

2022 CHEVROLET CORVETTE SERVICE MANUAL

- SEARCH

1. Engine/Propulsion

2. Engine Mechanical - 6.2L (LT2)

3. Specifications

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Engine Mechanical Specifications

Application	Specification	
	Metric	English
General		
• Engine Type	V8	
• Displacement	6.2L	376 CID
• RPO	LT2	
• VIN	4	
• Bore	103.25 mm	4.064 in
• Stroke	92.0 mm	3.622 in
• Compression Ratio	11.5:1	
• Firing Order	1-8-7-2-6-5-4-3	
• AFM Cylinders	8-2-5-3	
• Spark Plug Gap	0.95-1.10 mm	0.037-0.043 in
Engine Block		
• Camshaft Bearing Bore 1 and 5 Diameter	59.58-59.63 mm	2.345-2.347 in
• Camshaft Bearing Bore 2 and 4 Diameter	59.08-59.13 mm	2.325-2.327 in
• Camshaft Bearing Bore 3 Diameter	58.58-58.63 mm	2.306-2.308 in
• Crankshaft Main Bearing Bore Diameter	69.869-69.891 mm	2.751-2.752 in
• Crankshaft Main Bearing Bore Out-of-Round	0.008 mm	0.00031 in
• Cylinder Bore Diameter	103.242-103.258 mm	4.0646-4.0653 in
• Cylinder Head Deck Height - Measuring from the Centerline of Crankshaft to the Deck Face	234.575-234.825 mm	9.235-9.245 in
• Cylinder Head Deck Surface Flatness - Measured Within a 150.00 mm (5.9 in) Area	0.05 mm	0.002 in
• Cylinder Head Deck Surface Flatness - Measuring between Cylinder Head Bolt Holes	0.03 mm	0.0012 in
• Cylinder Head Deck Surface Flatness - Measuring the Overall Length of the Block Deck	0.1 mm	0.0039 in
• Valve Lifter Bore Diameter	21.417-21.443 mm	0.843-0.844 in
• Valve Lifter Follower Bore Diameter	29.187-29.213 mm	1.149-1.150 in

Application	Specification	
	Metric	English
Camshaft		
• Camshaft End Play	0.025~0.305 mm	0.001~0.012 in
• Camshaft Journal Diameter	54.990~55.015 mm	2.164~2.166 in
• Camshaft Bearing Diameter	55.063~55.088 mm	2.1678~2.1688 in
• Camshaft Journal-to-Bearing Clearance	0.048~0.098 mm	0.0019~0.0038 in
• Camshaft Journal Out-of-Round	0.006 mm	0.0002 in
• Camshaft Lobe Lift ~ Exhaust Non AFM	7.749 mm	0.3051 in
• Camshaft Lobe Lift ~ Exhaust AFM	7.858 mm	0.3094 in
• Camshaft Lobe Lift ~ Intake Non AFM	7.757 mm	0.3054 in
• Camshaft Lobe Lift ~ Intake AFM	7.866 mm	0.3097 in
• Fuel Pump Lobe Lift	5.70 mm	0.224 in
• Camshaft Runout ~ Measured at the Intermediate Journals	0.05 mm	0.002 in
Camshaft Position Actuator		
• Range of Authority	62 degrees	
• Park Position	7 degrees Advanced	
Connecting Rod		
• Connecting Rod Bearing Clearance ~ Production	0.024~0.064 mm	0.0009~0.0025 in
• Connecting Rod Bearing Clearance ~ Service	0.023~0.076 mm	0.0009~0.0029 in
• Connecting Rod Bore Diameter ~ Bearing End	56.505~56.525 mm	2.224~2.225 in
• Connecting Rod Bore Out-of-Round ~ Bearing End ~ Production	0.006 mm	0.00023 in
• Connecting Rod Bore Out-of-Round ~ Bearing End ~ Service	0.008 mm	0.0003 in
• Connecting Rod Side Clearance	0.125~0.495 mm	0.004~0.019 in
Crankshaft		
• Connecting Rod Journal Diameter ~ Production	53.320~53.336 mm	2.0992~2.0998 in
• Connecting Rod Journal Diameter ~ Service	53.31 mm	2.0996 in
• Connecting Rod Journal Out-of-Round ~ Production	0.005 mm	0.0002 in
• Connecting Rod Journal Out-of-Round ~ Service	0.01 mm	0.0004 in
• Connecting Rod Journal Taper ~ Maximum for 1/2 of Journal Length ~ Production	0.008 mm	0.0003 in
• Connecting Rod Journal Taper ~ Maximum for 1/2 of Journal Length ~ Service	0.015 mm	0.00059 in
• Crankshaft End Play	0.040~0.220 mm	0.0015~0.0086 in

Application	Specification	
	Metric	English
• Crankshaft Main Bearing Clearance " Production	0.02"0.052 mm	0.0008"0.0021 in
• Crankshaft Main Bearing Clearance " Service	0.02"0.065 mm	0.0008"0.0025 in
• Crankshaft Main Journal Diameter " Production	64.992"65.008 mm	2.558"2.559 in
• Crankshaft Main Journal Diameter " Service	64.982 mm	2.558 in
• Crankshaft Main Journal Out-of-Round " Production	0.005 mm	0.002 in
• Crankshaft Main Journal Out-of-Round " Service	0.01 mm	0.0004 in
• Crankshaft Main Journal Taper " Production	0.008 mm	0.0003 in
• Crankshaft Main Journal Taper " Service	0.015 mm	0.00059 in
• Crankshaft Rear Flange Runout	0.025 mm	0.00098 in
• Crankshaft Reluctor Ring Runout " Measured 1.0 mm (0.04 in) Below Tooth Diameter	0.7 mm	0.028 in
• Crankshaft Thrust Surface " Production	26.14"26.22 mm	1.029"1.0315 in
• Crankshaft Thrust Surface " Service	26.22 mm	1.0315 in
• Crankshaft Thrust Surface Runout	0.04 mm	0.002 in
Cylinder Head		
• Cylinder Head Height/Thickness " Measured from the Cylinder Head Deck to the Valve Rocker Arm Cover Seal Surface	132.5 mm	5.216 in
• Surface Flatness " Block Deck " Measured Within a 152.4 mm (6.0 in) Area	0.05 mm	0.002 in
• Surface Flatness " Block Deck " Measuring the Overall Length of the Cylinder Head	0.1 mm	0.004 in
• Surface Flatness " Exhaust Manifold Face	0.1 mm	0.004 in
• Surface Flatness " Intake Manifold Face	0.1 mm	0.004 in
• Valve Guide Installed Height " Measured from the Spring Seat Surface to the Top of the Guide	17.05"17.55 mm	0.671"0.691 in
• Injector Bore Diameter	7.65"7.87 mm	0.301"0.309 in
Intake Manifold		
• Surface Flatness " Measured at Gasket Sealing Surfaces and Measured Within a 200 mm (7.87 in) Area that Includes 2 Runner Port Openings	0.3 mm	0.118 in
Lubrication System		
• Oil Pressure " Minimum " Hot	152 kPa at 1,000 engine RPM 207 kPa at 2,000 engine RPM 228 kPa at 3,000 engine RPM	22 psig at 1,000 engine RPM 30 psig at 2,000 engine RPM 33 psig at 3,000 engine RPM
Oil Pan		
• Front Cover Alignment " at Oil Pan Surface	0.0"0.5 mm	0.0"0.02 in

Application	Specification	
	Metric	English
Crankshaft Rear Oil Seal Housing Alignment " at Oil Pan Surface	0.0"0.5 mm	0.0"0.02 in
Oil Pan Alignment " to Rear of Engine Block at Transmission Bell Housing Mounting Surface	0.0"0.1 mm	0.0"0.004 in
Piston Ring		
Piston Ring End Gap " First Compression Ring " Measured in Cylinder Bore " Production	0.23"0.39 mm	0.009"0.0153 in
Piston Ring End Gap " First Compression Ring " Measured in Cylinder Bore " Service	0.23"0.45 mm	0.009"0.0177 in
Piston Ring End Gap " Second Compression Ring " Measured in Cylinder Bore " Production	0.32"0.63 mm	0.0126"0.0248 in
Piston Ring End Gap " Second Compression Ring " Measured in Cylinder Bore " Service	0.32"0.69 mm	0.0126"0.0272 in
Piston Ring End Gap " Oil Control Ring " Measured in Cylinder Bore " Production	0.22"0.79 mm	0.0086"0.0311 in
Piston Ring End Gap " Oil Control Ring " Measured in Cylinder Bore " Service	0.22"0.85 mm	0.0086"0.0335 in
Piston Ring-to-Groove Clearance " First Compression Ring " Production	0.040"0.083 mm	0.0016"0.0033 in
Piston Ring-to-Groove Clearance " First Compression Ring " Service	0.040"0.083 mm	0.0016"0.0033 in
Piston Ring-to-Groove Clearance " Second Compression Ring " Production	0.040"0.083 mm	0.0016"0.0033 in
Piston Ring-to-Groove Clearance " Second Compression Ring " Service	0.040"0.083 mm	0.0016"0.0033 in
Piston Ring-to-Groove Clearance " Oil Control Ring " Production	0.013"0.201 mm	0.0005"0.0079 in
Piston Ring-to-Groove Clearance " Oil Control Ring " Service	0.013"0.201 mm	0.0005"0.0079 in
Piston and Pin		
Pin " Piston Pin Clearance-to-Piston Pin Bore " Production	0.002"0.01 mm	0.00008"0.0004 in
Pin " Piston Pin Clearance-to-Piston Pin Bore " Service	0.002"0.015 mm	0.00008"0.0006 in
Pin " Piston Pin Diameter	23.952"23.955 mm	0.9430"0.9431 in
Pin " Piston Pin Fit in Connecting Rod Bore " Production	0.007"0.02 mm	0.00027"0.00078 in
Pin " Piston Pin Fit in Connecting Rod Bore " Service	0.007"0.022 mm	0.00027"0.00086 in
Piston " Piston Diameter " Measured Over Skirt Coating	103.258"103.289 mm	4.0653"4.0665 in

Application	Specification	
	Metric	English
• Piston $\checkmark$ Piston to Bore Clearance $\checkmark$ Production	$\checkmark$ 0.047 to +0.000 mm	$\checkmark$ 0.0019 to +0.000 in
• Piston $\checkmark$ Piston to Bore Clearance $\checkmark$ Service Limit With Skirt Coating Worn Off	0.052 mm	0.0020 in
Valve System		
• Valves $\checkmark$ Valve Face Angle	45 degrees	
• Valves $\checkmark$ Valve Face Width	1.25 mm	0.05 in
• Valves $\checkmark$ Valve Lash	Net Lash $\checkmark$ No Adjustment	
• Valve Lift $\checkmark$ Exhaust Non AFM	14.000 mm	0.551 in
• Valve Lift $\checkmark$ Exhaust	14.211 mm	0.559 in
• Valve Lift $\checkmark$ Intake Non AFM	14.000 mm	0.551 in
• Valve Lift $\checkmark$ Intake	14.211 mm	0.559 in
• Valves $\checkmark$ Valve Seat Angle	45 degrees	
• Valves $\checkmark$ Valve Seat Runout $\checkmark$ Production	0.05 mm	0.002 in
• Valves $\checkmark$ Valve Seat Runout $\checkmark$ Service	0.08 mm	0.003 in
• Valves $\checkmark$ Valve Seat Width $\checkmark$ Exhaust	2.52 mm	0.099 in
• Valves $\checkmark$ Valve Seat Width $\checkmark$ Intake	1.98 mm	0.078 in
• Valves $\checkmark$ Valve Stem Diameter $\checkmark$ Production	$\checkmark$ 7.956 $\checkmark$ 7.976 mm	$\checkmark$ 0.313 $\checkmark$ 0.314 in
• Valves $\checkmark$ Valve Stem Diameter $\checkmark$ Service	7.95 mm	0.313 in
Note:		
For valve stem to guide clearance $\checkmark$ valve guide inner diameter measurements must be recorded at a depth of 7 mm (0.26 in) in the valve guide bore.		
• Valves $\checkmark$ Valve Stem-to-Guide Clearance $\checkmark$ Production $\checkmark$ Exhaust	0.025 $\checkmark$ 0.065 mm	0.001 $\checkmark$ 0.0026 in
• Valves $\checkmark$ Valve Stem-to-Guide Clearance $\checkmark$ Service $\checkmark$ Exhaust	0.093 mm	0.0037 in
• Valves $\checkmark$ Valve Stem-to-Guide Clearance $\checkmark$ Production $\checkmark$ Intake	0.025 $\checkmark$ 0.066 mm	0.001 $\checkmark$ 0.0026 in
• Valves $\checkmark$ Valve Stem-to-Guide Clearance $\checkmark$ Service $\checkmark$ Intake	0.093 mm	0.0037 in
• Valves $\checkmark$ Valve Stem Height $\checkmark$ Measured from Spring Seat $\checkmark$ Intake and Exhaust	51.945 $\checkmark$ 52.695 mm	2.045 $\checkmark$ 2.074 in
• Rocker Arms $\checkmark$ Valve Rocker Arm Ratio	1.80:1	
• Valve Springs $\checkmark$ Valve Spring Free Length $\checkmark$ Yellow Stripe & Top	56.2 mm	2.21 in
• Valve Springs $\checkmark$ Valve Spring Installed Height $\checkmark$ Yellow Stripe & Top	47.75 mm	1.88 in

Application	Specification	
	Metric	English
• Valve Springs “ Valve Spring Load “ Closed “ Yellow Stripe & Top	430 N at 47.75 mm	97 lb at 1.9 in
• Valve Springs “ Valve Spring Load “ Open “ Yellow Stripe & Top	1345 N at 34.15 mm	302 lb at 1.34 in

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