

1965 Corvette: Service News: Engine Removal Revised

Subject: Engine Removal Revised

Model and Year: 1965 Corvette with 327 or 396 cu. in. engine

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Page: 2

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Regardless of whether a 1965 Corvette be equipped with a 327 or a 396 cu. in. engine, all major engine repairs except crankshaft and cylinder block replacement can be performed with the engine in the car.

In those few cases where it would be necessary to remove an engine from a Corvette, it is recommended that the engine and transmission assembly then be lifted from the vehicle as a unit. Experience shows that it takes considerably less time to remove the engine and transmission as a package, than it would to "split" the engine from the transmission in the vehicle and remove the engine alone.

The following is a revised service procedure for removal of 327 and 396 cu. in. engines from 1965 Corvettes.

1. Disconnect battery ground cable.
2. Remove hood assembly (2-man operation)
3. Remove carburetor air cleaner.
4. Raise vehicle and place on jack stands.
5. Drain radiator. On Powerglide equipped vehicles, disconnect cooler lines at transmission and unclip these lines from engine.
6. Drain cylinder block. on the 327 engines, it will be necessary to remove the starting motor heat shielding and ignition lower shielding to gain drain plug access.
7. Disconnect electrical wiring at starter motor.
8. Disconnect electrical wiring at Delcotron.
9. Disconnect electrical wiring at engine temperature gauge sending unit.
10. Disconnect ground strap at accelerator linkage.
11. Disconnect oil pressure gauge line from engine. On 327 engines, it will be necessary to remove the crankcase vent tube from the cylinder block for access to the gauge line connection.
12. Disconnect primary lead at ignition coil.
13. Disconnect engine ground strap at engine left front mount.
14. Disconnect flex fuel line at fuel pump inlet.
15. Disconnect accelerator linkage from accelerator lever at dash.
16. Drain oil from engine crankcase.

17. Remove carburetor choke tubes.
18. Remove both valve rocker covers and clean gasket surfaces.
19. Attach lifting device to engine cylinder heads.
20. Disconnect exhaust pipes at exhaust manifold flanges.
21. On all Corvettes except those with side mounted exhaust system (RPO N14); remove exhaust pipe clamps at exhaust pipe support "yoke".
22. Support and raise transmission enough to remove load from rear mount cushion. Remove two bolts from bracket-to-cushion and two bolts from mount-to-transmission. Remove mount cushion and exhaust pipe "yoke".
23. On vehicles with 3 or 4-speed transmissions, disassemble transmission gearshift control lever by unscrewing ball from lever, lifting out "T" handle return spring and "T" handle, then removing the anti-rattle bushings.
24. On jobs with 3 or 4-speed transmissions lower transmission assembly to within 1" of crossmember.
25. Disconnect heater hoses at water pump and inlet manifold. On the 327 engines also slide the heater hoses out of routing clamp at exhaust manifold.
26. Disconnect radiator upper host at inlet manifold and the lower hose at water pump.
27. Remove engine fan and pulley assembly.
28. After disconnecting the hose from the radiator supply tank, remove the radiator and shroud-to-tie bar upper attachment. Remove shroud retaining screws then lift the radiator and shroud from the vehicle together.
29. Remove the ignition distributor and coil shielding.
30. Disconnect tachometer drive at distributor.
31. Disconnect shift rods and levers at transmission.
32. Disconnect back-up lamp switch linkage and wiring on all vehicles except those equipped with Powerglide.
33. On vehicles with 3 or 4-speed transmissions, remove two bolts to disconnect the transmission gearshift control lever and bracket assembly from its adapter plate on side of transmission. Lower lever and bracket assembly and remove from the vehicle.
34. Disconnect speedometer cable from transmission.
35. Remove prop shaft "U"-bolts at transmission and wire yoke onto transmission. Tape "U"-join bearings to trunnion.
36. Remove engine front mount thru bolts.
37. Using the lifting device, raise and guide engine and transmission out of the vehicle, as an assembly (2-man operation).

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