Trouble-Shooting Flow Chart
for ASSE 1013 (RP) Assemblies

Attach test kit

Test #1
Tightness of #2 shutoff valve

Close #2 shutoff valve

Does relief valve discharge?

YES

FAIL

#1 check valve is leaking and must be repaired

NO

Bypass pressure from TC #2 to TC #4

Close TC #2

Does gauge reading remain steady?

YES

PASS

TEST #1
#2 shutoff valve is pressure tight

TEST #2
Check valve #2 leak tight under backpressure

NO

Does gauge reading drop?

YES

FAIL

#2 shutoff valve is leaking under backpressure

NO

Does gauge reading remain steady?

YES

Does relief valve discharge?

YES

FAIL

#2 check valve is leaking and must be repaired

NO

If a no flow condition can not be achieved, #2 shutoff valve must be repaired

Gauge reading increases means #2 shutoff is leaking under backpressure

Testing shall not proceed unless the backpressure is relieved
Does gauge reading remain steady?

YES

PASS

Check valve #2 is leak tight under backpressure

NO

Proceed with testing

PASS

TEST #2

#2 check valve is leak tight under backpressure

TEST #3

Check valve #1 pressure differential

1. Close Bypass valve
2. Open TC #2
3. Open Low bleed valve
4. Close Low bleed valve

Is the gauge reading ≥ 5 psid?

YES

PASS

TEST #3

#1 check valve is working properly

NO

Does the gauge reading drop and relief valve discharge?

YES

FAILURES

#1 check valve seat or rubber disk may be damaged OR #1 check valve may be fouled with debris OR internal leaks through the relief valve diaphragm may be present

Repair is needed

FAILURES

#1 check requires maintenance. The rubber disk or valve seat or both may be damaged

NO

Is the gauge reading < 5 psid with no relief valve discharge?

YES

FAILURES

#1 check requires maintenance. The rubber disk or valve seat or both may be damaged

NO

Is relief valve discharge intermittent?

YES

PASS

Line pressure fluctuation is present and check valve #2 can be recorded as leak tight under backpressure

NO

FAILURES

Check valve #2 is leaking under backpressure and must be repaired

FAILURES

Check valve #2 is leak tight under backpressure

FAILURES

Check valve #2 is leaking under backpressure and must be repaired

FAILURES

Check valve #2 is leaking under backpressure and must be repaired
TEST #4
Relief valve opening pressure differential

Slowly open the Low valve

Does the relief valve drip with a gauge reading of ≥ 2 psid?

YES

The relief valve does not drip with the Low valve wide open

FAILURES

PASS

The relief valve is working properly

1. Remove test kit
2. Restore system
3. Open #2 shutoff

TEST COMPLETE

Restore to pre-test condition

Does the relief valve drip with a gauge reading of < 2 psid?

NO

The relief valve requires service

YES

Does #2 shutoff valve leaking now?

NO

The relief valve is stuck closed and requires service

YES

A no flow condition must be achieved by accommodating the leak with a Bypass hose or additional downstream shutoff before completing the test

FAILURES

If a no flow condition can not be achieved, #2 shutoff valve must be repaired.