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Servicing Metallic Brakes

The metallic brake shoes offered optionally on 1963 and many past model passenger vehicles, incorporate several segmented pads on each brake shoe assembly. The metallic braking material forms the top layer of each segment and the lower layer is a metal backing pad used to weld the segment to the shoe proper (Fig. 1).

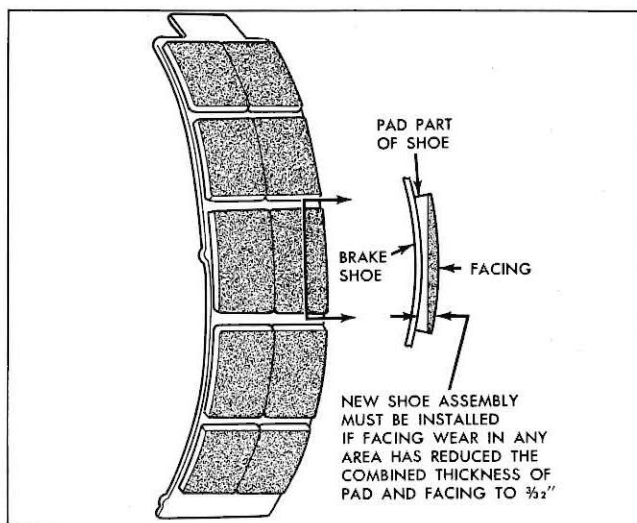


Fig. 1—Checking Metallic Brake Lining Wear

The metal backing or bonding pad is very similar in appearance to the metallic brake facing material; therefore, there is a possibility that at time of brake inspection the overall thickness of the segment could be mistakenly interpreted as the actual thickness of facing material remaining

on a worn shoe assembly. To preclude the possibility of excessively worn shoes remaining in service and causing erratic braking and/or scored drums, it is recommended that metallic brake shoes be replaced whenever the combined thickness of the metallic facing material, together with its backing pad, has in any area been reduced by wear to a thickness $\frac{3}{32}$ " or less.

Acrylic Finish Repair

A one-day school introducing painters to an entirely new method of repairing automotive acrylic lacquer color coats is being conducted by Fisher Body personnel in all General Motors Training Centers. Even the most experienced painters in Chevrolet dealerships will find that they will adopt many of the newly developed time-saving techniques that they first used in the classroom of the "Acrylic Finish Repair Program."

The course is unusual in that it departs from conventional refinishing procedures and teaches a new, more positive method of matching metallic colors. Each student is taught how to regulate the dispersion of pigment and metallic flake within the paint film build-up. Proper use of this technique allows the color shade to be adjusted to provide the best possible blending of the service refinish materials with the original production color.

During the fast moving eight hour program, spot repair demonstrations will be performed on 1963 vehicles. All painters will have ample opportunity to practice the new refinishing techniques under supervised conditions.

Your arrangements for enrollment in the "Fisher Body Acrylic Finish Repair Program" should be made through Chevrolet Zone Service personnel.

Chassis Lubricant For 1963 Vehicles

The 1963 Shop Manuals and early editions of Owner Guides for Chevy II, Chevrolet Passenger Car, Corvair, and Corvette specified that chassis lubricant to be used in the servicing of these vehicles should be "Water Resistant EP Lubricant, meeting General Motors Standard GM 4751-M." In later editions of these Chevrolet publications, all references to the GM 4751-M specification will be omitted.

Since nearly all major oil companies presently merchandise a Water Resistant EP Chassis Lubricant which meets Chevrolet's requirements, it is felt that service reference to the "GM Standard" is unnecessary and has caused some confusion in the field.

1963 Chevrolet Parking Brake Adjustment

When necessary to adjust the parking brake on a 1963 Chevrolet passenger car, the following procedure should be utilized:

1. Raise the rear of the vehicle.
2. Depress parking brake pedal to **first** notch.
3. Adjust front cable to position parking brake idler lever $1'' \pm \frac{1}{4}''$ forward of rear edge of bracket (Fig. 2).

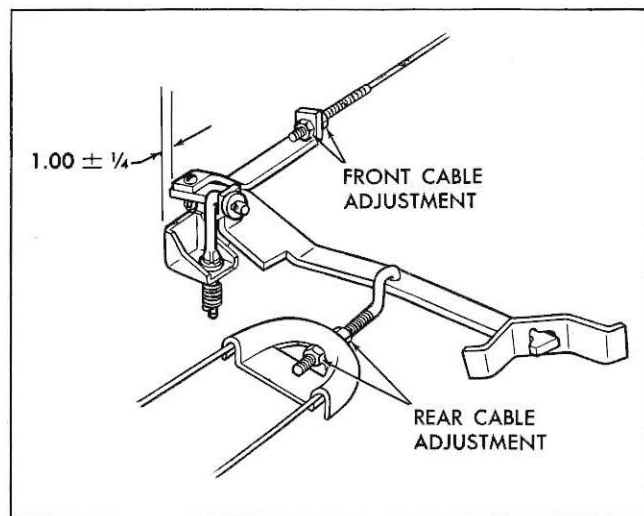


Fig. 2—Parking Brake Linkage Adjustment

4. Adjust rear cable to obtain a moderate brake drag on rear wheels.
5. Release parking brake pedal—no brake shoe drag should be felt.

Corvette Ash Tray

On some 1963 Corvette vehicles it can be extremely difficult to remove the ash tray. This is

caused by insufficient clearance between Trim Plate and Ash Tray. (Ref. 1963 Corvette Shop Manual Page 1-8 figure 12)

This condition can be corrected in the following manner:

1. Loosen the (6) trim plate attaching screws and remove the front screw on the right hand side of trim plate.
2. Loosen the center screw of the lower moulding.
3. Use awl at location where screw was removed, and force trim plate rearward to obtain necessary clearance for ash tray then replace and tighten screw.
4. Tighten all other trim plate and moulding screws.

To further ease removal it may be necessary to file the rolled flange in the seal retainer.

NOTE: The ash tray must be installed with the snuffer towards the front of car.

It Can Be Done!

SOMEWHERE IN THE WARM COUNTRY— A major triumph of man over machine occurred here today when Fredrick J. McEasy, Service Technician employed by a local Chevrolet Dealer, single-handedly removed the clock from a 1963 Impala sedan without removing the glove box, radio or instrument console! And this vehicle was equipped with All-Weather Air Conditioning!!

When questioned about his performance of this feat Fred said, "Shucks, it was easy. All I did was take the knob off the stem that sticks through the plastic window in front of the clock face: then I removed the ash tray and the ash tray retainer. This gave me room to reach my hand up behind the instrument panel to gain access to the two screws which hold the clock to the console. I pulled the electrical connector and the two lights off the back of the clock and loosened the two $\frac{1}{4}''$ hex head screws with a $\frac{1}{4}''$ drive socket and ratchet. After I got the screws loose, I took the socket off the ratchet and spun the screws all the way off holding just the socket in my fingers. I do this a lot when I'm working in a spot that's a little tight; it's faster. I keep a little tape wrapped around my $\frac{1}{4}''$ drive sockets so I can get a better grip on 'em."

"Getting back to the clock, after you get the screws out, it's clear sailing. Just ease the clock out of the panel and past the wires. Be careful that you don't pull anything loose that you don't want loose; a light touch will pay off here."

"Going back in with the new clock is pretty much the same; but, like I said, take it easy when you are passing through the wires back of the panel so that you don't snag the clock hands or scratch the face."

Corvair Universal Service Engines Available

Two universal service engines are now available as replacement for 1960 thru 1963 Corvair engines. Engine Assembly Part No. 3830951 provides replacement for all manual transmission high-performance engines, except the turbocharged engine. Engine assembly 3830953 is serviced as replacement for all Powerglide or manual transmission equipped base engines, including the Monza Powerglide engine and all Corvair "95" engines.

The 3830953 "Standard" engine assembly is internally complete from rocker cover to rocker cover and from crankshaft pulley to the clutch housing mounting surface. The 3830951 "High-Performance" engine assembly includes the above plus a distributor, clutch housing, flywheel and clutch assembly. All other external parts must, at time of engine installation, either be transferred from the engine being replaced, or be procured separately if the condition of the in-service part does not permit its further use.

Due to the broad service application these two replacement engines have in vehicles of different model years and body styles, it is felt that engine replacement will be accomplished more readily if the technician follows a step by step service procedure similar to that provided below. It should be noted that in the suggested procedure for build-up of the new engine, the oil pressure switch is being located at the oil filter adapter. This will necessitate a rework of the wiring harness on many past model vehicles. If the replacement engine is being installed in an air-conditioned vehicle, it will be necessary to transfer the oil filter mount adapter and install new adapter gaskets, before attaching a new filter cannister.

DISASSEMBLY OF ENGINE BEING REPLACED

PROCEDURE	VEHICLE MODEL YEAR		PROCEDURE	VEHICLE MODEL YEAR	
	1960	1961-62-63		1960	1961-62-63
1. Remove Powertrain Unit per appropriate Shop Manual. (Drain engine oil.)	X	X	15. Remove Upper Shroud retaining screws (including Oil Cooler Access Cover) and remove upper shroud.	X	X
2. Remove Transoxle from Engine per Shop Manual, then mount Engine in Rebuild Stand. (Remove Exhaust Pipe and Muffler Assy.)	X	X	16. Remove Engine Front Shield.	X	X
3. Remove Air Cleaner Air Tubes at Carburetors.	X		17. Remove Engine Side Shields and Muffler Shield.	X	X
4. Remove Air Cleaner Assemblies, and Supports. (Including Positive Crankcase Ventilation Valve and Hose, if so equipped.)		X	18. Remove Rear Center Shield, Seal and Seal Retainer.	X	X
5. Disconnect Choke Heat Tube, Vacuum Hose, Modifier Link, and Fast Idle Link then remove Air Horn and Support Assembly.	X		19. Remove Engine Rear Mount Bracket.	X	X
6. Disconnect Accelerator Rod Dust Boot at front shield, Fuel Lines at Carburetor and Spark Advance Hose at right Carburetor.	X	X	20. Remove L. H. and R. H. Lower Shroud and Ducts as assemblies.	X	X
7. On 1962-63 Vehicles Only—Disconnect Choke Control Rods at Choke Lever.		X	21. Remove R. H. Exhaust Manifold.	X	
8. Remove hold down nuts of each Carburetor and remove Carburetors and Cross-Shaft as an assembly (1961 includes choke cables).	X	X	22. Remove Oil Pressure Switch.	X	X
9. Remove Blower Belt and Idler Pulley.	X	X	23. Remove Temperature Sending Switch (oil temp. 1960—head temp. '61-63)	X	X
10. Remove Fuel Pump with Fuel Lines. Remove Pump Push Rod.	X	X	24. Remove Engine Blower and Pulley.	X	X
11. Remove Generator and Support Bracket Assembly including Ground Strap.	X	X	25. Remove Crankcase Vent Tube (either positive ventilation or road draft).	X	X
12. Remove Vacuum Balance Tube, Engine Oil Dipstick and Dipstick Boot.	X	X	26. On 1962-63 Vehicles Only. Remove upper and lower choke control rods, but do not remove the Choke Thermostatic Coil.		X
13. Disconnect cables at Spark Plugs and ignition wires at Coil, then remove Distributor Assembly with wires attached. Remove Ignition Coil.	X	X	27. Remove Engine Skid Plate.	X	X
14. Disconnect Cooling Air Thermostat Rod at control lever, then remove Cooling Air Throttling Valve and Bracket Assembly.	X		28. Remove engine from overhaul stand.	X	X
			THE FOLLOWING STEPS APPLY TO ONLY THE "STANDARD" (3830953) ENGINE.		
			29. Remove Engine Clutch Assembly (manual trans. vehicles).	X	X
			30. Remove Flywheel or Converter Flex Plate.	X	X
			31. Remove Clutch Housing, then replace Crankshaft Seal in housing.	X	X

UNCRATE NEW ENGINE AND CHECK FOR THE FOLLOWING PARTS:

- | | |
|---|--|
| (a) Sedan type Oil Filler Tube. | (e) Vacuum Balance Tube Hoses (2). |
| (b) Sedan type Oil Dipstick Tube. | (f) Plug for oil filler hole. |
| (c) Fuel pump to carburetor line Nipple. | (g) Plug for dipstick tube hole. |
| (d) 3/8—16x1 1/2 Bolt required for generator attachment on 1960-61. | (h) Plug for oil temperature hole. |
| | (i) Oil filler Tube Seal Ring (Corvair "95" & Station Wagon) |

ASSEMBLY AND INSTALLATION OF CORVAIR UNIVERSAL REPLACEMENT ENGINES

**NOTE: Start at step 7 when assembling the 3830591 "Hi-Performance" Engine.
Steps 1 thru 6 pertain to only the 3830953 Standard Engine.**

PROCEDURE	VEHICLE MODEL YEAR		PROCEDURE	VEHICLE MODEL YEAR	
	1960	1961-62-63		1960	1961-62-63
1. Remove Oil Pan from new engine.	X	X	21. Install Ignition Coil.	X	X
2. Install Clutch Housing using a new Crankshaft Seal and Housing-to-Block Gasket.	X	X	22. High-Performance Engine only —Install ignition secondary wires to plugs and coil using old distributor as a guide, then connect distributor to coil primary wire.	X	X
3. Install Flywheel or Converter Flex Plate and indicate flywheel and housing runout.	X	X	23. Standard Engine only —Remove No. 1 spark plug to determine TDC at crank pulley, then install distributor and coil; connect primary and secondary wiring after reinstalling spark plug.	X	X
4. Install Clutch Assembly (manual trans.)	X	X	24. Install Vacuum Balance Tube using new short rubber hoses at ends.	X	X
5. On Powerglide vehicles, remove Clutch Shaft Pilot Bearing for clearance to converter pilot area.	X	X	25. On all except Corvair "95" and Station Wagon —Install Oil Dipstick Boot and new Dipstick.	X	X
6. Install Oil Pan using new gasket.	X	X	26. As an assembly, install Generator with its Support Bracket (use new mounting bolt furnished for 1960-61 vehicles).	X	X
7. Mount new engine in Assembly Stand.	X	X	27. Install Carburetors and Cross-Shaft, as an assembly.	X	X
8. Remove R. H. Exhaust Manifold from the new engine and install the manifold from old engine.	X		28. Install Fuel Pump Push Rod after checking Parts Catalog to insure that it is the proper Rod for the Pump being used. Install Fuel Pump, then install fuel lines to carburetors. (The new Nipple furnished will be required to avoid filler tube interference with the fuel line on 1960-61 vehicles.)	X	X
9. Install temperature switch from old engine or obtain new Cylinder Head Temperature Switch and install. (Plug oil temp. hole if using head temp. switch in its place on 1960 models.)	X	X	29. Install Blower Belt Idler Pulley and Belt, then adjust tension using tension gauge.	X	X
10. On all vehicles except Corvair "95" and Station Wagon. Install Oil Filler Tube Plug in lower opening (use Seal) and install furnished Oil Dipstick Tube and Filler Tube (sedan type). On Corvair "95" and Station Wagon. Install Oil Filler Tube Plug (no Seal) in oil filter adapter opening, also insert Plug in oil dipstick tube opening.	X	X	30. On 1962-63 Vehicles Only —Adjust Choke control Rods and connect at Carburetor Choke Valve Lever.		X
11. On 1962-63 Vehicles Only. Install upper and lower Control Rods from choke coil (choke coil is furnished on engine and should also be left on 1960-61 vehicles to provide shroud sealing).		X	31. Connect Vacuum Advance Hose at R. H. carburetor and Accelerator Rod at cross-shaft, then install Accelerator Rod Dust Boot at front shields.	X	X
12. Install engine Skid Plate Assembly and Engine rear mount bracket.	X	X	32. Install Air Horn and Support Assembly then connect Choke Heat Tube, Vacuum Hose, Modifier Link and Fast Idle Link.	X	
13. Install Engine Blower and Blower Pulley Assembly then install Crankcase Vent Tube (P.C.V. or road draft type).	X	X	33. Install Air Cleaner and air tubes.	X	
14. Install Oil Pressure Switch in oil filter adapter—all models (where necessary, rework wiring harness as shown on page 6A-7 of the 1962-63 Corvair Shop Manual).	X	X	34. Install Air Cleaner Supports, and Air Cleaner Assemblies, then install P.C.V. Valve and hoses, if used.		X
15. Install lower L. H. and R. H. Shrouds and Duct assemblies with Thermostats.	X	X	35. Install Exhaust Pipes and Muffler Assembly. Install a new Oil Filter Cannister.	X	X
Note: On 1960-61 vehicles, if interference is encountered on assembly of a shroud or duct it may be necessary to slightly rework the sheet metal in the area of interference.			36. Remove engine from rebuild stand and install on jack stand with proper adapter.	X	X
16. Install Rear Center Shield, Seal and Seal Retainer.	X	X	37. Install Transaxle unit per Shop Manual appropriate outline (This includes Starter Motor assembly and solenoid wires).	X	X
17. Install Muffler Shield and Engine Side Shield (leave screws loose).	X	X	38. Install Powertrain in vehicle per appropriate Shop Manual outline.	X	X
18. Install Engine Front Shield (screws loose).	X	X	39. On Corvair "95" and Station Wagon —Install Oil Filler Tube with Seal. Install Oil Dipstick.		X
19. Install Upper Shroud then tighten all sheet metal screws.	X	X	40. Perform necessary tune-up procedures and engine performance checks (timing—carburetor synchronization and valve lash if needed).	X	X
20. Install Cooling Air Throttling Valve and Bracket Assembly and connect and adjust Thermostat Control Rod.	X				