

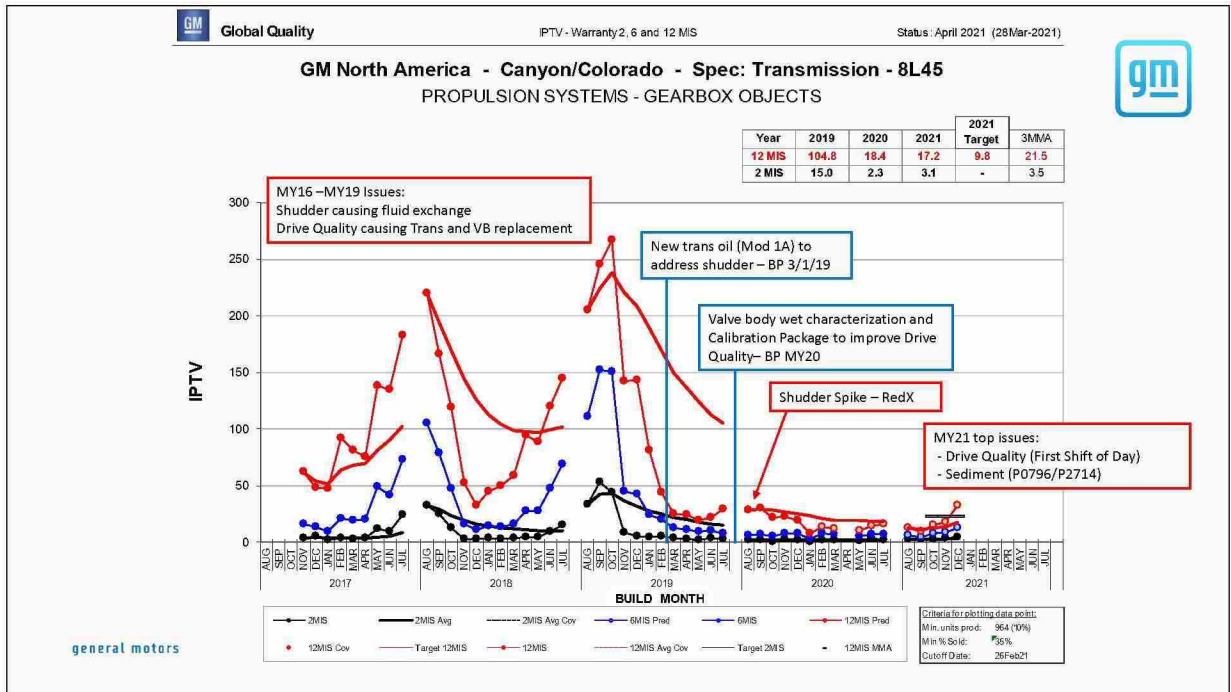
**Tab 6**  
**UNREDACTED**  
**VERSION OF**  
**DOCUMENT TO BE**  
**SEALED PURSUANT**  
**TO LR 5.3(b)(3)(B)(iii)**

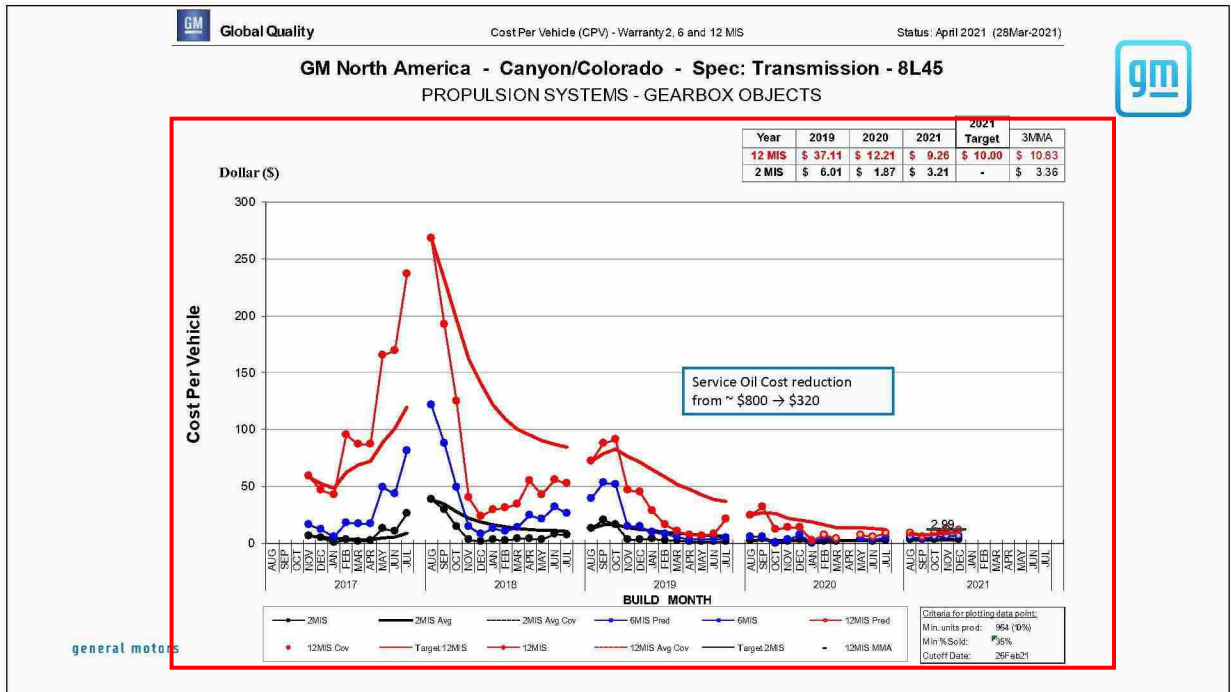


## 31XX2 8RWD Quality Update

Quality Council  
Dave Little  
04/15/2021







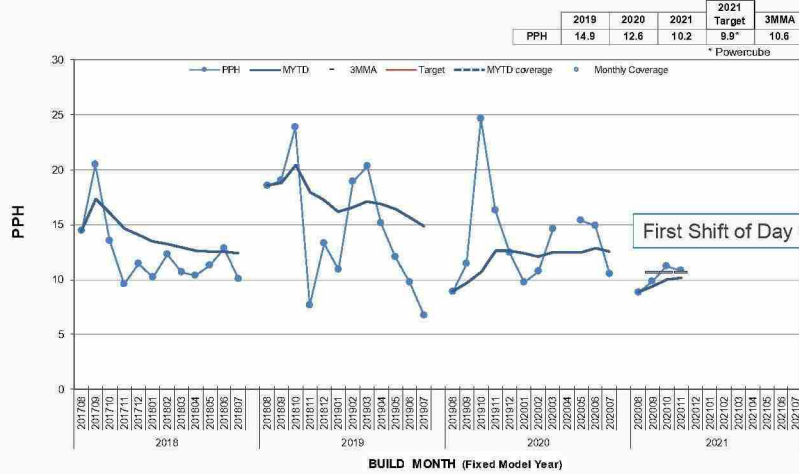
# 8RWD – Compass



Compass Status: April 2021



Can/Col (WEN) , Vehicles Sold In: GM North America , Specification: Transmission - 8L45  
SMT - Propulsion Systems - Trm



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Printed By: David Little

Minimum Sample: 50  
4/12/2021

## 8RWD GEN1– Top Open Issues



- Drive Quality Issues ~ 10 IPTV
  - No further improvements planned for GEN1 for Drive Quality concerns
  - GEN2 hardware and calibration to address customer Drive Quality concerns
- Sediment (P0796 / P2714) – Stuck Valves ~ 2 IPTV
  - Sector level transmission sediment reduction focus with many activities:
    - Bill of Sediment Elimination (BOSE) audit required for BIQ
    - Adding drawing specifications for sediment
    - SQE audits for sediment for purchased parts
  - SW/Cal investigation to flush line solenoid at Key off & diagnostic action
  - 8RWD GEN2 Spacer Plate screen. Has shown significant improvement in other programs
- Shudder – RedX investigation ongoing
  - 2 TCC Shudder cases identified in MY21. Takes ~10k miles for shudder to appear
  - RedX candidate is aluminum particles and oxides sediment. Suspect grind media elements
  - Element analysis of Torque Converter filters at TTO show same elements in WOW transmission. Further investigation with TC supplier
  - GEN2 has Centrifugal Pendulum Absorber (CPA) Torque converter. In T1XX w/CPA no case of confirmed shudder

general

## 8RWD Gen1 Drive Quality Issues



### ***What do customers still comment on?***

“ After shifting into gear in the morning, there is a delay and then a harsh shift ”

Harsh Garage Shifts

“ Pulling out of my driveway I feel a bump on the first shift at 5 MPH ”






























First Shift of the Day

“ Coming to a stop it feels like I was rear ended ”

Rough Coast Downs

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**8RWD GEN2 addresses these customer facing issues**

8RWD Gen2 Hardware Improvements							
Gen2 Change	Harsh Garage Shifts	First Shift of the Day	Rough Coast Downs	Supplier	Plant Impact		
VB + Park Clutch Prime 					VB Mach. VB Sub. VB Test		
Electric Aux. Pump 					VB Mach. VB Sub. VB Test		
One Way Clutch 					Case Mach. Main Line		
Clutch Optimization Wave Plate & Fibers 					Clutch Sub. Main Line		
 Many other smaller improvements:	 Reduced Lube	 Coil Pack Springs	 Over Drive Pump	 Pressure Sensor	 Dir. Speed Sensors	 New Filter	 Piston Seals



# 8RWD Gen1 Drive Quality Issues



**Issue: How do we know Gen2 8 speed RWD will meet Top Quartile drive quality metrics?**

- Advanced Analytics team lead by Gary Cygan(DSE) to develop an integrated system model to predict variation and assess robustness to variation
  - First use of a high fidelity model architecture to simulate hydraulics, clutch systems, full integration w/TCM and Software In The Loop
  - Phase 1 compared Gen2 Gamma to Gen 1
  - Phase 2 compared Gen2 Gamma to the benchmark transmission of ZF8HP75(Dodge Ram) and 10 Speed RWD 10R80
- Shift quality DOE methodology used with 2 DOEs: Green and Adapted with 25 sources variation

**Results:**

- ZF 8HP75 and 10R80 have excellent variation robustness
- **Gen2 Gamma performed as good or better to benchmark transmissions**

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