UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF FLORIDA
MIAMI DIVISION

Class Action: Case No. 1:19-cv-21552

DOUGLAS WEISS, on behalf of himself and all others similarly situated,

Plaintiff,

v.

GENERAL MOTORS LLC,

Defendant.

CLASS ACTION COMPLAINT

JURY TRIAL DEMANDED

Plaintiff Douglas Weiss, on behalf of himself and all others similarly situated, by and through his undersigned counsel, brings this action against General Motors LLC. For his Complaint, Plaintiff alleges the following based on personal knowledge as to his own acts and on the investigation conducted by counsel as to all other allegations:

SUMMARY OF THE ACTION

1. Plaintiff brings common law warranty claims and claims under the Magnuson-Moss Warranty Act, 15 U.S.C. §§ 2301, *et seq.* and the Florida Deceptive and Unfair Trade Practices Act ("FDUTPA"), Fla. Stat. §§ 501.201, *et seq.*, against Defendant General Motors LLC ("GM").

2. This action arises from the sale or lease of hundreds of thousands of vehicles throughout Florida and the United States manufactured by Defendant GM that are equipped with defective drivelines. The defect, often referred to by consumers as the "Chevy Shake," is that certain GM vehicles shake violently when they reach interstate cruising speeds ("**the Chevy Shake**" or "**the defect**"). These defective drivelines were installed in all model year 2015 to

present Cadillac Escalades, 2014 to present Chevrolet Silverados, 2015 to present Chevrolet Suburbans, 2015 to present Chevrolet Tahoes, 2014 to present GMC Sierras, and 2015 to present GMC Yukon/Yukon XLs sold or leased to consumers in the United States, including Plaintiff's vehicle (the "**Class Vehicles**"). The root cause of the Chevy Shake is a defective drive shaft common to all Class Vehicles, also referred to by GM as a "propeller shaft" or "prop shaft," which is part of the vehicle's driveline. All Class Vehicles share the same defective condition of the driveline (and specifically the defective aluminum drive shaft) that GM failed to disclose to Plaintiff, consumers, and each Class Member.

3. In the Class Vehicles, the drive shaft is an aluminum tube that runs the length of the interior, transmitting torque and rotation from the engine to the wheels. When the output shaft of the transmission rotates, it spins the drive shaft, turning the differential ring gear to rotate the wheels. The drive shaft must be a precisely designed, manufactured, balanced, and weighted component because it must rotate at high speeds and torque values to turn the wheels.

4. Plaintiff and Class Members purchased GM vehicles fitted with defective drive shafts that cause them to shake at high speeds. This is a major safety concern because drivers have reported that the defect makes the vehicles feel unstable at speed and can cause a loss of control. Over time, an unaddressed drive shaft defect can cause the part to progressively deteriorate, culminating in failure as the shaft drops to the ground and renders the vehicle undriveable.

5. GM sold, leased, and continues to sell and lease the Class Vehicles despite its awareness of the defect. GM chose and continues to choose financial gain at the expense of consumers by concealing and omitting a disclosure of this critical driveline component and potential safety hazard to consumers who purchase or lease Class Vehicles.

6. Despite its knowledge, GM has failed to recall the inherently dangerous drive shafts or reimburse vehicle owners for the inevitable failure of this critical part.

7. Plaintiff and Class Members have suffered harm as a result of GM's decision not to disclose the defect by overpaying for their vehicles and by paying significant sums for GM to attempt, and fail, to properly diagnose and repair their vehicles that exhibit the Chevy Shake.

8. GM has long been on notice about the defect and that its drive shafts are not fit for their intended purpose, as detailed at length in the factual background section below.

9. GM actively concealed and/or failed to notify the public of the existence and nature of the defect and of the safety hazard presented by the defect. GM has not recalled the vehicles to replace the drive shafts; it has not offered to replace the drive shafts to its customers free of charge; and it has not offered to reimburse owners, present or past, who have incurred costs relating to diagnosing and repairing issues arising from the Chevy Shake. GM's conduct violates well-established consumer protection laws in Florida and constitutes a continuous breach of its warranties to Plaintiff and consumers in the United States.

10. Plaintiff brings this action on behalf of himself and all those similarly situated ("Class," "Class Members," "Consumers," "Owners") for GM's breach of its warranties across the United States and GM's deceptive trade practices in violation of the consumer protection laws of Florida.

PARTIES

11. Plaintiff Douglas Weiss is a citizen and resident of Broward County, Florida.

12. Defendant General Motors LLC is a Delaware limited liability company with its principal place of business located at 300 Renaissance Center, Detroit, Michigan 48243. Defendant designs, manufactures and sells automobiles throughout the United States, including in the State

of Florida, under the brand names Chevrolet, GMC, and Cadillac. GM does business in Florida, advertising, distributing, and selling its vehicles through its dealer network and other outlets in the State. GM's registered agent in this State is Corporation Service Company, located at 1201 Hays Street, Tallahassee, FL 32301-2525.

JURISDICTION AND VENUE

13. This action is properly before this Court and this Court has subject matter jurisdiction over this action under the Class Action Fairness Act. At least one member of the proposed class is a citizen of a different state than GM, the number of proposed Class Members exceeds 100, and the amount in controversy far exceeds the sum or value of $5,000,000.00 exclusive of interest and costs. 28 U.S.C. § 1332(d)(2)(A).

14. This Court has general and specific jurisdiction over the Defendant because Defendant GM has sufficient minimum contacts with Florida and within the Southern District of Florida to establish Defendant's presence in Florida, and certain material acts upon which this suit is based occurred within the Southern District of Florida. GM does substantial business in the State of Florida and within this Judicial District, is registered to and is doing business within the State of Florida, and otherwise maintains requisite minimum contacts with the State of Florida. Specifically, GM distributed Plaintiff's Class Vehicle in Florida, and the vehicle has remained in Florida and been registered in Florida since its original sale at a franchised GM dealership in Florida.

15. Venue is proper in this District pursuant to 28 U.S.C. § 1391(b)(2) because Defendant is subject to personal jurisdiction within the Southern District of Florida and a substantial part of the events or omissions giving rise to the claims asserted herein occurred in this judicial district, including: Plaintiff experienced the Chevy Shake in Broward and Dade Counties,

and Plaintiff's Chevy Shake was diagnosed by a GM franchised dealership in Dade County. Furthermore, the Plaintiff's Class Vehicle is located in Broward County, and Plaintiff resides in Broward County. Additionally, GM distributes Class Vehicles in this District and receives substantial compensation and profits from the sale and lease of Class Vehicles in this District, and has and continues to conceal and make material omissions in this District.

FACTUAL BACKGROUND AND SUBSTANTIVE ALLEGATIONS

16. GM manufactures, markets, distributes, and warrants automobiles in the United States sold under various brand names, including the Chevrolet, GMC, and Cadillac brands. This lawsuit concerns model year 2015 to present Cadillac Escalades, 2014 to present Chevrolet Silverados, 2015 to present Chevrolet Suburbans, 2015 to present Chevrolet Tahoes, 2014 to present GMC Sierras, and 2015 to present GMC Yukon/Yukon XLs sold or leased to consumers in the United States, including Plaintiff's vehicle (the "**Class Vehicles**").

THE "CHEVY SHAKE" DEFECT

17. GM, through its dealerships, employees, agents, and servants, failed to disclose to Class Members and the public that the Class Vehicles contain an irreparable and defective drive shaft that renders the vehicles not fit for their intended purpose. This omission allowed Defendant GM to place the Class Vehicles in commerce and profit from their sales. However, GM knew from the time of manufacture that the drive shafts contained a dangerous, inherent defect from the point of manufacture that caused the Class Vehicles to exhibit the "Chevy Shake."

18. GM's notice of the Chevy Shake defect derived from, among other things, GM's own knowledge about the material, design, and manufacture of the part; feedback, both directly and through its dealers, from its customers during repairs; complaints in the National Highway

Transportation Safety Administration ("NHTSA") database beginning as early as 2014; online complaints in web forums and social media that are monitored by GM; and news reports.

A. GM was aware of the Chevy Shake through consumer complaints and news reports.

19. One forum titled "Shake or Vibration Issues" on the website www.gm-trucks.com has *thousands* of complaints from GM consumers about the defect; at the time of access, it spanned 829 pages. The first comment was registered on April 4, 2013, and complained of "a shake or vibration" in a brand new 2014 GM Sierra. *See* "Shake or Vibration Issues," https://www.gm-trucks.com/forums/topic/153186-shake-or-vibration-issues/ (last accessed March 31, 2019).

20. On August 6, 2013, an authorized and verified GM representative—Jennifer T. of GM Customer Care—responded to the thread of consumers to say that GM could be of assistance. In the days that followed, streams of other consumers complained of the same issue in their new 2014 GM vehicles, and GM Customer Care continued to respond, inviting assistance.

21. The original commenter and other consumers reported, however, that when they took their vehicles into GM dealerships, GM representatives were unable to diagnose and fix the Chevy Shake defect. Consumers detailed that GM representatives would orally confirm the presence of the defect after a test drive but then later misrepresent the problem to avoid having to address it. For example, one commenter wrote on December 11, 2013: "Looking at my paper work last night, the service manager wrote 'no vibration present at this time, let customer go'. This even after he road with me, confirmed the vibration, told me they were getting tons of these complaints, and that he was trying to get GM involved."[1]

1 See https://www.gm-trucks.com/forums/topic/153186-shake-or-vibration-issues/?do=findComment&comment=1382265

22. GM acknowledged the large volume of complaints and continued to provide vague reassurances without suggesting a concrete solution.[2]

23. The complaints describe the common defect with tremendous similarity across models and model years. Here is a sampling from the forum at different points in time:

- "2014 GMC Sierra. … I have the vibration also between 65-75mph. The passenger seat shakes like hell, the steering wheel has bad wobble."[3]

- "2014 GMC 4x4 Z71 SLT Crew Build date 9/13. I dropped it off April 8th due to a vibration at all speeds in the steering wheel, once reaching 70mph a seat vibration started to become really noticable and extremely noticeable as speed increase past 70. In conjuction an audible noise inside the cab developed at 75 that sounding like a metal on metal vibration at a high frequency and the cab was much louder. Became really noticible at 80 and beyond."[4]

- "I have a 2014 Chevrolet Silverado 1500 4x4 crew cab standard size bed with 20" Goodyear tires. I was starting to think I was the only one with this problem. I have been having the same experience with vibration at varied speeds around 75 to 85 mph."[5]

- "First post, ended up here hunting down a solution to the 70-80 mph shimmy my truck has intermittently. Truck is a SCSB Z71 4x4, 5.3 with the 3.42 gears, love the truck... hate the shake since i drive everyday on the interstate and i have to be doing 69 or less or 80 and above to keep my coffee from shaking out of the center console."[6]

- "2014 GMC all-terrain package unresolved vibration issues started bringing this truck back to the dealership after 17 days of ownership. Rf tires no change, had really bad vibration in rear end at 80 mph …. had a customer service agent tell me there was nothing wrong with my truck so therefore they could not do anything for

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2 https://www.gm-trucks.com/forums/topic/153186-shake-or-vibration-issues/?do=findComment&comment=1383513

3https://www.gm-trucks.com/forums/topic/153186-shake-or-vibration-issues/?do=findComment&comment=1388110 (Dec. 16, 2013).

4 https://www.gm-trucks.com/forums/topic/153186-shake-or-vibration-issues/?do=findComment&comment=1455956 (May 16, 2014). Consumer also noted several repairs performed that did not fix the vehicle.

5 https://www.gm-trucks.com/forums/topic/153186-shake-or-vibration-issues/?do=findComment&comment=1489417 (Aug. 13, 2014).

6 https://www.gm-trucks.com/forums/topic/153186-shake-or-vibration-issues/?do=findComment&comment=1527953 (Nov. 13, 2014)

me … I stood behind the GMC name for over 30 years unfortunately GM does not stand behind their customers or their products ."[7]

- "Truck is at the shop again today. They are going to analyze with a vibration meter. I specifically stated the speed of vibration was 70 to 75 on highway. Vibration feels like it starts in steering wheel then feels like it moves to rear or the front is so bad it resonates the whole vehicle. … I have 21000 miles on this vehicle and have been battling little vibrations since the get go, over the last 2 months it seems to have gotten worse. I should prepare myself for the inevitable 'cant replicate', 'they all do this', or 'we can't go over 70mph'."[8]

- "I have a 2015 Z71 4x4 CC Sierra SLT 3.42 rear end that started vibrating at about 2k miles. It has Rancho quick lift rs9000 struts on the front and rs9000s in the rear. Aftermarket wheels and toyo at II tires. … Truck still vibrates from 70 - 75 mph. … I'm trying to arm myself with enough data to avoid multiple trips to the dealer where they just rf balance the tires over and over before actually looking at the rear end or other drive train components as the source. I won't accept 'normal operation' or 'they all do it' out of a $55k truck."[9]

- "I have the same vibration issues with my 2015 Sierra starts at 75mph had to dealer three times and going back again they keep balancing the tires and it doesnt fix it."[10]

- "Just bought a 2016 LTZ CC Tuesday night, on my Wednesday work commute noticed the shaking around 65-75 MPH. … [S]ad to see my 8 mile odometer truck in the shop already."[11]

- "My 2016 Z71 Crew Cab has shook from day one. Now has 9K on it. Third trip to dealer and I took service manager for a ride. He seen and felt it and stated my entire passenger side door was shaking also. Speed of 70 mph up."[12]

- "Holy Cow - I just purchased a 2014 short bed 4wd z71 and I noticed a bad shake

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7 https://www.gm-trucks.com/forums/topic/153186-shake-or-vibration-issues/?do=findComment&comment=1590952 (March 10, 2015)

8 https://www.gm-trucks.com/forums/topic/153186-shake-or-vibration-issues/?do=findComment&comment=1652088 (July 15, 2015).

9 https://www.gm-trucks.com/forums/topic/153186-shake-or-vibration-issues/?page=339 (July 19, 2015).

10 https://www.gm-trucks.com/forums/topic/153186-shake-or-vibration-issues/?do=findComment&comment=1758670 (Feb. 10, 2016).

11 https://www.gm-trucks.com/forums/topic/153186-shake-or-vibration-issues/?do=findComment&comment=1759420 (Feb. 11, 2016).

12 https://www.gm-trucks.com/forums/topic/153186-shake-or-vibration-issues/?do=findComment&comment=1829454 (June 27, 2016)

from 65 mph - 75 mph the second day i had it. I ended up taking it to a shop the same day and having the tires balanced and I did notice that helped, but didn't solve the problem. I started fumbling through Google looking to see if this was a known issue and I found this thread. I read the first 10 pages before I realized there was 625 pages in this thread. I assume this is a huge and very common issue due to the fact of activity on this thread."[13]

- "Sorry if this has been covered in this 600 page thread, but I have a few questions. I have started to notice vibrations at speeds of 65-75 mph. I have a 2015 crew cab with about 6800 miles."[14]

- "2016 Sierra Denali short box. 5.3L[.] Noticed a vibration with 26 miles on it taking it off the lot. … 75-80 MPH is the worst."[15]

- "I purchased a 2016 Silverado Crew LTZ in Aug. The truck has 2800mi. And has developing the 'chevy shake' ! … I cant deny thats its there Just as described in all othe previous post from 2014- 2015 trucks , 50 and 70 mph and above. I had hoped this issue would have been resolved at this point!"[16]

- "Dropped my 17' sierra off this morning for its first free oil change at 3k miles. I told them about the 72 mph shake. Service writer nodded his head and said that it is a known issue with the driveshafts."[17]

- "This is my first post, and I have read around 100 pages on this forum thread after buying my overstock new 2015 Silverado 1500 Double Cab Z71 4x4 about 3 weeks ago. I have read about complaints, failed attempts, fixes, non issues, and how bad the quality of life now seems after buying a new truck that vibrates constantly. I must claim that my truck has a vibration that many have described. My truck vibrates right around 45 MPH and again between about 72 and 80 MPH."[18]

- "My '16 Z71 Silverado has been to the dealer twice, no success with getting rid of the shakes. Last visit was 10/25 when dealer tried to convince me the vibrations

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13 https://www.gm-trucks.com/forums/topic/153186-shake-or-vibration-issues/?do=findComment&comment=1843441 (July 29, 2016).

14 https://www.gm-trucks.com/forums/topic/153186-shake-or-vibration-issues/?do=findComment&comment=1848394 (August 9, 2016).

15 https://www.gm-trucks.com/forums/topic/153186-shake-or-vibration-issues/?do=findComment&comment=1882778 (October 25, 2016).

16 https://www.gm-trucks.com/forums/topic/153186-shake-or-vibration-issues/?do=findComment&comment=1886634 (Nov. 3, 2016).

17 https://www.gm-trucks.com/forums/topic/153186-shake-or-vibration-issues/?do=findComment&comment=1887255 (Nov. 4, 2016).

18 https://www.gm-trucks.com/forums/topic/153186-shake-or-vibration-issues/?do=findComment&comment=1897593 (Nov. 18, 2016).

(+,- 45 MPH and 70 on up to +85) was due to the 'aggressive tread' of my Dueler A/Ts. That was after re-balancing the tires. After holding back my laugh and letting the service manager know I wasn't a total … idiot, he said put another 1000 miles on the truck, then call and make another appointment and they would switch tires/wheels off another truck and see if that helps."[19]

- Well my new to me 2014 silverado high country has the shaker option also! so far I've owned a 2105 silverado double cab a 2015 1500 LT z71 5.3l GMC Sierra crew cab 2014 1500 SLE 5.3lSilverado high country crew cab 1500 5.3l THEY ALL SHAKE!! my current truck the high country has a more exact shake. Its at 45 mph and 75 mph……almost exactly! i went through GM on my 2015 silverado and GMC sierra their tires not balancing is total garbage. their trucks never did this before i can't believe they are honestly telling people its tires[20]

- "I took a 500 mile trip on an interstate road last weekend and the shaking [on the 2016 Silverado LTZ] was very evident at 70 mph and above. Feels to me like it comes from the rear so I lowered the driver's side mirror to look at the wheel. I can clearly see it wobbling ever so slightly to the exact frequency of my vibration."[21]

- "This is my first post and after seeing the duration and number of pages on this one thread, I'm not hopeful that my issue will ever be resolved. I bought a 2016 GMC Denali 3500HD Crew DRW 4x4 on 3/31/16 (traded in a 2013 black 3500HD Denali Crew Dually 4x4 that never exhibited any vibration). I've had both steering wheel & wheel/tire vibration problems with this truck since I bought it new from Beck and Masten GMC in Houston, TX. … The truck now has 17,999 miles and it still has the same issues - extreme vibration of entire vehicle at 60+mph and steering wheel vibration/wobble from 35+mph. The truck is back in the shop currently and the service manager left a voicemail on Friday that they had found one bent inside wheel in the rear. I'm frustrated beyond belief."[22]

- "Same issues for me. Speeds vary but most noticable at 70-78MPH....2016 Crew Cab, 5.3L, 2x4, Stock Goodyears, had it to dealer 4 times, 4 road balances....Same story over and over. Bottle of water shakes in the center console, my backpack shakes while on the passanger seat, and i can even see the hood shake. So sick of this problem. Just turned 13k miles."[23]

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19 https://www.gm-trucks.com/forums/topic/153186-shake-or-vibration-issues/?do=findComment&comment=1924820 (Jan. 21, 2017).

20 https://www.gm-trucks.com/forums/topic/153186-shake-or-vibration-issues/?do=findComment&comment=1925299 (Jan. 22, 2017).

21 https://www.gm-trucks.com/forums/topic/153186-shake-or-vibration-issues/?do=findComment&comment=1995278 (June 7, 2017).

22 https://www.gm-trucks.com/forums/topic/153186-shake-or-vibration-issues/?do=findComment&comment=2000357 (June 19, 2017).

23 https://www.gm-trucks.com/forums/topic/153186-shake-or-vibration-

- "Traded in my 2000 Silverado on a 2018. Double cab, LT Z71, 4WD, optional 20" wheels (5 star) with goodyear SR-As. It vibrates on the highway, starting around 50mph and peaking around 70-75 I'd say. I have been reading this thread but after realizing it is nearly 800 pages does anyone have a link to a wiki or an FAQ or some sort of summary on the issue? … I'm going to wait since I don't want the dealership pointing to the new tires (which are not on the truck yet) as a possible culprit."[24]

- "[M]ine doesn't start until it hits 70 mph, then until about 76 it starts to die down, but like someone else said, this shouldn't be happening to a 45k + vehicle, especially for how long they've known about it. I've got a 2018 [GMC Sierra All-Terrain] with 1000 miles on it BTW."[25]

- "I just spent a ton of money on a truck and I'm getting the vibration. I've got a 2018 Sierra with about 1400 miles. My steering wheel was off, and got vibrations about 70 mph to 75. … I travel on the highway everyday so I need to get it fixed or trade it in on a ram …."[26]

- "[T]est drove my 2018 Sierra SLT crew cab around Oct 28th and told them I felt the vibration at 65 mph. Not being aware that this was a chronic problem, I believed the salesman when he told me that they would balance the tires and that would get rid of it. I bought it on the 29th and immediately called them saying the problem was still there. … The dealer says there is nothing else they can do, and GM won't accept that the product they sold me is defective." [27]

- "Just bought a new 2018 Silverado 1500 W/T model regular cab long bed. Got on the highway to take it home and it immediately started vibrating at about 63 mph and above,felt it in the steering wheel and the center console module."[28]

- "I have a 2018 regular cab long bed Work Truck Silverado ,V6 that has had the vibration issue since day one with seats and center console when driving above 60

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issues/?do=findComment&comment=2053074 (Nov. 8, 2017).

24 https://www.gm-trucks.com/forums/topic/153186-shake-or-vibration-issues/?do=findComment&comment=2067151 (Dec. 21, 2017).

25 https://www.gm-trucks.com/forums/topic/153186-shake-or-vibration-issues/?do=findComment&comment=2132539 (July 20, 2018).

26 https://www.gm-trucks.com/forums/topic/153186-shake-or-vibration-issues/?do=findComment&comment=2134424 (July 27, 2018).

27 https://www.gm-trucks.com/forums/topic/153186-shake-or-vibration-issues/?do=findComment&comment=2183298 (Dec. 12, 2018).

28 https://www.gm-trucks.com/forums/topic/153186-shake-or-vibration-issues/?do=findComment&comment=2190688 (Dec. 31, 2018).

MPH."[29]

24. In addition to describing the common defect, customers describe similar treatment at GM dealerships in which they are repeatedly misled about the source of the problem, compelled to pay substantial sums out-of-pocket for GM to diagnose and attempt to address the defect with bad fixes, and they waste countless hours in the process:

- "I have been to the dealer that I purchased my 2014 Silverado Crew Cab LT 4x4 5.3 FOUR times now. First time, they replaced one tire. Second time, they road forced balanced my tires AGAIN. 3rd time I took the Service Manager for a ride. 4th time was to get all new tires. They put on Michelin tires this time. 265/65/18's. I still have the shake, however the speed at which it comes has moved now. It used to come around 72 mph. Now I can feel it intermittently starting around 45mph all the way past 80mph. Two weeks ago I wrote a letter to the head honcho of GM and I guess she just forwarded my letter to a rep. This rep called Monday and asked for my VIN #. I asked her that before I give it to her, would she tell me whether or not she has heard of this problem and she said yes. I was like, great, Maybe I'll get somewhere with her then. I also said that I heard that once we give our VIN #'s to GM that we would basically be blackballed from all dealerships regarding this problem. She said she never heard of that and that she would do her best to ensure that this would be taken care of. She looked up my VIN# and said that there was a recall on my vehicle for a shudder in my tranny and also wanted to make sure that I understood that my Service Manager had not reported any of these problems to them, nor has he been in contact with GM. She said he also has not performed the recall that dates back to June. Today she called back. This time, she had informed me that the call was being recorded. Her demeanor had totally changed. CRAPPPPPPPPP! I knew I was doomed. She said that she contacted a closer dealership and that the service manager of that dealership would be in contact with me. She also told that service manager what my previous service manager had performed. He told her that those would of been the steps that he would of done. After she was done talking to me, I got a phone call from this new service manager. Right off the bat, he wanted to tell me that this shaking was a normal characteristic of a Silverado. That got my blood boiling as I thought that I might actually have an advocate on my side. I told him that if I was to come into his dealership it would be to get this fixed. If he was going to just look at the tires and nothing else, that he would be wasting my time. His attitude got worse and said for me not to come in as he would be just wasting my time."[30]

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29 https://www.gm-trucks.com/forums/topic/153186-shake-or-vibration-issues/?do=findComment&comment=2231910 (March 27, 2019).

30 https://www.gm-trucks.com/forums/topic/153186-shake-or-vibration-issues/?do=findComment&comment=1518445 (Oct. 22, 2014).

- "I have owned at least 4 Silverados over the past ten years with no issues. I came to the site to see if others were experiencing issues with the 2014 or 2015 Silverados. There appears to be much more than I thought. In August 2014, I bought a 2014 Z71, trading in my 2011 model. While I was driving it home from the dealership and reaching about 40mph, I noticed a significant vibration. It felt like I was driving on a road full of pebbles. I called the dealership and they thought it was flat spots on the tires. Two weeks later same problem. Had the truck into the shop 4 different times, once for two straight weeks, over a 6 month period. Four technicians noticed the vibration but could not diagnose it. The rearend was replaced, the shocks were replaced, the tires were replaced, etc., etc. I finally got to the point where I filed a claim with GM. they COULD NOT fix the problem and GM gave me a new 2015 Z71. I had to pay the difference of MSRP which was $800.00, but all my pmts up to this date were applied to the new truck. I was quite pleased with the 2015 until I reached about 500 miles on the new truck. I noticed a vibration, same as the 2014 but only after I reached highway speeds, 60mph and up. I thought I was being paranoid and tried to convince myself that it was not there. Well, my wife and I took a 400 mile trip by highway, and about an hour into the trip, she asked me what was wrong with the truck. She was feeling vibration in her seat and floorboard. Now I am back where I started with the 2014 issues. During this same trip, I ran into a friend who had bought the 2015 Silverado 2500HD. He said his truck vibrates to the point where his outside mirrors are shaking. Granted completely different truck but seems all too common among the GM trucks. He was bringing it back to the dealership."[31]

- "More run-around by GM. They continue to tell me that they will not buy-back the vehicle. They're talking out both sides of their mouth. They acknowledged that service bulletins have been issued, and in the same breath, they said they will not buyback the car since it is a 'normal operating function of the vehicle!' WHAT?!?!?!"[32]

- "I just want to share my experience and how utterly disgusted I am at how GM is avoiding this vibration/shaking issue.

  Two months ago, August 12th 2017 I bought what I thought was going to be a great arizona outdoor truck for camping and seeing the great outdoors. Truck is a chevy silverado 1500 4x4 dbl cab 5.3L. With 22k miles full factory warranty and CERTIFIED PRE OWNED.

  After getting on the freeway at 65 mph I notice the center console and passenger seat rattling like crazy, I take it back to the selling dealership and they say oh yeah trucks been sitting awhile and rebalanced the tires.

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31 https://www.gm-trucks.com/forums/topic/153186-shake-or-vibration-issues/?do=findComment&comment=1645929 (July 2, 2015).

32 https://www.gm-trucks.com/forums/topic/162779-2015-yukon-noise-in-cabin/?do=findComment&comment=1611512 (April 14, 2015).

I leave and same thing, rattling and shaking and vibration at 65mph+.

I go back to the selling dealer ship to have the tires STOCK 275-55R20s road force balanced, tech gets out of the truck after test drive and says truck is still shaking and we think you have a bad tire GM doesnt want to pay for the tire, I call chevy corporate and they replace the tire. Tech at selling dealership suggests I get new tires.

Leave the dealership again and the same vibration and shake happens again on the same smooth NEWLY paved freeway, mind you the selling dealership is 35 miles from my house.

At this point Im pissed at go to a chevy dealership right by my house, we test drive and the tech sees the center console vibrating to where keys and cell phone wont stay in the holder.

He thinks its the tires, that was my final straw!!!
I go to discount tire and drop $1700 bucks on BFF all terrains and new wheels. I ask them to road force balance right away and the readings come in well below GMs spec. TRUCK IS STILL VIBRATING AT 65mph +!

I go back to the chevy dealership by my house and I tell them new tires and wheels, same problem!

I finally convince them to Pico scope the truck and guess what, they come back with a tire issue. I leave the dealership, and go back to discount and they replace all four bff tires and road force the new tires again WELL BELOW GM SPEC and again, I have the same shake and vibration as. With the stock tires and wheels I bought the truck with.

I decide to do some research and consult with several professional driveline mechanics, THIS IS NOT A TIRE AND WHEEL ISSUE! I am bringing the truck to a driveline specialist next week and after the research Ive done, I know for a fact this is a driveline (axle, drive shaft, prop shaft) issue that clearly GM does not want to fix and theyll have you believe its tire and wheel.

Ive reached the end of my rope and if the driveline guy finds the problem, I guarantee you I will go back to the dealership and have it fixed because GM is definitely avoiding this problem and giving the dealerships the talking points and truck owners the tire and wheel BS.

I am stunned that GM wont step up with all these problems and do whats right.

We will see because to sell someone a vehicle under warranty and having to take off work 7 times to deal with this is a joke.

> If I dont get this rectified, I will consider my options up to legal action. No one is able to ride passenger in my truck on road trips because of this problem, it makes my young kid sick, and the shaking is not acceptable!"[33]

25. News reports have also detailed the pervasiveness and ubiquity of the defect and GM's refusal to provide a common fix.[34]

B. GM was aware of the Chevy Shake through complaints to NHTSA.

26. GM, through its dealerships, agents, servants, and employees, was also put on actual and/or constructive notice of the Chevy Shake from GM's internal customer assistance inquiry records and National Highway and Traffic Safety Administration Office of Defects Investigation (NHTSA-ODI) reports dating back to 2014. The NHTSA-ODI website allows consumers to identify and report problems with vehicle, tires, equipment or car seats. *See* https://www.nhtsa.gov/recalls (last accessed March 30, 2019) ("What happens to my complaint? Your complaint fuels our work. … Your complaint will be added to a public NHTSA database …. If the agency receives similar reports from a number of people about the same product, this could indicate that a safety-related defect may exist that would warrant the opening of an investigation.").

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33 https://www.gm-trucks.com/forums/topic/153186-shake-or-vibration-issues/?do=findComment&comment=2042658 (Oct. 6, 2017).

34 *See, e.g.,* Jessica McMaster, "General Motors' customers frustrated over shaking pickup trucks," NBC News WPTV (July 7, 2017), available at https://www.wptv.com/news/national/general-motors-customers-frustrated-over-shaking-in-pickup-trucks; Stephen Elmer, "Mysterious, Unfixable 'Chevy Shake' Affecting Pickup Trucks Too," AutoGuide.com (March 30, 2016), available at: https://www.autoguide.com/auto-news/2016/03/the-mysterious-chevy-shake-is-affecting-pickup-trucks-now-too.html ; Aimee Picchi, "Is your GM vehicle making you sick?", CBS News Moneywatch (Jan. 4, 2016), available at https://www.cbsnews.com/news/is-your-gm-vehicle-making-you-sick/ ; Stephen Elmer, "There's a Big Issue with GM's SUV and No One Seems to Have a Solution," AutoGuide.com (Dec. 16, 2015), available at: https://www.autoguide.com/auto-news/2015/12/there-s-a-big-issue-with-gm-s-suvs-and-no-one-seems-to-have-a-solution.html .

27. The Office of Defects Investigation reviews and analyzes complaints to determine whether to issue recalls. The Vehicle Safety Complaint filing form specifically includes required fields for the name, telephone number, and email address for the complainant, in addition to the VIN number for the vehicle (which are apparently tested by an online database). *See* https://www-odi.nhtsa.dot.gov/VehicleComplaint/ (last accessed March 30, 2019). NHTSA-ODI does not share complainants' personal information with the general public, and a complaint is added to a public NHTSA database only after it removes all information from complaint fields that personally identify a complainant. *See* https://www.nhtsa.gov/recalls (last accessed March 30, 2019).

28. NHTSA-ODI specifically states on its website that:

> Government analysts review each complaint in a timely fashion. If warranted, the Office of Defects Investigation (ODI) will open an investigation to determine if a safety defect trend exists. Some of these investigations result in safety recalls.
>
> While you may or may not be contacted by a NHTSA-ODI investigator to clarify the information submitted, all reports are reviewed and analyzed for potential defects trends.

Thus, NHTSA-ODI complaints are made by individuals who must identify themselves and enter detailed contact information and an accurate VIN number, and these complaints are reviewed and analyzed by the federal government.

29. NHTSA-ODI reports over 100 complaints consistent with the symptoms of the Chevy Shake in Class Vehicles. These consumer complaints filed with the NHTSA are delivered to GM, reviewed by GM, and analyzed by GM's engineers. GM received and were aware of these consumer complaints. True and accurate copies of a sampling of these complaints, termed Vehicle Owner Questionnaires ("VOQs"), are set forth in the paragraphs below.

30. A consumer complaint dated 11/05/2014 and submitted to NHTSA states the following regarding a 2015 GMC Yukon Denali XL 1500: VEHICLE HAS A TERRIBLE

VIBRATION. HAS BEEN TO DEALER 7 TIMES, FOR A TOTAL OF 4 WEEKS. A GM ENGINEER HAS LOOKED AT IT TWICE. THEY HAVE REPLACED RING/PINION, DRIVESHAFT, AXLE. TRIED IT WITH 4 SETS OF TIRES/WHEELS. LAST IDEA WAS TO REPLACE SHOCKS, STRUTS, SWAY BARS WITH HAND BUILT PARTS, CUT BRACKETS OFF CAR AND WELD NEW BRACKETS ON. WHEN LIABILITY WAS BROUGHT UP, THEY CHANGED THEIR STORY. THERE IS A LARGER ISSUE AS WAS RELAYED BY ENGINEER TO SERVICE MANAGER AT DEALERSHIP. ISSUE IS WITH ALL 2015 TAHOE, YUKON, ESCALADES. IN AN EFFORT TO PREVENT ROLL OVERS, THEY DESIGNED THE FRAME AND BODY MOUNTS TOO STIFF. THERE ARE 40 ENGINEERS WORKING ON ISSUES, THEY HAVE NO SOLUTIONS THAT WORK ACROSS THE BOARD. ACCORDING TO ENGINEER, GM IS KEEPING AN EYE ON HOW MANY UNITS THEY HAVE TO BUY BACK, OR TRADE FOR ... IF NUMBER IS LOW ENOUGH, THEY WILL NOT MAKE ANY CHANGES TO DESIGN. I WOULD LIKE TO SCHEDULE A MEETING NEXT WEEK TO DISCUSS THIS ISSUE AND THE LARGER ISSUE IN PERSON. SINCE THEY ARE REFUSING TO BUY BACK MY VEHICLE, I AM TURNING MATTER OVER TO ATTORNEY. *TR.

31. A consumer complaint dated 12/30/2014 and submitted to NHTSA states the following regarding a 2015 GMC Yukon Denali XL 1500: VIBRATION THOUGH CAR AT HIGH SPEEDS SINCE CAR IS NEW. DEALER REPLACED ONE TIRE AND THAT CURED PROBLEM FOR A SHORT PERIOD. HAVE RETURNED VEHICLE TO DEALER SEVERAL TIMES FOR THE RECURRING PROBLEM AND IT HAS NOT BEEN ADDRESSED CORRECTLY RECEIVED RECALL LETTER FROM CONTINENTAL TIRE DUE TO VIBRATION ISSUES. MY VEHICLE IS NOT EQUIPPED WITH TIRES CONTAINING DATE

CODE AFFECTED BY THE RECALL. THE MAKE, MODEL, AND SIZE OF TIRES DOES MATCH RECALL. I BELIEVE THERE IS A LARGER ISSUE COVERING A MUCH LARGER PERIOD OF TIME OF TIRE MANUFACTURE AND MY CAR SHOULD BE INCLUDED IN RECALL. FOR THE MOST PART HAVE STOPPED DRIVING THE CAR FOR FEAR OF A TIRE BLOWING OUT OR DAMAGING THE VEHICLE. *TR.

32. A consumer complaint dated 01/15/2015 and submitted to NHTSA states the following regarding a 2015 Chevrolet Tahoe: TL* THE CONTACT OWNS A 2015 CHEVROLET TAHOE. WHILE DRIVING APPROXIMATELY 47 MPH, THE STEERING WHEEL VIBRATED WITHOUT WARNING. THE CONTACT MENTIONED THAT THE FAILURE ONLY OCCURRED WHEN DRIVING LESS THAN 55 MPH. THE VEHICLE WAS TAKEN TO A DEALER WHERE IT WAS DIAGNOSED THAT THE BEARING, GEAR KIT, GASKET AND SEAL NEEDED TO BE REPLACED AND THE DRIVE SHAFT NEEDED TO BE RE-BALANCED. THE VEHICLE WAS REPAIRED. THE FAILURE RECURRED. THE VEHICLE WAS TAKEN TO ANOTHER DEALER WHERE IT WAS DIAGNOSED THAT THE RACK AND PINION, BEARING, GEAR KIT, SEAL AND GASKET NEEDED TO BE REPLACED. THE VEHICLE WAS REPAIRED. THE FAILURE RECURRED. THE MANUFACTURER WAS NOTIFIED OF THE FAILURE. THE FAILURE MILEAGE WAS 21,084.

33. A consumer complaint dated 3/1/2015 and submitted to NHTSA states the following regarding a 2015 GMC Sierra: TL* THE CONTACT OWNS A 2015 GMC SIERRA. WHILE DRIVING APPROXIMATELY 60 MPH, THE VEHICLE BEGAN TO VIBRATE. THE LONGER THE VEHICLE WAS DRIVEN, THE MORE IT SHOOK. THE CONTACT TOOK THE VEHICLE TO THE DEALER SEVERAL TIMES, BUT NO FAILURE WAS FOUND. THE

DEALER TEST DROVE THE VEHICLE AND IT DID NOT VIBRATE. THE DEALER REPLACED THE TIRES, TRANSMISSION, AND SHOCKS; HOWEVER, THE FAILURE RECURRED. THE VEHICLE WAS NOT REPAIRED. THE CONTACT STATED THE SEAT WARMERS ALSO FAILED. THE MANUFACTURER WAS NOT MADE AWARE OF THE FAILURES. THE APPROXIMATE FAILURE MILEAGE WAS 2,500.

34. A consumer complaint dated 03/20/2015 and submitted to NHTSA states the following regarding a 2015 GMC Yukon Denali XL 1500: TRANSMISIÓN PROBLEMS WE WHERE DRIVING AROUND THE CITY AT 30-40MPH WHEN THE GEARS WENT CRAZY IT ACCELERATED BY ITSELF RPMS WENT CRAZY IT SOUNDED LIKE THE TRANSMISIÓN HAD GEARS IN PAN LOUD GRINDING THEN ALSO THE SEATS DONT VIBRATE WITH LAND DEPARTURE IT SHOWS SERVICE LANE DEPARTURE LAST WHEN DRIVI G AT SPEEDS LF 40-70 MPH THERE IS A STRONG VIBRATION IN FRONT MAKES ENTIRE TRUCK SHAKE TOOK TO DEALER ROTATED TIRES AND BALANCED ALLIGNMENT ALSO AND PROBLEM STILL THERE IDK WHAT TO DO.

35. A consumer complaint dated 3/20/2015 and submitted to NHTSA states the following regarding a 2015 GMC Yukon Denali XL 1500: PROBLEM STARTED WHEN DRIVING AT 60-70 MPH YOU CAN FEEL A STRONG VIBRATION CAUAES ENTIRE TRUCK TO SHAKE DONT KNOW WHAT IT IS DEALERS CANT FIX ALSO TRANSMISIÓN SHIFTS INTO GEARS HARD ACCELERATES BY ITSELF CAUSES ROUGH DRIVING VERY LOUD NOISE UNDER TRUCK SOUMDS LIKE TRANSMISIÓN ABOUT TO COME OFF AND ALSO SHIFTS INTO 4WD BY ITSELF OR PARK TO NUETRAL AND TRUCK WONT RUN.

36. A consumer complaint dated 05/01/2015 and submitted to NHTSA states the following regarding a 2015 GMC Yukon Denali XL 1500: OUR VEHICLE HAS A SIGNIFICANT VIBRATION IN V4 MODE WHEN TRAVELING BETWEEN 45-65 MPH AND ABOVE. THE VIBRATION IS ALSO ACCOMPANIED BY INCREASED CABIN PRESSURE. THESE ISSUES ARE CAUSING HEADACHES, NAUSEA, DIZZINESS, AND ARE FURTHER EXACERBATING MY WIFE'S MULTIPLE SCLEROSIS. WE ALSO HAVE A POPPING SOUND COMING FROM THE REAR OF THE VEHICLE'S SUSPENSION WHEN TURNING THAT MAKES US FEEL UNSAFE. THE VIBRATION STARTED RIGHT AFTER WE TOOK DELIVERY OF THE CAR AND HAS ONLY GOTTEN WORSE. WE BOUGHT THE CAR IN APRIL 2015 AND THE ISSUE CONTINUES UNFIXED TO THIS DAY. THE POPPING NOISE STARTED ABOUT 3-4 WEEKS AGO AND IT SOUNDS LIKE A SUSPENSION COMPONENT. OUR AC RECIRCULATING FEATURE ALSO DOES NOT WORK AND IT ALLOWS HARMFUL EXHAUST SMOKE IN.

37. A consumer complaint dated 06/08/2015 and submitted to NHTSA states the following regarding a 2015 Chevrolet Silverado: TL* THE CONTACT OWNS A 2015 CHEVROLET SILVERADO. THE CONTACT STATED THAT WHILE DRIVING AT 60 MPH, THE INTERIOR OF THE VEHICLE VIBRATED. THE VEHICLE WAS TAKEN TO A DEALER MULTIPLE TIMES. THE TECHNICIAN WAS UNABLE TO DIAGNOSE OR REPAIR THE VEHICLE. THE MANUFACTURER WAS NOTIFIED OF THE FAILURE. THE FAILURE MILEAGE WAS 200.

38. A consumer complaint dated 07/05/2015 and submitted to NHTSA states the following regarding a 2015 Chevrolet Silverado: THE TRUCKS HAVE A VIBRATION THAT IS FELT IN THE STEERING WHEEL, FLOOR, SEATS, ACCELERATOR AND BRAKE

PEDALS ETC. WHILE DRIVING. THE MAJOR CONSENSUS IT THAT THE WORST SPEED IT 76 MPH, YET IT IS FELT TO A LESSER DEGREE AT ANY SPEEDS, WITH SOME BEING WORSE THAN OTHERS. THERE ARE A LARGE NUMBER OF TRUCKS WITH THIS ISSUE, YET GENERAL MOTORS REFUSES TO DO ANYTHING ABOUT IT. IT BEGAN WITHIN A COUPLE WEEKS OF PURCHASING MY TRUCK. I FOUND PEOPLE FIRST REPORTING THE ISSUE IN 2015, AND MORE RECENTLY IT CONTINUES WITH THE 2015 AND 2016 MODEL YEARS.

39. A consumer complaint dated 07/16/2015 and submitted to NHTSA states the following regarding a 2015 Chevrolet Silverado: BOUGHT THE TRUCK NOTICED THERE IS A SHAKE WHEN DRIVING FROM 60-80 TOOK IT BACK SAME DAY I BOUGHT IT AND THEY SAID OH WE KNOW WHAT IT IS IT'S THE TIRES SO THE REPLACED THEM NOPE DIDN'T FIX IT SO TOOK IT BACK THEY REPLACED TWO MORE TIRES INTHE FRONT SAYING THE NEW ONES HAD A BALLS ON THEM SO TOOK IT HOME AND NOPE DIDN'T FIX IT SO TOOK IT BACK AGAINAND THEY DRIVE IT AND SAY IT'STHE DRIVE SHAFT SO THEY FIX IT I TAKE IT HOME. IT'S STILL NOT FIXED. IT MAKES FOR A VERY UNCOMFORTABLE DRIVE. WE BOUGHT A 46,000 TRUCK AND THERE'S PROBLEMS WITH IT. REALLY SCARED SOMETHING WRONG IS WITH IT AND THE DEALER DUO IS NOT HELPING. IF YOU GO PAST 80 THE TRUCK WHISTLES LIKE A SIREN. PLEASE HELP ME I TRAVEL ALOT AND HAVE KIDS IN.

40. A consumer complaint dated 08/01/2015 and submitted to NHTSA states the following regarding a 2015 Chevrolet Silverado: HAS A VIBRATION AT 65, TURNS INTO A BAD SHAKE AT 75.

41. A consumer complaint dated 08/08/2015 and submitted to NHTSA states the following regarding a 2015 GMC Sierra: TL* THE CONTACT OWNS A 2015 GMC SIERRA 2500. THE CONTACT STATED THAT WHILE DRIVING AT HIGH SPEEDS, THE VEHICLE VIBRATED VIOLENTLY WITHOUT WARNING. THE VEHICLE WAS TAKEN TO A DEALER BUT THE FAILURE WAS UNABLE TO BE DUPLICATED. THE MANUFACTURER WAS NOTIFIED OF THE FAILURE. THE FAILURE MILEAGE WAS 30.

42. A consumer complaint dated 08/28/2015 and submitted to NHTSA states the following regarding a 2015 Chevrolet Tahoe: BAD VIBRATION AT SPEEDS BETWEEN 60 TO 75 MPH (GM DEALER HAS HAD CAR 3 TIMES AND REPLACED TIRES, ROAD FORCED BALANCED, CHECKED ALIGNMENT WITH NO SUCCESS); WIND NOISE AND BUFFETING INSIDE CAR WITH ALL WINDOWS IN THE UP POSITION AT SPEEDS FROM 35 MPH AND UP CAUSING DIZZINESS AND NAUSEA ON LONGER RIDES. EXTERIOR DOOR PLASTIC FASCIA BECOMES LOOSE AND FALLS OFF DUE TO METAL CLIP BREAKING OFF AT THE ATTACHMENT POINT.

43. A consumer complaint dated 09/01/2015 and submitted to NHTSA states the following regarding a 2015 Chevrolet Tahoe: CAR WAS VIBRATING WHEN GETTING ABOVE 45 MILES PER HOUR. THOUGHT WHEELS NEEDED TO BE BALANCED. ONCE BALANCED, PULLED TRAILER AND VIBRATION WAS EXTREMELY WORSE. VIBRATING LIKE WE HAD THE BACK WINDOW ROLLED DOWN, BUT ALL WINDOWS WERE UP. WENT BACK TO DEALER IN NEWNAN GEORGIA AND THEY HOOKED UP A TRAILER TO ANOTHER VEHICLE AND IT HAD THE SAME PROBLEM. WE WERE TOLD THEY COULD NOT DO ANYTHING ABOUT IT. WE THEN BOUGHT NEW TIRES THINKING IT WOULD HELP THE ISSUE. WE HAVE SINCE BOUGHT TWO SETS OF

TIRES, CONSTANTLY HAVING THE VEHICLE TIRES ROTATED AND BALANCED TRYING TO MINIMIZE THE VIBRATION. WE ARE CURRENTLY UP TO 53K ON THE VEHICLE AND VERY DISAPPOINTED IN THE VEHICLE WITH THE LUXURY PRICE WE PAID. THIS ALL HAPPENED UPON PURCHASE.

44. A consumer complaint dated 09/15/2015 and submitted to NHTSA states the following regarding a 2016 GMC Yukon Denali XL 1500: I LEASED A 2016 YUKON DENALI XL ON 9/15/15. IT HAS TWO MAJOR PROBLEMS. 1. BUFFETING/PRESSURE NOISE - A NOISE AS IF A WINDOW IS CRACKED, EXCEPT IT'S NOT CRACKED. THIS OCCURS AT SPEEDS FROM 24MPH AND UP AND CAUSES EARS TO POP AND IS NOTICEABLE TO VIRTUALLY EVERY PASSENGER I HAVE HAD. 2. WHOLE-TRUCK VIBRATION - OCCURS BETWEEN 70-80MPH IN ENTIRE VEHICLE. WHEEL REPLACEMENTS, TIRE REPLACEMENTS, ROAD-FORCE BALANCING, DRIVESHAFT REPLACEMENT, DRIVESHAFT "BALANCING", ETC....NOTHING HAS FIXED IT. I HAVE DRIVEN 13 2016 YUKON, YUKON XL, TAHOE AND SUBURBANS. EVERY SINGLE ONE HAS THE BUFFETING ISSUES. ALL BUT ONE HAS THE VIBRATION ISSUES. GM HAS ISSUED A PI STATING THAT THE ROOF BOWS MAY HAVE COME DISCONNECTED AND THEY NEED TO BE REATTACHED. THE ISSUE HERE IS THAT REATTACHING THEM DOESN'T FIX THE BUFFETING ISSUE. I HAVE A DATE-STAMPED LOG OF EVERY DEALER VISIT, CONVERSATION, EMAIL, ETC. AND AM GLAD TO SHARE IT. THESE ISSUES ARE RIDICULOUS TO OCCUR IN ANY CAR MUCH LESS A 75K FLAGSHIP CAR THAT PULLS IN 3-7K IN PROFIT FOR GM/DEALERS PER VEHICLE.

45. A consumer complaint dated 10/01/2015 and submitted to NHTSA states the following regarding a 2015 GMC Yukon Denali XL 1500: VEHICLE HAS A VIBRATION

WHEN GOING BETWEEN 60-70 MILES PER HOUR ON HIGHWAY. THE VIBRATION STARTS AND STOPS OVER AND OVER AGAIN. VIBRATION LAST ABOUT TWO SECONDS EACH TIME. TOOK VEHICLE TO DEALER THEY SAID THE ISSUE WAS CAUSED BY RECALL THAT GMC WAS TRYING TO FIX. CURRENTLY NO PART IS AVAILABLE TO FIX VEHICLE. INSTRUCTED TO JUST KEEP DRIVING VEHICLE WITH THE VIBRATION UNTIL A PART IS ISSUED.

46. A consumer complaint dated 10/15/2015 and submitted to NHTSA states the following regarding a 2015 GMC Yukon Denali XL 1500: I PURCHASED A NEW, 2015 GMC YUKON XL IN DECEMBER OF 2014. I HAD BEEN DEALING WITH A VIBRATION RELATED PROBLEM AT HIGHWAY SPEEDS STARTING IN OCTOBER OF 2015 IN MY SUV THAT THE DEALER BALANCED, ALIGNED, ETC. PROBLEM STILL EXISTED IN DECEMBER OF 2015, AGAIN RAN TESTS AND FOUND NOTHING. CONTINUED TO COMPLAIN EVERY TIME I WENT INTO DEALER AND ON JUNE 28, 2016 AND WAS TOLD MY TREAD WAS WEARING UNEVENLY, AND AFTER A ROAD TEST WITH THE HEAD TECHNICIAN IT WAS FOUND THERE WAS HIGH ROAD FORCE ON THE TIRES. TODAY I CAME IN FOR MY OIL CHANGE AND MY DEALER HAD AN ALERT TO CHECK MY TIRES (ORIGINAL ONES THAT I REPLACED AT MY COST ON 6/28/16) FOR THE EXACT TIRE ON MY TRUCK GIVING ME THE SAME PROBLEM. I HAVE A HIGH SPEED VIBRATION AND TREAD WEAR PROBLEMS. MY OLD TIRES WERE OUTSIDE OF THE RECALL BUT I FEEL THAT THEY WERE DEFECTIVE. MY DOT# WAS A32AWBDE2414 AND I HAD TO REPLACE ALL 4 TIRES. GM PAID PARTIAL WARRANTY ON THEM. MY COST WAS $519.45. *TR.

47. A consumer complaint dated 10/31/2015 and submitted to NHTSA states the following regarding a 2015 GMC Sierra: STEERING WHEEL AND TRUCK VIBRATES/SHAKES AND VARIOUS SPEEDS.

48. A consumer complaint dated 11/25/2015 and submitted to NHTSA states the following regarding a 2016 GMC Yukon Denali XL 1500: VIBRATION AT SPEEDS OVER 72 MPH BECOMES WORSE WHILE GOING UP GRADE WHILE ACCELERATING...HAS BEEN IN SHOP MANY TIMES NEW TIRES, BALANCED MULTIPLE TIMES, ALONG WITH SUSPENSION PARTS AND DRIVE TRAIN PARTS. STILL NOT FIXED SUV HAS 22 INCH RIMS.

49. A consumer complaint dated 12/21/2015 and submitted to NHTSA states the following regarding a 2015 Chevrolet Tahoe: CABIN VIBRATION AT HIGHWAY SPEEDS. AFTER SEVERAL ATTEMPTS DEALER SAID THERE IS NO FIX AND IS NOT LOOKING TO CORRECT ISSUE.

50. A consumer complaint dated 12/24/2015 and submitted to NHTSA states the following regarding a 2016 GMC Yukon Denali XL 1500: SINCE THE DAY I PURCHASED THIS 2016 GMC YUKON XL DENALI THERE HAS BEEN A VIBRATION IN WHAT I THINK IS THE PASSENGER REAR END. I'VE TAKEN IT IN 3 TIMES AND EACH TIME THE DEALER AND THE GM REPRESENTATIVE SAY IT IS "WITHIN SPEC." THIS PROBLEM HAS PERSISTED. THE VEHICLE IS NOW ALMOST UN-DRIVABLE DUE TO THE SHAKING. IT AFFECTS THE STEERING WHEEL AT ALL SPEEDS. THIS HAPPENS AT ALL SPEEDS ON ALL TERRAINS. THIS HAPPENS WHEN THE VEHICLE IS COLD AS WELL AS WARM/HOT. THE VEHICLE WILL SOMETIMES JERK TO THE LEFT OR RIGHT WHEN THE SHAKING GETS REAL BAD. THIS VEHICLE IS BECOMING

DANGEROUS TO DRIVE BUT I HAVE TO USE IT. I AM NOT THE ONLY ONE WITH THIS ISSUE AND WOULD APPRECIATE SOME HELP.

51. A consumer complaint dated 01/01/2016 and submitted to NHTSA states the following regarding a 2016 GMC Sierra: VEHICLE SHAKES AND VIBRATES AT ANY SPEEDS ABOVE 75 MPH.

52. A consumer complaint dated 01/06/2016 and submitted to NHTSA states the following regarding a 2015 Chevrolet Suburban: VIBRATION AT SPEEDS OF 70-80 MPH. THE TIRES HAVE BEEN ROAD FORCED BALANCED 3 TIMES STILL HAS THE PROBLEM. THE PROBLEM WAS NOTICED AFTER THE FIRST SERVICE AND TIRES ROTATED.

53. A consumer complaint dated 01/28/2016 and submitted to NHTSA states the following regarding a 2016 Cadillac Escalade: CAR VIBRATES FROM 35MPH UP TO 80 PLUS. HAD IT TO DEALER 5 TIMES AND THEY KNOW THAT THERE IS A VIBRATION. THEY SAID GM SAID THE TORQUE CONVERTER WAS OUT OF BALANCE AND GM WAS DESIGNING A FIX. ABOUT 5 CALLS AND THREE WEEK LATER THEY RECEIVED A NEW SPECIAL TORQUE CONVERTER AND AFTER IT WAS INSTALLED THE VIBRATION WAS STILL THERE. YOU CAN FEEL THE VIBRATION IN THE STEERING WHEEL, THROTTLE, CENTER CONSOLE, FLOOR, AND THE SEAT. THE SERVICE MANAGER HAS BEEN VERY POLITE AND HAS GONE OUT OF HIS WAY TO HELP. A GM FIELD SERVICE REP HAS LOOKED AT THE CAR AND SAID IT IS WITHIN GM SPECS. I AM READING ALL OVER THE INTERNET OF THE SAME PROBLEM AND GM HAS REPLACED DRIVELINES, WHEELS, TIRES, TORQUE CONVERTERS, SHOCKS, REAR AXLES, ENGINE MOUNTS, ETC. AND STILL HAVE A VIBRATION PROBLEM.

THEY HAVE EVEN BOUGHT SOME OF THE 2015 AND 2016 BACK. THIS IS HAPPENING ON ALL GM FULL SIZE SUV'S. CHEVROLET, GMC, AND CADILLAC.

54. A consumer complaint dated 02/02/2016 and submitted to NHTSA states the following regarding a 2016 Cadillac Escalade: TL* THE CONTACT OWNS A 2016 CADILLAC ESCALADE. THE CONTACT STATED THAT WHILE DRIVING AT 35 MPH, THE VEHICLE BEGAN TO VIBRATE AS THE SPEED INCREASED. THE VEHICLE WAS TAKEN TO BE REPAIRED BUT THE DEALER COULD NOT REMEDY THE FAILURE. THE MANUFACTURER WAS MADE AWARE OF THE FAILURE. THE FAILURE MILEAGE WAS 4,000. UPDATED 05/11/16*LJ.

55. A consumer complaint dated 02/10/2016 and submitted to NHTSA states the following regarding a 2017 Chevrolet Silverado: HAS THE CHEVY SHAKES BETWEEN 38 AND 70 MILE PER HOUR .5.3 V8 MOTOR AND 8 SPEED TRANSMISSION 342 REAR AXEL LOCKING DIFFERENTIAL . BEEN SELLING GM'S FOR 55 YEARS AND IF THIS WAS A DEMENSTRATOR WE WOULD NEVER NEVER SELL ANOTHER TRUCK.

56. A consumer complaint dated 03/04/2016 and submitted to NHTSA states the following regarding a 2015 Chevrolet Suburban: VEHICLE HAS UNUSUAL VIBRATION AT HIGHWAY SPEEDS. IT HAS DONE THIS FOR SOME TIME & DOES THIS OVER MOST ROAD TYPES - WE RECENTLY TOOK IT TO FLORIDA ON A 2,000+ MILE VACATION TRIP - IT VIBRATED MOST OF THE TIME ON THE HIGHWAY.

57. A consumer complaint dated 03/05/2016 and submitted to NHTSA states the following regarding a 2015 GMC Sierra: MY VEHICLE SHAKES AT HIGHWAY SPEED. I CAN FEEL IT IN THE STEERING WHEEL, AND SEAT. VISUALLY I CAN SEE THE BED OF THE TRUCK SHAKE. THE ISSUE HAS NOT GONE AWAY.

58. A consumer complaint dated 03/16/2016 and submitted to NHTSA states the following regarding a 2016 GMC Yukon Denali XL 1500: MY 2016 YUKON DENALI HAS A VIBRATION PROBLEM, WHICH I BELIEVE IS CAUSED BY THE MAGNETIC RIDE CONTROL. THE VIBRATION DOES NOT SPEED UP, NOR SLOW DOWN, DEPENDING ON SPEED. IT IS, HOWEVER, MORE NOTICEABLE WHEN THERE IS ANY ROAD IMPERFECTION. THE GMC SERVICE DEPT. HAS BALANCED AND ROTATED TIRES, EVEN SENT IT TO TWO OTHER BUSINESSES TO TRY AND FIX -- ALIGNMENT, ETC. VIBRATION CONTINUES. I'VE HAD PASSENGERS WHO ASK ""WHY DOES YOUR CAR HAVE THE SHIVERS?"" GM DEALER DID GET AHOLD OF A GMC TECHNICIAN WHO FLEW IN, AND DROVE THE CAR AND SAID -- YES IT HAS A VIBRATION, BUT IT IS IN ACCEPTABLE PARAMETERS. MY DEALER HAS PROVIDED ME 3 DIFFERENT RENTAL CARS WHILE WORKING TO TRY AND FIX THE ""SHIVERS"" ... ALL THREE WERE FAIRLY NEW, SMALL BUICKS, AND ALL 3 RODE BETTER THAN THIS NEW $75,000 DENALI. I LOVE THE VEHICLE, HATE THE VIBRATION. GMC ITSELF HAS NOW TOLD ME -- YOUR CASE IS CLOSED! THE VIBRATION IS WITHIN ACCEPTABLE LIMITS. THE DEALER HAS LET ME DRIVE TWO OTHER YUKON DENALI'S ... BOTH HAVE SIMILAR VIBRATIONS... JUST NOT AS BAD AS THIS VEHICLE.VIBRATION IS NOTICEABLE AT 25 MPH, AS WELL AS AT 80 MPH; ALTHOUGH IT IS MORE NOTICEABLE ON ROUGHER ROADS. AM HAPPY TO SHARE THE REPORTS FROM MY LOCAL GM DEALER, WHO COMPLETELY AGREES THAT THE CAR SHIMMIES. WE TRIED THE GMC BUYBACK PROGRAM, AND I WAS TOLD BY GMC THAT PROGRAM IS NOT AVAILABLE TO ME, EVEN THOUGH I TOOK THE CAR BACK TO THE DEALER WHEN I HAD LESS THAN 100 MILES ON IT. AND HAVE BEEN TAKING IT BACK REGULARLY SINCE.

59. A consumer complaint dated 04/02/2016 and submitted to NHTSA states the following regarding a 2015 GMC Sierra: WHEN AT SPEEDS OF ROUGHLY 50MPH SEATS VIBRATE. TRUCK HAS ROUGHLY 3000MILES AND THE FRAME, REAREND AND OTHER UNDERBODY COMPONENTS HAVE ALOT OF SURFACE RUST.

60. A consumer complaint dated 05/02/2016 and submitted to NHTSA states the following regarding a 2016 GMC Yukon Denali XL 1500: VIBRATES WHEN AT SPEED 70-85.

61. A consumer complaint dated 05/04/2016 and submitted to NHTSA states the following regarding a 2016 Chevrolet Suburban: I OWN A 2016 CHEVY SUBURBAN LTZ PURCHASED FEB 29, 2016. IT IS NOW AT THE DEALER AND FOR A SECOND TIME DEALING WITH A VIBRATION ISSUE STARTING AT APPROXIMATELY 43 MPH AND CONTINUING TO WORSEN AS SPEED INCREASES. THE TIRES HAVE BEEN ROAD FORCED BALANCE BUT VIBRATION IS STILL PRESENT. THIS IS THE SECOND SUBURBAN WITH ISSUES, THE 2015 I HAD WAS SO PROBLEMATIC THAT GM DID TRADE ASSISTANCE TO GET ME OUT OF IT, BUT IT STILL COST ME MONEY. THE CURRENT 2016 SUBURBAN AS ONLY 1600 MILES ON IT AND VIBRATION ISSUES BEGAN AT APPROXIMATELY 900 MILES. I CANNOT DESCRIBE THE INCONVENIENCE AND FRUSTRATION I AM EXPERIENCING FOR A VEHICLE COSTING MORE THAN $70,000. GM KNOWS THERE IS A PROBLEM AND THEIR LACK OF FIXING IT OR ADDRESSING IT IS NOTHING SHORT OF CRIMINAL THEFT. THEY TAKE PEOPLE'S MONEY KNOWING THEIR VEHICLES ARE SUB-STANDARD THEN RELEGATE ME TO A PATHETIC LOANER VEHICLE, TELL ME IT IS "NORMAL" AND IN THE END TOSS A LITTLE MONEY FOR "TRADE ASSISTANCE" RESULTING IN

ANOTHER PROBLEMATIC ISSUE. I BEG AND IMPLORE YOU AS THE FEDERAL REGULATORY AGENCY TO MAKE GM ACCOUNTABLE IMMEDIATELY. EITHER FORCE THEM TO IMMEDIATELY FIX THESE VEHICLES, FORCE THEM TO BUY THEM BACK AT FULL PURCHASE PRICES AND STOP THEM FROM SELLING THEM IMMEDIATELY. FRANKLY, THIS ISSUE IS THE SAME AS VW WITH TDI ENGINES EXCEPT THAT GM IS NOT COVERING IT UP AND FEDS ARE NOT FORCING THE HAND. HELP PROTECT THE MONEY AND LIVES OF US CITIZENS. THERE HAVE BEEN NUMEROUS COMPLAINTS!

62. A consumer complaint dated 05/06/2016 and submitted to NHTSA states the following regarding a 2016 GMC Yukon Denali XL 1500: TL* THE CONTACT OWNS A 2016 GMC YUKON XL. WHILE DRIVING AT VARIOUS SPEEDS, THE VEHICLE VIOLENTLY VIBRATED WITHOUT WARNING. THE VEHICLE WAS TAKEN TO A DEALER WHERE THE TECHNICIAN REPLACED THE WHEELS, BUT THE FAILURE RECURRED. THE VEHICLE WAS TAKEN BACK TO THE DEALER. THE CONTACT WAS INFORMED THAT THE VEHICLE WAS OPERATING AS DESIGNED. THE MANUFACTURER WAS NOTIFIED OF THE FAILURE. THE FAILURE MILEAGE WAS 2,000.

63. A consumer complaint dated 05/06/2016 and submitted to NHTSA states the following regarding a 2016 Cadillac Escalade: VEHICLE EXHIBITS A CONSTANT VIBRATION AT SPEEDS BETWEEN 35 MPH AND 75 MPH. VIBRATION IS NOT ROAD RELATED, IT IS A CONSTANT, STEADY VIBRATION REGARDLESS OF ROAD CONDITIONS, BEST DESCRIBED AS IF THE VEHICLE WAS DRIVING OVER CORDUROY. THERE IS ALSO A STEADY ""BUFFETING"" NOISE COMING FROM THE CABIN OF THE VEHICLE AT SPEEDS BETWEEN 55 MPH AND 70MPH. VEHICLE WAS

BROUGHT TO INDEPENDENT TIRE SHOP (BY ME) TO HAVE WHEELS AND TIRES ROAD FORCE BALANCED. REPORT WAS PROVIDED, ALL IN SPEC AND VIBRATION IS STILL PRESENT. CURRENTLY, THERE IS A ""OPEN TICKET"" ON THE VEHICLE AT THE CADILLAC DEALERSHIP AWAITING A ""GM ENGINEER"" TO VERIFY THE VIBRATION. AS A RESULT, I DO NOT HAVE A COPY OF THE LATEST INVOICE VERIFYING THE SERVICE VISIT. THE VEHICLE CURRENTLY HAS 2000 MILES ON IT, THE VIBRATIONS WERE PRESENT SINE NEW AND SEEM TO BE GETTING WORSE.

64. A consumer complaint dated 06/12/2016 and submitted to NHTSA states the following regarding a 2016 Chevrolet Suburban: I OWN A2016 SUBURBAN AND ITS SEEM TO HAVE A VIBRATION WHEN I'M DOING 35 TO 45 MILES ,TOOK SUBURBAN TO DEALER AND THEY TOLD ME THAT NEED IT BALANCE ON TIRES, I PAY 19.99 FOR THE BALANCE AND THE PROBLEM STILL THERE.ITS THERE ANYTHING I NEED TO DO TO GET THIS PROBLEM SOLVE.

65. A consumer complaint dated 07/19/2016 and submitted to NHTSA states the following regarding a 2015 Chevrolet Suburban: EXCESSIVE VIBRATION WHEN TRAVELING AT HIGHWAY SPEEDS BETWEEN 60-70 MPH. VEHICLE HAS BEEN TO DEALERSHIP 3 TIME FOR THIS PROBLEM AND THEY STATE EVERYTHING IS NORMAL. REBALANCED TIRES AND CHECKED THE SUSPENSION BUT IT CANNOT BE FIXED. MANUFACTUIRNG DEFECT.

66. A consumer complaint dated 08/01/2016 and submitted to NHTSA states the following regarding a 2015 Chevrolet Suburban: TL* THE CONTACT OWNS A 2015 CHEVROLET SUBURBAN EQUIPPED WITH CONTINENTAL CROSSCONTACT LX20 TIRES, SIZE: P275/55R20. WHILE DRIVING APPROXIMATELY 50 MPH, A LOUD NOISE

AND HEAVY VIBRATION OCCURRED UNDERNEATH THE VEHICLE. THE CONTACT TOOK THE VEHICLE TO THE DEALER WHERE IT WAS DIAGNOSED THAT ALL FOUR TIRES HAD EXCESSIVE WEAR. THE TIRES WERE ROTATED SEVERAL TIMES, BUT THE FAILURE RECURRED. THE CONTACT TOOK THE VEHICLE BACK TO THE DEALER WHERE IT WAS DETERMINED THAT THE TIRES MAY HAVE TO BE REPLACED. THE TIRES WERE NOT REPLACED. THE TIRES WERE THE ORIGINAL TIRES. THE MANUFACTURER WAS NOT MADE AWARE OF THE FAILURE. THE DOT NUMBER WAS NOT PROVIDED. THE APPROXIMATE TIRE AND VEHICLE FAILURE MILEAGE WAS 30,000. *TR.

67. A consumer complaint dated 08/01/2016 and submitted to NHTSA states the following regarding a 2015 Chevrolet Tahoe: MY TAHOE JUST STARTED TO HAVE A VIBRATION ISSUES AT SPEEDS FOR 60 TO 75MPH THE WHOLE CABIN SHAKES AND ALSO A WIND NOISE COMING FROM THE ROOF AT SPEEDS AT 80 MPH OR HIGHER MY MILEAGE IS 21000 I GET HEADACHES WHEN DRIVING MY CHEVY TAHOE. *TR.

68. A consumer complaint dated 08/01/2016 and submitted to NHTSA states the following regarding a 2016 Chevrolet Tahoe: MY BRAND NEW 2016 CHEVY TAHOE SHAKES WHILE AT IDLE IN "DRIVE". THIS ISSUE HAS BEEN TAKEN UP WITH THE DEALERSHIP WHO ACKNOWLEDGES THE ROUGH IDLE BUT SAYS "IT'S WITHIN ACCEPTABLE LIMITS". IT IS NOT ACCEPTABLE TO FEEL LIKE YOU HAVE GERBALS RUNNING UNDER YOUR SEAT WHILE STOPPED AT A RED LIGHT. IT IS CONSTANT AND EXTREMELY ANNOYING. IF THEY ARE GOING TO MAKE A CAR THAT SHAKES, NOT TELL THE CUSTOMER ABOUT THE PROBLEM AND THEN CHARGE OVER $50,000 FOR THE VEHICLE, SHAME ON THEM. THIS WILL BE THE LAST GM VEHICLE THAT

I PURCHASE. I WILL ALSO GLADLY DISCOURAGE ANYONE LOOKING FOR AN SUV TO PURCHASE A GM VEHICLE.

69. A consumer complaint dated 08/30/2016 and submitted to NHTSA states the following regarding a 2015 Chevrolet Tahoe: I HAVE TAKEN MY 2015 CHEVROLET TAHOE IN SEVERAL TIMES FOR A VIBRATION ISSUE. FIRST TIME IT WAS MENTIONED ON AN INVOICE WAS AUGUST OF 2016 BUT HAD BEEN GOING ON FOR MONTHS BEFORE. MY VEHICLE VIBRATES AT ABOUT ANY SPEED. THE FIRST TIME TO THE DEALER THEY SAID THEY DIDN'T THINK THERE WAS A PROBLEM. THE SECOND TIME THEY SAID THAT IT IS THE SUSPENSION BUT THERE IS NOTHING THEY CAN DO ABOUT IT. THE VIBRATION HAS MADE PARTS OF THE VEHICLE TO RATTLE. THE THIRD TIME TO THE DEALER THEY HAD TO FIX A LIGHT ISSUE AND A RATTLE BETWEEN THE PASSENGER FROM DOOR AND BACK DOOR. THE VIBRATION HAPPENS EVERY WHERE AT EVERY SPEED. SCARIEST ON THE HIGHWAY THOUGH. FEELS LIKE THE VEHICLE IS GOING TO "CRACK" IN HALF. SCARY.

70. A consumer complaint dated 09/07/2016 and submitted to NHTSA states the following regarding a 2015 Chevrolet Suburban: HAVE HAD OUR VEHICLE IN THE DEALERSHIP 3 TIMES FOR ROAD/TIRE VIBRATION FROM TIRES OR SUSPENSION. DEALERSHIP HAS CHANGED 3 OF 4 TIRES COULD NOT GET ROAD FORCED BALANCES WITH 22 INCH TIRES. DEALERSHIP CLAIMS BAD BATCH OF TIRES FROM BRIDGESTONE. VIBRATION HAS CONTINUED AT SPEEDS OF 70-80 MPH. IT ALL BEGAN AFTER THE FIRST SERVICE AT 5792 MILE AND TIRE ROTATION. VEHICLE WAS BROUGHT BACK TO DEALERSHIP ADVISING OF VIBRATION IN STEERING WHEEL AND BOTH FRONT SEATS. DEALERSHIP CLAIMED THAT THEY WERE NOT

ABLE TO GET TIRES BALANCED. HAD TO ORDER 3 DIFFERENT SETS OF REPLACEMENT TIRES WITH NO PREVAIL. BROUGHT BACK AGAIN FOR SECOND REQUIRED SERVICE AND DEALERSHIP HAS ROTATED THE TIRES FOR A SECOND TIME.

71. A consumer complaint dated 10/01/2016 and submitted to NHTSA states the following regarding a 2016 Cadillac Escalade: I PURCHASED A NEW VEHICLE A LITTLE OVER A YEAR AGO, PICKED IT UP AT 4PM, ON MY DRIVE HOME I NOTICED A VIBRATION WHEN DRIVING AT SPEEDS FROM 35 MILES PER HOUR PLUS. THE VIBRATION INCREASES WITH SPEED. I BROUGHT IT BACK TO THE DEALER THE NEXT MORNING ON SATURDAY AT 8AM. I WAS ASKED TO DROP IT OFF DURING THE WEEK, WHICH I DID. THEY REPLACED 4 TIRES. THIS DID NOT CORRECT THE PROBLEM. I BROUGHT IT BACK AGAIN A FEW WEEKS LATER, TWO TIRES WERE REPLACED A SECOND TIME. I STILL HAD THE SAME PROBLEM. I BROUGHT IT BACK AGAIN, THE 3RD TIME THEY REPLACED ON TIRE. IT DID NOT CORRECT THE VIBRATION. I NOW HAVE MY VEHICLE IN FOR SERVICE AGAIN, THEY REPLACED THE DRIVE SHAFT. I JUST RECEIVED AN EMAIL FROM THE SERVICE MANAGER INFORMING ME THE DRIVE SHAFT REPLACEMENT DID NOT CORRECT THE PROBLEM.

72. A consumer complaint dated 11/07/2016 and submitted to NHTSA states the following regarding a 2015 Chevrolet Tahoe: I PURCHASED MY VEHICLE USED ON OCT 14 2016. I DROVE IT FOR ABOUT 3 WEEKS IN LOCAL TRAFFIC WITH SPEEDS 60MPH AND BELOW WITH NO ISSUES. I THEN WENT ON A ROAD TRIP ON NOV 7 2016 WHERE I USED MAJOR INTERSTATES THAT REQUIRED SPEEDS BETWEEN 70-75

MPH. AS SOON AS I HIT THE MAJOR INTERSTATES I NOTICED SOMETHING WAS NOT RIGHT. WHEN THE VEHICLE WAS SET TO CRUISE BETWEEN 70-75MPH AND THE VEHICLE REDUCED FROM V8 MODE TO V4 MODE THE INTERIOR OF THE VEHICLE BEGAN TO VIGOROUSLY SHAKE. THE HANDLING AND WHEEL TO PAVEMENT CONTACT FELT STABLE SO I CONTINUED MY 600 MILE TRIP. AT TIMES THE SHAKING CONDITIONS MADE ME FEEL DIZZY AND SOMEWHAT NAUSEOUS. I IMMEDIATELY UPON ARRIVAL AT MY DESTINATION SCHEDULED AN APPOINTMENT AT A CERTIFIED CHEVY DEALER AND WAS SEEN NOV 14 2016. THEY TEST DROVE THE VEHICLE FOR ABOUT 22 MILES AND WERE ABLE TO DUPLICATE MY PROBLEM, HOWEVER THROUGH TROUBLESHOOTING AND INSPECTION COULD NOT FIND ANYTHING WRONG. I CALLED THE NUMBER IN THE WARRANTY MANUAL AND STARTED A CLAIM AND THEIR RESOLUTION WAS THE VEHICLE WAS OPERATING AS DESIGNED, BUT THE GM ADVISOR DID SAY THERE WAS A KNOWN ISSUE? HOWEVER THEY COULD NOT TELL ME WHY THE DESIGN MADE THE VEHICLE DO THIS. TO ME IT SOUNDS LIKE IT IS A FLAW IN THE DESIGN AND GM DOES NOT KNOW WHY YET. THROUGH FURTHER RESEARCH I FOUND MULTIPLE POST AND DISCUSSIONS WITH THE SAME COMPLAINT AS WELL AS A FOX NEWS REPORT WHERE GM SPOKESMAN TOM WILKINSON STATED GM KNOWS THERE IS A PROBLEM AND GM WOULD WORK WITH CUSTOMERS CASE BY CASE TO RESOLVE THE PROBLEM. IN MY CASE THE RESOLUTION WAS TO TELL ME THAT'S WHAT IT WAS DESIGNED TO SHAKE. I CERTAINLY DONT BELIEVE WHAT THEY ARE TELLING ME. AFTER SERVING THIS COUNTRY IN TWO DIFFERENT COMBAT ZONES TO PROTECT OUR FREEDOMS IT'S DISAPPOINTING TO KNOW

THAT GM WONT STAND BEHIND THEIR PRODUCT AS I HAVE STOOD AT THE FRONT FOR THIS COUNTRY.L CAN PROVIDE VIDEO AND DEALER SERVICE DOCUMENTS UPON REQUEST.

73. A consumer complaint dated 11/11/2016 and submitted to NHTSA states the following regarding a 2016 Chevrolet Tahoe: VEHICLE SHAKES AND VIBRATES AT SPEEDS ABOVE70MPH. AT SPEEDS OF 80MPH THE SHAKE IS VERY PRONOUNCED AND THE VEHICLE STABILITY IS AFFECTED. VEHICLE HAS BEEN DOING THIS SINCE DAY ONE. DEALERSHIP HAS TRIED REPLACING TIRES MULTIPLE TIMES BUT NOTHING HAS WORKED. DIFFICULT AND DANGEROUS TO DRIVE THE VEHICLE BETWEEN 70-80 MPH.

74. A consumer complaint dated 12/05/2016 and submitted to NHTSA states the following regarding a 2017 Chevrolet Silverado: I AM REQUESTING THAT DOT NHTSA INVESTIGATE THE EXTREME WOBBLE/VIBRATION/SHAKE ON NEW 2017 CHEVROLET SILVERADO 1500. THE VEHICLE WAS PURCHASED NEW AND DRIVEN UNDER 55 MPH FOR THE FIRST 500 MILES. AFTER THE FIRST 500 MILES AND BEGINNING TO DRIVE HIGHWAY SPEEDS, BETWEEN 60 - 75+ MILES PER HOUR, A WOBBLE/VIBRATION/SHAKE BEGAN TO OCCUR. WHEN THE WOBBLE/VIBRATION/SHAKE BEGINS THE DRIVER FEELS THAT CONTROL OF THE VEHICLE IS BEING LOST AND THE DRIVER MUST DECREASE THE SPEED, WHICH IS ABLE TO BE ACCOMPLISHED WITH BOTH RELEASING FOOT OFF OF THE ACCELERATOR OR LIGHTLY BREAKING, IN ORDER TO REGAIN CONTROL. THE VEHICLE HAS BEEN TO THE DEALER FOR FRONT LEFT WHEEL REPLACEMENT DUE TO THE INABILITY OF ORIGINAL TIRE TO BE BALANCED, THE VEHICLE HAS FIELD

FORCE BALANCING 3 TIMES, AND THE LEFT FRONT AXLE BOOT HAS BEEN REPLACED. AFTER SEVERAL ATTEMPTS TO CORRECT THE WOBBLE/VIBRATION/SHAKE, THE VEHICLE NOW HAS ~10,000 MILES, THE WOBBLE/VIBRATION/SHAKE CONTINUES TO OCCUR AT HIGHWAY SPEEDS.

75. A consumer complaint dated 01/01/2017 and submitted to NHTSA states the following regarding a 2016 GMC Yukon Denali XL 1500: VEHICLE SHAKES AND VIBRATES HORRIBLY AT HWY SPEEDS I HAVE TAKEN IT TO THE DEALERSHIP WITH NO FIX SAME PROBLEM.

76. A consumer complaint dated 01/02/2017 and submitted to NHTSA states the following regarding a 2015 GMC Yukon Denali XL 1500: 2015 GMC YUKON. CONSUMER WRITES IN REGARDS TO BAD TIRE VIBRATION WHEN DRIVING AT CERTAIN SPEEDS. *LD THE CONSUMER STATED THE TIRES ON HIS SUV DO NOT QUALIFY UNDER THE RECALL, BECAUSE OF THE YEAR THEY WERE MANUFACTURED. *JB.

77. A consumer complaint dated 01/11/2017 and submitted to NHTSA states the following regarding a 2017 Chevrolet Silverado: TL* THE CONTACT RENTED A 2017 CHEVROLET SILVERADO 1500. WHILE DRIVING APPROXIMATELY 55 MPH, THE VEHICLE VIBRATED VIOLENTLY. THE CONTACT NOTICED THAT THE VOLTAGE REGULATOR DROPPED TO 10.5. THE VEHICLE WAS NOT DIAGNOSED OR REPAIRED. THE MANUFACTURER WAS NOT MADE AWARE OF THE FAILURE. THE APPROXIMATE FAILURE MILEAGE WAS 2,061.

78. A consumer complaint dated 02/01/2017 and submitted to NHTSA states the following regarding a 2017 Chevrolet Silverado: TRUCK EXHIBITS A ROUGH IDLE AFTER TRUCK IS DRIVEN AND WARM. IDLE CAUSES TEH TRUCK TO SHAKE AND FEELS

LIKE IT WILL DIE AT STOPS. RPM DROPS BELOW 300 RPM THEN GOES BACK TO 490 RPM. IN ADDITION THE TRUCK WILL START TO SHAKE AND VIBRATE AT HIGHWAY SPEEDS OF 75-80 MPH. GMC SERVICE PERFORMED TSB CHANGING OUR ENGINE MOUNTS BUT THAT HAS NOT FIXED THE ISSUE. THIS IS A KNOWN ISSUE ON SILVERADOS AND NO FIX IN SITE. CONCERNED WITH SEAT VIBRATION THIS IS A SAFETY ISSUE DUE TO POTENTIAL DRIVE TRAIN PART FAILURE.

79. A consumer complaint dated 02/01/2017 and submitted to NHTSA states the following regarding a 2016 Chevrolet Suburban: CAR SHAKES AT SPEEDS OVER 65MPH WITH NO SOLUTION FROM DEALER OR CHEVROLET AFTER MULTIPLE TRIPS TO DEALER FOR A PERMANENT REPAIR. OR RESPONSE FROM CHEVROLET CUSTOMER SERVICE.

80. A consumer complaint dated 03/23/2017 and submitted to NHTSA states the following regarding a 2017 GMC Sierra: HEAVY VIBRATION BETWEEN 1200 RPM AND 1500 RPM ANYWHERE BELOW 45 MPH AND ABOVE 70 MPH.

81. A consumer complaint dated 03/27/2017 and submitted to NHTSA states the following regarding a 2017 GMC Sierra: MY NEW 2017 GMC SIERRA VIBRATES BADLY AT ALL SPEEDS ABOVE 40 MPH. THE SHAKE IN THE STEERING WHEEL CAUSES MY HANDS TO GO NUMB AND IS A SAFETY ISSUE. I HAVE INFORMED GM OF THIS AND HAD IT REPAIRED 3 TIMES. THIS DIDN'T CORRECT THE ISSUE AND GM IS STATING THE VEHICLE IS "OPERATING AS DESIGNED" AND WILL NOT DO ANY FURTHER REPAIRS. IT IS HARD TO BELIEVE THAT IN THIS DAY AND AGE A VEHICLE IS DESIGNED TO HAVE A CONSTANT VIBRATION. THIS ISSUE HAS BEEN GOING ON SINCE MODEL YEAR 2014 AND GM WILL NOT ACKNOWLEDGE OR CORRECT THE

ISSUE. IT IS GOING TO TAKE SOMEONE'S SERIOUS BODILY INJURY OR DEATH FOR THEM TO LOOK INTO THE PROBLEM. PLEASE OPEN AN INVESTIGATION INTO ALL GM HALF TON TRUCKS FROM MODEL YEAR 2014 THROUGH 2017.

82. A consumer complaint dated 05/01/2017 and submitted to NHTSA states the following regarding a 2016 GMC Sierra: VIBRATION BETWEEN 65-80MPH. DEALER HAS ROAD FORCE BALANCED TIRES TWICE WITH NO BETTER RESULTS. FIRST TIME ONE TIRE WAS FOUND TO BE OUT OF SPEC THEN 2ND TIME, ALL FOUR ARE IN 'SPEC'. I DON'T BELIEVE THIS IS A TIRE/WHEEL PROBLEM AS THE VIBRATION VARIES ON SMOOTH HIGHWAY - AT TIMES IT IS VERY SMOOTH THEN IT WILL START VIBRATING/BOUNCING. VERY UNNERVING DRIVING AT THESE SPEEDS WITH A VIBRATION THAT FEELS LIKE A LOOSE WHEEL OR OTHER DRIVETRAIN PART. MY SON HAD A 2015 MODEL HE BOUGHT NEW AND HE FINALLY SOLD IT DISCLOSING THE ISSUE (STILL UNDER WARRANTY) RATHER THAN CONTINUING TO WASTE TIME WITH GM. PROBLEM HAS EXISTED SINCE I BOUGHT THE TRUCK NEW OCT. 2016. 2016 GMC SIERRA 2500HD DENALI 20" FACTORY WHEELS.

83. A consumer complaint dated 05/01/2017 and submitted to NHTSA states the following regarding a 2015 Cadillac Escalade: VEHICLES START VIBRATING WHEN HIT SPEEDS RANGING FROM 40 TO 60 MILES PER HOUR. DEALER DOESN'T TAKE SERIOUSLY. I AM VERY CONCERNED ABOUT THIS HUGE SAFETY ISSUE.

84. A consumer complaint dated 05/06/2017 and submitted to NHTSA states the following regarding a 2015 Chevrolet Suburban: 2015 CHEVY SUBURBAN SHAKES UNCONTROLLABLY STARTING AT 50 MPH. PEAK OF SHAKING AT 77 MPH.

INCREASED WEIGHT SEEMS TO INCREASE EFFECT SUCH AS FULL TANK VS LOW. VEHICLE IS IN MOTION.

85. A consumer complaint dated 05/07/2017 and submitted to NHTSA states the following regarding a 2015 Chevrolet Suburban: BOUGHT A USED 2015 SUBURBAN NOTICED A VIBRATION YOU CAN HEAR AND FEEL BETWEEN 40-60 MPH. TRIED TO GET IT FIXED BUT NO ONE KNOWS WHAT IS CAUSING IT ON 4TH VISIT TO GET IT FIXED RIGHT NOW HAVE HAD IT FOR 3 WEEKS TRIED TO GET DEALER TO TAKE IT BACK AND THEY REFUSED AFTER FIXING BRAKE ROTORS. IT IS ALSO HAVING PROBLEMS DOWNSHIFTING. RANDOMLY. WILL DOWNSHIFT WHILE MAINTAINING SPEEDS OF 50-55 MPH TO 38 WITH NO WARNING WILL MAKE GRINDING NOISES AND AM UNABLE TO STEER OR BREAK. AFRAID MY FAMILY IS GOING TO GET REAR ENDED WHILE IT'S HAPPENING. CAN'T ACCELERATE OR DO ANYTHING WHILE IT'S HAPPENING. DO NOT FEEL SAFE DRIVING MY FAMILY IN THIS CAR BUT IT'S WHAT WE HAVE.

86. A consumer complaint dated 05/15/2017 and submitted to NHTSA states the following regarding a 2017 Chevrolet Silverado: VEHICLE SHAKES OR VIBRATES AT MOST SPEEDS. THE VIBRATION IS WORST AT 25-45 AND 65MPH+. IT CAUSES DRIVER FATIGUE AND NAUSEA. TIRES HAVE BEEN ROAD FORCED BALANCED BY DEALER AND DRIVE SHAFT REPLACED IN ATTEMPTS TO FIX PROBLEM. NO SOLUTION HAS BEEN FOUND BY DEALER. DEALER ACKNOWLEDGES THE VIBRATIONS AND SAYS THE VIBRATION IS NORMAL OPERATION FOR THIS VEHICLE LEADING ME TO BELIEVE THAT A RECALL SHOULD BE ISSUED.

87. A consumer complaint dated 06/21/2017 and submitted to NHTSA states the following regarding a 2015 GMC Yukon Denali XL 1500: A STRONG VIBRATION OR "SHUDDER" RESONATES THROUGHOUT THE BODY OF THE ENTIRE CABIN. FEELS LIKE YOU ARE DRIVING OVER LARGE RUMBLE STRIPS, EVEN WHEN THE ROAD IS COMPLETELY SMOOTH. APPEARS TO OCCUR AT SPEEDS GREATER THAN 30 MILES PER HOUR AND WHEN THE RPMS EXCEED 1,000 RPM. THE RPM NEEDLE "JUMPS" REPEATEDLY WHILE THE VIBRATION/SHUDDER OCCURS. WHEN WE TOOK IT TO THE LOCAL GMC DEALER, THEY TOLD US IT WE NEEDED A NEW WHEEL FOR WHICH WE BOUGHT AND IT ACCOMPLISHED NOTHING. THEN, WE RETURNED IT, DESCRIBED THE PROBLEM IN EXCRUCIATING DETAIL - EVEN REFERENCING KNOWN PUBLIC SERVICE BULLETINS - WHICH PROMPTED THEM TO "BALANCE THE TIRES." LEFT THE GMC DEALERSHIP AGAIN AND IT WAS OBVIOUS THE DEALERSHIP DID NOT ADDRESS THE PROBLEM AND THAT IT HAD NOTHING TO DO WITH THE WHEELS. WE RETURNED AND ADVISED THEM THEY DID NOT FIX THE PROBLEM. THE KEPT THE DENALI AGAIN AND THEN ADVISED US THEY WERE "100% SURE" THE PROBLEM WAS THE "SHOCKS". THEY REPLACED THE SHOCKS FOR NEARLY $2,000 AND ADVISED US BY PHONE THE PROBLEM WAS "FIXED." I ASKED THE REPRESENTATIVE IF THEY HAD CONFIRMED IT WAS FIXED AND HE SAID "YES", THE TECHNICIAN HAD DRIVEN THE VEHICLE AND THERE WERE NO FURTHER ISSUES. MINUTES LATER, I GOT A CALL FROM THE SERVICE MANAGER WHO ADVISED THE CUSTOMER SERVICE REPRESENTATIVES CALL TO ME WAS "PREMATURE" (I GUESS HE FINALLY DECIDED TO DRIVE THE VEHICLE) AND ADVISED THERE WAS A PROBLEM WITH THE TORQUE CONVERTER AND THAT HE

NEEDED TO KEEP IT FOR A FEW MORE DAYS. I ASKED WHY HE THEY HAD TOLD ME THEY WERE "100% SURE" THE PROBLEM WAS THE SHOCKS AND HE ADVISED HE DROVE IT AND THEY "SEIZED" UP. WE ARE STILL AWAITING SOME RESOLUTION TO THIS $75,000 NEW VEHICLE DISASTER. THIS IS THE FIRST AMERICAN VEHICLE WE HAVE PURCHASED AND ARE CERTAINLY REGRETTING THAT DECISION AND ARE CURRENTLY RESEARCHING OTHER FULL-SIZE SUVS FOR BETTER SAFETY AND RELIABILITY.

88. A consumer complaint dated 07/11/2017 and submitted to NHTSA states the following regarding a 2015 Chevrolet Silverado: HAD A VIBRATION PROBLEM WITH THIS 2015 SILVERADO 2500HD SINCE NEW SEPT. 2015 AT DIFFERING SPEEDS, FELT IN THE SEAT AND CENTER CONSOLE. VIBRATION IS ON CITY STREETS, HIGHWAYS, ALL ROADS. CENTER CONSOLE HAS A VERY NOTICEABLE SHAKE TO IT. VIBRATION AT TIMES IS MODERATE, AT OTHER TIMES MORE SEVERE. AT 2500 MILES BROUGHT TO GWATNEY CHEVROLET IN JACKSONVILLE, AR. THREE GOODYEAR TIRES REPLACED, ROAD FORCED BALANCED. AT 11,000 MILES BROUGHT TO GWATNEY CHEVROLET TWO MORE GOODYEAR TIRES REPLACED, ROAD FORCED BALANCED. IN GWATNEY NOTES, IT TOOK NINE TIRES TO FIND TWO GOOD TIRES TO PUT ON MY TRUCK. AT 18,000 MILES RETURNED TO GWATNEY CHEVROLET, SERVICE MANAGER STATED THE PROBLEM WAS THE TIRES AND I WOULD HAVE TO PAY A PORTION OF THE COST. MY RESPONSE WAS I SHOULDN'T HAVE TO PAY FOR A PROBLEM THAT THE TRUCK HAD SINCE IT WAS NEW. THE SERVICE MANAGER WAS HOSTILE, ARGUMENTATIVE AND REFUSED TO DO ANY MORE WORK ON THE TRUCK. I COMPLAINED TO GM CUSTOMER CARE, THEY WANTED TO GIVE ME $100

AND CLOSE THE CASE. I ESCALATED MY COMPLAINT TO THE GM EXECUTIVE LEVEL, THEY APPEAR TO BE MORE ACCOMMODATING, THEY STATED THEY ARE GOING TO HAVE A GM TECHNICAL ASSISTANCE TEAM LOOK AT MY PROBLEM. RIGHT NOW, I'M AWAITING FURTHER RESPONSE FROM GM.

89. A consumer complaint dated 07/11/2017 and submitted to NHTSA states the following regarding a 2017 Chevrolet Silverado: MY VEHICLE VIBRATES AND SHAKES AT VARYING SPEED BUT MOSTLY BETWEEN 60 AND 75MPH. I HAVE BEEN TO DEALERSHIP THREE TIMES FOR DIAGNOSIS AND TIRES REPLACED TWICE. THE DEALERSHIP TESTED THE VEHICLE WITH SENSORS AND CAN NOT ISOLATE THE VIBRATION. I HAVE ONLY HAD VEHICLE A FEW MONTHS AND QUESTION THE SAFETY OF THE VEHICLE. I WISH I HAD RESEARCHED THE TRUCK ON THE INTERNET PRIOR TO PURCHASE BECAUSE THE PROBLEM I AM HAVING IS KNOWN AND HAS A NAME "THE CHEVY SHAKE" I HOPE OTHERS WILL CONTINUE TO REPORT THESE CONCERNS BECAUSE CHEVROLET NEEDS TO RECOGNIZE THEY HAVE A PROBLEM AND ADDRESS THE ISSUE WITHOUT THE RUNAROUND CUSTOMERS ARE BEING FORCED TO ENDURE. THE VEHICLE ISSUE NEEDS A RECALL.

90. A consumer complaint dated 08/12/2017 and submitted to NHTSA states the following regarding a 2015 GMC Yukon Denali XL 1500: VEHICLE VIBRATES DURING DRIVING SPEEDS ABOVE 35 MPH. HAD TIRED ROTATED AND BALANCED, STILL VIBRATED, REPLACED TIRES AND RECEIVED 4 WHEEL ALIGNMENT, STILL SHAKES BAD. WHEN TRAVELING AT SPEEDS ABOVE 35, SEATS STARTS TO SHAKE AS IF YOU

ARE TRAVELING OVER A BAD BUMPY ROAD. THIS OCCURS BOTH ON CITY STREETS AND HIGHWAYS.

91. A consumer complaint dated 08/23/2017 and submitted to NHTSA states the following regarding a 2017 Chevrolet Silverado: I HAVE BEEN DRIVING A 2017 CHEVROLET SILVERADO 1500 Z71 PICK-UP TRUCK SINCE FEBRUARY 2017. SINCE NEARLY DAY ONE, THE VEHICLE HAS EXPERIENCED VIBRATION AND WOBBLE LIKE SHAKING NOTICEABLE AT NORMAL HIGHWAY SPEEDS, BECOMING MORE NOTICEABLE ABOVE 60 MPH. AT CERTAIN INSTANCES THE VEHICLE BEGINS TO EXPERIENCE A MILD BOUNCING. THE VEHICLE HAS BEEN IN TO THE DEALERSHIP TO REPAIR THE PROBLEM FOUR TIMES OVER THE COURSE OF OWNERSHIP (APX. SIX MONTHS AT THE TIME OF THIS SUBMISSION) AND APPROXIMATELY 10,000 DRIVING MILES AND THE ISSUE STILL IS ONGOING. THE DEALER STATED THAT THEY ARE UNABLE TO REPAIR THE PROBLEM. THE DEALERSHIP HAD CALLED IN A FIELD ENGINEER TO HELP WITH THE ISSUE, TWICE, THEY AS WELL, UNABLE TO REPAIR THE PROBLEM. THE DEALERSHIP HAS REPLACED NUMEROUS TIRES, ROAD FORCE BALANCED WHEELS AND TIRES, REPLACED SUSPENSION BUSHINGS, STEERING GEAR BOX, STEERING BUSHINGS, UNMOUNTED THE BODY FROM THE CHASSIS AND UNBOLTED THE EXHAUST SYSTEM, REASSEMBLING IN A DIFFERENT PATTERN, REMOVED CALIPER CLIPS, AND MADE OTHER CHANGES. THE ISSUE STILL EXISTS. FOLLOWING THEIR ATTEMPT TO REPAIR THE ISSUE, THE VEHICLE NOW MAKES A CLUNK NOISE WHEN EXECUTING A TIGHT TURNING RADIUS AND DRIVING OVER A SMALL BUMP (SUCH AS A DRIVEWAY APRON). WHEN THE

SHAKING / VIBRATION OCCURS, THE VEHICLE FEELS UNSTABLE AND FEELS AS IF THERE MAY BE A LOSS OF CONTROL.

92. A consumer complaint dated 09/01/2017 and submitted to NHTSA states the following regarding a 2015 Chevrolet Suburban: CAR EXHIBITS SHAKING/VIBRATIONS AT SPEEDS ABOUT 65MPH, WHICH AT TIMES IS ACCOMPANIED BY A BUFFETING SOUND.

93. A consumer complaint dated 09/26/2017 and submitted to NHTSA states the following regarding a 2017 GMC Sierra: VIBRATION 65+ MPH, FELT IN STEERING WHEEL AND SEAT. STEERING WHEELS QUIVERS AT 65+ MPH. TRUCK FEELS VERY UNSTABLE AT HIGHWAY SPEEDS. DEALER STATES IT'S NORMAL.

94. A consumer complaint dated 09/28/2017 and submitted to NHTSA states the following regarding a 2017 Chevrolet Silverado: THIS VEHICLE, LIKE MANY OTHERS OF THIS SAME DESIGN, HAS HAD A VIBRATION AT HIGHWAY SPEEDS SINCE THE VEHICLE WAS PURCHASE ON 9-14-2017. IT HAS BEEN ADDRESSED BY THE DEALER FOUR TIMES WITH THE TIRES BEING THE PRESUMED ISSUE. THE VIBRATION HAS CONTINUED EVEN AFTER DIFFERENT TIRES INSTALLED AND RECENTLY THE VIBRATION CAUSED THE VEHICLE TO BEGIN TO DRIFT TOWARD THE EDGE OF THE ROADWAY WHILE TRAVELLING AT 70 MPH IN A 70 MPH SPEED ZONE IN A CURVE THAT WAS NOT POSTED WITH A REDUCED SUGGESTED SPEED. THE TRUCK HAS CURRENTLY BEEN AT THE GENERAL MOTORS DEALER IN DELAWARE OHIO FOR EIGHT DAYS WHERE THEY HAVE VERIFIED THE ISSUE, HAVE NOT BEEN ABLE TO LOCATE A CAUSE AND HAVE NOTIFIED GENERAL MOTORS FOR GUIDANCE. WHILE RESEARCHING THIS ISSUE I HAVE FOUND THAT IT APPEARS TO BE A LONG TERM

ISSUE FOR THIS MANUFACTURER THAT IS NOT BEING ADDRESSED. BEING A RETIRED STATE TROOPER WHO HAS DRIVEN MANY MANY MILES IN HIS CAREER, I FEEL THIS SITUATION COULD CAUSE A SERIOUS SAFETY ISSUE THAT COULD POTENTIALLY CAUSE A LOSS OF CONTROL AND CONTRIBUTE TO INJURIES OR WORSE TO THE VEHICLE OCCUPANTS. PERSONNEL AT THE DEALERSHIP HAVE CONFIRMED TO ME THAT THEY HAVE HEARD OF THIS SITUATION AND THAT SOME TRUCKS ARE ABSOLUTELY PERFECT WHILE OTHERS DEVELOP THIS CONTINUING PROBLEM. THIS VIBRATION BEGINS AT APPROXIMATELY 68 MPH AND CONTINUES TO AT LEAST 76 MPH AND IS FELT THROUGH THE SEAT, ACCELERATOR AND STEERING WHEEL. I DO HAVE SOME OF THE ""REPAIR"" DOCUMENTS BUT THEY ARE INCOMPLETE AT THIS TIME.

95. A consumer complaint dated 10/15/2017 and submitted to NHTSA states the following regarding a 2017 Chevrolet Silverado: TL* THE CONTACT OWNS A 2017 CHEVROLET SILVERADO. WHILE DRIVING VARIOUS SPEEDS, THE VEHICLE WOULD VIBRATE. THE VEHICLE WAS TAKEN TO HUFFINES CHEVROLET (1400 STEMMONS FWY, LEWISVILLE, TX 75067) WHERE IT WAS DIAGNOSED THAT THE TIRES WERE OUT OF BALANCE AND THE FRONT DRIVER'S TIRE NEEDED TO BE REPLACED. THE VEHICLE WAS REPAIRED; HOWEVER, THE FAILURE PERSISTED. THE VEHICLE WAS TAKEN TO CLASSIC CHEVROLET (3991, 1101 TX-114, GRAPEVINE, TX 76051) WHERE IT WAS DIAGNOSED THAT THE MOTOR MOUNT NEEDED TO BE REPLACED. THE VEHICLE WAS REPAIRED, BUT THE FAILURE RECURRED. THE MANUFACTURER WAS NOT NOTIFIED. THE APPROXIMATE FAILURE MILEAGE WAS 3,000.

96. A consumer complaint dated 10/16/2017 and submitted to NHTSA states the following regarding a 2017 Cadillac Escalade: TL* THE CONTACT OWNS A 2017 CADILLAC ESCALADE. WHILE DRIVING VARIOUS SPEEDS, THERE WAS AN ABNORMAL SHUDDERING AND VIBRATION FROM THE VEHICLE. THE CONTACT ALSO STATED THAT THE VEHICLE FAILED TO SHIFT INTO GEARS PROPERLY. THE VEHICLE WAS TAKEN TO DALE EARNHARDT JR. BUICK/GMC (1850 CAPITAL CIR NE, TALLAHASSEE, FL 32308, (850) 270-1453) WHERE IT WAS DIAGNOSED THAT THE TORQUE CONVERTER WAS POSSIBLY DEFECTIVE. THE VEHICLE WAS REPAIRED; HOWEVER, THE FAILURE RECURRED. ADDITIONALLY, THE CONTACT STATED THAT THREE OF THE FOUR TIRES WERE ALSO REPLACED; HOWEVER, THE VIBRATION AND SHUDDERING PERSISTED. THE MANUFACTURER WAS NOT NOTIFIED OF THE FAILURE. THE APPROXIMATE FAILURE MILEAGE WAS 6,000. *JS.

97. A consumer complaint dated 10/19/2017 and submitted to NHTSA states the following regarding a 2017 GMC Sierra: TL* THE CONTACT OWNS A 2017 GMC SIERRA 1500. WHILE DRIVING 75 MPH, THE VEHICLE VIBRATED WITHOUT WARNING. THE VEHICLE WAS TAKEN TO CREST AUTO WORLD AT (603) 356-5401 LOCATED ON 802 EASTMAN RD, CENTER CONWAY, NH 03813 WHERE NO DIAGNOSTIC FAILURE CODES WERE FOUND AND THE FAILURE COULD NOT BE DUPLICATED. THE VEHICLE WAS NOT REPAIRED. THE VEHICLE WAS THEN TAKEN TO ROBERTSON'S GMC TRUCK AT (508) 273-2935 LOCATED ON 2680 CRANBERRY HWY, WAREHAM, MA 02571 WHERE IT WAS DIAGNOSED THAT ALL FOUR TIRES NEEDED TO BE REPLACED. ALL FOUR TIRES WERE REPLACED; HOWEVER, THE FAILURE RECURRED. THE MANUFACTURER WAS NOTIFIED AND TRANSFERRED THE

CONTACT TO THE NHTSA HOTLINE WITHOUT NOTICE. THE APPROXIMATE FAILURE MILEAGE WAS 648.

98. A consumer complaint dated 10/30/2017 and submitted to NHTSA states the following regarding a 2017 Chevrolet Silverado: NOTICED AFTER PURCHASE THAT THERE IS VIBRATION LIKE A BAD TIRE 35-42 MPH. VIBRATION FELT IN SEAT, CONSOLE AND STEERING WHEEL 58-65 MPH. TRANSMISSION DOWN SHIFTS HARD SOMETIMES FEELS LIKE BEING BUMPED FROM BEHIND, IT ALSO HESITATES AND JERKS AFTER LETTING OFF THE ACCELERATOR AND ACCELERATING AGAIN BETWEEN 25-45 MPH. WHEN ACCELERATING IT SURGES, JERKS AND STUMBLES. SOMETIMES WHEN ACCELERATING THE TRANSMISSION DOWNSHIFTS AND HANGS IN THAT GEAR UNTIL YOU LET OFF THE ACCELERATOR.

99. A consumer complaint dated 11/07/2017 and submitted to NHTSA states the following regarding a 2016 Chevrolet Suburban: I JUST PURCHASED THIS VEHICLE A MONTH AGO AND ALREADY RECEIVED A RECALL FOR THE SOFTWARE AIRBAG ISSUE. I TRADED MY 2010 CHEVY SUBURBAN FOR THIS NEW ONE AND HAVE NOTICED THAT THE MOMENT I GET ONTO THE FREEWAY AND START TO ACCELERATE THE CAR STARTS TO VIBRATE SO BAD THAT ANYTHING IN THE MIDDLE CONSOLE STARTS TO RATTLE AND THE CONSOLE WILL SPILL ANY DRINKS SITTING THERE IN THE CUPHOLDERS. I HAVE OWNED CHEVY VEHICLES ALL MY LIFE AND AM VERY ANNOYED THAT THIS IS HAPPENING. SOMETHING IS SERIOUSLY WRONG. I ALSO JUST NOTICED THAT THERE IS A RECALL FOR THE SUSPENSION RECALL 42190 AND PARTS ARE NOT AVAILABLE AT THIS TIME I JUST BOUGHT THIS VEHICLE IN SEPT 2016 AND IT ONLY HAS 800 MILES ON IT AND

NOTICES WENT OUT MAY-JUNE 2016 AND I WAS NOT MADE AWARE WHEN I PURCHASED THIS VEHICLE. I WILL ALSO TALK TO THE DEALERSHIP ACCORDING TO THIS RECALL THE VEHICLE SHOULD NOT BE DRIVEN UNTIL IT'S FIXED. WHO WAS GOING TO TELL ME THIS HAD I NOT LOOKED IT UP AND NOT DRIVING IT IS IMPOSSIBLE IT'S OUR ONLY VEHICLE AND WERE A FAMILY OF 7. FOUR OF THOSE ARE MY BABIES. I ALSO WILL BE TAKING IT IN DUE TO THE RECALL 16007. THE VIBRATION OF THE VEHICLE WILL ALSO BE DISCUSSED AS WELL.

100. A consumer complaint dated 12/29/2017 and submitted to NHTSA states the following regarding a 2017 Chevrolet Silverado: JUST BOUGHT A NEW 2017 BLACK EDITION. REG CAB SHORT BED. 5.3. SHAKES FROM NEW OVER 73+ MPH. TOOK IT TO DEALER AT 648 MILES ON 01/19/2018. PURCHASED NEW 12/28/2017 THEY REBALANCED ALL 4 WHEELS. STILL SHAKES. THEY PUT A NEW DRIVESHAFT IN AND SAID IT WAS FIXED. I PICKED IT UP TODAY. NOPE. IT'S WORSE. NOW IT BEGINS SHAKE NO AT 60 AND AT 74-75 HAS A PRETTY DRAMATIC SHAKE. THIS HAPPENS WHILE DRIVING ON THE INTERSTATE. NOW I GO BACK AGAIN MONDAY TO LET THEM HAVE ANOTHER GO AT IT.THIS IS A BRAND NEW TRUCK.

101. A consumer complaint dated 02/25/20218 and submitted to NHTSA states the following regarding a 2017 Chevrolet Silverado: I PURCHASED A NEW (175 MILES) 2017 CHEVROLET SILVERADO LS 4X4 FROM A DEALERSHIP ON 2/10/2017. I NOTICED THE RIDE WAS A BIT BUMPY ON THE 80 MILE RIDE HOME FROM THE DEALERSHIP, BUT THOUGHT NOTHING OF IT. THE NEXT TIME I DROVE IT WAS 2 WEEKS LATER (I WAS ON BUSINESS TRAVEL IN BETWEEN AND LET THE TRUCK SIT IN MY GARAGE), AND I DROVE IT AROUND TOWN ON 2/25/2017. IN ADDITION TO A MINOR ROUGH IDLE,

IT WAS VERY BUMPY. IT WOULD SHAKE AT VIRTUALLY ALL SPEEDS. AFTER MY 5 MINUTE DRIVE FROM THE GROCERY STORE, I LITERALLY FELT DIZZY AND ILL. THE NEXT MORNING ON 2/26/2018, I DROVE IT TO WORK (25 MILES), AND EXPERIENCED THE SAME FEELINGS OF MOTION SICKNESS. I AM A CERTIFIED AUTO TECHNICIAN WITH NEARLY 20 YEARS EXPERIENCE, AND HAVE WORKED ON ALL COMPONENTS OF CARS AND TRUCKS (ENGINE REPAIR / OVERHAUL, TRANSMISSION, SUSPENSION, BRAKES, ELECTRICAL, HEATING / AC, ETC.). I'VE WORKED ON TRUCKS SPANNING A WIDE RANGE OF YEARS WITH VARIOUS ISSUES AND MILEAGES (LOW MILEAGE TO +250,000 MILES). I HAVE NEVER FELT A MORE UNCOMFORTABLE RIDE IN A TRUCK IN MY YEARS OF TEST DRIVING VEHICLES (BEFORE AND AFTER REPAIR) THAN I HAVE WITH THIS NEW 2017 SILVERADO.

102. A consumer complaint dated 03/22/2018 and submitted to NHTSA states the following regarding a 2017 Chevrolet Silverado: PURCHASED MY 17 CHEVROLET SILVERADO 1500 ON 11/28/17 AND RETURNED IT TO THE DEALERSHIP ON 12/1/17. THIS WAS DUE TO A SEVERE SHUDDERING & SHIFTING IN THE TRANSMISSION & SEVERE SHAKE IN THE FRONT END AT 70-90MPH. THEY BALANCED & ROTATED THE TIRES, SAYING THE ISSUE WAS FIXED, I PICKED THE VEHICLE BACK UP ON 12/4/17 BUT THE ISSUE WAS NOT FIXED & AN ELECTRICAL ISSUE HAD ALSO OCCURRED. I TOOK THE VEHICLE BACK ON 12/7/18 WITH THE SAME COMPLAINTS REGARDING THE TRANSMISSION & SHAKING IN THE FRONT END, AS WELL AS THE ELECTRICAL ISSUE. THE PROBLEM ELECTRICALLY WAS WHILE SITTING AT A STOPLIGHT THE BRIGHT LIGHTS FLASHED & THE RADIO/NAVIGATION SCREEN WENT BLANK. THE DEALERSHIP CALLED ME ON 12/8/17, TOLD ME THEY HAD BEEN

UNABLE TO DUPLICATE THE ISSUES, FINDING NOTHING WRONG. I LEFT IT OVER THE WEEKEND, WENT IN MONDAY MORNING & SPOKE TO THE SERVICE MANAGER DIRECTLY. HE TOLD ME HE HAD PURCHASED THE SAME VEHICLE WITH THE SAME TRANSMISSION ISSUES. SAID THERE WAS A POSSIBLE FIX BY EXCHANGING THE TRANSMISSION FLUID & THEY WOULD USE A NEW MACHINE PICO TO CHECK IT OUT. THEY HAD TO REPLACE THE TORQUE CONVERTER DUE TO MALFUNCTIONING & PERFORM A PROGRAMMING MODULE UPDATE ON RADIO, I PICKED IT UP ON 12/22/17, ISSUE WITH THE TRANSMISSION WAS STILL NOT RESOLVED. I TOOK IT TO A DIFFERENT DEALERSHIP FOR TRANSMISSION SHUDDER, SHIFT & SHAKE ISSUE MOST NOTICEABLE AT 70-90MPH, & RADIO ISSUE. THEY WERE ADVISED TO PERFORM A MODULE UPDATE ON THE TRANSMISSION & GIVEN 2 OPTIONS ON THE RADIO, THEY CHOSE TO REPLACE THE SCREEN. I TOOK IT BACK TO THAT SAME DEALERSHIP, MODULE UPDATE MADE TRANSMISSION/FRONT END ISSUE WORSE, ESPECIALLY COMING OUT OF A CURVE. THEY'VE REPLACED MY 2 BACK TIRES SAID THEY WERE BAD & SHOULD FIX THE SHAKING ISSUE IN THE FRONT END. UNABLE TO DUPLICATE TRANSMISSION ISSUES THUS THEY CANNOT REPAIR IT. OWNERS WITH THE SAME ISSUES ARE BEING TOLD GM KNOWS BUT CAN'T FIX TRANSMISSION ISSUE.

103. A consumer complaint dated 04/02/2018 and submitted to NHTSA states the following regarding a 2016 GMC Yukon Denali XL 1500: WATER LEAK DUE TO BAD FRONT WINDSHIELD SEAL, WATER LEAK THROUGH GPS ANTENNA, FOUR WHEEL DRIVE MODULE WAS BAD, DVD PLAYER STOPPED WORKING, AND LASTLY A HORRIBLE VIBRATION THAT OCCURRED AROUND 77-83 MPH. TO THE POINT THE

VEHICLE DID NOT FEEL SAFE TO HANDLE. TRIM ON THE B POST KEPT COMING LOOSE. THIS ALL OCCURRED IN OVER A YEARS PERIOD OF TIME. THIS WAS MY SECOND VEHICLE BECAUSE I TRADED IN MY 2015 TAHOE BECAUSE IT WAS HAVING MANY OF THE SAME ISSUES AND MORE. GM DID REPAIR ALL ISSUES OTHER THAN THE SHAKING, THEY WANTED ME TO BUY TIRES AND AFTER READING OTHER COMPLAINTS ON THE SHAKING I REFUSED, THE TIRES ONLY HAD 25,800ISH MILES ON THEM.

104. A consumer complaint dated 06/12/2018 and submitted to NHTSA states the following regarding a 2017 Chevrolet Tahoe: SHAKE/SHUDDER WHILE DRIVING STRAIGHT ON HIGHWAY AT 72 MPH UP TO AT LEAST 90 MPH. STEERING WHEEL, CENTER COUNSLE, AND SEATS SHAKE. GOES AWAY WHEN NOT ACCELERATING. BALANCED TIRES AND DID NOT FIX. DEALER THEN BALANCED TIRES AND ALIGNMENT WAS COMPLETED. THIS ALSO DID NOT FIX. DEALER KEPT MY CAR FOR ALMOST 2 WEEKS AND REPLACED TORQUE CONVERTER. THIS STILL DID NOT FIX IT. HAVE TO TAKE IT IN FOR A 3RD TIME. MAKE ME FEEL DIZZY AND NAUSEOUS.

105. A consumer complaint dated 06/14/2018 and submitted to NHTSA states the following regarding a 2015 Chevrolet Suburban: WHEN TRAVELING AT INTERSTATE HIGHWAY SPEEDS VEHICLE HAD SHAKING, SHIMMYING, VIBRATION AND BUFFETING AS WELL AS LOUD HUM AND WIND NOISE CAUSING NAUSEA RESULTING IN NAUSEA AND DIZZINESS TO THE DRIVER. THIS WAS WORSE ON NEW MACADAM AND ON GROOVED HIGHWAY BUT OCCURRED INTERMITTENTLY ON OTHER SURFACES, I JUST PURCHASED THIS VEHICLE USED AND IT IS

CERTIFIED. I WAS UNAWARE THAT THIS IS A COMMON ISSUE AND UNDERSTAND NOW THAT THERE IS NO RECALL TO FIX THIS AND THAT GM HAS NOT FOUND A PERMANENT SOLUTION TO THE PROBLEM. THE VEHICLE WAS ALSO EXHAUSTING TO DRIVE ON THE HIGHWAY BECAUSE OF THE AFOREMENTIONED ISSUES.

106. A consumer complaint dated 10/05/2018 and submitted to NHTSA states the following regarding a 2016 Cadillac Escalade: SHUDDER / VIBRATION BETWEEN 45 - 65 MPH. CAUSE WAS TORQUE CONVERTER. 85 - 90% OF VIBRATION WAS MITIGATED. CONTINUE TO HAVE STEADY VIBRATIONS 65 -70MPH AND ABOVE. DEALER ALSO INSTALLED NEW TIRES / WHEELS AND I HAVE HAD A ROAD FORCE BALANCE.

107. A consumer complaint dated 10/10/2018 and submitted to NHTSA states the following regarding a 2015 Cadillac Escalade: VEHICLE VIBRATES EXCESSIVELY WHEN DRIVING. AT FIRST I THOUGHT IT WAS DUE TO ROAD CONDITIONS BUT THEN REALIZED THE VIBRATION RESIGNATES FROM MY VEHICLE DRIVETRAIN. TOOK IT TO DEALERSHIP AND THEY INFORMED ME IT'S MY TORQUE CONVERTER. APPARENTLY THERE ARE MANY COMPLAINTS WITH THIS ISSUE WITH 6 SPEED TRANSMISSION OPERATED VEHICLES FROM GM. STILL WAITING ON RECAL FROM GM TO BE PUBLISHED.

108. A consumer complaint dated 10/31/2018 and submitted to NHTSA states the following regarding a 2016 Cadillac Escalade: THIS VEHICLE IS ABOUT TO SHAKE ME OUT OF IT. THE SUN ROOF EVEN SHAKES AT ALL SPEEDS AND AT ALL TIME. A $50.000.00 PIECE OF JUNK. I'M EMBARRASSED TO LET SOMEONE RIDE WITH ME. IT'S UNSAFE!!!"

C. GM's own Service Bulletins demonstrate its knowledge of both the Chevy Shake present in Class Vehicles and the defect's underlying cause.

109. There is strong evidence that the aluminum drive shafts in the Class Vehicles are the source of the defect in the Class Vehicles. Customers who have ordered, paid out of pocket for and installed custom-made steel drive shafts have reported that their repair was a complete fix. For instance, Bart Butler, an owner of a 2017 Silverado 1500 LTZ 2WD from Irvington, Alabama, reported that this fix worked for him after GM refused to provide an appropriate repair:

> GM will only replace it with another aluminum shaft. They did that for me and determined that the replacement shaft was only half as out of round as my original one. However that amount was within GM specs so no replacement of the Second shaft. Mind you they had already done tires, torque converter, etc with no success. I had less than 1000 miles on it. I could not afford to trade (8000 bucks for a 2018) so I set about determining what part could be causing different vibrations at varying speeds. The driveshaft! So I contacted Performance Drivelines in Barstow CA and they made me a custom two piece steel driveshaft with a custom center support and bearing. They made it to 3/4 ton specs for my 1500. It cost me $800 shipped to my door. Took me about 90 minutes to install in my driveway laying on my back! One test drive and I had a smooth as silk truck. It now has 15,000 miles more and still no vibrations. GM knows they have driveshaft problems but to recall would cost billions. They are content paying dealer to perform their slight of hand to appease customers and buy back a few here and there. I lost my warranty on the driveshaft thru GM but at least I now have a truck I can enjoy for many more thousands of miles. I took it in for an oil change the other day and every tech came over to look at my solution. I noticed that my truck traveled 30 miles during that oil change! They drove it just to verify I was right!!![35]

110. Others have reported that custom drive shaft replacements of a different design have solved the defect.[36]

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35 https://www.gm-trucks.com/forums/topic/153186-shake-or-vibration-issues/?do=findComment&comment=2163675 (Oct. 19, 2018).

36 *See, e.g.*, https://www.gm-trucks.com/forums/topic/153186-shake-or-vibration-issues/?do=findComment&comment=2175870 (Nov. 24, 2018) (Florida owner of a 2015 Silverado); https://www.gm-trucks.com/forums/topic/153186-shake-or-vibration-issues/?do=findComment&comment=2176487 (Nov. 26, 2018) (Florida owner of a 2014 Silverado).

111. In its own Technical Services Bulletin "#PI1354C: Information on Vibration Analysis and Diagnostic - (Aug 14, 2015),"[37] which was given to GM dealerships and other authorized agents but not GM consumers, GM admitted that drive shafts could be a source of the problem and further admitted that "[t]here have been many cases of dented propeller shafts." GM instructed its dealers to inspect the drive shaft as one possible source of the problem, noted that any dents or damage to the drive shaft requires replacement, but then permitted only replacement of its defective aluminum drive shaft with the same defective drive shaft.

112. GM's December 2014 Service Bulletin "PI1354A," an earlier version of the PI1354C bulletin, is an example of GM's knowledge of the Chevy Shake defect dating back to 2014, and is attached as Exhibit A. This service bulletin likewise demonstrates GM's knowledge of the drive shaft (or "prop shaft" or "propeller shaft") issues.

113. In February of 2019, GM again updated this Service Bulletin to its tenth iteration, titled "#PI1354I - Information on Vibration Analysis and Diagnostic," attached as Exhibit B. This latest version of the bulletin demonstrates that the Chevy Shake continues to plague new vehicles, despite half a decade of service bulletins issued by GM regarding the issue. The PI1354 Service Bulletin now applies to 2014 to ***2019*** Chevrolet Silverados and GMC Sierras. Furthermore, as evidenced in part by the consumer complaints and NHTSA VOQs above, the same problem continues to affect 2015 to present Chevrolet Tahoes, Chevrolet Suburbans, GMC Yukons, and Cadillac Escalades, all of which share the same architecture and parts with the 2014 - 2019 Silverado, including the defective drive shafts at issue.

D. GM systematically refuses to disclose the known defect and refuses to honor its warranties to Class Members by repairing the known defect.

37 https://www.autoguide.com/blog/wp-content/uploads/2016/03/PI1354C-GM-Truck-Vibration-Information-Bulletin-1.pdf .

114. Class Vehicles were sold with a 5-Year / 100,000-Mile Powertrain Limited Warranty that included coverage of drive shafts.

115. It is commonly understood that the drive shaft in sport utility vehicles and passenger trucks like the Class Vehicles should have an expected useful life of at least 75,000 miles. *See*, *e.g.*, Valerie Johnston, "How Long Does a Driveshaft Last?", Your Mechanic, Jan. 14, 2016, available at https://www.yourmechanic.com/article/how-long-does-a-driveshaft-last (last accessed March 31, 2019). Reasonable consumers expect that a vehicle—and its safety features—to last at least this long. The typical car on the road in the United States is 11.5 years old. The number of vehicles that are 16 to 24 years old is 44 million. The number of vehicles on the road that are at least 25 years old is about 14 million.

116. A reasonable consumer must be upset over the substantial cost in time and money of attempting to diagnose and fix the Chevy Shake.

117. Many purchasers and lessees of Class Vehicles have spent hundreds or thousands of dollars on defect-related repairs and related expenses.

118. The mileage and durational limitations in GM's Powertrain Limited Warranty, as applied to Plaintiff and Class Members, are unconscionable. GM knew about the inherent defect in the drive shaft at various points, including: (1) when it designed and manufactured the drive shaft and performed pre-sale testing and validation, (2) when individuals began to lodge complaints with NHTSA as early as 2014, (3) when it saw and responded to complaints of the defect beginning in the Fall of 2013, (4) when GM determined that many of the vehicles exhibiting the defect had damaged drive shafts, (5) when GM did the preliminary investigation before issuing a service bulletin regarding the class defect in December of 2014, and (5) before Plaintiff and the Class purchased their GM vehicles. Still, GM opted not to warn, disclose, or otherwise inform the

potential or eventual purchasers about the defect. GM continues to refuse disclosure of this known defect to this date on newly sold Class Vehicles.

119. GM has never disclosed the defect to drivers or potential purchasers or lessees of Class Vehicles, and GM has never instructed its dealerships to disclose the defect to drivers or potential purchasers or lessees of Class Vehicles.

120. The defect was not known to or reasonably discoverable by the Plaintiff and proposed Class Members before purchase or lease, or without experiencing the defect first hand and exposing themselves to an unreasonable safety risk.

121. GM has remained publicly silent even as it has privately acknowledged the defect, conducted internal investigations, and learned of thousands of complaints about Class Vehicles directly from its customers and from NHTSA.

122. As a result of GM's inaction and silence, many consumers are unaware that they purchased, and continue to drive, unsafe and unreliable vehicles. As GM knows, a reasonable person would consider the defect important and would either not purchase or lease a vehicle with the defect were the defect disclosed in advance or would pay substantially less for the vehicle.

123. Plaintiff and the putative Class neither knew, nor could have known, about the defective nature of the drive shaft at the time they purchased their Class Vehicles. GM knowingly manufactured vehicles that contained an inherent defect, but did not inform Plaintiff of the problem when Plaintiff agreed to purchase the Class Vehicle or any time thereafter. GM has vigorously refused to acknowledge that the drive shaft is the source of the defect to avoid having to pay for a replacement with a non-defective drive shaft under its Limited Powertrain Warranty. As such, GM intentionally limited the company's liability for the known defect, and Plaintiff and putative Class Members never had the opportunity to bargain for a warranty that would have covered the defect

because they had no knowledge about its existence. As such, GM's material omission concerning the existence of the defect rendered the warranty unconscionable as applied to Plaintiff and Class Members.

PLAINTIFF'S EXPERIENCE

124. On September 10, 2015, Plaintiff Douglas Weiss purchased a new 2015 Chevrolet Silverado 1500 from Auto Nation Chevy in Coral Gables, Florida. Mr. Weiss's Silverado came with a defective drive shaft that made it susceptible to the Chevy Shake. GM did not disclose this fact to Mr. Weiss, who greatly values vehicle safety and who wanted a fully functional vehicle.

125. From the date of purchase to the present, Plaintiff has serviced his vehicle in a timely and proper manner.

126. Mr. Weiss experienced the Chevy Shake within a year of purchase when the vehicle had approximately 12,000 miles on it—well within GM's bumper-to-bumper and powertrain warranties.

127. His Silverado violently shakes when it reaches about 70 mph and shakes strongest in the range of 75-80 mph. During this time, the center console is aggressively shaking left to right such that if a cup were placed in the console without a lid, it would spill.

128. Mr. Weiss has paid approximately $2,500 to attempt to diagnose and fix the problem. On April 11, 2018, he took the vehicle to a local Firestone repair shop to examine and perform work, including replacement of the tires, replacement of the rotors, replacement of the brakes, realignment, and re-rounding of the rims. The repairs cost $2,132.43. Nevertheless, the defect persisted.

129. On July 30, 2018, Mr. Weiss took the vehicle back to Firestone where it underwent a realignment and tire rebalancing, which did not address the problem.

130. On December 28, 2018, he returned to Firestone for another evaluation but the problem could not be addressed. A technician informed Mr. Weiss that this problem is widespread in certain Chevy vehicles.

131. Mr. Weiss made an appointment with AutoNation of Coral Gables for January 10, 2019 and, at the appointment, was told that there is a $160.00 fee for troubleshooting the vehicle. Mr. Weiss left his vehicle with the dealership for two days and paid approximately $50 for a rental vehicle. Upon return, the service advisor told Mr. Weiss that the problem is the brake rotors, for which Mr. Weiss had already paid substantial sums to replace and, in reality, could not be the source of the symptoms he experienced, including a steady vibration at speed without braking.

132. Mr. Weiss again left his vehicle with the AutoNation service manager for examination. After a week, the GM dealership informed him that his vibration issue was caused by his brakes, and that their tests showed the vibration to be "within the normal limits of road vibration."

133. As with other consumers, General Motors, through its franchised dealership, refused to honor its warranty and instead completely denied that Mr. Weiss's steady, intense vibration at speed is the result of a widespread defect long known to GM.

134. On January 12, 2019, Mr. Weiss initiated a complaint with GM corporate, who assigned him a case number but subsequently failed to provide any meaningful assistance in addressing the defect or otherwise honoring GM's warranty.

135. Mr. Weiss has never received a reimbursement for his out of pocket expenses, and the defect continues to persist unrepaired in his Class Vehicle.

CLASS ACTION ALLEGATIONS

136. Pursuant to Fed. R. Civ. P. 23(b)(2) and (b)(3), Plaintiff intends to seek certification of a Nationwide Class consisting of:

> **All persons who purchased or leased in the United States a 2015 or newer Cadillac Escalade, 2014 or newer Chevrolet Silverado, 2015 or newer Chevrolet Suburban, 2015 or newer Chevrolet Tahoe, 2014 or newer GMC Sierra, or 2015 or newer GMC Yukon/Yukon XL.**

Plaintiff also intends to seek certification of a Florida Sub-Class consisting of:

> **All persons who purchased or leased in Florida a 2015 or newer Cadillac Escalade, 2014 or newer Chevrolet Silverado, 2015 or newer Chevrolet Suburban, 2015 or newer Chevrolet Tahoe, 2014 or newer GMC Sierra, or 2015 or newer GMC Yukon/Yukon XL.**

137. Excluded from each proposed class are: General Motors, any affiliate, parent, or subsidiary of GM; any entity in which GM has a controlling interest; any officer, director, or employee of GM; any successor or assign of GM; anyone employed by counsel for Plaintiff in this action; any judge to whom this case is assigned, his or her spouse, and all persons within the third degree of relationship to either of them, as well as the spouses of such persons.

NUMEROSITY

138. The members of the classes are so numerous that joinder of all members is impracticable. While the precise number of Class Members can only be confirmed through discovery, it is estimated that there are at least hundreds of thousands of persons who purchased or leased Class Vehicles.

COMMON QUESTIONS OF LAW AND FACT PREDOMINATE

139. There are questions of law and fact common to all members of each Class: specifically, Plaintiff's claims arise from the same event or practice or course of conduct by the Defendant that gives rise to those claims of the putative classes, and Plaintiff's claims are based upon the same legal theories as those of the putative classes. The Defendant has engaged in a

pattern and practice, in violation of the law, of not informing purchasers or potential purchasers of the known defect in the Class Vehicles. The resolution of this issue—to wit, whether Defendant knew about the defect and did not inform Plaintiff and Class Members—is a common question of fact and law that will affect all members of the class in the same manner.

140. The questions of law and fact common to the Class predominate over questions that may affect individual members, and include the following:

a. Whether General Motors disclosed the known Class Defect to Class Members prior to their purchase;

b. Whether General Motors violated state consumer protection laws by concealing the known Class Defect;

c. Whether Class Members are entitled to actual damages and, if so, the appropriate amount;

d. Whether members of the classes are entitled to be notified and warned about the defect and are entitled to the entry of final and injunctive relief compelling General Motors to issue a notification and warning to all Class Members concerning such a defect;

e. Whether General Motors deliberately failed to disclose material facts to Plaintiff and the Class Members; and

f. Whether Defendant manufactured defective drive shafts and should replace them at no cost to Plaintiff and the Class Members.

TYPICALITY

141. The claims and defenses of the Named Plaintiff are representative of the Class Members he seeks to represent and typical of the claims and defenses of the class because the Plaintiff and the Class Members all owned Class Vehicles with defective drive shafts that were

manufactured and sold by Defendant. Plaintiff, like all Class Members, purchased a Class Vehicle without having received any warning or notification from Defendant of the defect.

ADEQUACY OF REPRESENTATION

142. The Named Plaintiff will fairly and adequately assert and protect the interests of the proposed class because:

a. Plaintiff has hired attorneys who are experienced in prosecuting class action claims and will adequately represent the interests of the classes;

b. Plaintiff has no conflict of interest that will interfere with the maintenance of this class action; and

c. Plaintiff has suffered consumer-related injuries and damages.

SUPERIORITY

143. A class action provides a fair and efficient method for the adjudication of the instant controversy for the following reasons:

a. The common questions of law and fact set forth above predominate over any questions affecting only individual Class Members;

b. The proposed classes are each so numerous that joinder would prove impracticable. The proposed classes, however, are not so numerous as to create manageability problems; moreover, no unusual legal or factual issues render the class unmanageable.

c. Prosecution of separate actions by individual members of the class would risk inconsistent and varying adjudications against Defendant;

d. The claims of the individual Class Members are small in relation to the expenses of litigation, making a class action the only procedure in which Class Members can, as a practical matter, recover for the damages done to them by GM.

e. A class action would be superior to, and more efficient than, adjudicating thousands of individual lawsuits.

144. In the alternative, the proposed classes may be certified because:

a. the prosecution of separate actions by the individual members of the proposed classes would create a risk of inconsistent or varying adjudication with respect to individual Class Members, which would establish incompatible standards of conduct for GM;

b. the prosecution of separate actions by individual Class Members would create a risk of adjudications dispositive of the interests of other Class Members not parties to the adjudications and substantially impair or impede their ability to protect their interests; and

c. GM has acted or refused to act on grounds generally applicable to the proposed class, which justifies final and injunctive relief for the members of the proposed class as a whole.

ESTOPPEL FROM PLEADING AND TOLLING OF APPLICABLE STATUTES OF LIMITATIONS

145. Defendant General Motors LLC has possessed exclusive knowledge about the Class Defect, including from its customer complaint and warranty records, internal emails, reports, analyses, and assessment of engineers, that is unavailable to Plaintiff and the proposed Class Members.

146. GM is estopped from relying on any statutes of limitation or repose due to its acts of concealment. Defendant knew about the defect in the Class Vehicles for years, but concealed it and/or failed to alert purchasers or potential purchasers. Defendant maintained exclusive control over information concerning the known, but non-public, defect and the number of Class Vehicles at issue; Plaintiff and Class Members, therefore, could not reasonably have known about the existence of the defect or the number of Class Vehicles affected. Thus, Defendant is estopped from relying on any statutes of limitations or repose that might otherwise be applicable to the claims asserted herein.

EXPRESS AND IMPLIED WARRANTIES

147. For each Class Vehicle sold by GM, an express written warranty was issued which covered the vehicle, including but not limited to, the driveline and drive shaft, and GM warranted the vehicle to be free of defects in materials and workmanship at the time of purchase or lease.

148. Pursuant to its express and written warranties, GM warranted the Class Vehicles' powertrain, including the driveline and drive shaft, to be free of defects in design, materials, and workmanship and that repairs and other adjustments would be made by authorized dealers, without charge, to correct defects in materials or workmanship which occurred during the first 5 years or 100,000 miles, whichever came first.

149. GM also sold or leased the Class Vehicles to Class Members under implied warranties of merchantability and fitness for a particular purpose. GM impliedly warranted the Class Vehicles to be merchantable, fit for the ordinary purposes for which they were intended to be used, including the guarantee that they were in a safe and non-defective condition for use by their owners or lessees for the ordinary purpose for which they were intended and were not otherwise injurious. GM is under a duty to design, construct, manufacture, inspect, and test the

Class Vehicles so as to make them suitable for the ordinary purposes of their use—transportation at interstate speeds.

150. GM breached its warranties for the Class Vehicles as a result of the latent defects in the driveline; denying the defect in the driveline when confronted with complaints of shuddering, shaking, or violent vibration; failing to repair the vehicles as warranted; and otherwise inadequately repairing the defect through ineffective repairs or replacement of the defective drive shafts with an equally defective drive shaft.

151. In breach of GM's warranties, the Class Vehicles are defective, unsafe, unfit for the ordinary purposes for which they are intended to be used, and not merchantable.

COUNT ONE
Violation of the Magnuson-Moss Warranty Act
15 U.S.C. §§ 2301, *et seq*.
(Nationwide Class)

152. Plaintiff, individually and for the Nationwide Class, hereby incorporates each and every allegation as though fully set forth herein.

153. For each Class Vehicle, GM issued an express written warranty that covered the vehicle, including but not limited to the drivetrain and driveline, and which warranted the vehicle to be free of defects in materials and workmanship at the time of delivery.

154. GM breached its express warranties by offering for sale and selling defective vehicles that were by design and construction defective and unsafe, thereby subjecting the occupants of the Class Vehicles purchased or leased to damages and risks of loss and injury.

155. Plaintiff and members of the class are "consumers" within the meaning of the Magnuson-Moss Act, 15 U.S.C. § 2301(3).

156. Defendant GM is a "supplier" and "warrantor" within the meaning of the Magnuson-Moss Act, 15 U.S.C. § 2301(4) and (5).

157. The Class Vehicles at issue are "consumer products" within the meaning of the Magnuson-Moss Act, 15 U.S.C. § 2301(6).

158. Defendant GM's written and implied warranties relate to the future performance of its vehicles because it promised that the driveline of the Class Vehicles would perform adequately for a specified period of time or mileage, whichever came first.

159. Defendant GM has breached and continues to breach its written and implied warranties of future performance, thereby damaging Plaintiff and similarly situated Nationwide Class members, when their Class Vehicles fail to perform as represented due to an undisclosed driveline defect. GM fails to fully cover or pay for necessary inspections, repairs and/or vehicle replacements for Plaintiff and the Nationwide Class.

160. As a result of Defendant's continued breach of its warranties, Plaintiff has suffered damages including the costs of diagnosis and the attempted repair of his vehicle, the loss of use of his vehicle, and other consequential damages.

WHEREFORE Plaintiff and the Nationwide Class seek full compensatory and consequential damages allowable by law, appropriate equitable relief including injunctive relief, a declaratory judgment, a court order enjoining Defendant's wrongful acts and practices, restitution, attorney's fees and costs, and any other relief to which Plaintiff and the Nationwide Class may be entitled.

COUNT TWO
Breach of Express Warranties
(Florida Sub-Class)

161. Plaintiff, individually and for the Florida Sub-Class, hereby incorporates each and every allegation as though fully set forth herein.

162. For each Class Vehicle sold by GM, an express written warranty was issued that covered the vehicle, including but not limited to the driveline, and which warranted the vehicle to be free of defects in materials and workmanship at the time of delivery.

163. GM breached its warranties by offering for sale and selling defective vehicles that were by design and construction defective and unsafe, thereby subjecting the occupants of the Class Vehicles purchased or leased to damages and risks of loss and injury.

164. GM continues to breach its warranties by failing to repair or replace Plaintiff's vehicle as warranted.

165. As a result of Defendant's continued breach of its warranties, Plaintiff has suffered damages including the costs of diagnosis and the attempted repair of his vehicle, the loss of use of his vehicle, and other consequential damages.

WHEREFORE Plaintiff and the Florida Sub-Class seek full compensatory and consequential damages allowable by law, appropriate equitable relief including injunctive relief, a declaratory judgment, a court order enjoining Defendant's wrongful acts and practices, restitution, attorney's fees and costs on behalf of the class, and any other relief to which Plaintiff and the Florida Sub-Class may be entitled.

COUNT THREE
Breach of Implied Warranties
(Florida Sub-Class)

166. Plaintiff, individually and for the Florida Sub-Class, hereby incorporates each and every allegation as though fully set forth herein.

167. GM impliedly warranted that the Class Vehicles, which it designed, manufactured, sold, or leased to Plaintiff and members of the Florida Sub-Class, were merchantable, fit and safe for their ordinary use, and not otherwise injurious to consumers.

168. Because the Class Vehicles are equipped with the defective drivelines, the vehicle purchased or leased and used by Plaintiff and Florida Sub-Class members is unsafe, unfit for use when sold, threatens injury to its occupants, and is not merchantable. GM breached the implied warranty of merchantability in the sale or lease of the Class Vehicles to Plaintiff and members of the Florida Sub-Class in that the vehicles were not fit for their ordinary purpose and not merchantable.

169. As a direct and proximate result of GM's breach of the implied warranty of merchantability and fitness for a particular purpose, Plaintiff has suffered damages including the costs of diagnosis and the attempted repair of his vehicle, the loss of use of his vehicle, and other consequential damages.

WHEREFORE Plaintiff and the Florida Sub-Class seek full compensatory and consequential damages allowable by law, appropriate equitable relief including injunctive relief, a declaratory judgment, a court order enjoining Defendant's wrongful acts and practices, restitution, attorney's fees and costs on behalf of the class, and any other relief to which Plaintiff and the Florida Sub-Class may be entitled.

COUNT FOUR
Violation of the Florida Deceptive and Unfair Trade Practices Act ("FDUTPA")
Fla. Stat. §§ 501.201, *et seq.*
(Florida Sub-Class)

170. Plaintiff, individually and for the Florida Sub-Class, hereby incorporates each and every allegation as though fully set forth herein.

171. Plaintiff brings this claim individually and on behalf of the Class.

172. Plaintiff and Class Members who purchased or leased Class Vehicles are "consumers" under FDUTPA.

173. Defendant's practices, acts, policies and course of conduct violated FDUTPA's prohibition on unfair and deceptive conduct in that:

a. At the time of sale, Defendant knowingly and intentionally omitted and concealed material information regarding the Class Vehicles by failing to disclose to Plaintiff and Class Members the defective drive shaft and the associated Chevy Shake. Defendant had a duty to notify Plaintiff at the point of sale about the presence of the Chevy Shake, but failed to make any disclosure whatsoever.

b. Thereafter, Defendant failed to disclose the defect to Plaintiff and the Class Members, either through warnings or notices, and/or actively concealed from them that the Class Vehicles' drive shafts were defective, even though the company knew of such defects: (1) at the time of manufacture, when it created the drive shafts in a manner unable to provide for consistently stable driving; (2) in the Fall of 2013 from complaints to NHTSA and to web forums actively monitored by GM; (3) when, GM's internal analyses determined the ubiquity of the problem and ascertained that the drive shaft was the source.

c. Based on these and, other, internal studies and investigations, Defendant knew with certainty that the drive shafts on the Class Vehicles would be compromised and that the Class Vehicles would have the Chevy Shake.

d. Nonetheless, Defendant forced Plaintiff and Class Members to expend money at its dealerships to diagnose and ineffectively repair Class Vehicles, despite Defendant's prior knowledge of the defect at the time of purchase.

e. Defendant, in administering its limited warranty, engaged in materially misleading deceptive acts and practices by classifying the defect as not involving the drive shaft, but rather, other parts such as tires, so as to place the defect outside of warranty

coverage. When Defendant did cover drive shaft repairs and replacements under the warranty, it replaced the defective part with equally defective units.

174. Furthermore, Defendant engaged in materially misleading and deceptive acts by continuing to sell the Class Vehicles to the consuming public and to represent that these vehicles were in good working order, merchantable, and not defective, despite Defendant's knowledge that the vehicles would not perform as intended, represented, and warranted and that the above described defects would cause purchasers to incur significant out-of-pocket costs and expenses.

175. Defendant's acts and omissions are unfair in that they (1) offend public policy; (2) are immoral, unethical, oppressive, or unscrupulous; and (3) cause substantial injury to consumers. Defendant has, through knowing, intentional, material omissions, concealed the true defective nature of the Class Vehicles.

176. Defendant's acts and omissions are also unfair in that they cause substantial injury to consumers far in excess of any conceivable benefit; and are injuries of a nature that they could not have been reasonably avoided by consumers.

177. Defendant's acts and omissions are deceptive in that Defendant has, through knowing, intentional, material omissions, concealed the true defective nature of the Class Vehicles. In making these misrepresentations of fact and/or material omissions to prospective customers while knowing such representations to be false, Defendant has misrepresented and/or knowingly and intentionally concealed material facts in breach of its duty not to do so.

178. Members of the public were deceived by Defendant's failure to disclose and could not discover the defect themselves before suffering their injuries. But for Defendant's deception, Plaintiff and the Class would not have bought their defective vehicles, or would have paid less for them.

179. As a direct and proximate result of these unfair acts or practices, Plaintiff and Class Members have been damaged because: they purchased Class Vehicles they otherwise would not have, paid more for Class Vehicles than they otherwise would, paid for diagnoses, repairs, and replacements, towing, and/or rental cars, and are left with Class Vehicles of diminished value and utility because of the defect. Meanwhile, GM has sold more Class Vehicles than it otherwise could have and charged inflated prices for Class Vehicles, thereby unjustly enriching itself.

WHEREFORE Plaintiff and the Florida Sub-Class seek full compensatory damages allowable by law, attorney's fees, costs, appropriate equitable relief including injunctive relief, a declaratory judgment that Defendant's conduct is unlawful, a court order enjoining Defendant's wrongful acts and practices, and any other relief to which Plaintiff and the Florida Sub-Class may be entitled.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff prays for judgment as follows:

a. For an order certifying the proposed classes and appointing Plaintiff and Plaintiff's counsel to represent the classes;

b. For an order awarding Plaintiff and Class Members compensatory, actual, statutory, consequential, and/or any other form of damages provided by and pursuant to the causes of action cited above;

c. For an order awarding Plaintiff and the Class Members restitution, disgorgement and/or other equitable relief provided by and pursuant to the causes of action cited above, including an order requiring specific performance of the Defendant's obligations;

d. For an order awarding Plaintiff and the Class Members injunctive and declaratory relief provided by and pursuant to the statutes cited above, including a declaration that Defendant's activities are unlawful and an order enjoining those activities;

e. For an order awarding Plaintiff and the Class Members pre-judgment and post-judgment interest;

f. For an order awarding Plaintiff and Class Members reasonable attorney's fees and costs of suit, including expert witness fees; and

g. For an order awarding such other and further relief as this Court may deem just and proper.

DEMAND FOR JURY TRIAL

The Plaintiff and each Class hereby demand trial by a struck jury of all issues triable by right.

DATED: April 23, 2019

Respectfully submitted,

/s/ F. Jerome Tapley

F. Jerome Tapley (FL Bar No. 0022066)
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apittman@corywatson.com

JS 44 (Rev. 06/17)

CIVIL COVER SHEET

The JS 44 civil cover sheet and the information contained herein neither replace nor supplement the filing and service of pleadings or other papers as required by law, except as provided by local rules of court. This form, approved by the Judicial Conference of the United States in September 1974, is required for the use of the Clerk of Court for the purpose of initiating the civil docket sheet. *(SEE INSTRUCTIONS ON NEXT PAGE OF THIS FORM.)*

I. (a) PLAINTIFFS

Douglas Weiss

(b) County of Residence of First Listed Plaintiff Broward County, FL
(EXCEPT IN U.S. PLAINTIFF CASES)

(c) Attorneys *(Firm Name, Address, and Telephone Number)*

F. Jerome Tapley, Ryan Lutz and Adam W. Pittman of Cory Watson, P.C., 2131 Magnolia Ave. S., Birmingham, AL 35205, (205) 328-2200

DEFENDANTS

GENERAL MOTORS LLC

County of Residence of First Listed Defendant Wayne County, MI
(IN U.S. PLAINTIFF CASES ONLY)

NOTE: IN LAND CONDEMNATION CASES, USE THE LOCATION OF THE TRACT OF LAND INVOLVED.

Attorneys *(If Known)*

II. BASIS OF JURISDICTION *(Place an "X" in One Box Only)*

- ☐ 1 U.S. Government Plaintiff
- ☐ 3 Federal Question *(U.S. Government Not a Party)*
- ☐ 2 U.S. Government Defendant
- ☒ 4 Diversity *(Indicate Citizenship of Parties in Item III)*

III. CITIZENSHIP OF PRINCIPAL PARTIES *(Place an "X" in One Box for Plaintiff and One Box for Defendant)*

(For Diversity Cases Only)

	PTF	DEF		PTF	DEF
Citizen of This State	☒ 1	☐ 1	Incorporated *or* Principal Place of Business In This State	☐ 4	☐ 4
Citizen of Another State	☐ 2	☐ 2	Incorporated *and* Principal Place of Business In Another State	☐ 5	☒ 5
Citizen or Subject of a Foreign Country	☐ 3	☐ 3	Foreign Nation	☐ 6	☐ 6

IV. NATURE OF SUIT *(Place an "X" in One Box Only)*

Click here for: Nature of Suit Code Descriptions.

CONTRACT
- ☐ 110 Insurance
- ☐ 120 Marine
- ☐ 130 Miller Act
- ☐ 140 Negotiable Instrument
- ☐ 150 Recovery of Overpayment & Enforcement of Judgment
- ☐ 151 Medicare Act
- ☐ 152 Recovery of Defaulted Student Loans (Excludes Veterans)
- ☐ 153 Recovery of Overpayment of Veteran's Benefits
- ☐ 160 Stockholders' Suits
- ☐ 190 Other Contract
- ☒ 195 Contract Product Liability
- ☐ 196 Franchise

REAL PROPERTY
- ☐ 210 Land Condemnation
- ☐ 220 Foreclosure
- ☐ 230 Rent Lease & Ejectment
- ☐ 240 Torts to Land
- ☐ 245 Tort Product Liability
- ☐ 290 All Other Real Property

TORTS

PERSONAL INJURY
- ☐ 310 Airplane
- ☐ 315 Airplane Product Liability
- ☐ 320 Assault, Libel & Slander
- ☐ 330 Federal Employers' Liability
- ☐ 340 Marine
- ☐ 345 Marine Product Liability
- ☐ 350 Motor Vehicle
- ☐ 355 Motor Vehicle Product Liability
- ☐ 360 Other Personal Injury
- ☐ 362 Personal Injury - Medical Malpractice

PERSONAL INJURY
- ☐ 365 Personal Injury - Product Liability
- ☐ 367 Health Care/ Pharmaceutical Personal Injury Product Liability
- ☐ 368 Asbestos Personal Injury Product Liability

PERSONAL PROPERTY
- ☐ 370 Other Fraud
- ☐ 371 Truth in Lending
- ☐ 380 Other Personal Property Damage
- ☐ 385 Property Damage Product Liability

CIVIL RIGHTS
- ☐ 440 Other Civil Rights
- ☐ 441 Voting
- ☐ 442 Employment
- ☐ 443 Housing/ Accommodations
- ☐ 445 Amer. w/Disabilities - Employment
- ☐ 446 Amer. w/Disabilities - Other
- ☐ 448 Education

PRISONER PETITIONS

Habeas Corpus:
- ☐ 463 Alien Detainee
- ☐ 510 Motions to Vacate Sentence
- ☐ 530 General
- ☐ 535 Death Penalty

Other:
- ☐ 540 Mandamus & Other
- ☐ 550 Civil Rights
- ☐ 555 Prison Condition
- ☐ 560 Civil Detainee - Conditions of Confinement

FORFEITURE/PENALTY
- ☐ 625 Drug Related Seizure of Property 21 USC 881
- ☐ 690 Other

LABOR
- ☐ 710 Fair Labor Standards Act
- ☐ 720 Labor/Management Relations
- ☐ 740 Railway Labor Act
- ☐ 751 Family and Medical Leave Act
- ☐ 790 Other Labor Litigation
- ☐ 791 Employee Retirement Income Security Act

IMMIGRATION
- ☐ 462 Naturalization Application
- ☐ 465 Other Immigration Actions

BANKRUPTCY
- ☐ 422 Appeal 28 USC 158
- ☐ 423 Withdrawal 28 USC 157

PROPERTY RIGHTS
- ☐ 820 Copyrights
- ☐ 830 Patent
- ☐ 835 Patent - Abbreviated New Drug Application
- ☐ 840 Trademark

SOCIAL SECURITY
- ☐ 861 HIA (1395ff)
- ☐ 862 Black Lung (923)
- ☐ 863 DIWC/DIWW (405(g))
- ☐ 864 SSID Title XVI
- ☐ 865 RSI (405(g))

FEDERAL TAX SUITS
- ☐ 870 Taxes (U.S. Plaintiff or Defendant)
- ☐ 871 IRS—Third Party 26 USC 7609

OTHER STATUTES
- ☐ 375 False Claims Act
- ☐ 376 Qui Tam (31 USC 3729(a))
- ☐ 400 State Reapportionment
- ☐ 410 Antitrust
- ☐ 430 Banks and Banking
- ☐ 450 Commerce
- ☐ 460 Deportation
- ☐ 470 Racketeer Influenced and Corrupt Organizations
- ☐ 480 Consumer Credit
- ☐ 490 Cable/Sat TV
- ☐ 850 Securities/Commodities/ Exchange
- ☐ 890 Other Statutory Actions
- ☐ 891 Agricultural Acts
- ☐ 893 Environmental Matters
- ☐ 895 Freedom of Information Act
- ☐ 896 Arbitration
- ☐ 899 Administrative Procedure Act/Review or Appeal of Agency Decision
- ☐ 950 Constitutionality of State Statutes

V. ORIGIN *(Place an "X" in One Box Only)*

☒ 1 Original Proceeding ☐ 2 Removed from State Court ☐ 3 Remanded from Appellate Court ☐ 4 Reinstated or Reopened ☐ 5 Transferred from Another District *(specify)* ☐ 6 Multidistrict Litigation - Transfer ☐ 8 Multidistrict Litigation - Direct File

VI. CAUSE OF ACTION

Cite the U.S. Civil Statute under which you are filing *(Do not cite jurisdictional statutes unless diversity)*:
Magnuson-Moss Warranty Act, 15 U.S.C. §§ 2301, et seq.

Brief description of cause:
Consumer fraud class action for defective motor vehicles under warranty law and Florida consumer law

VII. REQUESTED IN COMPLAINT:

☒ CHECK IF THIS IS A CLASS ACTION UNDER RULE 23, F.R.Cv.P.

DEMAND $

CHECK YES only if demanded in complaint:
JURY DEMAND: ☒ Yes ☐ No

VIII. RELATED CASE(S) IF ANY

(See instructions): JUDGE _____ DOCKET NUMBER _____

DATE
04/23/2019

SIGNATURE OF ATTORNEY OF RECORD
F. Jerome Tapley

FOR OFFICE USE ONLY

RECEIPT # _____ AMOUNT _____ APPLYING IFP _____ JUDGE _____ MAG. JUDGE _____

AO 440 (Rev. 06/12) Summons in a Civil Action

UNITED STATES DISTRICT COURT

for the

Southern District of Florida

DOUGLAS WEISS, and all other similarly situated,

Plaintiff(s)

v.

GENERAL MOTORS LLC

Defendant(s)

Civil Action No. 1:19-cv-21552

SUMMONS IN A CIVIL ACTION

To: *(Defendant's name and address)* GENERAL MOTORS LLC
c/o Corporation Service Company
1201 Hays Street
Tallahassee, FL 32301

A lawsuit has been filed against you.

Within 21 days after service of this summons on you (not counting the day you received it) — or 60 days if you are the United States or a United States agency, or an officer or employee of the United States described in Fed. R. Civ. P. 12 (a)(2) or (3) — you must serve on the plaintiff an answer to the attached complaint or a motion under Rule 12 of the Federal Rules of Civil Procedure. The answer or motion must be served on the plaintiff or plaintiff's attorney, whose name and address are:

F. Jerome Tapley
Cory Watson, P.C.
2131 Magnolia Avenue South
Birmingham, AL 35205
jtapley@corywatson.com

If you fail to respond, judgment by default will be entered against you for the relief demanded in the complaint. You also must file your answer or motion with the court.

CLERK OF COURT

Date: _____

_____
Signature of Clerk or Deputy Clerk

Civil Action No. 1:19-cv-21552

PROOF OF SERVICE

(This section should not be filed with the court unless required by Fed. R. Civ. P. 4 (l))

This summons for *(name of individual and title, if any)* _____ was received by me on *(date)* _____ .

❒ I personally served the summons on the individual at *(place)* _____ on *(date)* _____ ; or

❒ I left the summons at the individual's residence or usual place of abode with *(name)* _____ , a person of suitable age and discretion who resides there, on *(date)* _____ , and mailed a copy to the individual's last known address; or

❒ I served the summons on *(name of individual)* _____ , who is designated by law to accept service of process on behalf of *(name of organization)* _____ on *(date)* _____ ; or

❒ I returned the summons unexecuted because _____ ; or

❒ Other *(specify):*

My fees are $ _____ for travel and $ _____ for services, for a total of $ 0.00 .

I declare under penalty of perjury that this information is true.

Date: _____

_____
Server's signature

_____
Printed name and title

_____
Server's address

Additional information regarding attempted service, etc:

Print Save As... Reset

Exhibit A

Service Bulletin

File in Section: -
Bulletin No.: PI1354A
Date: December, 2014

PRELIMINARY INFORMATION

Subject: **Information on Vibration Analysis and Diagnostic**

Models: **2014 Chevrolet Silverado 1500**
2015 Chevrolet Silverado
2014 GMC Sierra 1500
2015 GMC Sierra

Attention: **This PI also applies to any of the above models that may be Middle East, Chile, Peru and Thailand Export vehicles.**

This PI has been revised to add the 2015 Model Year, update the Additional Notes for Testing Table, edit the Check Pinion Flange Runout Measurement procedure and updated the Example in the Backlash Adjustment Procedure. Please discard PI1354.

Training Available

US Courseware			
Course	**Delivery Platform**	**Course Description**	**Length**
13042.14D1	Virtual Classroom Training (VCT)	Noise, Vibration and Harshness (NVH) 1	1.5 hrs
13042.14D2	Virtual Classroom Training (VCT)	Noise, Vibration and Harshness (NVH)	2.0 hrs
13042.14H	Hands-On Training (est. avl. December 2014)	Noise, Vibration and Harshness (NVH)	8.0 hrs
13042.12W	Web-Based Training	Noise, Vibration and Harshness (NVH)	2.0 hrs
13042.13V	Video On Demand (VOD)	PicoScope Noise, Vibration, and Harshness Diagnostics Overview	15:05 minutes
GMCL Courseware			
13042.12W	Web-Based Training	Noise, Vibration and Harness	—
13042.05D1	Virtual Classroom Training (VCT)	Noise Vibration & Harshness - Session 1	—
13042.05D2	Virtual Classroom Training (VCT)	Noise Vibration & Harshness - Session 2	—
13025.16H	Hands-On Training	Vibration Diagnosis (2 day classroom training)	—
13042.13V	Video On Demand (VOD)	PicoScope Noise, Vibration, and Harshness Diagnostics Overview - VOD	—

Condition/Concern

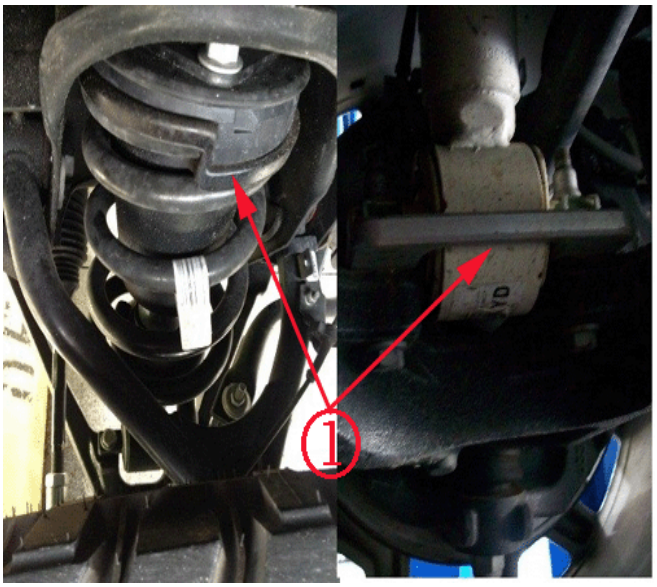
Some customers may comment about a vibration at speeds of 56-72 km/h (35-45 mph) or 96-120 km/h (60-70 mph), which can be felt in either the seat or steering wheel.

The purpose of this bulletin is to outline the recommendations and procedures for diagnosing and repairing vibrations caused by wheel and tire, axle components and/or propeller shafts.

Recommendation/Instructions

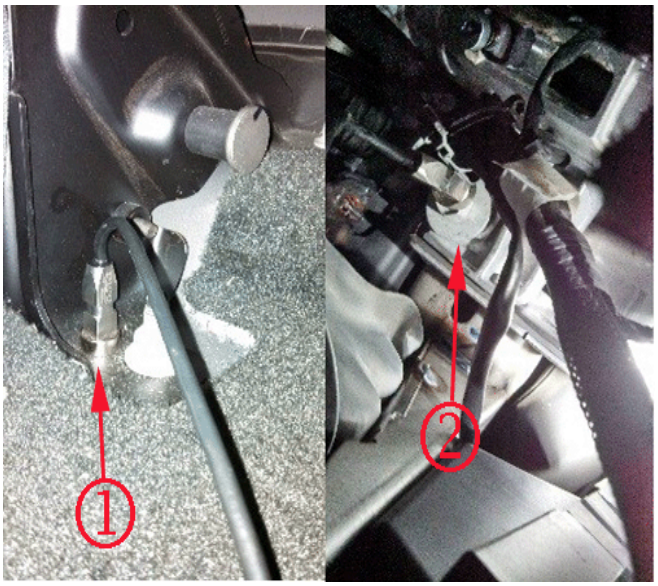
Important: The first step in determining the cause of the vibration is a test drive with the appropriate diagnostic equipment installed on the vehicle. If the correct tools and procedures are not followed, an incorrect diagnosis will result.

Full Size Truck Vibration Analysis:



4002193

1. Inspect the truck for any aftermarket equipment installations. For example: non factory tires, wheels and/or lift kits or leveling kits – shims (1) installed as shown above. Aftermarket equipment does include running boards, bug deflectors, and window shades, etc. Remove any aftermarket that might cause vibration transmission paths.
2. Mark each tire valve stems location on the tire. This will be utilized to check for tire slippage on the rim.



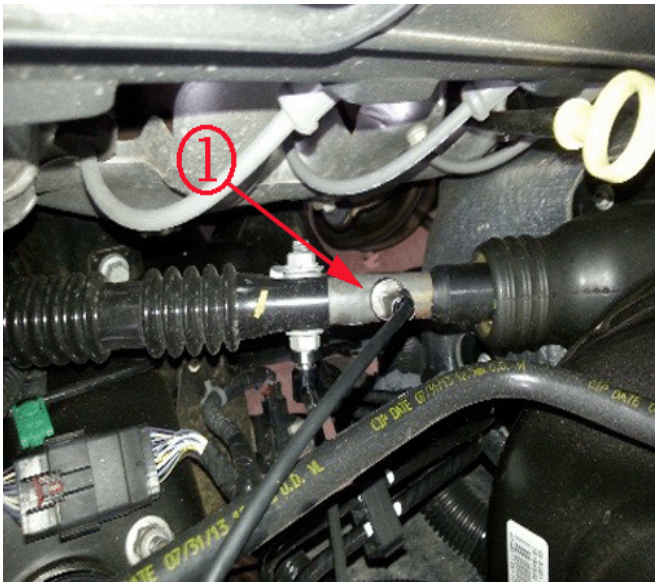
4002206

3. Using a Pico Oscilloscope Diagnostic Kit, mount the PicoScope vibration sensor on one of the two locations shown above.

Note: Only the use of the Pico Oscilloscope Diagnostic Kit with NVH should be utilized, available from GM Dealer equipment (P/N 733–CH-51450). Previous vibrations tools are NOT recommended due to the types and frequencies producing these vibrations.

- Seat Vibration – mount the sensor to the rear seat bracket (1).
- Steering Wheel Vibration – mount the sensor to the steering wheel bracket (2) under dash.

Note: In some cases, moving the sensor from a vertical position to a horizontal position may indicate higher amplitude and may be beneficial to help in diagnosis.



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4. This step should be only be used if the vibration can be felt while running the vehicle on the rack. Mount the sensor on the steering shaft (1), under the hood as illustrated above.
5. Measure the vibration. Typically trucks should be driven in M5 to keep from switching in and out of active fuel management (AFM).

Note: At the bottom of this bulletin is a required Vibration Diagnostic Worksheet that MUST be completed and is required for the claim payment. Vibration Diagnostic must be retained by the dealership. This worksheet is required to be filled out before calling TAC.

6. After the road test, verify that the tires have not slipped on the rim (step #2). If slippage has been found, correct the condition prior to any other repair. Refer to the latest version of Corporate Bulletin Number 12-03-10-001: Vibration Shortly After Tires are Mounted/Preventing Vibration from Wheel Slip (Tire Sliding on Wheel).
7. Once the condition has been duplicated on a test drive and the vibration readings have been recorded, bring the vehicle back into the shop and test the vehicle on four jack stands or a suitable hoist. The hoist must support the suspension at the same trim heights as the vehicle would normally sit on the road.
8. With the vehicle properly supported, bring the speed up to the complaint speed and verify that the previously recorded vibration data matches current vibration data being displayed.
9. The test should be performed in both 2 wheel drive and 4 wheel drive, if equipped. If vibration can be duplicated on the rack, the test should be performed a second time with the wheels and tire assemblies removed from the vehicle and the wheel nuts installed to retain the brake discs and/or brake drums. If the vibration has been eliminated with the wheel and tire assemblies removed, focus on the wheel and tire assemblies as the source of the vibration. If the vibration is still present, focus on the vehicle driveline as the source of the vibration.

Additional Notes for Testing

- Phasing is typical on these tracks. Test drives should include many turns that can prevent phasing.
- Same test should be conducted after dealer correction to ensure vibration is eliminated throughout the entire test repair phase.

Use the chart below to determine which type of vibration the truck has and what repair procedure should be utilized.

Type of Vibration	Go to Condition
1st Order Tire	1
1st Order Prop Shaft	2
2nd Order Prop Shaft	3
3rd Order Tire Combined with 1st Order Prop	4
Vibration Felt in 4 cylinder mode (AFM) – V6 Engine Only	5
Vibration Felt at Idle Only	6*
*For rough idle and/or vibration at idle in gear – PIP5211: Rough Idle. *For vibration related to AFM in 4 cylinder mode – refer to PIP5228: Vibration During Active Fuel Management V4 Mode Operation 1200–1400 Engine RPM.	

Important: Prior to any Road Force Balancing done with the Hunter 9700, please make sure that the wheel assemblies pass the centering test, which is performed using the Hunter 9700 machine.

Condition 1: 1st Order Tire Suggestions (Freq 11-14 hz at 60 mph or 97 km/h)

Measurements

1. Remove the tire and wheel assemblies from the vehicle and perform the Road Force Variation (RFV) measurement.

Important: Prior to taking any measurements, the assemblies MUST all pass a center check.

Note: Rule of Thumb for vibrations.

- Steering Wheel = Front Wheels
- Floor/Seat Track/Body = Rear Wheels

2. Document the before and after Road Force Variation (RFV) numbers on the vibration worksheet located at the end of this bulletin.

Road Force Specifications

P-Metric tires on passenger cars	15 lbs (6.8 kg) or less
P-Metric tires on light trucks	15 lbs (6.8 kg) or less
LT - tires on light trucks	15 lbs (6.8 kg) or less

Note: These numbers are lower than what is currently published in service information as some vehicles react to parts that are near the high limit. These numbers SHOULD NOT be used if you do not have a tire speed related disturbance.

Repair:

- For any assembly that has an out of balance condition (greater than 0.25 oz), remove the weights and correct the condition utilizing normal balancing techniques.
- For any assembly having RFV measurements beyond the specification above, vectoring the tire on the rim should be utilized prior to tire replacement. If this does not bring the assembly within specification, the tire should be replaced.

Additional Notes on Balancing:

- Always perform a centering check.
- The Hunter Balancer/Road Force Balancer should not be set to “Smart Weight.”
- All tires need to be balanced under 0.25 oz (both static and dynamic).
- When using the Hunter – Balancer/Road Force Balancer, removal and remounting to the tire balancer should be performed to re-check balance and verify that results are repeatable to 0.25 oz or less.
- Check Wheel Runout.

Important: When replacing tires, the road force should be checked before a test drive and after a test drive (min of 10-15 miles or 16-24 km/h). Road force on new tires will change dramatically after being warmed up (as much as a 20 lb reduction). After the test drive, the tire’s road force should be checked. If acceptable RFV cannot be achieved, first try vectoring the tire on the rim before an alternate tire is utilized. Also refer to the Information in the latest version of Corporate Bulletin Number 13-03-10-002: Diagnostic Tips for Difficult to Resolve Tire/Wheel Vibration Concerns. Some more information is needed on how to check the assemblies for 2nd, 3rd, and 4th order RFV.

Condition 2: 1st Order Prop Shaft (Freq 38-44 hz at 60 mph or 97 km/h)

Perform Propeller Shaft Runout Measurement (Refer to the SI Document ID# 2084709)

Specification	0.50”*
Actual Measurement	
*For Best Result, the maximum runout should be under 0.20.” If over, then replace the driveshaft.	

Note: These numbers are lower than what is currently published in service information as some vehicles react to parts that are near the high limit. These numbers SHOULD NOT be used if you do not have a propeller shaft speed related disturbance.

Check Pinion Flange Runout Measurement

Special Tools:

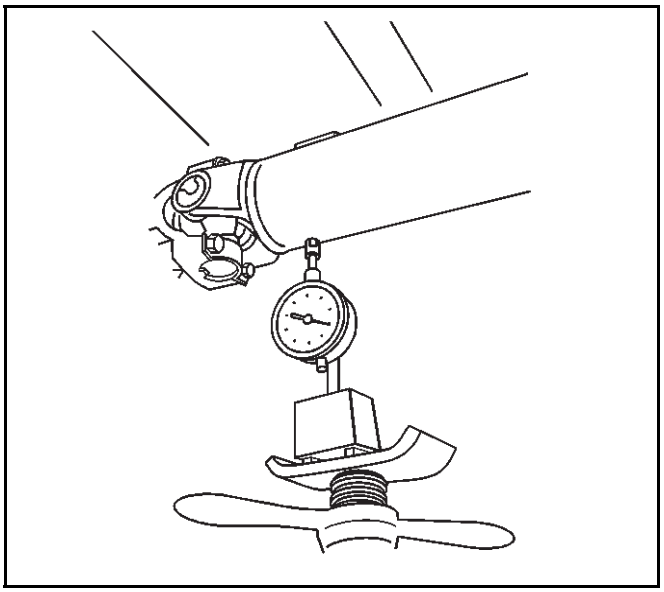
- GE-7872 Magnetic Base Dial Indicator Set, equivalent
- GE-8001 Dial Indicator Set, or equivalent

For equivalent regional tools, refer to the Special Tools and Equipment in SI.

Note:

- This measurement procedure is intended to measure propeller shaft runout for prop shaft systems with 2 or 3 U-joints only. This is not for prop systems with only 1 U-joint, or with only constant velocity (CV) joints, and/or coupler assemblies.
- When measuring runout of propeller shafts, do not include fluctuations on the dial indicator due to welds or surface irregularities.

1. Raise and support the vehicle with the wheels free to rotate. Refer to the Lifting and Jacking the Vehicle in SI.
2. Place the transmission is NEUTRAL.
3. Clean the circumference of the propeller shaft of any debris and/or undercoating along the rear of the shaft, where contact of the dial indicator will make to the propeller shaft.
4. Inspect the propeller shaft for dents, damage, and/or missing weights. Any propeller shaft this is dented or damaged requires replacement.



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5. Mount the GE-7872 Magnetic Base Dial Indicator Set, or equivalent, or the GE-8001 Dial Indicator Set, or equivalent, to the vehicle underbody or to a service stand positioned just clear of the U-joint yoke weld on the prop shaft.
6. Rotate the drive pinion axle flange, torque tube input flange, transmission output, or transfer case output flange by hand while take runout measurements of the prop shaft. The prop shaft will rotate more easily in one direction than in the other. If necessary, the tire and wheel assemblies and even the brake caliper assemblies can be positioned and supported aside, or the brake drums can be removed from the drive axle to provide axle to provide easier rotation of the prop shaft.
7. Measure and mark the high spot of the propeller shaft. Mark the location of the propeller shaft to flange.
8. Rotate the propeller shaft 180 degrees from its original position on the flange.
9. Perform step six again.
10. If the high spot of the propeller shaft is in the same location as marked in the previous step and the measurement exceeds the maximum prop shaft runout specified, the prop shaft requires replacement before proceeding.

Note: This measurement is focused on pinion flange runout, it is NOT a complete measurement of the prop shaft runout. To fully measure prop shaft runout, measurements must be taken at the front and middle of each prop shaft segments.

11. If the high spot is in a different location, the runout is in the pinion flange or pinion. If this exceeds the maximum allowable runout for the pinion flange, the source of the runout (usually the flange or the pinion itself) must be found.

Perform Balance Measurement using "Adjustment Procedure Using Oscilloscope" (PicoScope) (Refer to the SI Document ID# 3753593)

Specification	10 g-cm
Actual Measurement	

For vehicles that are out of balance, perform a system balance. Using the two hose clamp method, the best driveline balance results are obtained under 10 g-cm.

Suggestions:

1. Perform Runout Measurement.
2. Disassembly/reassembly rear yoke joint – checks for shift in U-joint.
3. Evaluation Drive.
4. Perform Runout Measurement.
5. Index 180.
6. Evaluation Drive.
7. Perform Runout Measurement.
8. Evaluation Drive.
9. Balance Shaft with PicoScope.

Diagnostic Aid:

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- Inspect the propeller shaft for dents or damage. There have been many cases of dented propeller shafts.
- For 4WD Trucks, remove the rear propeller shaft, seal output shaft and drive the vehicle in 4WD. If the vibration is gone, the rear prop shaft could be the problem.
- For vehicles with a 3:08 with a one-piece steel shaft, this can be replaced with a one-piece aluminum one that is utilized on all 3:42 and 3:73 ratios (K15543 and K15753 Models only).
- PIP5140: Low Speed Vibration 30-35 mph (48-56 km/h).
- Inspect the transmission output shaft bushing for irregular wear.

Condition 3: 2nd Order Prop Shaft (Normally a launch shudder or left under hard acceleration)

Note: Vehicle rear suspension must be properly supported during the Driveline Angle measurement process in order to record true Driveline Angle measurements.

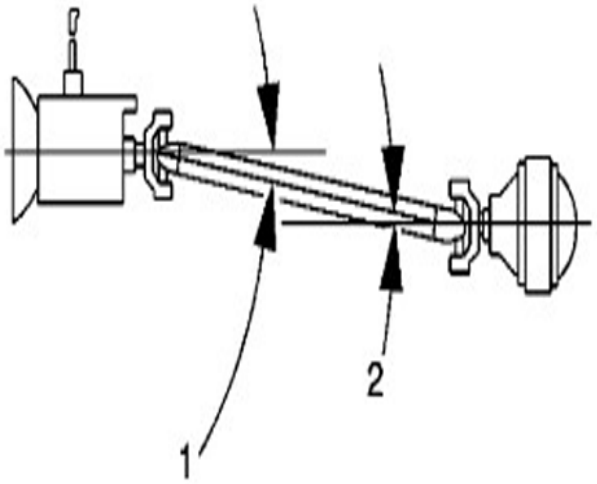
Check Driveline Angles (Refer to SI Document ID# 2084724)

Suggestion:

1. Check Angle.
2. Disassembly/reassembly rear yoke – check for shift in U-joint.

3. Check Angle.
4. Evaluation Drive.

	Measurement	Notes:
Yoke to Shaft		The first (forward most) U-joint action on a two piece driveshaft system is not canceled out by another U-joint. Because of this, the first U-joint working angle should be between 0. 5 and 0.75 degrees.
Front Shaft to Center Support Bearing (if equip)		U-joint pairs cancel each other. Neither U-joint working angle should exceed 4 degrees, nor the allowable range of difference between cancelling U-joint working angles is 0.00 to 1.0 degrees.
Shaft to Diff Yoke		



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Propeller systems containing only 1 U-joint: The U-joint working angle should be between 1/2 and 3/4 degrees.
Allowable range of difference between cancelling U-joint working angles: 0.25 to 1.0 degrees.

Shimming

Important: This is only be used for trucks that have incorrect working angles.

Options:

1. Originally, trucks were built with a 14 mm spacers under the transfer case (4WD only). In some cases, reducing this shim to a 7 mm shim may correct the condition.
2. A 2 degree axle shim (P/N 23469809 – Qty 2) can be placed between the leaf spring pack and the axle perch. To rotate the pinion up to correct this; the “fat end” of the shim must face backwards, to the rear of the truck.

Center Support Bearing - Two Piece Propeller Only

Change center support bearing shim from 12 mm (0.47 in) to 6 mm (0.24 in) using washers or other means. (If replacing the propeller, the new one will come with 6 mm or 0.24 in shim).

Condition 4: 3rd Order Tire with 1st Order Prop

- 3rd Order Tire combined with 1st Order Prop. This type will create a phasing boom. Need to focus on the 1st Order Prop – condition above.

Condition 5: Vibration Felt in 4 Cyl Mode (AFM) – V6 Engine Only

Several customers have commented on a vibration felt in the steering wheel or seat during 4 Cylinder Active Fuel Management (AFM) operation. This can be noticed more at 64-72 km/h (40-45 mph) and by lightly accelerating to the point where the engine transitions to 6 cylinders, or V6 mode.

- This type of vibration can be the result of exhaust cross pipe ground out and/or cab mount ground out.

To repair this condition, the three-way catalytic converter settling procedure in PIP5228: Vibration During Active Fuel Management V4 Mode Operation 1200–1400 Engine RPM should be completed.

Condition 6: Vibration Felt at Idle Only

- Refer to the PIP5137A: Rough Idle or Vibration In Drive.

Other Sources of Vibrations

1. Exhaust resonance – PI1201A: Exhaust Rattle, Buzz, Pop or Whistle.
2. Vibration during active fuel management V4 mode operation – PIP5228. Follow this cab mount settling procedure listed below:

Warning: When settling the body cushions, do NOT separate the frame from the body more than is necessary. Possible personal injury and damage to multiple parts may result if you do not follow the guides outlined below:

- Intermediate steering shaft – Do not allow the shaft to extend more than 25 mm (1 in).
- Fuel tank filler hose – Do not stretch the hose excessively.
- Tail/Turn signal lamp wiring/rear lamps junction block – Leave slack in the wires
- Park brake cable – Leave slack in the cable
- Body ground straps – Leave slack in the wire

⇒ The technician should first loosen the fastener located at the center of each body mount (6 for a regular cab, 8 for crew and double cab).

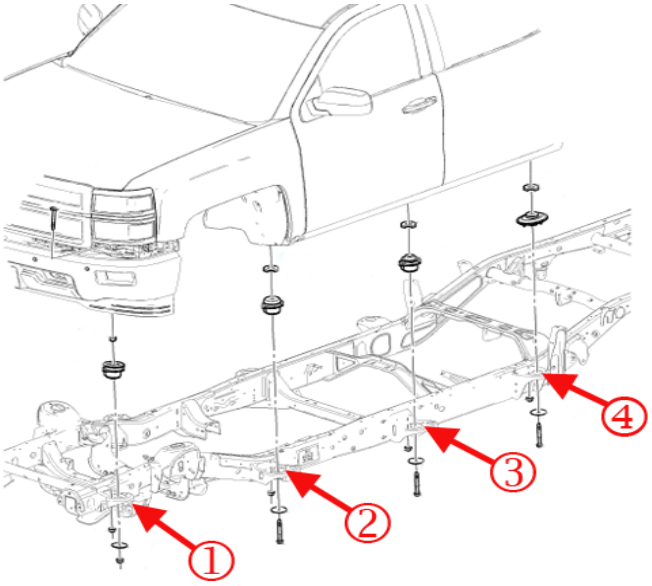
⇒ Using a large angled pry bar, lift up the cab body slightly to settle / relax it. Perform this at each mount location one at a time.

⇒ Repeat this cab mount settling process twice, to confirm the mounts are settled / relaxed.

Visually verify that the cab to box alignment is correct before re-torqueing all mounts to specification found in Service Information, body repair, frame and under body section.

The cab / body mount position location

The numbers in the picture below indicate the specific mount position. The mounts on the passenger side of the vehicle are identified the same way. This will assist the technician to identify the correct location of each mount so they can be torque to the proper specification.



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1 = body mount cushion front

2 = body mount cushion position number 1

3 = body mount cushion position number 2

4 = body mount cushion position number 3

3. Pitchline runout – Pitchline runout will normally show as a 1st order tire vibration on the PicoScope. If after correcting tire(s) with excessive Road Force, a vibration exists, remove differential cover and check ring gear backlash. Every tooth should be checked for excessive backlash. If there is more than 0.0762 mm (0.003 in) of variation, the ring gear and/or differential should be replaced to correct the condition (SI Document ID# 3269088, 3620298) (PIP4148A).

Backlash Adjustment Procedure

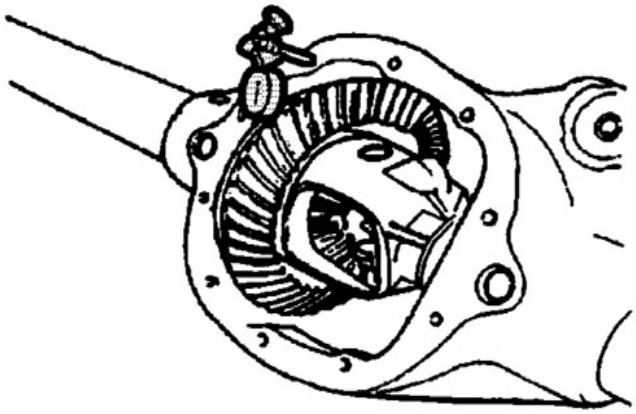
Special Tools:

- J-8001 Dial Indicator Set
- J-25025 Guide Pins

Note:

- Ensure that the side bearing surfaces in the axle housing are clean and free of burrs. If the original bearings are to be reused, the original bearing cups must also be used.
- The differential side bearings must be initially preloaded in order to determine the backlash of the gear set. After the backlash is set, the final bearing preload is set.
- Mark the bearing caps left or right sides.

1. Measure the rotating torque of the drive pinion and differential assembly. Refer to the Differential Drive Pinion Gear Bearing Replacement in SI.



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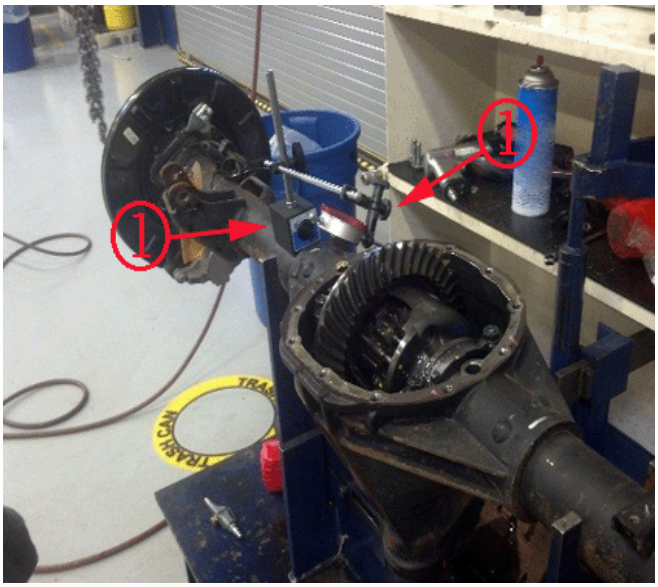
2. Install the J-25025 pins and the J-8001 indicator to the axle housing.

Note: Preload the dial of the J-8001-3 indicator approximately ¾ of a turn and zero the gauge.



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Note: The illustration above is for reference only. The differential does NOT need to be removed from the vehicle.

3. Set the J-8001-3 indicator (1) so that the stem is aligned with the gear rotation (1) and square to the tooth angle.
4. Hold the drive pinion stationary and move the ring gear back and forth.
5. Repeat the measuring procedure at **each tooth** around the ring gear.

6. The difference between the backlash at all of the measuring points should not vary by more than 0.05 mm (0.002 in).
7. If the difference between the backlash at all of the measuring points varies by more than 0.05 mm (0.002 in), inspect for burrs, a distorted case flange or uneven bolting.
8. If the difference between all the measuring points is within specifications, the backlash at the minimum lash point measured should be 0.08-0.25 mm (0.003-0.010 in) with a preferred backlash of 0.13-0.18 mm (0.005-0.007 in).

Note:

- Increasing or decreasing the shim thickness by 0.05 mm (0.002 in) will change the backlash adjustment approximately 0.03 mm (0.001 in).
- If the backlash is less than, select a smaller shim than the one that was removed. For example, to INCREASE the backlash by 0.05 mm (0.002 in), select a shim that is 0.10 mm (0.004 in) thinner than the shim that was removed.
- If the backlash is larger than, select a larger shim than the one that was removed. For example, to DECREASE the backlash by 0.05 mm (0.002 in), select a shim that is 0.10 mm (0.004 in) thicker than the shim that was removed.

9. Install the selected shim.

Caution: Use the correct fastener in the correct location. Replacement fasteners must be the correct part number for that application. Do not use paints, lubricants, or corrosion inhibitors on fasteners, or fastener joint surfaces, unless specified. These coatings affect fastener torque and joint clamping force and may damage the fastener. Use the correct tightening sequence and specifications when installing fasteners in order to avoid damage to parts and systems. When using fasteners that are threaded directly into plastic, use extreme care not to strip the mating plastic part(s). Use hand tools only, and do not use any kind of impact or power tools. Fastener should be hand tightened, fully seated, and not stripped.

10. If the backlash is to small, increase the backlash using the following procedure:
    10.1. Remove the bearing cap bolts and the bearing caps.

Note: Mark the bearing cups and the shims left or right.

    10.2. Remove the differential case assembly with the bearing cups and the shims.
    Note: Measure the production shim or the shim and service spacer in 3 locations.
    Measure each shim separately.
    10.3. Measure the thickness of left side shim pack.

Note: If the original shim is cast iron production shim, assemble the shim pack using a service spacer and service shims. For example, to increase the backlash by 0.05 mm (0.002 in), remove 0.10 mm (0.004 in) in of thickness from the left side shim pack.

    10.4. Calculate the average of the 3 measurements for each shim.

Note: If the original shim is cast iron production shim, assemble the shim pack using a service spacer and service shims. For example, to increase the backlash by 0.05 mm (0.002 in), remove 0.10 mm (0.004 in) of thickness from the left side shim pack.

    10.5. Assemble a new left side shim pack by decreasing the appropriate amount of thickness from the original left side shim pack.

Note: Measure each shim separately.

    10.6. Measure the thickness of right side shim or the shim and service spacer in 3 locations.

Note: Add the average of each of the shim measurements together. Record the measurement. This is the thickness for the right side shim pack.

    10.7. Calculate the average of the 3 measurements for each shim.
    10.8. Assemble a new right side shim pack by increasing the appropriate amount of thickness to the original right side shim pack. If the original shim is cast iron production shim, assemble the shim pack using a service spacer and service shims. For example, to increase the backlash by 0.05 mm (0.002 in), add 0.10 mm (0.004 in) of thickness to the right side shim pack.

11. Use the following procedure to decrease the backlash if the backlash is too large:
    11.1. Remove the bearing cap bolts and the bearing caps.

Note: Mark the bearing cups and the shims left or right.

    11.2. Remove the differential case assembly with the bearing cups and the shims.

Note: Measure the production shim or the shim and service spacer in 3 locations. Measure each shim separately.

    11.3. Measure the thickness of left side shim pack.

Note: Add the average of each of the shim measurements together. Record the measurement. This is the thickness for the left side shim pack.

11.4. Calculate the average of the 3 measurements for each shim.

11.5. Assemble a new left side shim pack by increasing the appropriate amount of thickness to the original left side shim pack. If the original shim is cast iron production shim, assemble the shim pack using a service spacer and service shims. For example, to increase the backlash by 0.05 mm (0.002 in), add 0.10 mm (0.004 in) of thickness to the left side shim pack.

Note: Measure the shim or the shim and service spacer in 3 locations. Measure each shim separately.

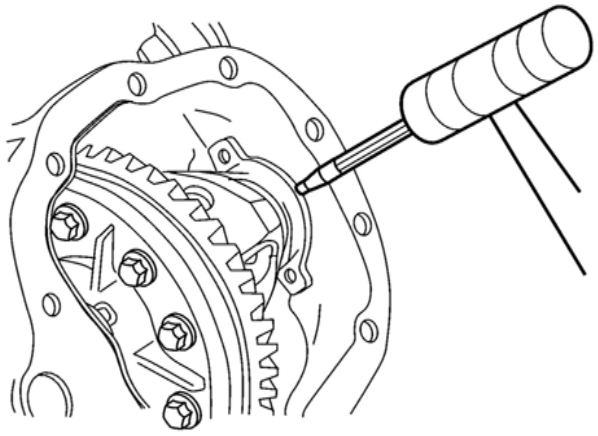
11.6. Measure the thickness of right side shim pack.

Note: Add the average of each of the shim measurements together. Record the measurement. This is the thickness for the right side shim pack.

11.7. Calculate the average of the 3 measurements for each shim.

11.8. Assemble a new right side shim pack by decreasing the appropriate amount of thickness to the original right side shim pack. If the original shim is cast iron production shim, assemble the shim pack using a service spacer and service shims. For example, to decrease the backlash by 0.05 mm (0.002 in), remove 0.10 mm (0.004 in) of thickness to the right side shim pack.

12. Install the differential case assembly with the bearing cups.
13. Install the left side service shims between the axle housing and the differential case.
14. Install the right side service shims between the axle housing and the differential case.



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Note: The service spacers must be installed between the service shim(s) and the axle housing.

15. Using the brass drift for 9.5/9.76 axle, install the left side service spacer.
16. Recheck the backlash and adjust, if necessary.
17. Install the bearing caps and bolts and tighten to 85 Nm (63 lb ft).
18. Recheck the backlash and adjust, if necessary.
19. Once backlash is correct, perform a gear tooth contact pattern check in order to ensure proper alignment between the ring and pinion gears. Refer to the Gear Tooth Contact Pattern Inspection in SI.

Note: Recheck the backlash following the steps above to verify that the backlash is within specifications.

20. Tighten the differential bearing cap bolts to 85 Nm (63 lb ft).
21. Measure the drive pinion and differential case side bearing preload and adjust, if necessary following the steps above.
22. Once the backlash and bearing preload is correct, perform a gear tooth contact pattern check in order to ensure proper alignment between the ring and pinion gears. Refer to the Gear Tooth Contact Pattern Inspection in SI.

Once all areas of vibrations has been reduced, if there is still vibration that the customer is concerned about, the following diagnosis maybe helpful to determine if a shock issue exists.

Warning: The following items should NOT be utilized until the source of the problem has been corrected.

Potential Vibration/Rough Ride:

Condition/Concern

The shock issues below DO NOT cause a vibration, it will only make an existing vibration feel worse. In some cases, a vibration that would not normally be a customer concern may now be felt due to a bad shock. But in general, the original source of the vibration, whether it is the wheels, tires, propeller shaft, etc, will have to be corrected. When diagnosing a vibration issue, there have been reports of the shocks amplifying the vibration felt inside the truck. Engineering has found that some shocks may have been built with contaminated shock oil. This may cause the shocks to dampen incorrectly.

This only applies to the following shocks:

- Rear- Only trucks listed with the Z71 option (RPO Z71, these shocks will be white in color)

Recommendation/Instructions:

Two checks are needed to be performed to verify if the shocks could be an issue:

1. Check the date code located on the bottom of the shock. The first 8 digits are the GM part number. The next 5 digits are the supplier part number. The last 5 digits will be the date code. Any shock built before A1474 could have an issue. The date code format is as follows: 1st digit is the plant, next 3 digits are the day of the year and the last digit is the last number of the year.

   Example:

   – A14743C
   – A = Plant
   – 147 = 147th Day of the Year
   – 4 = 2014
   – 3C = Drawing Change Level
2. If the rear shocks are built before this date code, they will have to be removed for a dynamic test.

Dynamic Test (Rear Shock – Z71 option only)

Starting with a fully extended shock, compress the rod taking notice of the first 10 millimeters of travel. A good shock will not have any free play and there will be immediate resistance to being compressed. A shock with an issue will have several millimeters of free play (no resistance) before feeling the resistance from being compressed. Replace any shocks with excessive free play. In most cases, the rear shocks will be the issue.

Warranty Information

For vehicles repaired under warranty, use:

Labor Operation	Description	Labor Time
8080108*	Perform Road Force Measurement	0.9 hr
	Add time to vector each tire correction (Before and after Road force number should be noted on Vibration worksheet)	0.2 hr
3080088*	Perform Prop Shaft Measurement and Balance (two hose clamp method)	0.8 hr
8060420	Replace Tire(s)	Use Published Labor Operation Time
8033641	Front Shock Absorber, Shock Absorber Component, or Spring Replacement - Both Sides	1.2 hrs
8044751	Rear Shock Absorber Replacement - Both Sides	0.7 hr
*This is a unique Labor Operation for Bulletin use only. It will not be published in the Labor Time Guide.		

Vibration Diagnostic Worksheet

Vibration Felt In:		
Seat:	Steering Wheel:	Other:
Complaint Speed:		VIN:
Year:		Model:
Symptom:		
Engine:		Engine Speed:
Tire Brand:		Tire Size:

Axle Ratio:	Gear:
TPC Spec:	
Primary	
Frequency:	Type (circle): T1 T2 T3 E1 E4 P1 P2 Other:
Measurement of vibration is M/g's (# of runs? Peak, Average, and Avg of Peaks?)	
Source of Vibration (Based PICO)	
Secondary	
Frequency:	Type (circle): T1 T2 T3 E1 E4 P1 P2 Other:
Measurement of vibration is M/g's (# of runs? Peak, Average, and Avg of Peaks?)	
Source of Vibration (Based PICO)	

Condition 1: Road-Force measurements

Before Repairs		
	Ounces	**Road Force (Lbs)**
Right Front		
Left Front		
Right Rear		
Left Rear		
After Repairs		
	Ounces	**Road Force (Lbs)**
Right Front		
Left Front		
Right Rear		
Left Rear		

Exhibit B

Service Bulletin

Bulletin No.: PI1354I
Date: February, 2019

PRELIMINARY INFORMATION

Subject: **Information on Vibration Analysis and Diagnostic**

Models: **2014 Chevrolet Silverado 1500**
2015-2018 Chevrolet Silverado 1500
2019 Chevrolet Silverado LD *
2014 GMC Sierra 1500
2015-2018 GMC Sierra 1500
2019 GMC Sierra Limited *
EXCLUDES HD Trucks

***Built at Oshawa Assembly Plant (11th VIN position "1") Attention:This PI also applies to any of the above models that may be North America Export to Middle East, Israel, Chile, Peru and Thailand vehicles.**

This PI has been revised to add the 2019 Model Year, and include Vibration Diagnostic Worksheet instructions. Please discard PI1354H.

Training Available

US Courseware			
Course	**Delivery Platform**	**Course Description**	**Length**
13042.14D1-R2	Virtual Classroom Training (VCT)	Noise, Vibration and Harshness (NVH) 1	1.5 hrs
13042.14D2-R2	Virtual Classroom Training (VCT)	Noise, Vibration and Harshness (NVH)	2.0 hrs
13042.14H-R2	Hands-On Training (est. avl. December 2014)	Noise, Vibration and Harshness (NVH)	8.0 hrs
13042.14W	Web-Based Training	Noise, Vibration and Harshness (NVH)	2.0 hrs
13042.13V	Video On Demand (VOD)	PicoScope Noise, Vibration, and Harshness Diagnostics Overview	15:05 minutes
GMCC Courseware			
13042.14W	Web-Based Training	Noise, Vibration and Harness	—
13042.05D1	Virtual Classroom Training (VCT)	Noise Vibration & Harshness - Session 1	—
13042.05D2	Virtual Classroom Training (VCT)	Noise Vibration & Harshness - Session 2	—
13025.16H	Hands-On Training	Vibration Diagnosis (2 day classroom training)	—
13042.13V	Video On Demand (VOD)	PicoScope Noise, Vibration, and Harshness Diagnostics Overview - VOD	—

Condition/Concern

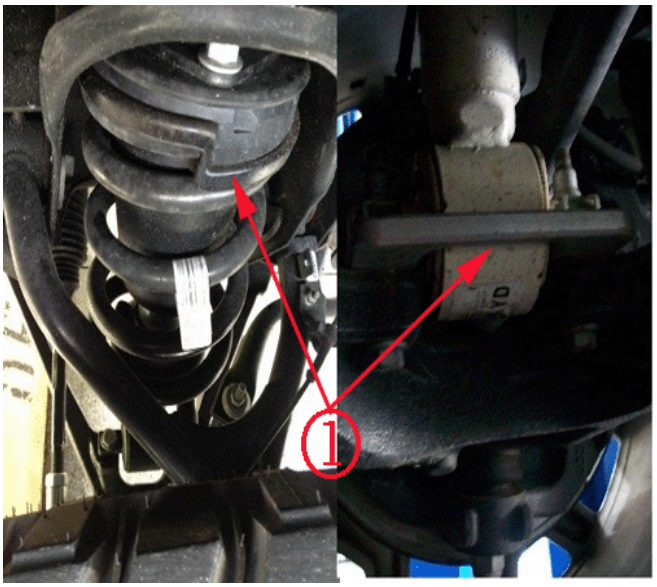
Some customers may comment about a vibration at speeds of 56-72 km/h (35-45 mph) or 96-120 km/h (60-70 mph), which can be felt in either the seat or steering wheel.

The purpose of this bulletin is to outline the recommendations and procedures for diagnosing and repairing vibrations caused by wheel and tire, axle components and/or propeller shafts.

Recommendation/Instructions

Important: The first step in determining the cause of the vibration is a test drive with the appropriate diagnostic equipment installed on the vehicle. If the correct tools and procedures are not followed, an incorrect diagnosis will result.

Full Size Truck Vibration Analysis:



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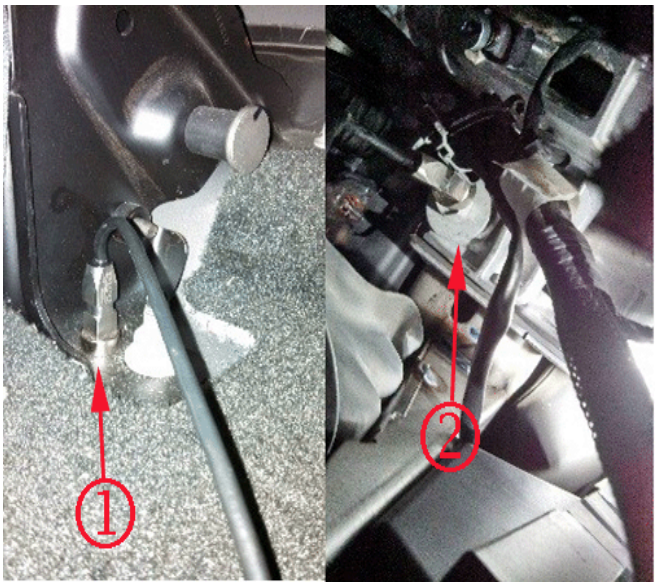
1. Inspect the truck for any aftermarket equipment installations. For example: non factory tires, wheels and/or lift kits or leveling kits – shims (1) installed as shown above. Aftermarket equipment does include running boards, bug deflectors, and window shades, etc. Remove any aftermarket that might cause vibration transmission paths.
2. Mark each tire valve stems location on the tire. This will be utilized to check for tire slippage on the rim.



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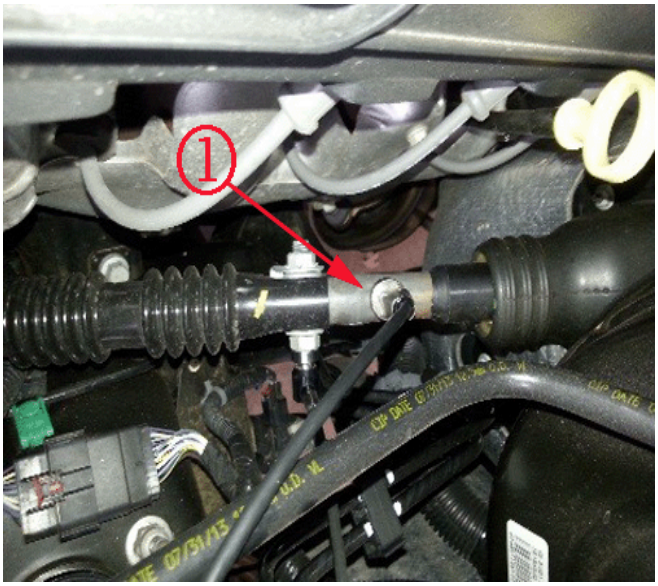
3. Using a Pico Oscilloscope Diagnostic Kit, mount the PicoScope vibration sensor on one of the two locations shown above.

Note: Only the use of the Pico Oscilloscope Diagnostic Kit with NVH should be utilized, available from GM Dealer equipment (P/N 733–CH-51450). Previous vibrations tools are NOT recommended due to the types and frequencies producing these vibrations.

- Seat Vibration – mount the sensor to the front right corner of the driver's seat bracket (1).
- Steering Wheel Vibration – mount the sensor to the steering wheel bracket (2) under dash.

Note: In some cases, moving the sensor from a vertical position to a horizontal position may indicate higher amplitude and may be beneficial to help in diagnosis.



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4. This step should be only be used if the vibration can be felt while running the vehicle on the rack. Mount the sensor on the steering shaft (1), under the hood as illustrated above.
5. Measure the vibration. Typically trucks should be driven in M5 for 6 speed applications and M7 for 8 speed applications to keep the engine from switching in and out of active fuel management (AFM).

Note: At the bottom of this bulletin is a required Vibration Diagnostic Worksheet that MUST be completed and is required for the claim payment. Vibration Diagnostic must be retained by the dealership. This worksheet is required to be filled out before calling TAC.

6. After the road test, verify that the tires have not slipped on the rim (step #2). If slippage has been found, correct the condition prior to any other repair. Refer to the latest version of Corporate Bulletin Number 12-03-10-001: Vibration Shortly After Tires are Mounted/Preventing Vibration from Wheel Slip (Tire Sliding on Wheel).
7. Once the condition has been duplicated on a test drive and the vibration readings have been recorded, bring the vehicle back into the shop and test the vehicle on four jack stands or a suitable hoist. The hoist must support the suspension at the same trim heights as the vehicle would normally sit on the road.
8. With the vehicle properly supported, bring the speed up to the complaint speed and verify that the previously recorded vibration data matches current vibration data being displayed.
9. The test should be performed in both 2 wheel drive and 4 wheel drive, if equipped. If vibration can be duplicated on the rack, the test should be performed a second time with the wheels and tire assemblies removed from the vehicle and the wheel nuts installed to retain the brake discs and/or brake drums. If the vibration has been eliminated with the wheel and tire assemblies removed, focus on the wheel and tire assemblies as the source of the vibration. If the vibration is still present, focus on the vehicle driveline as the source of the vibration.

Additional Notes for Testing

- Phasing is typical on these trucks. Test drives should include many turns that can prevent phasing.
- Same test should be conducted after dealer correction to ensure vibration is eliminated throughout the entire test repair phase.

Use the chart below to determine which type of vibration the truck has and what repair procedure should be utilized.

Type of Vibration	Go to Condition
1st Order Tire	1
1st Order Prop Shaft	2
2nd Order Prop Shaft	3
3rd Order Tire Combined with 1st Order Prop	4
Vibration Felt in 4 cylinder mode (AFM) – V6 Engine Only	5
Vibration Felt at Idle Only	6*
*For rough idle and/or vibration at idle in gear – 17–NA-166: Rough Idle. *For vibration related to AFM in 4 cylinder mode – refer to PIP5228: Vibration During Active Fuel Management V4 Mode Operation 1200–1400 Engine RPM.	

Important: Prior to any Road Force Balancing done with the Hunter 9700, please make sure that the wheel assemblies pass the centering test, which is performed using the Hunter 9700 machine.

Condition 1: 1st Order Tire Suggestions (Freq 11-14 hz at 60 mph or 97 km/h)

Measurements

Refer to Bulletin Number 17-NA-170: Information on Hunter Road Force Balancer.

1. Remove the tire and wheel assemblies from the vehicle and perform the Road Force Variation (RFV) measurement.

Important: Prior to taking any measurements, the assemblies MUST all pass a center check.

2. Document the before and after Road Force Variation (RFV) numbers on the vibration worksheet located at the end of this bulletin.

Road Force Specifications

P-Metric tires on passenger cars	15 lbs (6.8 kg) or less
P-Metric tires on light trucks	15 lbs (6.8 kg) or less
LT - tires on light trucks	15 lbs (6.8 kg) or less

Note: These numbers are lower than what is currently published in service information as some vehicles react to parts that are near the high limit. These numbers **SHOULD NOT** be used if you do not have a tire speed related disturbance.

Repair:

- For any assembly that has an out of balance condition (greater than 0.25 oz), remove the weights and correct the condition utilizing normal balancing techniques.
- For any assembly having Radial Force Variation (RFV) measurements beyond the specification above, should be corrected utilizing the Hunter 180 Match Mount Process (See Hunter 180 Match Mount process below) prior to tire replacement. If this does not bring the assembly within specification, the tire should be replaced. The existing vectoring process cannot be utilized on Full size truck rims (except steel wheels) due to the removal of the out-board flange on the wheel which was utilized for the outboard rim runout measurement. Without this surface, an inaccurate rim runout measurement would exist and negatively affect the vectoring calculation.

Additional Notes on Balancing:

- Always perform a centering check.
- The Hunter Balancer/Road Force Balancer should not be set to “Smart Weight.”
- All tires need to be balanced under 0.25 oz (both static and dynamic). In many cases, it may be helpful to add weight to only one plane at a time.
- When using the Hunter – Balancer/Road Force Balancer, removal and remounting to the tire balancer should be performed to re-check balance and verify that results are repeatable to 0.25 oz or less.
- Anytime a tire is removed from the wheel, the bare wheel should be mounted back on the vehicle and a runout check be performed on-vehicle. This process not only checks the wheel but also all mounting surfaces and suspension components that may effect runout.

Important: When replacing tires, the road force should be checked before a test drive and after a test drive (min of 10-15 miles or 16-24 km). Road force on new tires will change dramatically after being warmed up (as much as a 20 lb reduction). After the test drive, the tire’s road force should be checked. If acceptable RFV cannot be achieved, first try vectoring the tire on the rim before an alternate tire is utilized. Also refer to the Information in the latest version of Corporate Bulletin Number 13-03-10-002: Diagnostic Tips for Difficult to Resolve Tire/Wheel Vibration Concerns. Some more information is needed on how to check the assemblies for 2nd, 3rd, and 4th order RFV.

Hunter 180 Match Mount Process

GM passenger cars have had some limited flangeless wheel applications in the past, but starting with the launch of the 2014 Light Duty Pickup, several new Flangeless wheels were introduced. Flangeless refers to the outboard flange of the wheel where previously a clip-on weight would attach. The new wheels do not have a machined flange for the Hunter Run-out Arm/Wheel to ride on. The previous process for tire and wheel assemblies that had high Road Force, was using the tire Force Matching process. This process requires the use of the Runout Measurement arms on the Hunter Road Force balancer. Without having this machined area, there is not a place for the Runout roller to measure. The Generation 3 and 4 RoadForce balancers have an alternate process called the 180 Match mount. On Gen IV machines this procedure can be found under RoadForce - Procedures - 180 Matching (or by selecting Match Mount without Rim Runout after initial RoadForce measurement).

This process does not use the Runout Arms and instead utilizes the Load Roller to optimize Road Force. While this process requires that the tire may need to be rotated up to 3 times on the rim to obtain the lowest Road Force number, it is the only way for the technician to match mount these wheel and tire assemblies reliably.

For more information on the 180 Matching process, please review the following Hunter Video that outlines the process. https://youtu.be/nswttgUKstk

Replace Steering Bushings

Double Cab and Crew Cab Models Only built prior to:

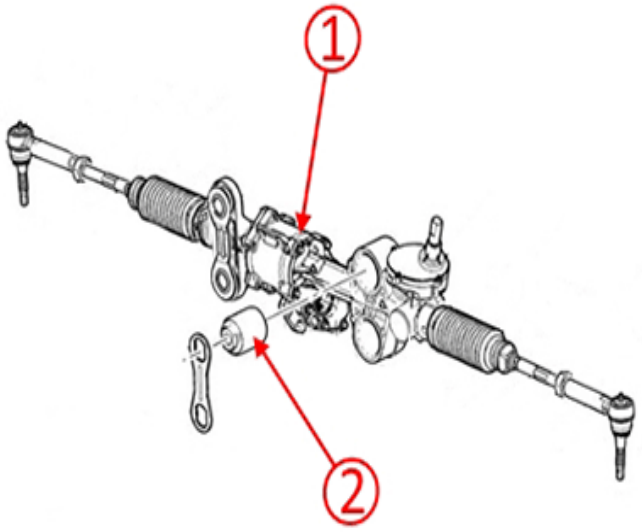
Silao – 11/3/16

Ft Wayne – 10/25/16

Flint – 9/30/16

For Reg Cabs, see Replace Rear Cab Mounts below

Important: *The following procedure should only be used after all tire issues have been corrected. Installation of revised steering bushing will have little to no effect on trucks that still have tire conditions. The T1 vibration must be reduced to under 20-25mg's for these bushings to be effective.*



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A revised steering bushing (2) has been released to address customer vibration concerns. After various testing and measurement of the T1 vibration, a vibration path from the tie rods =>steering rack=>steering bushings=>frame=>Body Mount=>Cabin Floor=>Seat has been identified. To help isolate the steering rack (1), a revised hydraulic bushing has been released and tuned to the T1 frequency. The new steering bushing dampens minor T1 vibrations. This is the reason that the causal part (normally the Tire/Wheel Assembly) must be corrected first. If the T1 vibration is over 20-25m/g's, the bushings will have little to no effect.

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For vehicles with T1 vibrations under 20-25m/g's, replace steering bushing per parts catalogue. Utilize SI procedure "Steering Gear Mount Bushing Replacement" for replacement of the steering bushings.

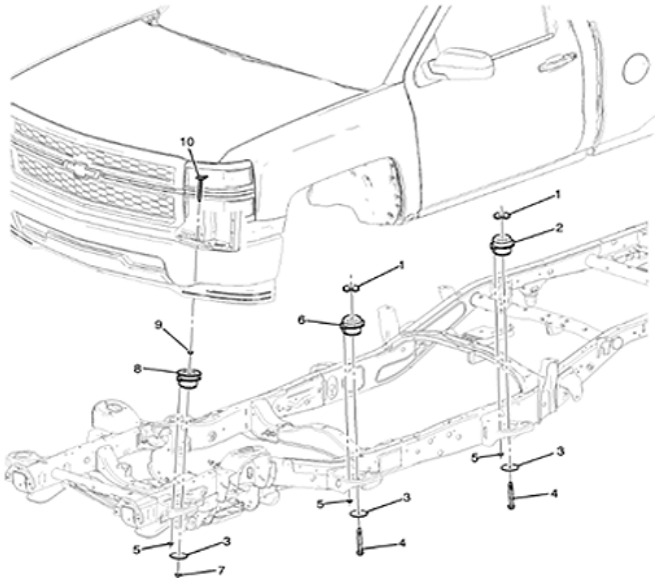
Warning: Care must be taken to not damage the EPS Motor electrical connectors or gear replacement may be required.

Description	Part Number	Qty
Steering Gear Bushing (CK10006 (SUV), K15743, K15543-NHT, K15753-NHT)	84234960	2
Steering Gear Bushing (C1004353, K15753 & NHT, K15543 & NHT	84234959	2

Replace Rear Cab Mounts - Regular Cab Models Built Prior To November 28, 2017

A revised Rear Cab Mount has been released to address customer vibration concerns. After various testing and measurement of the T1 vibration, a vibration path from the tie rods =>steering rack=>steering bushings=>frame=>Body Mount=>Cabin Floor=>Seat has been identified. To help isolate the cab, a revised Cab Mount has been released and tuned to the T1 frequency. The new cab mount dampens minor T1 vibrations. This is the reason that the causal part (normally the Tire/Wheel Assembly) must be corrected first. If the T1 vibration is over 20-25m/g's, the cab mount will have little to no effect.

Correction: Replace Rear Cab Mount with Revised part number.



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Description	Part Number	Qty
CUSHION, BODY MT UPR LOCATION #2	84332391	2

Condition 2: 1st Order Prop Shaft (Freq 38-44 hz at 60 mph or 97 km/h)

Perform Propeller Shaft Runout Measurement (Refer to the SI Document ID# 2084709)

Specification	0.050"*
Actual Measurement	
*For Best Result, the maximum runout should be under 0.20." If over, then replace the driveshaft.	

Note: These numbers are lower than what is currently published in service information as some vehicles react to parts that are near the high limit. These numbers SHOULD NOT be used if you do not have a propeller shaft speed related disturbance.

Check Pinion Flange Runout Measurement

Special Tools:

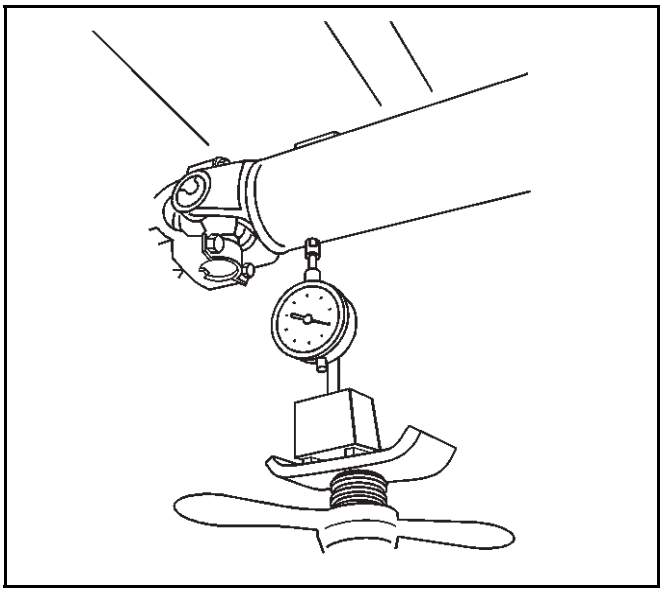
- GE-7872 Magnetic Base Dial Indicator Set, equivalent
- GE-8001 Dial Indicator Set, or equivalent

For equivalent regional tools, refer to the Special Tools and Equipment in SI.

Note:

- This measurement procedure is intended to measure propeller shaft runout for prop shaft systems with 2 or 3 U-joints only. This is not for prop systems with only 1 U-joint, or with only constant velocity (CV) joints, and/or coupler assemblies.
- When measuring runout of propeller shafts, do not include fluctuations on the dial indicator due to welds or surface irregularities.

1. Raise and support the vehicle with the wheels free to rotate. Refer to the Lifting and Jacking the Vehicle in SI.
2. Place the transmission is NEUTRAL.
3. Clean the circumference of the propeller shaft of any debris and/or undercoating along the rear of the shaft, where contact of the dial indicator will make to the propeller shaft.
4. Inspect the propeller shaft for dents, damage, and/or missing weights. Any propeller shaft this is dented or damaged requires replacement.



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5. Mount the GE-7872 Magnetic Base Dial Indicator Set, or equivalent, or the GE-8001 Dial Indicator Set, or equivalent, to the vehicle underbody or to a service stand positioned just clear of the U-joint yoke weld on the prop shaft.
6. Rotate the drive pinion axle flange, torque tube input flange, transmission output, or transfer case output flange by hand while take runout measurements of the prop shaft. The prop shaft will rotate more easily in one direction than in the other. If necessary, the tire and wheel assemblies and even the brake caliper assemblies can be positioned and supported aside, or the brake drums can be removed from the drive axle to provide axle to provide easier rotation of the prop shaft.
7. Measure and mark the high spot of the propeller shaft. Mark the location of the propeller shaft to flange.
8. Rotate the propeller shaft 180 degrees from its original position on the flange.
9. Perform step six again.
10. If the high spot of the propeller shaft is in the same location as marked in the previous step and the measurement exceeds the maximum prop shaft runout specified, the prop shaft requires replacement before proceeding.

Note: This measurement is focused on pinion flange runout, it is NOT a complete measurement of the prop shaft runout. To fully measure prop shaft runout, measurements must be taken at the front and middle of each prop shaft segments.

11. If the high spot is in a different location, the runout is in the pinion flange or pinion. If this exceeds the maximum allowable runout for the pinion flange, the source of the runout (usually the flange or the pinion itself) must be found.

Perform Balance Measurement using "Adjustment Procedure Using Oscilloscope" (PicoScope) (Refer to the SI Document ID# 3753593)

Specification	10 g-cm
Actual Measurement	

For vehicles that are out of balance, perform a system balance. Using the two hose clamp method, the best driveline balance results are obtained under 10 g-cm.

Suggestions:

1. Perform Runout Measurement.
2. Disassembly/reassembly rear yoke joint – checks for shift in U-joint.
3. Evaluation Drive.
4. Perform Runout Measurement.
5. Index 180.
6. Evaluation Drive.
7. Perform Runout Measurement.
8. Evaluation Drive.
9. Balance Shaft with PicoScope.

Diagnostic Aid:

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- Inspect the propeller shaft for dents or damage. There have been many cases of dented propeller shafts.
- For 4WD Trucks, remove the rear propeller shaft, seal output shaft and drive the vehicle in 4WD. If the vibration is gone, the rear prop shaft could be the problem.
- For vehicles with a 3:08 with a one-piece steel shaft, this can be replaced with a one-piece aluminum one that is utilized on all 3:42 and 3:73 ratios (K15543 and K15753 Models only).
- PIP5140: Low Speed Vibration 30-35 mph (48-56 km/h).
- Inspect the transmission output shaft bushing for irregular wear.

Condition 3: 2nd Order Prop Shaft (Normally a launch shudder or left under hard acceleration)

Note: Vehicle rear suspension must be properly supported during the Driveline Angle measurement process in order to record true Driveline Angle measurements.

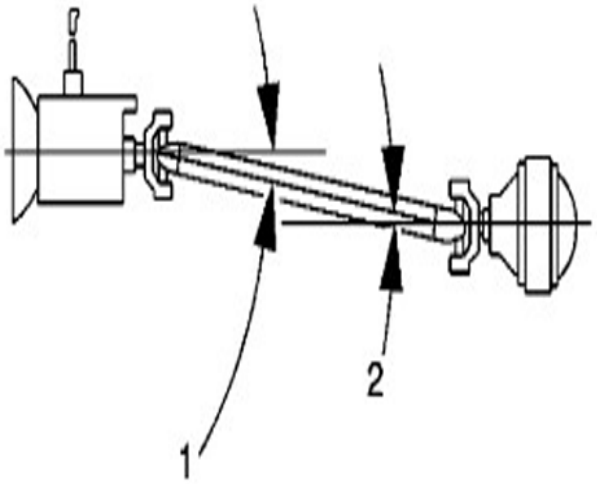
Check Driveline Angles (Refer to SI Document ID# 2084724)

Suggestion:

1. Check Angle.
2. Disassembly/reassembly rear yoke – check for shift in U-joint.

3. Check Angle.
4. Evaluation Drive.

	Measurement	Notes:
Yoke to Shaft		The first (forward most) U-joint action on a two piece driveshaft system is not canceled out by another U-joint. Because of this, the first U-joint working angle should be between 0. 5 and 0.75 degrees.
Front Shaft to Center Support Bearing (if equip)		U-joint pairs cancel each other. Neither U-joint working angle should exceed 4 degrees, nor the allowable range of difference between cancelling U-joint working angles is 0.00 to 1.0 degrees.
Shaft to Diff Yoke		



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Propeller systems containing only 1 U-joint: The U-joint working angle should be between 1/2 and 3/4 degrees.
Allowable range of difference between cancelling U-joint working angles: 0.25 to 1.0 degrees.

Shimming

Important: This is only be used for trucks that have incorrect working angles.

Options:

1. Trucks were built prior to 1/1/2015 had a 14 mm spacers under the transfer case (4WD only). Starting with 1/1/2015. The shim was reduce to 7 mm shim which may correct the condition.
2. A 2 degree axle shim (P/N 23469809 – Qty 2) can be placed between the leaf spring pack and the axle perch. To rotate the pinion up to correct this; the “fat end” of the shim must face backwards, to the rear of the truck.

Center Support Bearing - Two Piece Propeller Only

Change center support bearing shim from 12 mm (0.47 in) to 6 mm (0.24 in) using washers or other means.
(If replacing the propeller, the new one will come with 6 mm or 0.24 in shim).

Condition 4: 3rd Order Tire with 1st Order Prop

- 3rd Order Tire combined with 1st Order Prop. This type will create a phasing boom. Need to focus on the 1st Order Prop – condition above.

Condition 5: Vibration Felt in 4 Cyl Mode (AFM) – V6 Engine Only

Several customers have commented on a vibration felt in the steering wheel or seat during 4 Cylinder Active Fuel Management (AFM) operation. This can be noticed more at 64-72 km/h (40-45 mph) and by lightly accelerating to the point where the engine transitions to 6 cylinders, or V6 mode.

- This type of vibration can be the result of exhaust cross pipe ground out and/or cab mount ground out.

To repair this condition, the three-way catalytic converter settling procedure in PIP5228: Vibration During Active Fuel Management V4 Mode Operation 1200–1400 Engine RPM should be completed.

Condition 6: Vibration Felt at Idle Only

- Refer to the PIP5137: Rough Idle or Vibration In Drive.

Other Sources of Vibrations

1. Exhaust resonance – PI1201: Exhaust Rattle, Buzz, Pop or Whistle.
2. Vibration during active fuel management V4 mode operation – PIP5228. Follow this cab mount settling procedure listed below:

Warning: When settling the body cushions, do NOT separate the frame from the body more than is necessary. Possible personal injury and damage to multiple parts may result if you do not follow the guides outlined below:

- Intermediate steering shaft – Do not allow the shaft to extend more than 25 mm (1 in).
- Fuel tank filler hose – Do not stretch the hose excessively.
- Tail/Turn signal lamp wiring/rear lamps junction block – Leave slack in the wires
- Park brake cable – Leave slack in the cable
- Body ground straps – Leave slack in the wire

⇒ The technician should first loosen the fastener located at the center of each body mount (6 for a regular cab, 8 for crew and double cab).

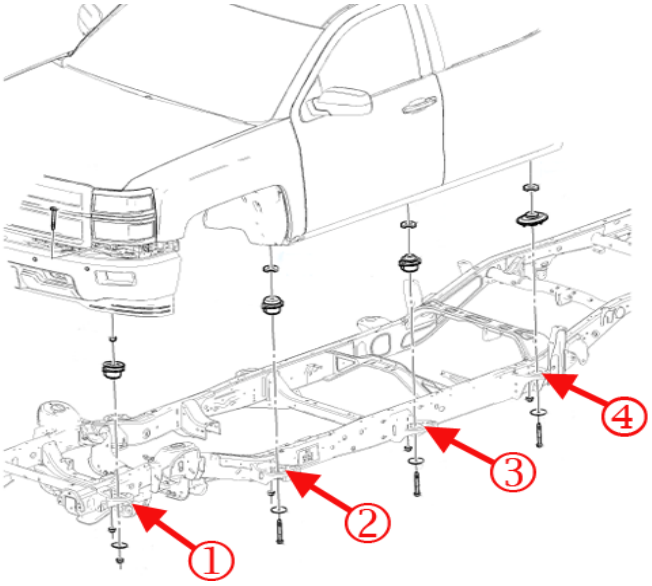
⇒ Using a large angled pry bar, lift up the cab body slightly to settle / relax it. Perform this at each mount location one at a time.

⇒ Repeat this cab mount settling process twice, to confirm the mounts are settled / relaxed.

Visually verify that the cab to box alignment is correct before re-torquing all mounts to specification found in Service Information, body repair, frame and under body section.

The cab / body mount position location

The numbers in the picture below indicate the specific mount position. The mounts on the passenger side of the vehicle are identified the same way. This will assist the technician to identify the correct location of each mount so they can be torque to the proper specification.



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1 = body mount cushion front

2 = body mount cushion position number 1

3 = body mount cushion position number 2

4 = body mount cushion position number 3

3. Pitchline runout – Pitchline runout will normally show as a 1st order tire vibration on the PicoScope. If after correcting tire(s) with excessive Road Force, a vibration exists, remove differential cover and check ring gear backlash. Every tooth should be checked for excessive backlash. If there is more than 0.0762 mm (0.003 in) of variation, the ring gear and/or differential should be replaced to correct the condition (SI Document ID# 3269088, 3620298) (PIP4148).

Backlash Adjustment Procedure

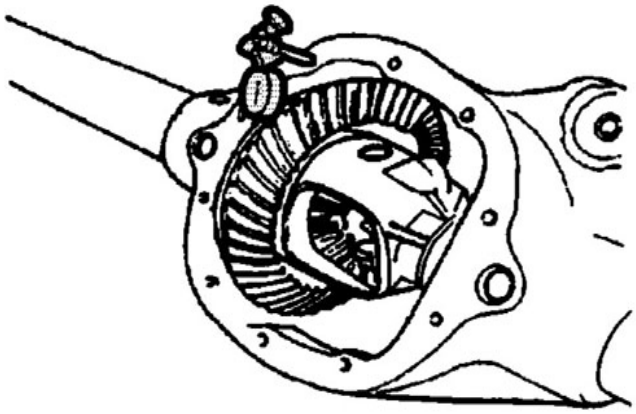
Special Tools:

- J-8001 Dial Indicator Set
- J-25025 Guide Pins

Note:

- Ensure that the side bearing surfaces in the axle housing are clean and free of burrs. If the original bearings are to be reused, the original bearing cups must also be used.
- The differential side bearings must be initially preloaded in order to determine the backlash of the gear set. After the backlash is set, the final bearing preload is set.
- Mark the bearing caps left or right sides.

1. Measure the rotating torque of the drive pinion and differential assembly. Refer to the Differential Drive Pinion Gear Bearing Replacement in SI.



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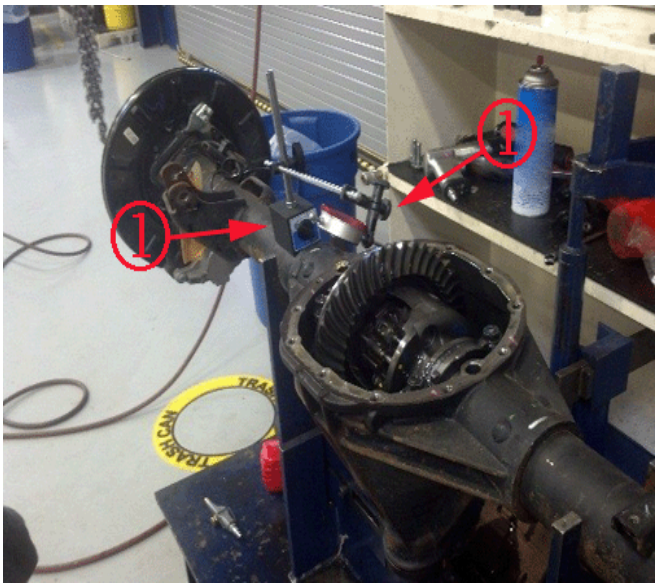
2. Install the J-25025 pins and the J-8001 indicator to the axle housing.

Note: Preload the dial of the J-8001-3 indicator approximately ¾ of a turn and zero the gauge.



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Note: The illustration above is for reference only. The differential does NOT need to be removed from the vehicle.

3. Set the J-8001-3 indicator (1) so that the stem is aligned with the gear rotation (1) and square to the tooth angle.
4. Hold the drive pinion stationary and move the ring gear back and forth.
5. Repeat the measuring procedure at **each tooth** around the ring gear.

6. The difference between the backlash at all of the measuring points should not vary by more than 0.05 mm (0.002 in).
7. If the difference between the backlash at all of the measuring points varies by more than 0.05 mm (0.002 in), inspect for burrs, a distorted case flange or uneven bolting.
8. If the difference between all the measuring points is within specifications, the backlash at the minimum lash point measured should be 0.08-0.25 mm (0.003-0.010 in) with a preferred backlash of 0.13-0.18 mm (0.005-0.007 in).

Note:

- Increasing or decreasing the shim thickness by 0.05 mm (0.002 in) will change the backlash adjustment approximately 0.03 mm (0.001 in).
- If the backlash is less than, select a smaller shim than the one that was removed. For example, to INCREASE the backlash by 0.05 mm (0.002 in), select a shim that is 0.10 mm (0.004 in) thinner than the shim that was removed.
- If the backlash is larger than, select a larger shim than the one that was removed. For example, to DECREASE the backlash by 0.05 mm (0.002 in), select a shim that is 0.10 mm (0.004 in) thicker than the shim that was removed.

9. Install the selected shim.

Caution: Use the correct fastener in the correct location. Replacement fasteners must be the correct part number for that application. Do not use paints, lubricants, or corrosion inhibitors on fasteners, or fastener joint surfaces, unless specified. These coatings affect fastener torque and joint clamping force and may damage the fastener. Use the correct tightening sequence and specifications when installing fasteners in order to avoid damage to parts and systems. When using fasteners that are threaded directly into plastic, use extreme care not to strip the mating plastic part(s). Use hand tools only, and do not use any kind of impact or power tools. Fastener should be hand tightened, fully seated, and not stripped.

10. If the backlash is to small, increase the backlash using the following procedure:
    10.1. Remove the bearing cap bolts and the bearing caps.

Note: Mark the bearing cups and the shims left or right.

    10.2. Remove the differential case assembly with the bearing cups and the shims.
    Note: Measure the production shim or the shim and service spacer in 3 locations.
    Measure each shim separately.
    10.3. Measure the thickness of left side shim pack.

Note: If the original shim is cast iron production shim, assemble the shim pack using a service spacer and service shims. For example, to increase the backlash by 0.05 mm (0.002 in), remove 0.10 mm (0.004 in) in of thickness from the left side shim pack.

    10.4. Calculate the average of the 3 measurements for each shim.

Note: If the original shim is cast iron production shim, assemble the shim pack using a service spacer and service shims. For example, to increase the backlash by 0.05 mm (0.002 in), remove 0.10 mm (0.004 in) of thickness from the left side shim pack.

    10.5. Assemble a new left side shim pack by decreasing the appropriate amount of thickness from the original left side shim pack.

Note: Measure each shim separately.

    10.6. Measure the thickness of right side shim or the shim and service spacer in 3 locations.

Note: Add the average of each of the shim measurements together. Record the measurement. This is the thickness for the right side shim pack.

    10.7. Calculate the average of the 3 measurements for each shim.
    10.8. Assemble a new right side shim pack by increasing the appropriate amount of thickness to the original right side shim pack. If the original shim is cast iron production shim, assemble the shim pack using a service spacer and service shims. For example, to increase the backlash by 0.05 mm (0.002 in), add 0.10 mm (0.004 in) of thickness to the right side shim pack.

11. Use the following procedure to decrease the backlash if the backlash is too large:
    11.1. Remove the bearing cap bolts and the bearing caps.

Note: Mark the bearing cups and the shims left or right.

    11.2. Remove the differential case assembly with the bearing cups and the shims.

Note: Measure the production shim or the shim and service spacer in 3 locations. Measure each shim separately.

    11.3. Measure the thickness of left side shim pack.

Note: Add the average of each of the shim measurements together. Record the measurement. This is the thickness for the left side shim pack.

11.4. Calculate the average of the 3 measurements for each shim.

11.5. Assemble a new left side shim pack by increasing the appropriate amount of thickness to the original left side shim pack. If the original shim is cast iron production shim, assemble the shim pack using a service spacer and service shims. For example, to increase the backlash by 0.05 mm (0.002 in), add 0.10 mm (0.004 in) of thickness to the left side shim pack.

Note: Measure the shim or the shim and service spacer in 3 locations. Measure each shim separately.

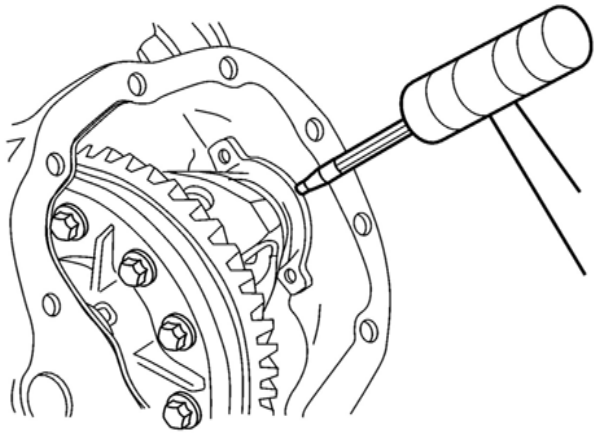
11.6. Measure the thickness of right side shim pack.

Note: Add the average of each of the shim measurements together. Record the measurement. This is the thickness for the right side shim pack.

11.7. Calculate the average of the 3 measurements for each shim.

11.8. Assemble a new right side shim pack by decreasing the appropriate amount of thickness to the original right side shim pack. If the original shim is cast iron production shim, assemble the shim pack using a service spacer and service shims. For example, to decrease the backlash by 0.05 mm (0.002 in), remove 0.10 mm (0.004 in) of thickness to the right side shim pack.

12. Install the differential case assembly with the bearing cups.
13. Install the left side service shims between the axle housing and the differential case.
14. Install the right side service shims between the axle housing and the differential case.



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Note: The service spacers must be installed between the service shim(s) and the axle housing.

15. Using the brass drift for 9.5/9.76 axle, install the left side service spacer.
16. Recheck the backlash and adjust, if necessary.
17. Install the bearing caps and bolts and tighten to 85 N•m (63 lb ft).
18. Recheck the backlash and adjust, if necessary.
19. Once backlash is correct, perform a gear tooth contact pattern check in order to ensure proper alignment between the ring and pinion gears. Refer to the Gear Tooth Contact Pattern Inspection in SI.

Note: Recheck the backlash following the steps above to verify that the backlash is within specifications.

20. Tighten the differential bearing cap bolts to 85 N•m (63 lb ft).
21. Measure the drive pinion and differential case side bearing preload and adjust, if necessary following the steps above.
22. Once the backlash and bearing preload is correct, perform a gear tooth contact pattern check in order to ensure proper alignment between the ring and pinion gears. Refer to the Gear Tooth Contact Pattern Inspection in SI.

Once all areas of vibrations has been reduced, if there is still vibration that the customer is concerned about, the following diagnosis maybe helpful to determine if a shock issue exists.

Warning: The following items should NOT be utilized until the source of the problem has been corrected.

Potential Vibration/Rough Ride:

Condition/Concern

The shock issues below DO NOT cause a vibration, it will only make an existing vibration feel worse. In some cases, a vibration that would not normally be a customer concern may now be felt due to a bad shock. But in general, the original source of the vibration, whether it is the wheels, tires, propeller shaft, etc, will have to be corrected. When diagnosing a vibration issue, there have been reports of the shocks amplifying the vibration felt inside the truck. Engineering has found that some shocks may have been built with contaminated shock oil. This may cause the shocks to dampen incorrectly.

This only applies to the following shocks:

- Rear- Only trucks listed with the Z71 option (RPO Z71, these shocks will be white in color)

Recommendation/Instructions:

Two checks are needed to be performed to verify if the shocks could be an issue:

1. Check the date code located on the bottom of the shock. The first 8 digits are the GM part number. The next 5 digits are the supplier part number. The last 5 digits will be the date code. Any shock built before A1474 could have an issue. The date code format is as follows: 1st digit is the plant, next 3 digits are the day of the year and the last digit is the last number of the year.

   Example:

   – A14743C

   – A = Plant

   – 147 = 147th Day of the Year

   – 4 = 2014

   – 3C = Drawing Change Level
2. If the rear shocks are built before this date code, they will have to be removed for a dynamic test.

Dynamic Test (Rear Shock – Z71 option only)

Starting with a fully extended shock, compress the rod taking notice of the first 10 millimeters of travel. A good shock will not have any free play and there will be immediate resistance to being compressed. A shock with an issue will have several millimeters of free play (no resistance) before feeling the resistance from being compressed. Replace any shocks with excessive free play. In most cases, the rear shocks will be the issue.

Warranty Information

For vehicles repaired under the Bumper-to-Bumper coverage (Canada Base Warranty coverage), use the following labor operation. Reference the Applicable Warranties section of Investigate Vehicle History (IVH) for coverage information.

Labor Operation	Description	Labor Time
3080138*	Perform Pico Scope Vibration Measurement and Road Test	0.5 hr
8080108*	Perform Road Force Measurement	0.9 hr
	Add time to vector each tire correction (Before and after Road force number should be noted on Vibration worksheet)	0.2 hr
3080088*	Perform Prop Shaft Measurement and Balance (two hose clamp method)	0.8 hr
8033641	Front Shock Absorber, Shock Absorber Component, or Spring Replacement - Both Sides	1.2 hrs
8044751	Rear Shock Absorber Replacement - Both Sides	0.7 hr
3080168*	Steering Gear Support Bushing Replacement	3.0 hrs
1431160	Body Mount Upper and Lower Cushion Replacement	1.2 hrs
Note: For steering wheel angle and/or front toe adjustment times, refer to labor code 8070012 and add the applicable base times to base labor hours.		
**	Replace Tire(s)	Use Published Labor Operation Time
*This is a unique Labor Operation for Bulletin use only. **Use the appropriate labor operation code in SI specific to the manufacturer of the tire being replaced.		

Notice: To access the Vibration Diagnostic Worksheet, Go to > Global Connect > Service Forms > General Information > Vibration Diagnostic Worksheet.