



Document Name:  <b>Bayonet Assembly  Procedure (PHPK PBA  series Bayonet)</b>	<b>PHPK Technologies</b>  <b>SPECIFICATION</b>	Number: <b>01-85-3001</b>	
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1.0 Remove the protective wrapping from the male and female bayonets.

**CAUTION: Do not cut protective wrapping. Damage may occur to machined and plated surfaces.**

2.0 Clean the O.D. of the male and the I.D. of the female with an approved solvent applied with a clean, lint-free rag. Allow to dry.

**CAUTION: Assembly contains equipment plated with nickel. Cleaning with acids or other caustic solutions will remove plating and void warranty.**

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3.0 Inspect the male tube for damage.

4.0 Clean the O-ring using procedures as outlined in Step 2.

5.0 Inspect the O-ring for scratches, cracks, or flat spots. O-ring material is Viton (Fluorocarbon Rubber) unless otherwise specified by customer. (Replace the O-ring if any such imperfections are found.)

6.0 Apply a very thin coat of vacuum grease to the O-ring (Dow Corning High Vacuum Grease #970, or equal) and install in the O-ring groove on the bayonet.

**CAUTION: In oxygen service, use only lox compatible grease.**

7.0 Align the male and female bayonet and gently slide them together, making sure that the O-ring stays in the O-ring groove.

**CAUTION: Pipes must be aligned or bayonets will not engage and damage can occur.**

The bayonet will easily slide together if properly aligned. If any resistance occurs, **do not force the bayonets together**. Re-check the piping alignment, adjust pipe hangers as necessary, and proceed with the engagement of the bayonets.

8.0 Install the V-band clamp on the bayonet flanges following the information below:

8.1 Inspection

Examine the T-bolt and nut threads to ensure they are clean and free of dirt, burrs or damaged threads. Replace the nut and/or bolt if threads are damaged (the entire coupling may need to be replaced if the bolt is not removable). Use only OEM-supplied replacement parts.

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8.2 Installation

- 8.2.1 Slip the V-retainer coupling over the flanged tube end. Do not overspread the coupling as this can cause a permanent kink in the outer band.
- 8.2.2 Place the V-retainer coupling on the properly-aligned, mated flanges and insert the threaded T-bolt through the trunnion. Install the nut (using only fingers) until the locking feature of the nut is engaged. This will further ensure that initial nut and bolt threads are not damaged. If self-locking feature of nut (resistance) falls below 6 lbs/inch, replace nut.
- 8.2.2.1 On single-latch couplings, tighten the nut to approximately 70% of final torque (final torque is 100-110 lbs/inch based on 5/16" diameter, 305 stainless steel "H" bolt. Note: Follow torque specification on outer band if so marked.
- 8.2.2.2 On dual-latch couplings, apply torque equally to each latch while visually checking to ensure equal engagement of nut to bolt end.
- NOTE: Reference paragraph 8.2.2 (V-band Installation)  
Installation of the lock-nut should not exceed 120 RPM to avoid thread galling due to frictional heat buildup. **(Do not use air tools.)**
- 8.2.2.3 Check visually to assure the coupling has seated over the flanges equally around the periphery. Also check for correct alignment between the two flanges.
- 8.2.3 Lightly tap the coupling around its circumference with a plastic or non-metallic mallet to distribute band tension (lubricant furnished on inside of some V-coupling retainers can reduce friction between flanges and the V-coupling and may minimize or eliminate the need for tapping).
- 8.2.4 As torque is increased to 100% of the specified value, again lightly tap around the outer periphery as necessary to prevent unequal loading. Re-torque to specified value.
- 8.2.5 After torquing, examine the V-coupling for contact between the strap loop ends or between the retainer segment ends in the latch area. Contact in either location indicates an improper installation which can seriously impair joint performance. **(Do not use if these conditions exist.)**
- 8.2.6 After proper fit and torque has been determined between V-coupling and flanges (as noted above), be sure to bleed-off or purge any trapped air in the system before fully charging.

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8.3 Recommendations

- 8.3.1 While torquing, visually check that the nut is bearing against the trunnion cap and moving down the bolt thread to ensure increased torque is coming from tightening and not thread galling.
- 8.3.2 With T-bolt latch, self-locking nuts should not be re-used more than five (5) times. Install a new nut at this time or sooner if self-locking starting torque falls below 6 lbs/inch. Also, re-inspect and replace the bolt if damaged or worn.

**CAUTION: Always relieve any system pressure prior to loosening or removing the V-retainer coupling. Over-torquing should not be used to stop V-retainer joint leakage. If a leak is found, check for incorrect assembly, incorrect torque, or damage to flanges or seal.**

9.0 Important Advisory/Disclaimer

The above information, of course, only provides general guidelines. Actual details of the installation procedure may vary depending upon the condition and applications. Please ensure that the part(s) are installed by a qualified maintenance engineer experienced in the installation of similar parts. Improper installation of this part can be dangerous. PHPK Technologies is not responsible for improper installation of the parts.

THE ABOVE INFORMATION DOES NOT CREATE ANY EXPRESS WARRANTY, IMPLIED WARRANTY OF MERCHANTABILITY OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, ALL SUCH WARRANTIES ARE HEREBY EXPRESSLY EXCLUDED AND DISCLAIMED. SEE THE CONTRACT OF SALE FOR RELEVANT INFORMATION IN THIS REGARD.

Please advise if additional information or clarification is needed.

PBA Series Bayonet Connections  
NPS sizes from 1/2-inch to 8-inch

