

TEST SPECIFICATION NYT-677-C

CODE OF TESTS FOR TESTING
KM-2 VENT VALVE PORTION, PC. 748715 (DWG. VV-389)
(AB TEST RACK)

ISSUE NO. 2
DECEMBER 12, 2002

SPEC. NYT-677-C
4 PAGES

WARNING: HIGH PRESSURE AIR IS PRESENT IN THE TEST RACK AND ASSEMBLY BEING TESTED. PRESSURE WILL VENT FROM COCKS AND/OR VALVE EXHAUST PORTS WHEN TEST RACK COCKS ARE MANIPULATED OR WHEN CONTROL DEVICES ARE OPERATED. TO MINIMIZE THE RISK OF PERSONAL INJURY FROM PRESSURE EXHAUSTING, ENSURE THAT ALL PERSONS STAND CLEAR OF THE EXHAUST PATH AND THAT HEARING PROTECTION AND EYE PROTECTION ARE WORN AT ALL TIMES.

Diagrammatic view and arrangement of the test rack is shown on Drawing NYT-677.

The AB-178 Test Plate Combination, Pc.569072 (Dwg.TA-2968-D) used in connection with these tests consists of the following:

AB-178 Test Plate Complete (See Note) - Pc.569073 (Dwg.TA-2968-C)
Ring Gasket Pc.93986 (Dwg. BC-8378)

NOTE: The chokes in test plate cocks "A" and "B" must be calibrated to provide the proper rate of blowdown of Auxiliary Reservoir pressure per instructions specified in the attached SUPPLEMENT.

Main Reservoir feed valve must be set to close at 110 PSI.

Supply pressure must be at least 130 PSI.

TEST NO. 1
LEAKAGE

Commence test with all Cocks closed and Valve "A" handle in Position No. 8.

Secure vent valve to test rack as shown on attached TC drawing.

Open Cocks 16 and 19. Move Valve "A" handle to Position No. 1. Operate vent valve several times by alternately opening and closing Cocks 16 and 15, finally close Cock 15 and open Cocks 16 and 2.

(a) Exhaust Valve Seal

EXHAUST PORT OPENING - Soap Test - 1" bubble in not less than 5 seconds.

(b) Casting and Gaskets

ENTIRE PORTION - Soap test - No leakage allowed.

TEST NO. 2
QUICK ACTION CHAMBER CHARGING

Commence test with Cocks 2, 16, and 19 open and Valve "A" handle in Position No. 1.

Close Cocks 2 and 16. Open Cocks "A" and "B" and drain Q.A. Chamber for 10 seconds, then close Cocks "A" and "B". Quickly open and close Cock 2 and note:

AUXILIARY RESERVOIR GAGE - pressure reduces to 70 psi in 10 to 28 seconds.

Open Cocks 2 and 16.

TEST NO. 3
SERVICE STABILITY

Commence test with Cocks 2, 16, and 19 open and Valve "A" handle in Position No. 1.

Close Cock 16. Partly open Cock 15 and slowly reduce Auxiliary Reservoir pressure to 70 psi, then close Cock 15. Allow 30 seconds for temperature effect, then with exactly 70 psi in the Auxiliary Reservoir, open Cock "A" and note:

AUXILIARY RESERVOIR GAGE - 70 to 45 psi without producing an emergency action.

Close Cock "A".

TEST NO. 4
EMERGENCY SENSITIVENESS

Commence test with Cocks 2 and 19 open and Valve "A" handle in Position No. 1.

Open Cock 16 and charge Auxiliary Reservoir to 110 psi. Allow 20 seconds for temperature effect, then close Cock 16. Partly open Cock 15 and reduce Auxiliary Reservoir pressure to 70 psi, then close Cock 15. Allow 45 seconds for temperature effect, then, with exactly 70 psi in the Auxiliary Reservoir, open Cock "B" and note:
Auxiliary Reservoir Gage - Emergency action must occur before pressure reduces more than 20 psi (70 to 50 psi). Pressure must reduce to 10 psi within 5 seconds after emergency occurs.

TEST NO. 5
RESET

Commence test with Cocks 2, 19, and "B" open, and Valve "A" handle in Position No. 1.

With all pressure drained from the Auxiliary Reservoir, close Cock "B". Partly open Cock 16 and note that exhaust valve closes after an emergency application, then charge Auxiliary Reservoir to 5 psi, close Cock 16 and note:

EXHAUST PORT OPENING - Soap Test - 1" bubble in not less than 5 seconds.

Open Cock "B". After all pressure has drained, close all cocks.

SUPPLEMENT
CODE OF TESTS FOR TESTING CHOKES IN COCKS "A" AND "B"
OF AB-178 TEST PLATE

A Blanking Pad, Pc. 510019 (Dwg. PF-314) must be available when making the following tests.

Commence test with all cocks closed and Valve "A" handle in Position No. 8.

Attach the AB-178 Test Plate to the rack pipe bracket, then fasten the Blanking Pad to the vent valve mounting flange of the test plate.

CAPACITY TEST

(a) Cock "A" [3/16" Drill Choke, Pc. 50713 (UV-118)].

Open Cocks 2 and 16. Move Valve "A" handle to Position No. 1 and charge Auxiliary Reservoir to exactly 110 psi pressure, allowing 2 minutes for temperature effect, then close Cock 16.

Open Cock "A" and note:

Auxiliary Reservoir GAGE - 110 to 10 psi in 25-1/2 to 26 seconds.

Close Cock "A".

(b) Cock "B" [No. 4 (.209") Drill Choke, Pc. 529834 (TA-2988)].

Open Cock 16 and re-charge the Auxiliary Reservoir to exactly 110 psi, allowing 2 minutes for temperature effect, then close Cock 16.

Open Cock "B" and note:

Auxiliary Reservoir GAGE - 110 to 10 psi in 16 to 16 1/2 seconds.

NOTE: This test is based on a predetermined rate of Auxiliary Reservoir reduction which should be obtained. If, however, due to tolerance variations in reservoir volumes, deviation from the above blowdown times is encountered, it can and must be corrected by carefully increasing and decreasing the choke capacity as the case may be.

In all cases the orifice face of the choke plug should be lapped to produce a sharp leading edge.

At the completion of test, move Valve "A" handle to Position No. 8 and close all cocks.

ENGINEERING DEPARTMENT

REVISION PAGE

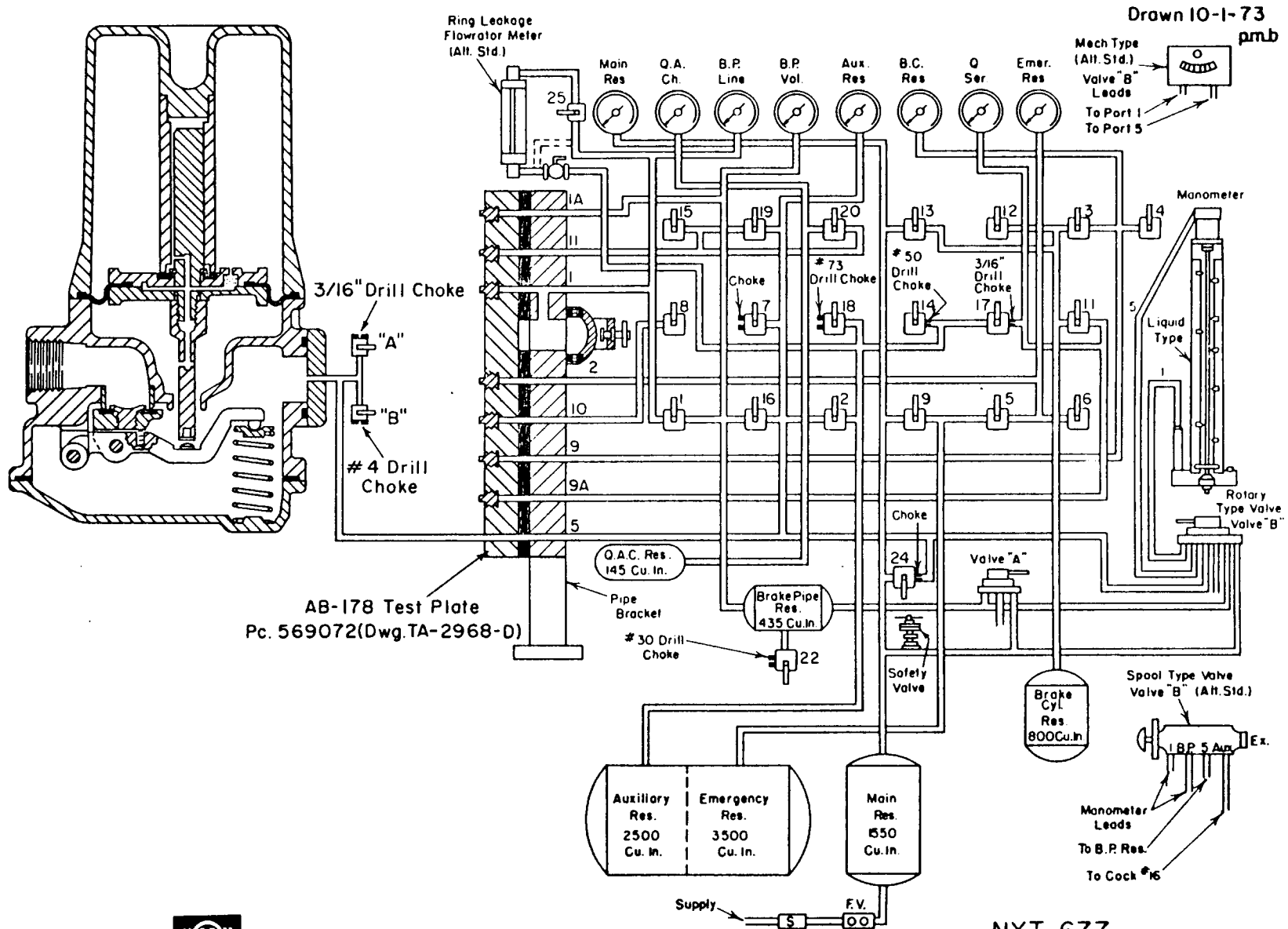
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Test 2 - 10 to 28 seconds was
not less than 18 seconds.



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NYT-677

Diagrammatic View And Arrangement
Of "AB" Test Rack For Testing KM-2 Vent
Valve Portion, Pc. 748715 (Dwg. VV-389)