

► TASK Diagnose A/C compressor clutch control systems; determine necessary action.

AST
7D2

MAST
7D2

Time off: _____

Time on: _____

Total time: _____

CDX Tasksheet Number: C374

Vehicle used for this activity:

Year _____ Make _____ Model _____

Odometer _____ VIN _____

1. Research the procedure and specifications to inspect and test the electrical components of the A/C compressor clutch control system in the appropriate service information.
 - a. Specified resistance of the clutch winding: _____ ohms
 - b. A/C cycling switch specifications (if equipped)
 - Off pressure: _____ psi/kPa
 - On pressure: _____ psi/kPa
 - c. A/C thermostatic switch specifications (if equipped)
 - Off temperature: _____ °F/°C
 - On temperature: _____ °F/°C
 - d. A/C duct temperature specifications: _____ °F/°C
 - e. A/C high-pressure cut-out switch specifications
 - Off pressure: _____ psi/kPa
 - On pressure: _____ psi/kPa
 - f. A/C low pressure cut-out switch (non-cycling) (if equipped)
 - Off pressure: _____ psi/kPa
 - On pressure: _____ psi/kPa
 - g. A/C compressor clutch relay specifications (if equipped)
 - Relay winding resistance: _____ ohm
 - Maximum allowable voltage drop across relay contacts: _____ volt
 - h. List all the fuses and/or fusible links for the A/C compressor clutch circuit: _____
 - i. Does the compressor clutch share a fuse with the blower circuit?
 - Yes: _____ No: _____
2. Following the specified procedure, activate the A/C system.
 - a. Does the compressor clutch engage? Yes: _____ No: _____
 - b. If yes, continue on to step 3. If no, skip to step 5.

3. List your observations below.
 - a. A/C cycling switch readings (if equipped)
 - Off pressure: _____ psi/kPa
 - On pressure: _____ psi/kPa

b. A/C thermoswitch readings (if equipped)

Off temperature: _____ °F/°C

On temperature: _____ °F/°C

c. A/C duct temperature: _____ °F/°C

d. A/C high pressure cut-out switch readings (may require condenser airflow blockage to test). (DUE TO THE SAFETY IMPLICATIONS, ONLY PERFORM THIS TEST IF APPROVED BY YOUR SUPERVISOR/INSTRUCTOR)

Off pressure: _____ psi/kPa

On pressure: _____ psi/kPa

e. Determine any necessary action(s):

4. Have your supervisor/instructor verify the readings. Supervisor's/instructor's initials: _____

NOTE If your instructor signed off on this step, skip to the final check off.

5. If the clutch does not engage, install a gauge set and check for minimum refrigerant pressure. If pressure is insufficient, check for refrigerant leaks, then retest after repair. If pressure is sufficient, measure the voltage applied to the compressor clutch winding.

a. Applied voltage to the compressor clutch: _____ volt

b. Compressor clutch winding resistance: _____ ohm

c. A/C compressor clutch relay readings

Relay winding resistance: _____ ohm

Voltage at the relay contact input terminal: _____ volt

Voltage drop across relay contacts (A/C on): _____ volt

d. Describe the circuit protection device(s) condition:

6. Determine any necessary action(s):

NOTE If repairs are made, return to step 3 and retest.

Name: _____ Date: _____ Class _____

7. Have your supervisor/instructor verify satisfactory completion of this procedure, any observations found, and any necessary action(s) recommended.

Performance Rating

CDX Tasksheet Number: C374

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Supervisor/instructor signature _____ Date _____

Name: _____ Date: _____ Class _____