



# Running Compression Test

**Meets NATEF Task:** (A8-A-4) Perform cylinder and running compression tests; determine necessary action. (P-1)

Name \_\_\_\_\_ Date \_\_\_\_\_ Time on Task \_\_\_\_\_

Make/Model/Year \_\_\_\_\_ VIN \_\_\_\_\_ Evaluation: 4 3 2 1

- \_\_\_\_\_ 1. Perform a normal cranking compression test to eliminate obvious engine mechanical faults.
- \_\_\_\_\_ 2. Install the spark plugs except for one. Use a jumper wire on the one remaining spark plug wire and connect the spark plug wire to ground to prevent damage to the coil or the ignition control module.
- \_\_\_\_\_ 3. Install the compression gauge, start the engine, and operate at idle speed (push on the Schrader valve and release the pressure every 5 or 6 “puffs”).
- \_\_\_\_\_ 4. Snap open the accelerator and note the gauge reading. It should increase.
- \_\_\_\_\_ 5. Record all cylinders for running (idle) and snap accelerator readings.

Cylinder #1	Idle _____	Snap _____	Cylinder #5	Idle _____	Snap _____
Cylinder #2	Idle _____	Snap _____	Cylinder #6	Idle _____	Snap _____
Cylinder #3	Idle _____	Snap _____	Cylinder #7	Idle _____	Snap _____
Cylinder #4	Idle _____	Snap _____	Cylinder #8	Idle _____	Snap _____

- \_\_\_\_\_ 6. Analysis:

Running compression at idle speed should be about half of the cranking compression test (60 to 80 psi). \_\_\_\_\_ **OK** \_\_\_\_\_ **NOT OK**

Snap throttle compression should be about 80% of the cranking compression (100 to 130 psi).

- All cylinders should be within 10% of each other on both tests.
- If the snap throttle or idle reading is low, look for a restricted intake, worn cam lobe, bent pushrod, or defective rocker arm.
- If the snap throttle reading is higher than 80% of the cranking compression test, look for a restricted exhaust on that cylinder, such as a worn exhaust cam lobe or a collapsed lifter. If all cylinders are high on the snap throttle test, look for a restricted catalytic converter or other restriction.

- \_\_\_\_\_ 7. Based on the test results, what is the necessary action? \_\_\_\_\_