units. The main causes of failures are related to poor initial alignment of the couplings and inadequate torque to complete the seal. Many times, low torque is related to no lubricant at the time of installation.

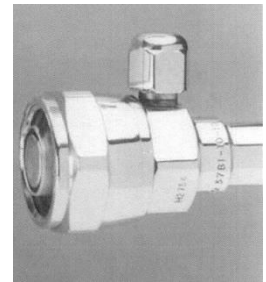
Please follow these instructions closely during the installation process.

Note: Per the manufacturer's instructions, do not use thread sealant/lock-tite on the Quick Connect threads. Use of this material could affect the torque needed to make the proper leak proof seal (metal to metal knife edge between the male and female fittings).



5700 Series Coupling and FD57 Series Stub Kit Coupling

Line-Set Field Installation Instructions



Step #1: Apply refrigerant oil to the entire surface of diaphragm, o-ring, and threaded area of male coupling assembly. The amount of lubricant used must cover all designated surfaces sufficiently. Ideal application is a small applicator brush saturated with lubricant and applied liberally. An alternate lubricant for this application is a refrigerant compatible silicone grease product like Dow Corning DC200/60,000cst.

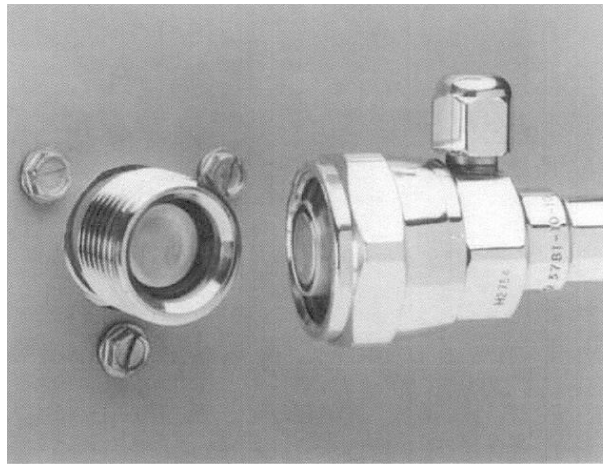
Note: A tube of lubricant is included in all line sets as well as HS-2150 quick connect fitting kit.

Results of failure to complete Step #1:

1. False indication of proper torque or difficulty in turning an addition quarter of a turn to complete seal.
2. Displacing &/or damaging of male coupling o-ring
 - a. Displacing of the o-ring hinders ability to complete final "Metal to Metal" seal and premature releasing of refrigerant during connection.
 - b. O-ring damage also allows refrigerant to be released during the connection.

Step #2: Ensure that the coupling halves are held in proper alignment with each other prior to starting the threads of the female coupling nut onto the male half. The coupling end faces should be parallel with each other and visually in line with each other. This allows the female coupling nut to be easily threaded on by hand for the initial 2-3 rotations of the union nut. These initial rotations will bring the diaphragm in contact and a sharp increase in torque will be felt when they come into contact.

IF THE NUT WILL NOT START BY HAND, – ADJUST THE POSITION OF THE LINE SET TO ENSURE PROPER COUPLING ALIGNMENT AND ELIMINATE/ MINIMIZE ALL SIDE-LOAD FORCE ON THE COUPLING DURING ASSEMBLY.

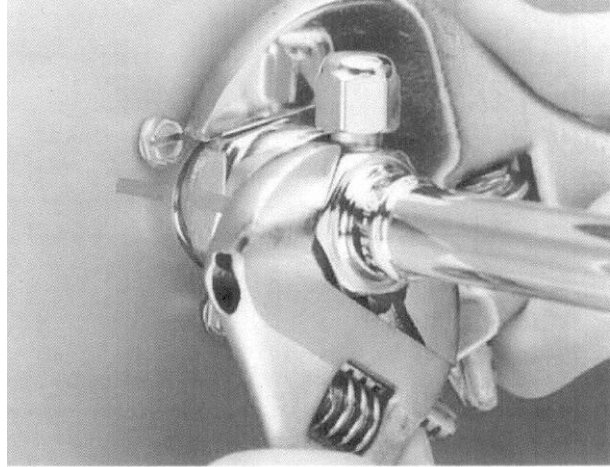


**THE COUPLING END
FACES SHOULD BE
PARALLEL WITH
EACH OTHER AND
VISUALLY IN LINE
WITH EACH OTHER.**

Results of failure to complete Step #2:

1. Displacing &/or damaging of male coupling o-ring
 - a. Displacing of the o-ring hinders ability to complete final “Metal to Metal” seal and premature releasing of refrigerant during connection.
 - b. O-ring damage also allows refrigerant to be released during the connection.
2. Deformation of female coupling body &/or male coupling cutter assembly
 - a. Deformation hinders the ability to complete final Metal to Metal” seal and premature releasing of refrigerant during connection.
3. Improper piercing & opening of male and female coupling diaphragm
 - a. Restricts system flow.

Step #3: Using appropriate size wrenches, reference table below, for the female coupling body and female union nut, tighten the female union nut while preventing rotation of the female body with respect to the male half. The nut should be tightened until a definite increase in resistance is felt, metal to metal contact occurs, **(at this point, the nut will have covered most of the threads on the male body)**. It is important to ensure the male and female coupling bodies DO NOT ROTATE during any portion of the wrench installation.



**TIGHTEN UNTIL A
DEFINITE INCREASE IN
RESISTANCE, METAL TO
METAL CONTACT
OCCURS.**

Results of failure to complete Step #3:

1. Use of “Slip” pliers &/or pipe wrenches is not recommended
 - a. Above tools limits ability to feel the Metal to Metal contact and hampers ability to meet final $\frac{1}{4}$ turn/rotation (90°) “Metal to Metal/Leak-Proof” seal.

Step #4: Using a permanent marker or scribe, mark a line lengthwise from the female coupling union nut to either the bulkhead or female coupling body. Then tighten an additional $\frac{1}{4}$ turn/rotation (90°); refer to the marking on the union nut to confirm the $\frac{1}{4}$ turn/rotation has occurred. This final $\frac{1}{4}$ turn/rotation is necessary to ensure the formation of the leak-proof seal, between the male and female couplings.



**TIGHTEN AN
ADDITIONAL $\frac{1}{4}$ TURN
TO ASSURE A BRASS
TO BRASS SEAL.**

Results of failure to complete Step #4:

1. Missing reference mark can not confirm final “Metal to Metal/Leak Proof” seal occurred.

Step #5: Repeat Step #1 thru #4 for all connections.

Size Designation	Torque Values Union Nut Min-Max	Male Coupling Hex Size	Female Coupling Union Nut Hex Size	Female Coupling Body Hex Size
-Copper-06	10-12 Ft/Lbs	$\frac{3}{4}$ "	$\frac{11}{16}$ "	$\frac{5}{8}$ "
-Copper-10	35-45 Ft/Lbs	$1 \frac{1}{16}$ "	$1 \frac{5}{16}$ "	1"
-Copper-11	35-45 Ft/Lbs	$1 \frac{1}{8}$ "	$1 \frac{5}{16}$ "	1"
-Copper-12	50-65 Ft/Lbs	$1 \frac{7}{16}$ "	$1 \frac{3}{8}$ "	$1 \frac{11}{16}$ "

Note: If the previous instructions are followed, the quick Connect should be a leak free connection however, it is always recommended to use soap bubbles to check and assure no leaks are found.

If you have any questions concerning this change, please contact the Technical Support Department at tech-support@hoshizaki.com or 1-800-233-1940.