



ONE PIECE KELLY VALVES OPERATION AND MAINTENANCE PROCEDURE REV 1 –

06/05

ASSEMBLY PROCEDURE FOR THE ONE PIECE KELLY VALVE

1.0 SCOPE

- 1.1 This procedure will provide general instructions regarding assembling the One Piece Kelly Valve with IDs:
- 1-1/4"
 - 1-3/4"
 - 2-1/4"
 - 2-13/16"
 - 3-1/16"

2.0 REFERENCES

- 2.1 The latest revision of the following specifications may be used to obtain additional information regarding this procedure.
- Packard Quality Procedures Manual.
 - API Specification 7 latest edition.
 - Bill of materials.

3.0 ASSEMBLY PROCEDURE

- 3.1 Clean valve body and all internal parts.
- 3.2 Visually Inspect for sign of damage or wear.
- 3.3 Fit operator, lower seat, upper seat, with new "O" rings. "O" ring elastomers must be compatible with drilling environment and grease "O" rings prior to installation.
- 3.4 Insert the feet of the pulling tool into the grooves in the Lower Seat ID from the lower end and pass the Assembly/Disassembly tool through the box end of the valve.
- 3.5 Place brace bar against the pin end and tighten the nut to compress the spring.
- 3.6 Insert Operator (Stem). In the body with the key parallel to the centerline of the valve's bore.
- 3.7 Grease ball and install in "closed" position.
- 3.8 Use the operating wrench to rotate the ball to the open position.
- 3.9 Insert the Lower Split Retainer Ring.

- 3.10 Remove assembly tool.
- 3.11 Insert the feet of the pulling tool into the grooves in the Upper Seat ID from the lower end and pass the Assembly/Disassembly tool through the box end of the valve.
- 3.12 Place the brace bar against the pin end and tighten the nut to install the Upper Seat in the correct position.
- 3.13 Insert the Upper Split Retainer ring.
- 3.14 Insert the Solid Retainer ring.
- 3.15 Install the Snap Ring.
- 3.16 Remove Assembly / Disassembly Tool Kit.
- 3.17 Follow "Maintenance" instructions to grease valve properly.

4.0 HYDROSTATIC TEST VALVE

- 4.1 Testing shall be performed in accordance with the test pressure and procedures outlined in API Specification 7 latest edition.

HYDROSTATIC TESTING PRESSURES			
MINIMUM PRESSURE WORKING RATING		MAXIMUM HYDROSTATIC SHELL TEST PRESSURE	
psi	MPa	psi	MPa
5000	34.5	10,000	68.9
10,000	68.9	15,000	103.4
15,000	103.4	22,500	155.1

Note: test pressure shall be stabilized prior to the timing start for holding pressure

- 4.2 Install the test plugs and cap on both box and pin connections of the valve assembly to be tested.
- 4.3 Install the pressure line to the bottom (Pin) connection of the valve.
- 4.4 With bleed valve on the top of the test plug in the open position, fill the body with water until it bleeds through the open valve. Actuate the valve several times to eliminate any trapped air in the valve body.
- 4.5 Close the bleed valve.



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| <p>4.6 With the wrench turn the Kelly valve to the half-open position.</p> <p>4.7 Conduct the Hydrostatic test per the lasted revision of API Specification 7.</p> <p>4.7.1 Engage pump and increase pressure to test pressure from Table above and stabilize. After stabilization of pressure, the valve will be held at pressure for three (3) minutes minimum with no detectable pressure drop or leakage.</p> <p>4.7.2 At the elapse of three minutes, the pressure will be reduced to zero.</p> <p>4.7.3 Engage pump a second time to increase the pressure to the test pressure per Table 1.1 and hold for a minimum of 10 minutes.</p> <p>4.8 Release the pressure on the assembly, assign the serial number, and complete the test chart</p> | <p>3.3. Remove the snap ring.</p> <p>3.4. Remove the upper split retainer ring.</p> <p>3.5. Remove the Assembly / Disassembly Tool Kit</p> <p>3.6. Insert Assembly / Disassembly Tool Kit into the box end and insert the feet into the groove of the upper seat.</p> <p>3.7. Place Brace bar across box face and tighten nut until upper seat comes free.</p> <p>3.8. Remove Lower Split Retainer Ring.</p> <p>3.9. Using the Operating Wrench turn the stem to “open” position and remove the ball.</p> <p>3.10. Insert Assembly / Disassembly Tool Kit through pin end, tighten nut against brace bar and compress spring.</p> <p>3.11. Remove Operating Stem</p> <p>3.12. Remove Assembly / Disassembly Tool Kit and insert through box end into groove in the Lower seat ID.</p> <p>3.13. Tighten nut against brace bar until lower seat comes free.</p> <p>3.14. Remove Assembly / Disassembly Tool Kit.</p> <p>3.15. Thoroughly clean all parts and valve body</p> <p>3.16. Inspect for damage and discard used “O” rings.</p> |
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**DISASSEMBLY INSTRUCTIONS FOR THE SINGLE
PIECE KELLY VALVE**

1.0 SCOPE

- 1.1. This procedure will provide general instructions regarding disassembly of the One Piece Kelly Valve.

2.0 REFERENCES

- 2.1. The latest revision of the following specifications may be used to obtain additional information regarding this procedure.

- Packard Quality Procedures Manual.
- API Specification 7 latest edition.
- Bill of materials.

3.0 DISASSEMBLY PROCEDURE

With the valve in the “open” position:

- 3.1. Insert the Assembly / Disassembly Tool Kit through the pin end into the groove in the id of the upper seat.
- 3.2. Place the brace bar against the pin face and tighten the nut to pull the upper seat away from the upper split retainer ring.

**PREPARING THE ONE PIECE KELLY VALVE FOR
INSTALLATION**

1.0 SCOPE

1.1 This procedure will provide general instructions regarding installation of the One Piece Kelly Valve.

2.0 REFERENCES

2.1 The latest revision of the following specifications may be used to obtain additional information regarding this procedure.

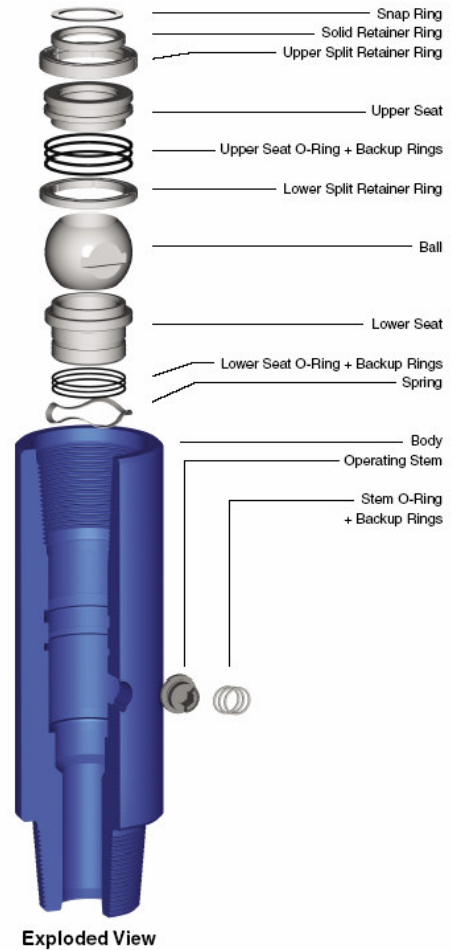
- Packard Quality Procedures Manual.
- API Specification 7 latest edition.
- Bill of materials.

3.0 INSTALLATION PROCEDURE

3.1 Clean shipping thread dope from threaded connections and apply thread dope suitable for drill string use.

3.2 Recommended: Dope base to include 40% to 60% (by weight) finely powdered zinc or lead.

NOTE: Failure to follow the above procedure explicitly may result in damage and subsequent premature valve failure.



ISO9001:2000 # 0163 API # 7-0207