2012 Honda Civic CNG VIN 0672

Advanced Vehicle Testing – Compression Testing Results

VEHICLE SPECIFICATIONS[1]

Vehicle

VIN:19XFB5F53CE000672
Class: Compact
Seatbelt Positions: 5
Type: Sedan
CARB[2]: AT-PZEV
EPA City/Hwy/Combined[3]: 27/38/32 MPGe

Tires

Manufacturer: Firestone
Model: Affinity
Size: P195/65R16
Pressure F/R: 30/30 psi
Spare Installed: T135/80D15 99M

Engine

Model: 16 Valve SOHC i-VTEC®
Output: 82 kW @ 6500 rpm
Torque: 143.72 Nm @ 4300 rpm
Configuration: Inline 4-Cylinder
Displacement: 1.8 L
Compression Ratio: 12.7:1
Fuel Type: Compressed Natural Gas

Compression Test Service Limits[4]

Minimum Manufacturer Compression per Cylinder: 135.0 psi
Maximum Compression Variation Between Cylinders: 29.0 psi

Transmission

Type: Electronically-Controlled 5-Speed Automatic
Features: ECO Mode

Weights

Design Curb Weight: 2,855 lb
GVWR: 3,814 lb
GAWR F/R: 2,029/ 1,852 lb
Max. Payload: 959 lb

Dimensions

Wheelbase: 105.1 in
Track F/R: 59.0 / 60.2 in
Length/Width: 177.3 in / 69 in
Height: 56.5 in
Ground Clearance: 5.5 in

Fuel Tank

Type: Structural Composite
Pressure Rating: 3600 psi
Fuel Tank Capacity[5]: 8.03 GGE

NOTES:

1. Vehicle specifications were supplied by the manufacturer, measured, or derived from a literature review.
2. The vehicle was certified as an Advanced Technology Partial Zero Emission Vehicle by the California Air Resources Board (CARB).
3. The fuel economy is given in units of "miles per gallon of gasoline equivalent" (MPGe).
4. Service limits provided from the 2012 Honda Civic CNG online service manual. There is an alternate minimum compression value of 127.6 psi from the Honda Civic CNG Service Manual Engine Compression Inspection R002800.
5. The fuel tank capacity is given in units of "gallons of gasoline equivalent" (GGE).

COMPRESSION TEST RESULTS[1]

Cylinder Measured	BOT Compression Measurement (Max psi)[2]	BOT Difference from Minimum Manufacturer Compression (psi)[3]	First ICD Compression Measurement (Max psi)[4]	First ICD Difference from Minimum Manufacturer Compression (psi)[5]	% Difference Between First ICD and BOT[6]
1	253.99	118.99	248.14	113.14	-2.3
2	226.60	91.60	237.47	102.47	4.8
3	237.15	102.15	240.02	105.02	1.2
4	253.15	118.55	254.00	119.00	0.3
Average (psi)	**242.73**	**107.73**	**244.91**	**109.91**	**0.9**
Max Variation (psi)	**27.39**		**16.53**		
Min Variation (psi)	**10.55**		**2.55**		

NOTES:

1. Compression test completed using Model 4223 or equivalent PicoScope with a calibrated WPS500 pressure transducer. Vehicle fuel injection and ignition fuse removed from vehicle fuse box. Throttle blade was held wide open to minimize pumping loss.
2. Beginning of Test (BOT) completed on 01/4/2013 with an odometer reading of 4,154 miles.
3. BOT measured compression is compared against the manufacturer-supplied minimum compression value per cylinder.
4. First Interim Component Durability (ICD) completed on 09/5/2013 with an odometer reading of 15,865 miles.
5. First ICD measured compression is compared against the manufacturer-supplied minimum compression value per cylinder.
6. % Difference between BOT and First ICD calculated with the following equation: ((BOT-First ICD)/BOT).

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