

NAVSEA
STANDARD ITEM

FY-20

ITEM NO: 009-50
DATE: 31 AUG 2018
CATEGORY: II

1. SCOPE:

1.1 Title: Horizontal Swing Check Valve; repair

2. REFERENCES:

2.1 S9086-RJ-STM-010/CH-504, Pressure, Temperature and Other Mechanical and Electromechanical Measuring Instruments

3. REQUIREMENTS:

3.1 Matchmark each valve part.

3.2 Disassemble, clean each internal and external surface free of foreign matter (including paint), and inspect each part for defects.

3.3 Repair valve as follows:

3.3.1 Chase and tap each exposed threaded area.

3.3.2 Dress and true each gasket mating surface.

3.3.3 Machine, grind, or lap and spot-in disc to seat to obtain 360-degree continuous contact.

(V) "INSPECT CONTACT"

3.3.3.1 Inspect contact using blueing method.

3.3.3.2 Transfer line for swing check valve shall not exceed 1/16-inch in width.

3.4 Assemble each valve installing new each gasket, each bushing, each disc retaining nut, each hinge pin, and each plug for those removed in 3.2 in accordance with manufacturer's specifications or instruction.

3.5 Hydrostatically test valve as follows:

3.5.1 Hydrostatic test equipment shall have the following capabilities:

3.5.1.1 Manual overpressure protection release valve.

3.5.1.2 Self-actuated and resetting relief valve with a set point no greater than 100 PSIG above the test pressure or 10 percent above the test pressure, whichever is less.

3.5.1.3 Master and backup test gauges with gauge range and graduation in accordance with Table 504-6-1 of 2.1. The backup gauge shall be cross-checked to the master hydrostatic test gauge up to the maximum test pressure just prior to start of testing. Master and backup gauges shall track within 2 percent of each other.

3.5.1.4 Protection equipment shall be accessible and test gauges shall be located where clearly visible and readable to pump operator and inspector.

(I) "SEAT TIGHTNESS"

3.5.2 Test for seat tightness in the direction tending to close the valve (back pressure) for a minimum of 5 minutes. Allowable leakage as follows:

<u>VALVE SIZE (NOM)</u>	<u>LEAKAGE RATE</u>
Up to 2 inches inclusive	25 cc/hr./in. dia.
2-1/2 inches - 10 inches inclusive	50 cc/hr./in. dia.
Over 10 inches	100 cc/hr./in. dia.

The back pressure applied shall be in accordance with the following:

<u>VALVE PRESSURE RATING</u>	<u>TEST BACK PRESSURE</u>
150 PSIG and Below	50 PSIG
Over 150 PSIG	100 PSIG

4. NOTES:

4.1 Test medium will be specified in Work Item.