

ETV & CSMV VALVE DIAGNOSTICS: TEST BEFORE YOU REPLACE



CHECK VALVE OPERATION BEFORE REPLACING HIGH-COST CONTROL COMPONENTS SUCH AS THE PCB

IDENTIFYING VALVE INVOLVEMENT



PRIMARY SYMPTOMS
Loss of cooling, unstable temperatures, or inability to reach setpoint.



CHECK FLOW CONTROL FIRST
Confirm whether the issue is linked to refrigerant flow control before assuming a PCB fault.



AVOID MISDIAGNOSIS
A valve fault can be mistaken for a PCB issue, leading to unnecessary replacement and downtime. **Confirm valve operation before considering PCB replacement.**

3-STEP DIAGNOSTIC WORKFLOW

1 CONFIRM SYMPTOMS

Verify symptoms such as loss of cooling, unstable temperatures, or inability to reach setpoint.



2 USE A DEDICATED VALVE TESTER

Use the tester to check actuation and valve opening / closing behaviour before replacing the PCB or controller, helping reduce diagnostic time.



3 INTERPRET THE RESULTS

✓ VALVE OPERATES
Continue diagnosis by checking wiring, controller inputs, sensors, and related components.



✗ NO OPERATION
Investigate the valve assembly and replace components as required.



IDENTIFYING FAILURE MODES



STUCK OPEN
Overcooling or poor temperature control.



STUCK CLOSED
No cooling or insufficient cooling.



INTERMITTENT RESPONSE
Unstable temperatures or inconsistent performance.



ELECTRICAL FAILURE
No actuation or no response, often mistaken for a PCB fault.

REPAIR OPTIONS & RELATED MYRIAD PARTS



MPN5500
Tester Tool
MRD-07-00375-00



MPN2479
CSMV Repair Kit
MRD-14-00441-01



MPN2481
CSMV Repair Kit
MRD-14-00410-53



MPN2659
CSMV Valve Piston
MRD-14-00263-20



MPN2478
CSMV Valve
MRD-14-00441-00



MPN2480
CSMV Valve HE 19
MRD-14-00410-28



MPN2482
CSMV Valve Vector 1350
MRD-14-00410-22 / 27



MPN3482
ETV Head Round
MRD-40-1571 / 0947



MPN3489
ETV Head Square
MRD-40-1472



MPN3484
ETV Complete Valve
MRD-61-9506

ETV / CSMV SYSTEM RELATIONSHIP (FUNCTIONAL FLOW)

1 CONTROLLER / PCB

Sends control signal.



2 ETV / CSMV VALVE

Adjusts refrigerant flow.



3 EVAPORATOR / REFRIGERATION CIRCUIT

Cooling effect happens here.



4 TEMPERATURE SENSORS

Send feedback to the controller.



FEEDBACK LOOP