

# 1961 Corvette: Service Bulletin: Hydraulic Lifter Usage and Adjustment

**Subject:** Hydraulic Valve Lifter Usage and Adjustment

**Model and Year:** 1961 V-8 Passenger Car and Truck Engines - 1961 Corvair Engines

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TO: ALL CHEVROLET DEALERS

This bulletin cancels and supersedes TSB #693 and DR #462 dated January 20, 1961 having a similar subject.

Long travel hydraulic valve lifters were incorporated in 1961 283" and 348" V-8 Passenger Car and Truck engines at the start of production and in Corvair engines on October 4, 1960, effective with engine #T-1004. The term "long travel" refers to the available lifter plunger travel between the bottomed and extended length. To maintain the proper relationship between the rocker arm pallet and the valve stem to prevent cutting of the rocker arm stud, it was necessary to revise valve lash adjustment procedure as covered later in this bulletin.

To minimize valve train geometry problems such as cut rocker arm studs on V-8 engines, loss of adjusting nut torque on 348" engines and slow lifter pump-up on Corvair engines, it was deemed advisable to revert back to the short travel lifters similar to those used in 1960 models. Short travel lifters entered production on 1961 model engines on the following dates effective with the engine numbers shown.

TYPE	DATE	ENGINE NO.
283" Engines	January 23, 1961	F-0123
283" Engines	January 30, 1961	T-0130
348" Engines	January 30, 1961	T-0130

Thus, on 1961 engines, it becomes apparent that it is very important to properly identify the type of lifter in an engine prior to making a valve adjustment.

Problems which may be encountered due to incorrect valve adjustment are as follows:

## 283" and 348" Engines

Adjustment of one turn tight from the zero lash position on engines incorporating long travel

lifters, may result in cutting of the rocker arm studs due to improper relationship between the rocker arm pallet and valve stem. To maintain the correct geometry, long travel lifters must be adjusted two turns tight.

Conversely, if short travel lifters are adjusted two turns tight, the lifters will bottom out preventing full closing of the valves.

In addition to the above on 348" engines, a one turn adjustment of the long travel lifter results in loss of rocker arm adjusting nut torque due to insufficient stud height.

### LIFTER IDENTIFICATION

Three methods of identification may be used depending on the specific situation:

#### Engine Number (Date Stamp)

Type Engine	Engine #	Type Lifter	Adjustment
283"	F-0920 thru F-1231 and F-0101 thru F-0122 (9/20/60 thru 1/22/61)	Long Travel	2 Turns
	T-0728 thru T-1231 and T-0101 thru T-0129 (7/28/60 thru 1/29/61)	Long Travel	2 Turns
	F-0123 and later	Short Travel	1 Turn
	T-0130 and later	Short Travel	1 Turn
348"	T-0728 thru T-1231 T-0101 thru T-0129 (7/28/60 thru 1/29/61)	Long Travel	2 Turns
	T-0130 and later	Short Travel	1 Turn

#### Visual Inspection - Lifters Removed From Engine

Part No.	Source	Travel	Identification
5232100	Detroit Diesel Div.	Long	1 hole body - 1 hole plunger - Steel color push rod seat, copper plated retainer spring.
5232110	Detroit Diesel Div.	Long	1 hole body - 6 hole

			plunger - copper plated push rod seat and retainer spring.
3789175	E. A. Thompson	Long	1 hole body - 6 hole plunger - reduced diameter unmachined surface at top of body.
3799644	E. A. Thompson	Short	1 hole body - 1 hole plunger - reduced diameter unmachined surface at top of body.
5231475	Detroit Diesel Div.	Short	1 hole body - 1 hole plunger - copper plated push rod seat - steel color retainer spring.

Trial Adjustment Method

Adjust all valves initially to one turn tight from zero lash. With the engine running, slowly tighten adjusting nut in 1/4 turn increments for 1 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 short travel lifter and should be re-adjusted to one turn.

NOTE:

The additional 1 1/2 turn adjustment must be made slowly, allowing time for the lifter to adjust itself, to prevent the possibility of interference between the inlet valve head and top of piston which might result in internal damage and/or bent push rods. the adjustment should also be made with engine warm, as the hydraulic lifters may not leak down fast enough with cold oil to permit valve to seat properly and prevent interference with the piston. It is extremely important that this procedure be followed on 348" engines which have a minimum design clearance between the piston and inlet valve.

Adjustment Procedure

Listed below are the latest hydraulic valve lifter adjustment recommendations which supersedes all previously published recommendations.

Engine	TURNS TIGHT FROM ZERO LASH		

	Late 1961 Short Travel	Early 1961 Long Travel	1960 and Earlier Short Travel
L6	1-1/2		1-1/2
265 - V8	-	-	1
283 - V8	1	2	1
348 - V8	1	2	1
* Corvair	1	1	1

\* Although some Corvair engines incorporate long travel lifters, the one turn adjustment remains in effect.

### Parts Data

All long travel hydraulic valve lifters have been removed from Parts stock. The following lifters are currently being serviced:

Part No.	Usage
3799644	May be used optionally on all engines with hydraulic lifters, 1955 thru 1961 - 265", 283" and 348" and regular production Corvair.
5231475	
5231475	Corvair RPO high performance engine.

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

Director, Technical Service Department

JCP/afm

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