

PRELIMINARY - FOR REVIEW ONLY

NAVSEA
STANDARD ITEM

FY-18

ITEM NO: 009-50
DATE: **xx NOV 2016**
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 valve parts.

(V) "INSPECT PARTS FOR DEFECTS"

3.2 Disassemble, clean internal and external surfaces free of foreign matter (including paint), and inspect parts for defects.

3.3 Repair valve as follows:

3.3.1 Chase and tap exposed threaded areas.

3.3.2 Dress and true gasket mating surfaces.

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 valve installing new gaskets, bushings, disc retaining nut, hinge pin, and plug in accordance with the manufacturer's specifications. |
Install new fasteners.

3.5 Hydrostatically test valve as follows:

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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.

(V) "GAGE CHECK"

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

3.5.1.4 Protection equipment shall be accessible and test gages 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.