# The Victoria Bustle

# International Model A Ford Victoria Association

Founded 1986

Model A Ford Club of America - Model A Restorers Club

**July 2023** 

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MAFCA Board Member and Victoria Member, Kay Lee's Leatherback

## President's Message

Can you believe it, Summer is here already!! I hope that everyone has had their Victoria out and about. Over Memorial weekend, I attended the Norther California Regional Group Roundup in Sonora. My wife, Liz, and I had a great time. There were 140 registrations but not one Victoria in the parking lot. It reminds me how unusual a Victoria is. We drove my wife's car because of her back issues.



I have great news!! I am very happy to introduce to the Victoria

Association membership our new Editor of the Bustle. Dean Larson has stepped up to assume the responsibilities of the Editor. Dean joined the Victoria Association in 1986 and has contributed several articles to the Bustle over the years. Dean will introduce himself later in the Bustle.

Another issue that needs to be addresses for the Victoria Association (VA) is our Employee Identification Number (EIN). When I became president of the VA, I received a paper with our EIN number on it and the paper stated that the VA is a 501 (C) (7). I finally did some digging on the IRS website and they do not have our EIN in their database. I will first need to have a lawyer look at our bylaws to make sure that they are up to date. Then, I can try and apply for a new EIN and reapply for a 501 (C) (7) exemption. The VA was originally established in Texas. Is there any member who has had experience in this field that can help me? Please email me if you can help.

# A Message from The New Bustle Editor, Dean Larson

I want to thank Bill Cilker for the warm welcome. I'm looking forward to the tasks ahead and glad to relieve Bill of this added work. Being our President takes a great deal of time and attention that goes well above producing our Bustle. It's a full-time responsibility. Bill, thanks for your leadership!



I have been a long-time member of the International Model A Ford Victoria

Association. I joined after reading a Hemmings ad that Charlie Viosca placed asking if there was interest in forming a Victoria club. I became a member in 1986. I served on the Model A Youth Scholarship board as the Keeper of the Records for several years. Annual reviews of applications and then making sure the recipients met the criteria for continued participation and approving scholarships to be paid by our Treasurer.

I readily admit to having no experience as an editor. Most of my writing has been centered around facilities engineering and business but promise to give it my best. With contributions from the membership, sharing owner stories and bringing you technical questions and answers to help in your restorations, I plan to keep the Bustle a welcome arrival in your mail boxes!

You may notice that the member list and email addresses have been left out of this issue. If you need an address of a new member, please contact me for the needed information.

## <u>Update on Membership from Chairman Ed Greany</u>

Membership for 2023 is healthy. As of June 1<sup>st</sup>, we have a total of 207 paid members in the Vicky Association. Of those 207 members, 27 are paid ahead from one to five years and one is a Life member.

This year we had a change of procedure. Previously, all dues went to the Membership Chairman (me) along with the membership document or postcard. Then I would have to forward those checks to the Treasurer which would cause a delay in their processing/cashing. Now the membership documents or postcard will go directly to our Treasurer, John Hooper, who will then notify me of the membership information attached by email. At this time if you have any questions about membership, you may contact me directly at <a href="mailto:crest25@verizon.net">crest25@verizon.net</a>. Any questions about payment of dues may be addressed to John Hooper at <a href="mailto:j\_c\_hooper@yahoo.com">j\_c\_hooper@yahoo.com</a>.

Address, phone number or email address corrections or changes should be brought to my attention for editing of the club roster. Some of you have already advised me upon seeing your entry in the latest Bustle and those have already been handled.

We can always use more Vicky members. If you see one on the road or at a gathering or in *Facebook*, give them a nudge and explain to them how they may become a member for only \$10 per year. The information is on our website under "Membership".

### Judging Standards Work

The 16-page supplement has been submitted and there are a few questions to finalize the inclusion of the supplement in the next publishing of the Judging Standards.

Bill Cilker is always looking for little tidbits about the Victoria body to include in the Victoria Supplement for the Restoration Guidelines that he is writing. Within the last 2 months, he became aware that on early Victoria bodies, the first roof rib was mounted a couple of inches closer to the windshield header than on the later bodies. Bill would like to find out if this is true. Bill asks "If anyone has a Leather back body and can send me the distance between the rear face of the header and the front face of the 1<sup>st</sup> roof rib and your Murray Body number. I would appreciate it, especially if your Victoria has a low Murray body number. Thanks". (weilkerjr@comcast.net).

## Technical Talk

These next two items are additional responses to the earlier question about door alignment. If you have had any experience with door or hood alignment and found a solution that worked for you, please share it with the membership.

# "No one knows everything, but together we know a lot" – Simon Sinek, motivational speaker

#### **Bob Bidonde**

When the doors are properly aligned, the dovetails should slide directly into their receptacles. The dovetails should not be raising / lowering the doors into alignment. In my opinion, the dovetails keep the door from bouncing when the car is underway.

#### Rotorwrench

Chassis frames flex and bend over many years of use and door hinges can be tweaked if too much downward pressure is applied anywhere near the rear of the door. A person has to check for both types of bend before adjusting.

#### Requests for information

Hi Bill, do you know of a local source, or a club member, who has the capability to restore/rebuild the front door window regulators on a Vicky? Thanks, John

#### **Tom Philips**

I had my window regulators repaired by a guy in Placerville Ca. about 4 or 5 years ago. I don't recall his name; however, I do remember that his contact information was provided by Steve Becker at Bert's Model "A" Center (800) 321-1931.

# Solving the Mitchell Overdrive Floor Bump with a BANG\* By Lee Paulus, PE Retired

Comments to: LPaulus526@aol.com and Bustle Technical Director and Editor

### **Background**

The floor bump occurs when a Mitchell overdrive is installed in some cars from 1930 and 1931. This includes the Slant Windshield Fordor (estimated manufactured 311,418), Deluxe Phaeton (estimated manufactured 7,218), Victoria (estimated manufactured 42,568), and Convertible Sedan models (estimated manufactured 5,058), all having a dropped rear floor panel.

While driving a Model A equipped with the Mitchell overdrive, hitting a major road hazard such as a bump or pothole often results in the overdrive hitting the underside of the dropped floor pan with a loud BANG. In addition to the annoying bang, the impact induces forces into the overdrive that will eventually damage the overdrive case and dent the dropped floor pan. Several solutions to this problem have been attempted with varying success.

**Mitchell adjustments.** Mitchell provides a special setup for these Model A's. It moved the location of the overdrive forward on the torque tube and removed portions of the cooling fins from the top of the case, maximizing the distance between the overdrive and dropped floor pan. This eliminated the bang for many road hazards, but the major hazards continue to bang. Steve Mitchell recommends replacing the eight-leaf rear spring with a ten-leaf spring to eliminate all but the worst road hazards.

**Rear spring modification or replacement.** Adding a leaf to the rear spring will make the spring stiffer and raise the rear of the car. Replacing the eight-leaf spring with a stiffer ten-leaf spring also raises the rear of the car about half an inch. These modifications eliminated the bang for most road

hazards. However, with no positive stop to the rise in the rear axle to prevent the bang, a bang may still occur during the worst road hazards. Raising the rear of the car changes the car's appearance to an expert's eye. Also, the feel of the ride becomes much stiffer for all road conditions. This solution is difficult to implement since the installed spring contains a significant amount of stored energy, which when released, can be dangerous. A special tool called a rear spring spreader is required to safely remove and install a rear spring. How modification and replacement of the rear spring impacts fine point judging should be investigated.

Modify the dropped floor pan. Once removed from the car, the shape of the floor pan can be modified to provide sufficient clearance for all road hazards, even the worst of them. Removing the floor pan is very difficult since the front and rear seats and seat support structures must be removed before removing the floor pan. Modifying the dropped floor pan is the best of all the solutions used to date. However, a sheet metal expert capable of performing this task is extremely hard to find. If the floor pan becomes unusable, replacements are impossible to find. Disadvantages include the following: The floor pan will be forever modified, the foot space for rear passengers is compromised, and the shape of the carpet must be modified to conform to the new shape of the floor pan. How modifying the floor pan impacts fine point judging should be investigated.

These solutions are either incomplete for the worst road hazards, will modify the ride and the appearance of the car, and are difficult to implement.

#### Objective

In pursuit of a solution my objective was to:

- 1. prevent the bang and damage to the overdrive and dropped floor pan,
- 2. maintain the original spring stiffness and ride,
- 3. maintain the original appearance of the car.

#### Parts of the solution

The parts of the rear suspension system that can be adjusted are:

- 1. tire pressure,
- 2. shock absorber,
- 3. rear spring,
- 4. limit rear axle upward movement.

**Adjusting the tire pressure.** Decreasing the rear tire pressure lessens the effect of a road hazard transmitted to the rear spring. More of the impact can be absorber by the tire. The recommended tire pressure is 34 psi. A decrease in the tire pressure by 10% would reduce the tire pressure to 30.6 psi. A decrease to 31 psi would be an 8.8% decrease. Lessening the effect of a road hazard would decrease the likelihood of a BANG but is not a total solution.

**Adjusting the shock absorber.** Increasing the shock absorber's resistance will dampen the spring's response to a road hazard. More of the impact is dampened out of the spring by slowing the spring's response to the road hazard. The original shocks and currently available replacements can be adjusted by setting a needle valve. Dampening the effect of a road hazard would decrease the likelihood of a BANG but is not a total solution.

**Modifying the rear spring.** As mentioned above, modification or replacement of the rear spring is not a total solution to the BANG. However, the internal friction within the spring will affect the spring's response to road hazards. Internal friction occurs when the leafs slide over each other as the spring flexes. The result is similar to the dampening from the shock absorber. Coating the interleaf surfaces with a lubricant, such as Slip Plate, will decrease the internal friction and dampening, the opposite of what is needed to eliminate the BANG.

Limit rear axle upward movement. To prevent all BANGs, the upward movement of the rear axle needs to be restrained to provide a minimum clearance between the overdrive and dropped floor pan. Under driving conditions, the spring, shock absorbers, and tires determine the position of the rear axle - if the spring is prevented from too much upward movement, the rear axle would be prevented from too much upward movement. Limiting the upward movement of the axle and spring appeared to be the only absolute solution to eliminating all possible BANGs.

#### **Bump Stops**

The suspensions of Jeeps and other off-road vehicles often "bottom out" and use bump stops to control and soften the bottoming and prevent damage. The available bump stops are made of rubber, urethane, or polyurethane and have a height ranging from 0.5 to 2.5 inches. Most are mounted on the vehicle's frame with a 1/4-20 steel stud. The bump stop is located over the top of a leaf spring and limits the upward movement of the spring and axle.

I evaluated 13 bump stops for use on my Victoria. The following is a summary of my evaluation and conclusions.









First, I had to determine what the upward limit of rear spring movement would be to prevent the overdrive from hitting the underside of the dropped floor pan. This limit established the limiting dimensions between the spring and frame required. I did this by jacking the rear axle upward while holding the frame in position - without rising. I placed a piece of thin cardboard between the overdrive and dropped floor pan in the area of possible contact. When the cardboard could be

moved, the axle could be raised a touch more until the cardboard was held in position, pinched between the overdrive and floor pan, and the limit was reached. Then the critical dimension between spring and frame could be measured. The leaf spring is connected to the axle by a shackle. As the axle rises the shackle rotates resulting in less rise in the spring. In addition, the leafs of the spring flex under the change in load resulting in less rise at the bump stop location. The combined effect of shackle rotation and leaf flex reduce the rise in the spring by approximately 52% at the spring-bump stop contact location.

Second, I had to determine the ideal bump stop location on the rear spring at the desired upward limit. The location had to be clear of the shock absorber arm and link and close to the frame rear cross member. The ideal position would be directly over the spring eye eliminating any need to consider flexibility in the spring once the bump stop is engaged. As the axle rises the leaf spring also rises and at the same time each leaf slides over the leaf below it. Consequently, the end position of each leaf changes as the spring is raised. After observing each leaf's movements through several cycles of motion, it was clear the bump stop should be positioned over the exposed top of the second or third leaf from the bottom of the spring. This position left the end portions of a few leafs between the bump stop and the spring eye that could flex.







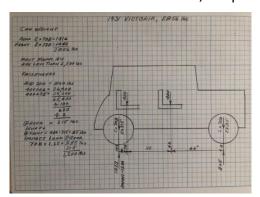
Third, I had to select a way to attach the bump stop to the frame. The rear spring is mounted within the channel shape of the frame's rear cross member. About one inch from the end of the rear cross member is a body bolt and about 3-1/2 inches further inboard is the first of two bolts that connect the rear bumper bracket to the cross member. The body bolt is of sufficient size and strength to attach a bump stop support fixture to the rear cross member.





#### Fourth, I had to determine the force required to stop the spring at the desired upward limit.

Common practice in structural engineering is to increase the weight of moving machinery by 50% for impact conditions. However, due to the lessening effect of the tires, the dampening effect of the shock absorber and spring friction, and compression of the bump stop, a smaller increase for impact is justified, say 25%. The weight of passengers was not increased for impact because then are sitting on seats containing springs that would lessen and dampen their impact forces. The weight of my Victoria on a rear wheel is 708 pounds. With a 25% increase for impact the force is  $1.25 \times 708 = 885$  pounds. The weight of four passengers at 200 pounds each is 800 pounds with 315 pounds going to each rear wheel. The total impact force at each bump stop, the force required to stop the spring at the desired upward limit, is estimated to be 885 + 315 = 1,200 pounds.

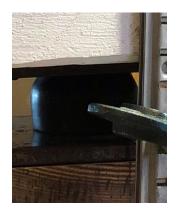


**Fifth, I had to determine the performance characteristics of the bump stops.** How much would a bump stop compress under a range of loads. I did this using a shop press, a shipping scale, a dial gauge, two short planks, and the video recorder on my cell phone. As the shop press applied load the dial gauge indicated the compression in the bump stop and, at the same time, the digital readout from the shipping scale showed a fraction of the bump stop load, all being recorded by the cell phone video.

The planking distributed the shop press load to the scale and bump stop in a set proportion, 1:3, for example, a reading on the scale of 400 pounds indicated the load on the bump stop would be 3 X 400 = 1,200 pounds. Data points were extracted from the video that were then plotted in a graph showing the amount of compression on the bump stop at any given amount of compression force. Twelve bump stops, numbers 2 through 13, where tested.







The performance ranged from a minimum of 0.139 inches of compression at 1,200 pounds for a bump stop 1 inch high (a hard stop) to a practical maximum compression of 0.540 inches of compression at 1,200 pounds for a bump stop 2.09 inches high (a soft stop).

#### **Conclusions**

Of all the solutions to the overdrive bump and bang, the bump stop is:

- 1. a complete solution (eliminating all Bangs),
- 2. requires the least modification to the car (only two body bolts),
- 3. the safest (no spring work with special tools),
- 4. the least amount of work (similar to changing two tires), and
- 5. would be considered an accessory for fine point judging.







As this analysis made clear, the bump stop assembly had to be adjustable to accommodate the large variations in bump stop height and performance. Also, the bump stop assembly had to accommodate the various conditions found in cars 90+ years old, such as: sagging frames, worn engine mountings, worn springs, worn spring shackles, etc. Several designs have been considered and a few built. The most promising design, now in road testing, uses a wood block as the support fixture that is attached to the frame rear cross member. Attached to the wood block is a steel plate to which the bump stop is attached. Shims of varying thicknesses can be used to provide the desired bump stop assembly height. The results of road testing of the most promising bump stop will be presented in a future article.

#### <u>Acknowledgments</u>

This article has been made possible by the generous support and previous work by many individuals. I thank Steve Mitchell for manufacturing an excellent overdrive for Model As and his helpful comments which were incorporated into this article. I thank the authors of previous articles that have appeared in the International Model A Ford Victoria Association newsletter, *The Victoria Bustle*, Ben Hadd and Tom Endy, who developed solutions to this problem. I thank Great Lake A's club members, Brian Campbell and Gary Zehren, for reviewing this article and offered suggestions. Last, I thank my editors, Frieda Walter and Joy Schwabach, for polishing the text.

\*Previously printed in the Model A News

### Ads

#### **Searching:**

VA member, Bill McElroy (lincolnmac9@aol.com) is seeking information and location of a Brewster Green and Black Steelback Victoria that was restored in 1971 by a friend of his. The restorer's family is looking for the Victoria. The last time Bill saw the Vitoria was in 2002 at an auction in Medina, Ohio. The seller's name was Clifford Kovacic. At the time of the auction, it had apple green wheels and whitewall tires. The spare tire is in the back. The green paint had started to fade on the Vicky by the time of the auction. It still had its Senior award from the Penn-Ohio Model A Ford Club in 1971 on the radiator. The Steelback Vicky was a real stunner in her prime. Bill thinks the car went to the Dayton, Ohio area.

#### For Sale:

1931 Ford Model A Victoria Leatherback. Chicle & Copra Drab with straw pinstripe, black fenders, wide whitewalls, straw powder coated wheels. Standard 3-speed with 2013 Mitchell overdrive. Engine stock, 6V, no mods, probably rebuilt years ago. Interior olive green, probably older LeBaron Bonney. Fixed seats, driver's seat moved back 2". The tires are WW Firestone from 2015, low mileage, new tubes, spare is a new Blackwall, grey full car dust cover. Nothing missing in or out. Has inside visors, vacuum wiper and back flower vases, seat lap belts and rear curtain. Kill switch under the seat, excellent bumpers and lights, Motometer, two taillights, no

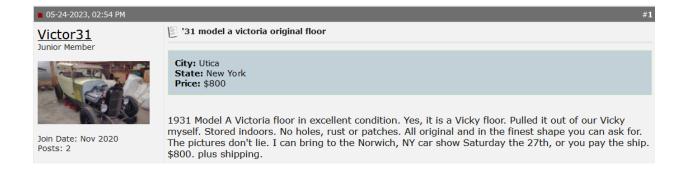
side curtains, door pockets, new fuel shutoff valve, no rear cargo box, running boards are good. Includes original driveshaft, various parts, 2 toolboxes of parts, fabric top is waterproof - replaced 2015, been driven from NE Oregon to Tacoma WA and back over the Cascades. Great driver and parade car. Joe Kresse La Grande Oregon 541-962-5230, email <a href="mailto:kressej@gmail.com">kressej@gmail.com</a> for more photos.



#### Ford Barn Victoria Items for sale

Occasionally items can be found that could be used for our Victoria's. If you haven't joined this community of passionate Ford hobbyists yet, look them up! These are some examples.





#### **Victoria Association Services**

The Association has a Technical Director, Chuck Christenson, who is willing to answer your questions on the Model A and the Victoria. You will find his email address on the front cover of the Bustle.

Bob Bidonde is now using the registry of Victorias to assign Body numbers to members' Victorias that do not have one. If you need a body number for your Victoria, please contact Bob at modela1931@aol.com.

We also have paper and digital window patterns for the Victoria. Please let me (Chuck) know if you would like to use them.

#### **Address changes**

If you <u>move</u>, be sure to notify the Victoria Association Membership Chairman, Ed Greany, of your new address!! (<u>crest25@verizon.net</u>) Also, if you <u>change</u> your email address, please let Ed know about the change.

Bill Cilker (President) is looking to contact any member that has a Victoria with original interior in any condition or pictures of original interiors for use on the Victoria Supplement of the Restoration Guidelines.

If any Victoria Association member would like to have the Bustle emailed to them instead of getting it by mail, please contact Ed Greany (crest25@verizon.net) and let him know. You will get the pictures in color.

The International Model A Ford Victoria Association is a body style chapter of the Model A Ford Club of America (MAFCA) and a region of the Model A Restorers Club (MARC). The association was founded in 1986 at Frisco, Texas by Charlie Viosca. The purpose of the association is to aid the membership in the authentic restoration of the Model A Ford A-190 Victoria body style. To achieve the purpose this quarterly newsletter is published for the association membership. The intent is to furnish accurate and complete information concerning the Model A Ford Victoria body style. Permission to reprint from this publication is expressly given provided acknowledgement and credit is given to the author and to the publication and no changes are made to the original article.



# International Model A Ford

Victoria Association

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# First Class Mail

To: