

# CHEVROLET



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## HYDRAULIC LIFTERS USED IN V-8 AND CORVAIR ENGINES

To avert valve train geometry problems as experienced on some early 1961 engines equipped with long travel hydraulic lifters; short travel lifters, similar to those used in the 1960 model year, have replaced the long travel lifters for all Production and Service applications.

Due to the change back to short travel lifters, the following information is provided to up-date the article "Adjusting 1961 Valve Lifters," presented in the January issue of *Chevrolet Service News*.

### LIFTER TYPES INSTALLED IN 1961 MODEL V-8 AND CORVAIR ENGINES

<u>Engine</u>	<u>Engine Date Stamp</u>	<u>Lifter Type</u>	<u>Adjustment</u>
283 cu. in.	F-0920 thru F-0122 (Covers 9/20/60 thru 1/22/61) T-0728 thru T-0129 (Covers 7/28/60 thru 1/29/61)	..... Long Travel	2 Turns
	F-0123 (1/23/61) and later T-0130 (1/30/61) and later	..... Short Travel	1 Turn
348 cu. in.	T-0728 thru T-0129 (Covers 7/28/60 thru 1/29/61)	..... Long Travel	2 Turns
	T-0130 (1/30/61) and later	..... Short Travel	1 Turn

Corvair

Although many Corvair engines incorporate long travel lifters, the "one turn" adjustment should be used for both the short or the long travel lifters that have been installed in these engines. This cancels the former recommendation of "2 turns" for Corvair long travel lifters, as shown in the January issue of *Chevrolet Service News*.

### SHORT TRAVEL LIFTERS FOR SERVICE REPLACEMENT

Should it become necessary to replace one or more lifters, or replace cut rocker arm studs in an engine originally equipped with long travel lifters, it is recommended that all of the original long travel lifters be replaced with the short travel type.

All long travel hydraulic valve lifters have been removed from Parts stock. The following short travel lifters are currently in production and are also available as service replacement for engine applications listed below:

Lifter Part No.	Lifter Identification	Usage
3799644	1 hole body—1 hole plunger—reduced diameter unmachined surface at top of body. . . . .	265, 283 and 348 cu. in. engines (1955 thru 1961). All Corvair engines except Super Turbo-Air.
5231475	1 hole body—1 hole plunger—copper plated push rod seat—steel color retainer spring. . . . .	265, 283 and 348 cu. in. V-8 engines (1955 thru 1961). Corvair Super Turbo-Air engine.

### VERIFYING LIFTER TYPE BY TRIAL ADJUSTMENT

Adjust all valves initially to one turn tight from zero lash. With the engine running, slowly tighten adjusting nut in  $\frac{1}{4}$  turn increments for  $1\frac{1}{2}$  additional turns. If the engine runs smoothly after the lifter has had time to adjust itself, the lifter is of the long travel type and should be re-adjusted to two turns tight from zero lash. Conversely, rough idle indicates a short travel lifter and it should be readjusted to one turn tight from zero lash.

### VALVE ADJUSTMENT CAUTION

Valve adjustments, with the engine running, should be performed only after the engine oil has

warmed. The rocker arm nut should then be turned slowly, allowing time for the lifter plunger to reposition itself as the setting changes.

It is important that the above procedures be followed in order to prevent possible damage to push rods or other engine parts during valve adjustment. This would be especially critical on the 348 cu. in. engine, which has a minimal clearance between the inlet valve head and top of piston.

When adjusting the valves on 348 engines, it is recommended that a thin-wall socket be used on the  $\frac{3}{4}$ " valve rocker arm nut. Interference with the rocker arm sometimes encountered when using heavier walled sockets, could result in push rod damage.

## Battery Cables Use Spring Type Post Clamp

Battery cables now being used on all 1961 vehicles utilize a battery post terminal clamp that

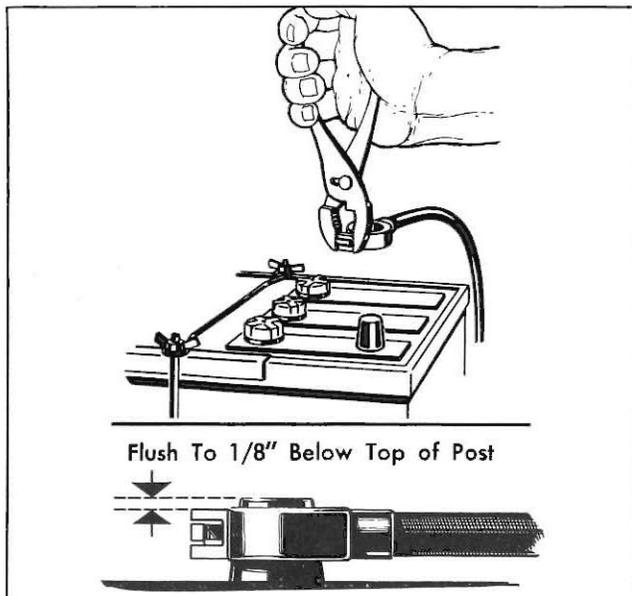


Fig. 1—Installing Spring Ring Clamp

incorporates a spring steel core. The new Spring Ring terminal provides more positive clamping, and also facilitates disconnecting of battery leads as recommended in numerous service procedures.

To remove the cable terminal from the battery post, grasp terminal tangs with pliers (Figure 1) and squeeze until the end of the single tang (present on one side) is flush with the stop formed by the base of the other two tangs. With the clamp held open in the above manner, it can be easily lifted off the battery post.

To install the cable terminal on the battery post; hold terminal squeezed open, as in terminal removal, while pushing the terminal as far as possible onto the post. When installed, the terminal should be flush to approximately  $\frac{1}{8}$  inch below top of post. After assembly of clamp to the battery post, apply a light film of oil or grease to the post area.

**CAUTION:** Do not hammer or otherwise drive terminal onto post. The post contacting surface of the clamp should not be filed or reamed as it could damage the built-in spring.

## 1961 Convertible Folding Top Adjustments

The following chart describes various types of folding top misalignment conditions, their causes and the recommended procedure for their correction. To correct some top variations, only a single adjustment is required; other top variations require a combination of adjustments. In conjunction with adjustment of the folding top assembly it may be necessary to adjust the door, door glass, rear quarter glass, trim sticks or side roof rail weatherstrips.

CONDITION	APPARENT CAUSE	CORRECTION
<b>Difficult locking action at front roof rail.</b>	Sunshade support misaligned. Lock hook lever improperly adjusted. Misaligned front roof rail front weatherstrip. Front roof rail misaligned.	Adjust sunshade support laterally. Adjust lock hook lever counterclockwise. Loosen, realign and retack front roof rail front weatherstrip. Adjust front roof rail.
<b>Top does not lock tight enough to windshield header.</b>	Sunshade support misaligned. Lock hook lever improperly adjusted. Misaligned front roof rail front weatherstrip. Front roof rail misaligned.	Adjust sunshade support laterally. Adjust lock hook lever clockwise. Loosen, realign and retack front roof rail front weatherstrip. Adjust front roof rail.
<b>Top travels too far forward.</b>	Front roof rail misaligned. Male hinge assembly misaligned.	Adjust front roof rail rearward (See Figure 1—View "A"). Adjust male hinge rearward (View "C").
<b>Top does not travel forward far enough.</b>	Front roof rail misaligned. Male hinge assembly misaligned.  Improper spacing between rear trim stick and body metal.	Adjust front roof rail forward (View "A"). Adjust male hinge assembly forward (View "C").  Install an additional spacer between rear trim stick and body metal at each attaching bolt location.
<b>Side roof rail rear weatherstrip too tight against rear of rear quarter window.</b>	Male hinge assembly misaligned.	Adjust male hinge assembly rearward (View "C").
<b>Gap between side roof rail rear weatherstrip and rear of rear quarter window.</b>	Male hinge assembly misaligned.	Adjust male hinge assembly forward (View "C") and/or shim side roof rail rear weatherstrip forward as required.
<b>Side roof rail rear weatherstrip too tight against top of rear quarter window.</b>	Male hinge support misaligned.	Adjust male hinge support upward (View "C").
<b>Gap between side roof rail rear weatherstrip and top of rear quarter window.</b>	Male hinge support misaligned.	Adjust male hinge support downward (View "C") and/or shim side roof rail rear weatherstrip downward.
<b>Sag at front to center side roof rail joint.</b>	Control link adjusting plate misaligned. Center side roof rail hinge adjusting screw improperly adjusted.	Adjust control link adjusting plate downward (View "C"). Adjust screw counterclockwise (View "B").
<b>Wind whistle or waterleak along front roof rail.</b>	Top does not lock tight enough to windshield header. Misaligned, front roof rail front weatherstrip. Front roof rail contour does not conform to windshield header.	Adjust sunshade support laterally and/or adjust lock hook lever clockwise. Retack front weatherstrip to front roof rail. Contour of front roof rail may be changed slightly by reforming rail.
<b>Folding top dust boot fits too loosely.</b>	Improper stack height due to misaligned control link adjusting plate. Rear seat back assembly is too far rearward.	Adjust control link plate forward (View "C"). Relocate rear seat back panel forward until distance between upper rear edge of rear seat back to forward edge of pinchweld finishing molding is $19\frac{1}{2}$ inches $\pm \frac{1}{16}$ ". The dimension is measured at approximate centerline of body (see Figure 1).

CONDITION	APPARENT CAUSE	CORRECTION
Front and center side roof rails bow upward at hinge joint.	Control link adjusting plate misaligned. Center side roof rail hinge adjusting screw improperly adjusted.	Adjust control link adjusting plate upward (View "C"). Adjust screw clockwise (View "B").
Folding top dust boot is difficult to install.	Improper stack height due to misaligned control link adjusting plate. Misaligned folding top dust boot female fastener.  Rear seat back assembly is too far forward.  Excessive build-up of padding in side roof rail stay pads.	Adjust control link plate rearward or forward as required (View "C"). Align boot female fastener by trimming edge of fastener mounting plate. To remove plate for rework, slit inner layer of boot rubber reinforcement along side edge of plate. Relocate seat back panel rearward until distance between upper rear edge of seat to forward edge of pinchweld molding is $19\frac{1}{2} \pm \frac{1}{16}$ " (see Fig.1). Repair side stay pads as required.
Top material is too low over windows or side roof rails.	Front roof bow improperly shimmed.  Excessive width in top material.	Install one or two $\frac{1}{8}$ " shims between front roof bow and slat iron (View "B"). W/shims use 4824257 screw ( $\frac{1}{8}$ ") If top is too large, trim off excessive material along side bindings as required; then hand sew binding to top material.
Top material is too high over windows or side roof rails.	Front roof bow improperly shimmed.  Front roof bow felt silencer too high.	Remove shim from between front roof bow and slat iron (View "B"). Trim silencer to within $\frac{1}{8}$ " of top of front roof bow (View "B").
Top material has wrinkles or draws.	Rear quarter trim stick improperly adjusted. Top material improperly installed to center or rear quarter trim stick.	Adjust rear quarter trim stick on side affected. Retack top material as required.

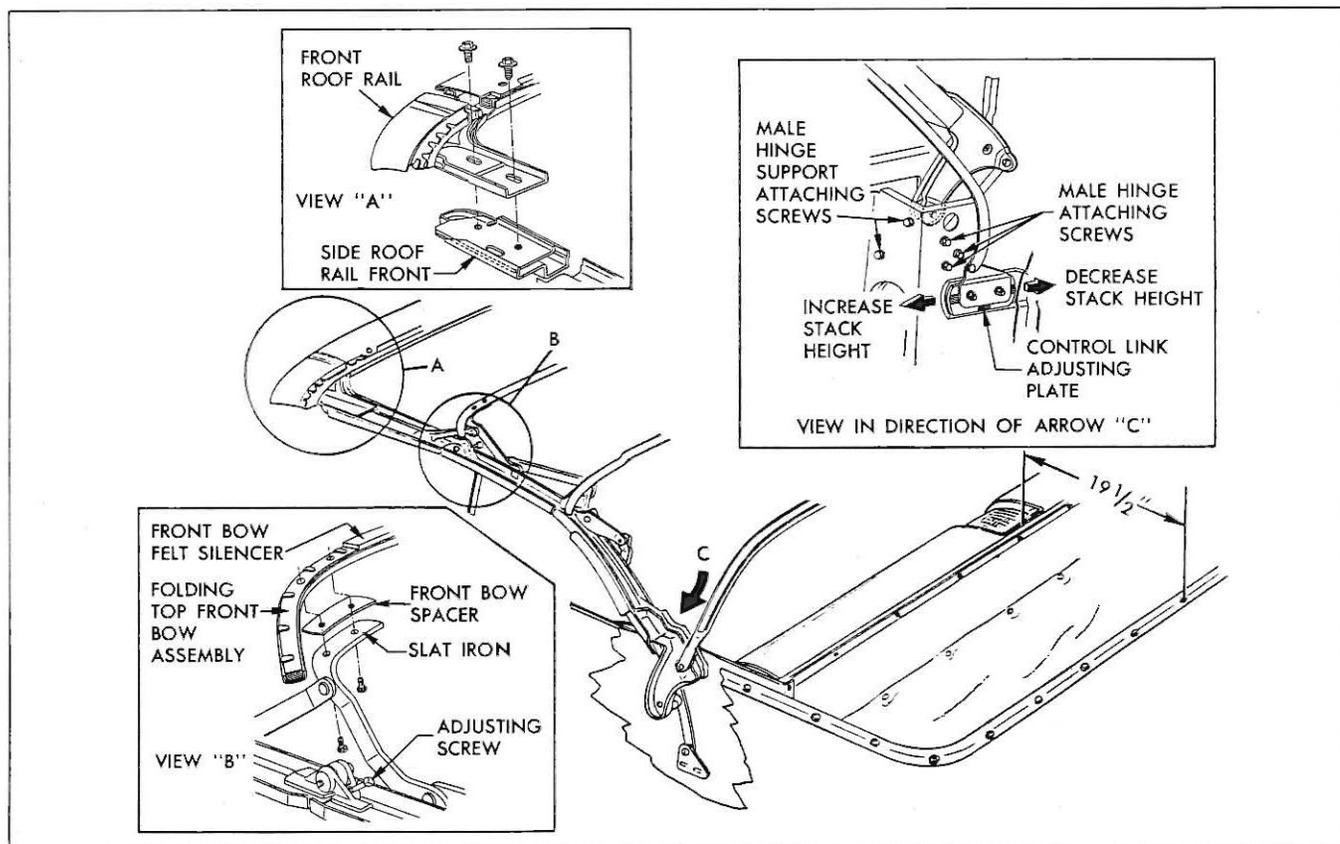


Fig. 2—Folding Top Alignment Areas