

Adjusting the hood on a 1956 Corvette

Rich Mozzetta, Roy Bratz and various forum contributors. PDF prepared by Dave Zuberer

<http://www.corvetteforum.com/forums/c1-and-c2-corvettes/3529580-adjusting-the-hood-on-a-1956-a.html#post1587789549>

Moonframer

Hi, does anyone have any good tips on adjusting the hood on a 1956.

My hood fits the body just fine but it won't stay closed. When I push it down it doesn't latch all the way. It pops up as soon as I hit a bump.

My concern is that I will get it stuck down and not be able to release it. I have used plumbers putty to check where the hood pins align with the body latches but still no luck yet. thanks... jim

Jim,

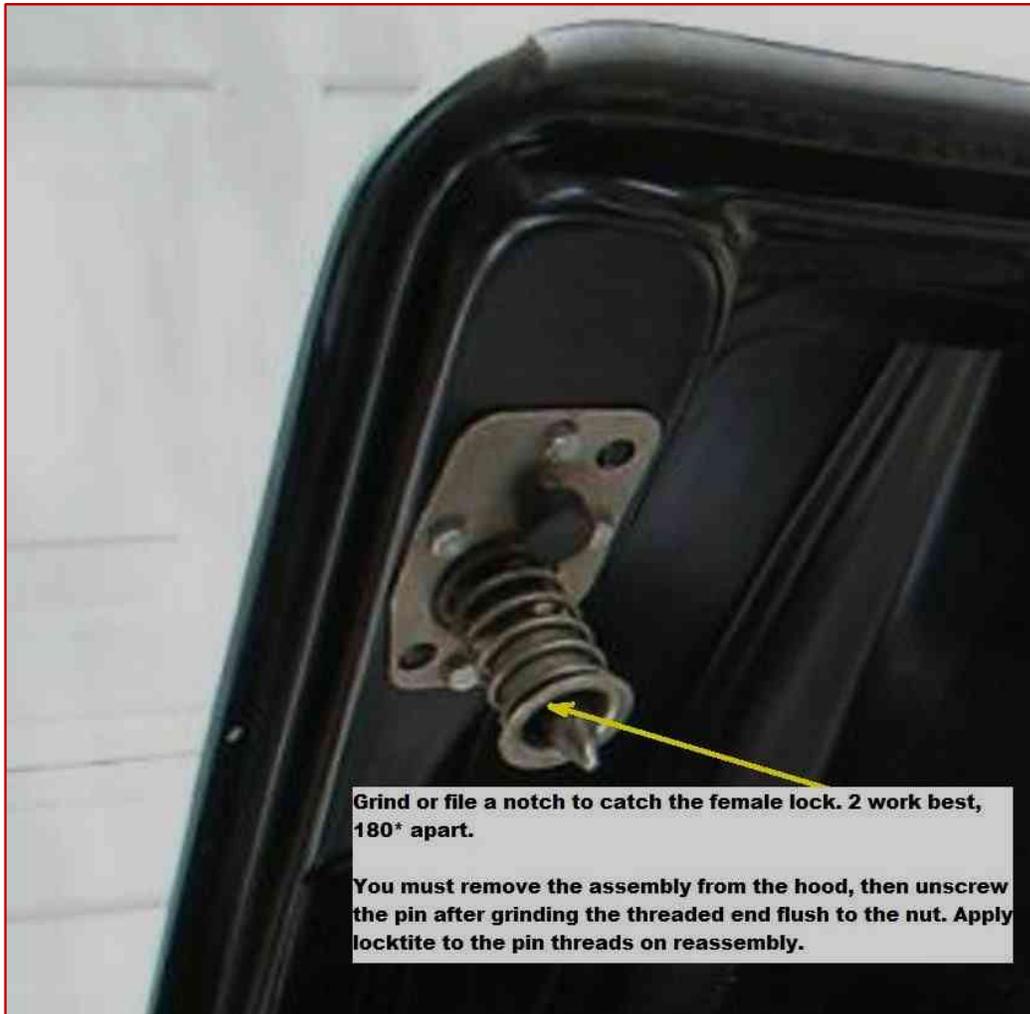
rich5962

It's a common problem. The design of the '56 & '57 latches depends on a knife-like edge on the female latch. The male hood pin catches the female latch at an angle and the side stress holds it there. But the pin wears over time and doesn't catch like when new.



A common fix is to grind or file a notch in the male pins at the "sweet spot" where catches the latch. This way it will catch and hold on to the edge of the circular female latch.

You can't see the notches in the pins in the photo, but they're just inside the spring cups. These were already modified on this car. The hood stays closed fine.



Also, attached is a document all about hood latches that DZVette(Dave Z) wrote and has some good info and pictures for reference.

Rich5962

Jim,

What you can do to find that "sweet spot", is to wrap the pin with masking tape and close it down and latch. Make sure your rubber hood height bumpers are set right to stop at the right place.

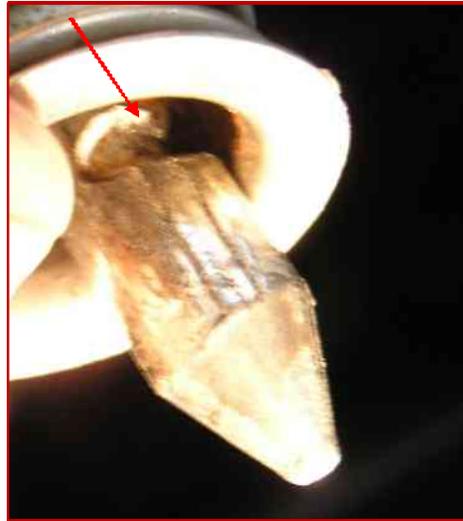
The latch will scrape the tape to give you a mark where it stops to make your notches.

If your front hood pop-ups are original you should be okay. If they are repros, when the hood latches it sometimes makes the fronts pop up a bit. So you may have to adjust those a bit after the rear latches are set.

Rich

p.s. If I get some time I'll try to get a few pics of the pin notches on this '56 I have here.

Jim,
Here are a few photos I just took of the notches in the pins.....Rich



scopeli

[QUOTE=rich5962;1587780078]Jim,

It's a common problem. The design of the '56 & '57 latches depends on a knife-like edge on the female latch. The male hood pin catches the female latch at an angle and the side stress holds it there. But the pin wears over time and doesn't catch like when new.

Your problem is most likely the first item mentioned. The female latch no longer has the correct edge. Early hoods are made to close with smooth pins. A female latch could appear good when viewed from the top, but once the latch is inspected from underneath, the wear becomes apparent. A good female latch will in most cases hold a worn pin, but a new pin will do little good if you have a worn female latch.

rich5962

Well stated. As the female latch loses its edge it cannot hold anything. The latches are available in reproduction but often there are flaws in their manufacture; they don't have original markings for the purists, and are very expensive at about \$100 per side. They are unique parts; Left or Right. Left shown below...



The lock lever, the part of the latch that has the hole with a new edge can be bought separately for about \$35 each, but now you have a shiny lever inside old latch housing. There's also a left and right.



The male pins (below left) are available separately in reproduction pretty cheap at around \$15 each, but as mentioned it won't solve the typical problem. One must buy the entire assembly (below right) if the spring and cup are missing as those aren't available separately.



Then we have the infamous hood popups mounted to the radiator support. Reproductions include springs that are too strong and tend to keep the hood forward edge always reaching the sky.



Trial cutting of the repro springs is needed to get the right fit, but cut too much and it won't do its job as needed, leaving the front edge in danger against the hood surround when the hood is raised. 🚗

The '53 to '57 hood mechanisms are probably one of the most problematic and misunderstood parts of all of the early Corvettes.

It's not a comfort for some to cut a notch in the male pins to solve the problem of hood closure, but once it's done it's difficult to see the modification. A short time with a grinding wheel and a sharp file will get the job done without making the fix too obvious. Not a mod for a judged car, but worth it to keep some sanity, and your hood closed..... for your driver car.

Rich

Last edited by rich5962; 09-09-2014 at 06:24 AM.

JohnZ

On both of my '57's, I replaced the smooth male pins with later pins with a series of annular grooves in them (don't recall the year); the grooves couldn't be seen with the hood open (spring retainer covered them), never had a hood pop-open problem again. 🚗

Abdo

On my '57 I did what was similar to what Rich and John Z did. I put the pin in a lathe and put in a series of grooves that were not too deep. That solved my problem. I did not have to do anything to the left side pin but for some reason that side always held.

I think that if the car were to be judged at a NCRS meet, a sharp judge would deduct a few points for the non-smooth pin.

Moonframer

Thanks for the helpful advice and especially the images. That should be enough to solve the problem

Jim,
Either method will work. But if you decide to cut the notches, this is what I did on that one side.....The masking tape method.

Adjust the male latch assembly for best alignment to the female latch. You may have to adjust the rubber bumper for proper hood to surround alignment. Do this first.

Then the 4 bolts and plate have some play to move around for best fit to the female latch lock lever hole. **Wrap the tape around the pin. Close the hood and push down to mate the hood flush with the surround.**

Release the hood and **the tape should leave the telltale mark where it stopped**, as well as the "side" where it's closest to the lock lever hole. That's where you want to cut the groove. Also place a mark on the flat plate that aligns with that telltale mark on the pin for later reassembly.

Use some tape to mark the 4 sides of the male plate assembly to the hood. Remove the hood assembly 4 bolts and remove the unit.

On the bench grinder, grind the end of the pin to remove the peened area. Push the cup/spring down and wrench the pin and unscrew it from the plate.

Make your notch on the marked side of the pin where the telltale mark is on the tape. You can cut another on the opposite side as a "spare" notch as well.

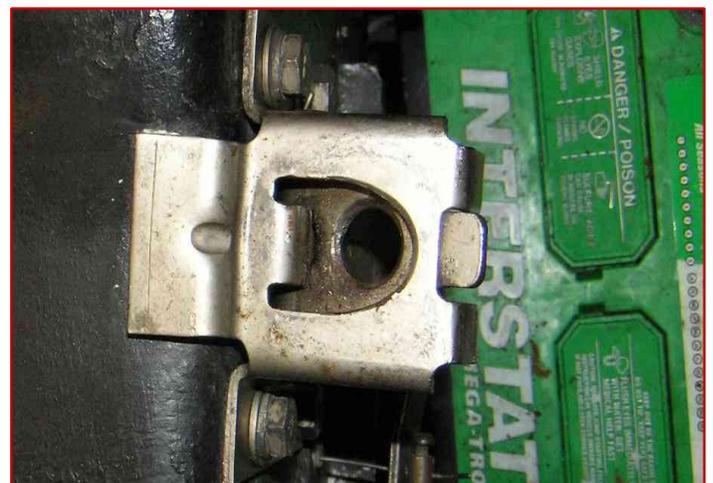
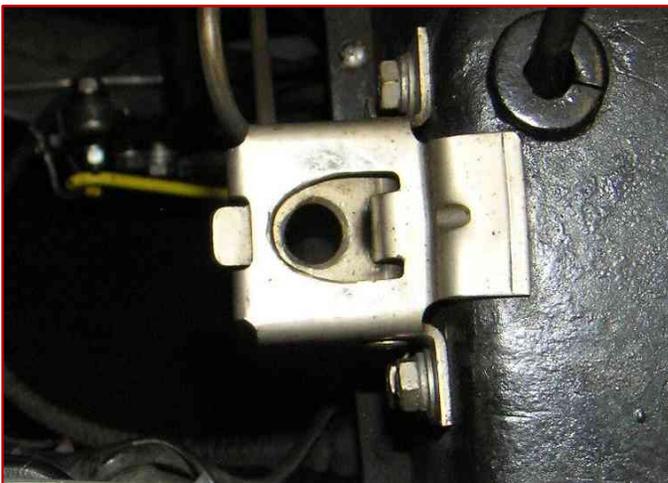
Or, if preferred use Tom's or John's method using the tubing cutter since the pin has to be separated to do either method.

Once the pin is modified, reassemble pin to the plate aligning the notch to the mark on the plate. Use some Loctite on the threads. On the one I did I used the Loctite and I also used a thin nut, 1/2"-20 IIRC, on the end of the pin to act as a locknut.

Reassemble and adjust the plate to the hood using the hood tape as your guide. Test fit and adjust as needed to get it aligned to the female latch. You may be able to turn the pin a bit before the Locktite sets up to help alignment.

Rich
edit add....

For reference, here are a few photos of the female lock lever, and as mentioned, you can remove that and file the edges sharper to help the male pin catch it better. Yet another solution, but like the original design, it will wear and not hold properly in time.





Last edited by rich5962; Today at 08:25 AM.

Ohiovet

Thanks guys, Great Info.

There is also a good thread on hood position adjustment by Roy Bratz which can be found by doing a search.

Rich5962

Bruce,

Yes, this one.....

<http://www.corvetteforum.com/forums/...justments.html>

(See info below)

I have that one stashed away with lots of other good info from Roy. 😊

Rich

53 to 57 hood adjustments

Thread started by Roy Bratz (01-31-2008)

<http://www.corvetteforum.com/forums/c1-and-c2-corvettes/1929003-53-to-57-hood-adjustments.html>

1955 copper (Roy Bratz)

😊🍺😊 OK let me try and make this simple 🤖🙄🤖🙄

I see hood hinges and pop-ups where the holes are extra elongated trying to fit the hood on 53 to 57 Corvettes all the time. That's because few know how to adjust or know what to do to make the hood fit and open CORRECTLY .

1. The pop-ups are there to only lift the hood front line UP when you release the rear latch's pulling the hood cable so as to NOT chip the paint on the body.
2. The hood HINGES are moveable (only a little to AID in pulling the hood FRONT area DOWN) in the last few inches of closing.
3. The two fiberglass stoppers holes are elongated so that you can move them UP or Down to meet the thickness of the HOOD when closed.
4. Now if the front hood line sits too high, adding shims ONLY at the hinge top bolt on both sides will canter the angle pulling the hood line down.

5. "Repro" pop-up AND rear male hood pins's springs {suck} because the wire is too thick making the front pop-ups too strong and causing the rear hood male pins to open when driving. (If you cut a coil off to where the spring just puts a little tension on the cup, your problem will be solved.
6. Number 5 is why you see the hood male latch and female latch holes elongated also.
7. A good looking working hood is when the hood front line pops-up at the same time the rear latch's pop-up, that's HOW it works PERIOD.

PS: the reason you see someone using both hands to lift the hood if adjusted correct is because the hood bracing BOND has come loose from the hood skin.

PPS: again the front hood hinges are designed to go OVER CENTER to pull the hood down compressing the pop-ups. That's WHY it has TWO arms!!!!!!

54greg

Thank you for the great description!

Now if you could only explain to me how to adjust my trunk lid I would be forever in your debt. The leading edge sits up about 3/4 of an inch above the hinge arms. The middle is 1/4 inch high but I can't seem to get spacers to bring down above the hinges. 🙄

1955 copper

3/4 is a lot! Maybe the hinge is bent, but the way to bring the line down, the hinge is a triangle looking thing (at the top "one" bolt "only" add shims) that brings the line down. Same with the soft top lid.

Duntov 54

I purchased the single action hood hinges for my 54, the best thing I ever did. Adjustments are a piece of cake. No need for the pop ups anymore.

Dazvet

Hi, where do you get the single action hood hinges? Quick look at the normal corvette outlets didn't come up with anything, thanks.

Larry

Duntov 54

I purchased them from Corvette Central. If you don't mind trimming some fiberglass just to the sides of the core support area, they are worth it!

Dazvet

Thanks for reply, I looked for them at Corvette Central again but no luck, apparently they have discontinued them. Too bad I sure would have given them a try. One more question - do they allow the hood to fit flush with the body on the front edge? I'm not giving up just yet, would appreciate a heads up if you ever see them advertised again.

56 Texas

daz .. look again .. part number 461030

Jrm5657

I agree with Roy on the repo pop up springs being too big. I have used the springs from the male hood pins from 63-67 as a substitute. They are correct diameter and have a much lower spring rate.

Duntov 54

Dazvet,

Yes they allow the hood to sit flush, and it's easy to align. My hood aligns perfect with the Corvette Central hinges. I am using them on my 54.

53 Blue Flame Bret

Modifications to Radiator Fiberglass

With the adjustments that can be made to the original parts, I would stay away from the CC hinges if my car were very original.

Yes, they do work and I used them on a 54 street rod. I like them but did have to cut out the radiator fiberglass.

Just my opinion. Everybody has one. 😊

1955 copper

Is it restored original

People that used the CC hinges all told me that they could not understand how to adjust the original parts // but took the time to understand how to make the rest of their Corvette CLOSE to original. I don't get it!

The same people buy mostly repro parts again saying they dint want to clean or restore a part. I don't get it!

The same people will tell other people how rare and original their Corvette is. I don't get it!

The same people will then tell me how much big \$\$ it's worth. I don't get it!

The same people cry when they go to sell their Corvette and wonder why the guy that knows what is right or wrong passes on the Corvette. They don't get it!

I could mention many more discussions I've had with those people, but they will never get it!

JohnFrom Ventura

I have used Roy's advice on "trunk gap" adjustment and know it works!

Dazvet

Thanks for the part number, I wasn't able to find it on their website but the part number did the trick. Also had a picture which shows how much fiberglass modification is needed. Not something I would use on an original type car but my 55 isn't original. I will give 1955 copper's instructions a very serious try before I make the change.

JohnZ

Roy's post (#1 in this thread) is right on the money. The key to getting a '53-'57 hood fit at the front is to understand that the parallelogram 2-link hinges go over-center in the closed position, and the two screw-on plastic bumpers are what positions the front of the hood when it's closed - the bottom surface of the front of the hood sits on those two bumpers. The pop-ups are only there to help the hinges come off the over-center position when you pull the release handle; if you have the wrong springs on the pop-ups (too strong), you'll never be able to fit the front of the hood AND have it pop up to clear the front end panel when you open it so you don't scrape paint. 🤖

(John's Hood fit photo from original post was not available)

56heap

Nice fit John. OK they didn't use shims out of the gate so how do you adjust the original hinges and tell if you have original pop-up springs. I'd like to get my hood looking like that without using the shims I have installed now

1955 copper

JohnZ thanks for the compliment -56heap to see if you have the right original pop-ups ,if you can push down the cup easily there original, hard repro's. Having shims is not unusual, many Corvettes from the factory have them . The most original's I've seen use about 1/8 thick, if more are needed you don't have the hinges adjusted correct or the vett had front damage or or !! If I saw your hinge area I might be able to see what's wrong. I've held workshops at NCRS and SACE showing people how to fit a C1 body, hood-doors, windshield and soft top. 🤖

Vettepoor

Roy and John - If I am understanding you right, the inner arm of the hinge, where it pivots, is supposed to go "over center" as the hood is closed, right? In other words, is the pivot point supposed to go from an "aft" position when it is open to a forward position when the hood is closed? Mine stays in the aft position, open and closed