



Navistar, Inc.  
2701 Navistar Drive  
Lisle, IL 60532 USA

W : navistar.com

Bruce York, Chief  
Medium and Heavy Duty Vehicles Division  
Office of Defects Investigation  
National Highway Traffic Safety Administration  
1200 New Jersey Ave. S.E.  
Washington, D.C. 20590

September 9, 2015

Ref.: NVS-213  
PE15-013phk

Dear Mr. York:

This letter is in response to your letter of July 29, 2015 requesting information for a Preliminary Evaluation to investigate allegations of accelerator pedals that do not return completely to an idle position in certain Navistar trucks and busses built since 2011 that use the Williams throttle control unit.

The following information is submitted in itemized format corresponding to your numeric requests:

1. State, by model and model year, the number of subject vehicles Navistar has manufactured for sale or lease in the United States. Separately, for each subject vehicle manufactured to date by Navistar, state the following:
  - a. Vehicle identification number (VIN);
  - b. Make;
  - c. Model;
  - d. Indicate which Models are school bus and public commuter busses;
  - e. Model Year;
  - f. Subject component part number and design version installed as original equipment;
  - g. Date of manufacture;
  - h. Date warranty coverage commenced; and
  - i. The State in the United States where the vehicle was originally sold or leased (or delivered for sale or lease).

Provide the table in Microsoft Access 2010, or a compatible format, entitled "PRODUCTION DATA."

Response 1:

| Vehicle Build Period  | Number of Vehicles |
|-----------------------|--------------------|
| 1/1/2011 thru 7/31/15 | 195,541            |

Please refer to the attached "PRODUCTION DATA" Excel spreadsheet for further details.

2. State the number of each of the following, received by Navistar, or of which Navistar is otherwise aware, which relate to, or may relate to, the alleged defect in the subject vehicles:
  - a. Consumer complaints, including those from fleet operators;
  - b. Indicate if the vehicle was a school bus or public commuter;
  - c. Property damage claims; and
  - d. Third-party arbitration proceedings where Navistar is or was a party to the arbitration; and
  - e. Lawsuits, both pending and closed, in which Navistar is or was a defendant or codefendant.

For subparts "a" through "f" state the total number of each item (e.g., consumer complaints, field reports, etc.) separately. Multiple incidents involving the same vehicle are to be counted separately. Multiple reports of the same incident are also to be counted separately (i.e., a consumer complaint and a field report involving the same incident in which a crash occurred are to be counted as a crash report, a field report and a consumer complaint).

In addition, for items "c" through "f" provide a summary description of the alleged problem and causal and contributing factors and Navistar's assessment of the problem, with a summary of the significant underlying facts and evidence. For items "e/f" and "f" identify the parties to the action, as well as the caption, court, docket number, and date on which the complaint or other document initiating the action was filed.

Response 2:

- a. Navistar has received (24) consumer complaints and (2) field reports related to the alleged defect.
  - b. Two of the consumer complaints related to the alleged defect were for school buses.
  - c. Navistar has received (0) property damage claims.
  - d. Navistar is not aware or involved in any third party arbitration proceedings relating to the alleged defect.
  - e. Navistar is not aware or involved in any closed or pending lawsuits related to the alleged defect.
3. Separately, for each item (complaint, report, claim, notice, or matter) within the scope of your response to Request No. 2, state the following information:
  - a. Navistar's file number or other identifier used;
  - b. The category of the item, as identified in Request No. 2 (i.e., consumer complaint, field report, etc.);
  - c. Vehicle owner or fleet name (and fleet contact person), address, and telephone number;
  - d. Vehicle's VIN;
  - e. Vehicle's make, model and model year;

- f. Report if the vehicle was a school bus or a public commuter Buss
- g. Vehicle's mileage at time of incident;
- h. Incident date;
- i. Report or claim date;
- j. Whether a crash is alleged;
- k. Whether property damage is alleged;
- l. Number of alleged injuries, if any; and
- m. Number of alleged fatalities, if any.

Provide this information in Microsoft Access 2010, or a compatible format, entitled "REQUEST NUMBER TWO DATA."

Response 3:

Please refer to the attached "REQUEST NUMBER TWO DATA" Excel spreadsheet. In addition, for questions 3 (j-m), Navistar is not aware of any alleged crashes, property damage, injuries or fatalities, which relate to the alleged defect.

- 4. Produce copies of all documents related to each item within the scope of Request No. 2. Organize the documents separately by category (i.e., consumer complaints, field reports, etc.) and describe the method Navistar used for organizing the documents. Describe in detail the search methods and search criteria used by Navistar to identify the items in response to Request No. 2.

Response 4:

Please refer to column Y of the attached "REQUEST NUMBER TWO DATA" Excel spreadsheet which includes the customer comments for each of the complaints and field reports related to the alleged defect. Navistar searched case file data items related to electrical systems issues. Those results were then reviewed, looking for descriptions and comments that were documented with one or more of the following; stick, hang, stuck, not return to idle, RPMs rev up and words that would indicate a potential increase in RPMs or RPMs not returning to expected idle speed.

- 5. State, by model and model year, a total count for all of the following categories of claims, collectively, that have been paid by Navistar to date that relate to, or may relate to, the alleged defect in the subject vehicles: warranty claims; extended warranty claims; claims for good will services that were provided; field, zone, or similar adjustments and reimbursements; and warranty claims or repairs made in accordance with a procedure specified in a technical service bulletin or customer satisfaction campaign.

Separately, for each such claim, state the following information:

- a. Navistar's claim number;
- b. Vehicle owner or fleet name (and fleet contact person) and telephone number;
- c. VIN;
- d. Repair date;
- e. Vehicle mileage at time of repair;
- f. Repairing dealer's or facility's name, telephone number, city and state or ZIP code;
- g. Labor operation number;
- h. Problem code;

- i. Replacement part number(s) and description(s);
- j. Concern stated by customer; and
- k. Comment, if any, by dealer/technician relating to claim and/or repair.

Provide this information in Microsoft Access 2010, or a compatible format, entitled "WARRANTY DATA."

Response 5:

Navistar searched its warranty claim database for issues related to the alleged defect. The search resulted in 1,233 relevant warranty claims including 1,027 warranty claims on vehicles built in the period between the April 26, 2012 Williams tooling change and the April 3, 2013 accelerator pedal update. The complete set of data is provided in the attached "WARRANTY DATA" Excel spreadsheet.

6. Describe in detail the search methods and search criteria used by Navistar to identify the claims in response to Request No. 5, including the labor operations, problem codes, part numbers and any other pertinent parameters used. Provide a list of all labor operations, labor operation descriptions, problem codes, and problem code descriptions applicable to the alleged defect in the subject vehicles. State, by make and model year, the terms of the new vehicle warranty coverage offered by Navistar on the subject vehicles (i.e., the number of months and mileage for which coverage is provided and the vehicle systems that are covered). Describe any extended warranty coverage option(s) that Navistar offered for the subject vehicles and state by option, model, and model year, the number of vehicles that are covered under each such extended warranty.

Response 6:

The search criteria used for Request No.5 was:

- The Accelerator Pedal Part Numbers (2595195C91, 2595196C91, 2595195C92, 3828434C91, 6121133C1, 6121040C1)
- Claims coded to:
  - Engine Accelerator Pedal
- In addition all claims were reviewed looking for descriptions and comments that were documented with one or more of the following; stick, hang, stuck, not return to idle, RPMs rev up and words that would indicate a potential increase in RPMs or RPMs not returning to expected idle speed.

Each Model vehicle is covered by the following basic vehicle warranties:

- DuraStar – 24 Months/Unlimited Miles
- LoneStar – 12 Months/100,000 Miles
- ProStar – 12 Months/100,000 Miles
- TerraStar – 36 Months/36,000 Miles
- WorkStar – 12 Months/Unlimited Miles
- Heavy WorkStar – 12 Months/Unlimited Miles
- IC AE Bus – 12 Months/Unlimited Miles
- IC AC Bus – 12 Months/Unlimited Miles
- IC HC Bus – 12 Months/Unlimited Miles
- IC School Bus – 12 Months/Unlimited Miles

- IC Commercial Bus – 12 Months/Unlimited Miles  
Custom extended warranties are available at the customer's request.

7. Produce copies of all service, warranty, and other documents that relate to, or may relate to, the alleged defect in the subject vehicles, that Navistar has issued to any dealers, regional or zone offices, field offices, fleet purchasers, or other entities. This includes, but is not limited to, bulletins, advisories, informational documents, training documents, or other documents or communications, with the exception of standard shop manuals. Also include the latest draft copy of any communication that Navistar is planning to issue within the next 120 days.

Response 7:

Navistar released an information article, pertaining to the accelerator pedal sensor on 8/12/2014. The article pertains to returning Williams accelerator pedals (PN 2595195C91) from the dealership inventory to Navistar's Parts Distribution Centers to be replaced with Williams accelerator pedals identified with a different label location that had gone through the new verification (x-ray) process. See attached "PRODUCT RETURN NOTICE" document.

For base warranty documents see attached; DuraStar Warranty, Heavy WorkStar Warranty, WorkStar Warranty, LoneStar Warranty, ProStar Warranty, and TerraStar Warranty, IC AC Bus Warranty, IC AE Bus Warranty, IC Commercial Bus Warranty, IC HC Bus Warranty, IC School Bus Warranty

8. Describe all assessments, analyses, tests, test results, studies, surveys, simulations, investigations, inquiries and/or evaluations (collectively, "actions") that relate to, or may relate to, the alleged defect in the subject vehicles that have been conducted, are being conducted, are planned, or are being planned by, or for, Navistar. For each such action, provide the following information:
  - a. Action title or identifier;
  - b. The actual or planned start date;
  - c. The actual or expected end date;
  - d. Brief summary of the subject and objective of the action;
  - e. Engineering group(s)/supplier(s) responsible for designing and for conducting the action; and
  - f. A brief summary of the findings and/or conclusions resulting from the action.

For each action identified, provide copies of all documents related to the action, regardless of whether the documents are in interim, draft, or final form. Organize the documents chronologically by action.

Response 8:

Dead band Containment Testing Feb2013

- a. Bias Bracket to Housing and Dead Band Validation (Ref 8D25389 ICA 2)
- b. February 2013
- c. February 2013
- d. Validate dead band programming as effectively negating effects of sensor movement after installation and initial programming.
- e. Williams Controls
- f. Dead band is an effective way to guard against change in CT electrical values.

WRTS 13-42660 May2013

- a. Subjective accelerator pedal evaluation (Ref 8D25389 ICA 1 – Implement dead band in sensor outputs)
- b. April 15, 2013
- c. April 23, 2013
- d. Evaluate drivability of accelerator pedals with increased dead band.
- e. Navistar Vehicle Testing
- f. Pedal dead band was noticed by drivers.

A-5860 Report Aug2013

- a. A-5860 – WM-542/400483/Endurance-Product Validation
- b. June 20, 2013
- c. August 13, 2013
- d. Validation of the accelerator pedal using deadband containment programming.
- e. Williams Controls
- f. Data from the assemblies is within the max/min limits.

WRTS 15-60279 Aug2015

- a. Accelerator Pedal Testing to Respond to NHTSA PE15-013
- b. August 4, 2015
- c. Still in progress
- d. Perform tests to determine if additional brake pressure is required to stop a vehicle in a certain stopping distance when an accelerator pedal is at 1.2 volts and at approximately 1.28 volts.
- e. Navistar Vehicle Testing
- f. Testing in progress.

See Attachments:

DeadbandContainmentTesting Feb2013  
 WRTS 13-42660 May2013  
 A-5860 Report Aug2013

9. Describe all modifications or changes made by, or on behalf of, Navistar in the design, material composition, manufacture, quality control, supply, or installation of the subject component, from the start of production to date, which relate to, or may relate to, the alleged defect in the subject vehicles. For each such modification or change, provide the following information:
  - a. The date or approximate date on which the modification or change was incorporated into vehicle production;
  - b. A detailed description of the modification or change;
  - c. The reason(s) for the modification or change;
  - d. The part number(s) (service and engineering) of the original component;
  - e. The part number(s) (service and engineering) of the modified component;
  - f. Whether the original unmodified component was withdrawn from production and/or sale, and if so, when;

- g. When the modified component was made available as a service component; and
- h. Whether the modified component can be interchanged with earlier production components.

Also, provide the above information for any modification or change that Navistar is aware of which may be incorporated into vehicle production within the next 120 days.

Response 9:

There were 7 modifications to the Williams Accelerator Pedal in question during the 1/1/2011 to 7/31/2015 timeframe.

Williams Controls tooling change

- a. April 26, 2012
- b. Williams Controls unauthorized tooling change
- c. Plastic housing production moved from US to China.
- d. 3602717F94, 3602718F94, 3814684F91, 3814685F91, 3828434C91, 2595195C91, 2595196C91
- e. No change
- f. All product was changed over.
- g. New orders filled with updated components.
- h. Yes, new components can replace old

Sensor dead band implemented

- a. April 4, 2013 (Navistar factory date)
- b. Sensor dead band implemented.
- c. Dead band compensates for mechanical variation in the pedal.
- d. 3602717F94, 3602718F94, 3814684F91, 3814685F91, 3828434C91, 2595195C91
- e. No change (Parts built under deviation)
- f. All product was changed over to updated design.
- g. New orders filled with updated components.
- h. Yes, new components can replace old

Dead band decreased

- a. June 11, 2013 (Navistar factory date)
- b. Dead band decreased to 0.75 degree nominal.
- c. Improved vehicle drivability.
- d. 3602717F94, 3602718F94, 3814684F91, 3814685F91, 3828434C91, 2595195C91
- e. No change (Parts built under deviation)
- f. All product was changed over to updated design.
- g. New orders filled with updated components.
- h. Yes, new components can replace old

Williams end of line (EOL) testing changes

- a. July 12, 2013
- b. SREA S-NAVT-13-302. Changes to end of line testing at Williams Controls. Pedal held more firmly to prevent movement while under test. Changed programming target from an angle to a percent of travel. Changed resolution on end of line test from 0.1° to 0.01°.
- c. Improved accuracy of end of line test.

- d. 3602717F94, 3602718F94, 3814684F91, 3814685F91, 3828434C91, 2595195C91
- e. No change (Parts built under deviation)
- f. All product was changed over to updated design.
- g. New orders filled with updated components.
- h. Yes, new components can replace old

#### Additional EOL testing changes

- a. September 17, 2013
- b. SREA S-NAVT-13-441. Additional changes to end of line testing at Williams Controls. The dead band estimation routines were improved.
- c. Improved ability of the measurement system. Allow more stable and normal distribution of newly established dead band characteristics.
- d. 3602717F94, 3602718F94, 3814684F91, 3814685F91, 3828434C91, 2595195C91
- e. No change (Parts built under deviation)
- f. All product was changed over to updated design.
- g. New orders filled with updated components.
- h. Yes, new components can replace old

#### 100% X-ray check at end of line

- a. April 2014
- b. 100% X-ray check at end of line.
- c. Sort for pedals with sensor spring binding at idle position.
- d. 3602717F94, 3602718F94, 3814684F91, 3814685F91, 3828434C91, 2595195C91
- e. No change (Parts built under deviation)
- f. All product was changed over to updated design.
- g. New orders filled with updated components.
- h. Yes, new components can replace old

#### Release Update

- a. January 12, 2015
- b. Release all of the previous changes being built under deviation.
- c. Update drawings and part numbers to document changes.
- d. 3602717F94, 3602718F94, 3814684F91, 3814685F91, 3828434C91, 2595195C91
- e. 6121145F91, 6121146F91, 6121147F91, 6121148F91, 6121133C1, 6121040C1, 2595195C91
- f. All product was changed over to updated design.
- g. New orders filled with updated components.
- h. Yes, new components can replace old

#### 10. Please make available one of each of the following if testing is conducted on behalf of ODI:

- a. Exemplar samples of each design version of the subject component
- b. Field return samples of the subject component exhibiting the subject failure mode; and
- c. Any kits that have been released, or developed, by Navistar for use in service repairs to the subject component/assembly which relate, or may relate, to the alleged defect in the subject vehicles.

Response 10:

- a. Navistar will work with Williams Controls to supply each design version of the accelerator pedal upon request.
  - b. Field return samples exhibiting the subject failure mode will be shipped upon request.
  - c. There are currently no kits released or developed for the alleged defect. The current repair is to remove and replace the accelerator pedal.
11. State the number of each of the following that Navistar has sold that may be used in the subject vehicles by component name, part number (both service and engineering/production), model and model year of the vehicle in which it is used and month/year of sale (including the cut-off date for sales, if applicable):
- a. Subject component; and
  - b. Any kits that have been released, or developed, by Navistar or Williams Controls for use in service repairs to the subject component/assembly.

For each component part number, provide the supplier's name, address, and appropriate point of contact (name, title, and telephone number). Also identify by make, model and model year, any other vehicles of which Navistar is aware that contain the identical component, whether installed in production or in service, and state the applicable dates of production or service usage.

Response 11:

See attached document "SERVICE PART INFORMATION" for detailed information on the production and service part numbers.

Tab "Model Service Parts";

- Provides the production Part Numbers and the Service Part Numbers that were / are available for vehicles built during the requested time frame. This would include the subject components and any kits that was released by Navistar and Williams Controls
- Provides the data using the production part number, model of vehicle, model year, design version, number of assemblies installed and the replacement service part number.

Tab "Service Parts Usage";

- For the production part numbers eight of the ten part numbers are production only part numbers. Two of the production numbers are also used as the Service Part Number
- For the Service Part Numbers these are the replacement components that was / are being used to service the requested vehicles.

The following are part numbers Williams Controls sold to Navistar:

3602717F94  
 3602718F94  
 3814684F91  
 3814685F91  
 6121145F91  
 6121146F91  
 6121147F91  
 6121148F91  
 3828434C91  
 6121133C1

2595195C91  
 2595196C91  
 2595195C92  
 6121040C1

Contact Information:

Curtis-Wright  
 Williams Controls  
 14100 SW 72nd Avenue  
 Portland, OR 97224, USA

Kurt Studer  
 Director of Quality  
 503-684-3801

Nearly all Navistar Model Year 2011 through Model Year 2016 ProStar, LoneStar, TranStar, DuraStar, TerraStar, and WorkStar trucks as well as IC School Buses and IC Commercial Buses manufactured for sale or lease with Navistar and non-Navistar engines were built with the subject Williams Controls accelerator pedal. The summary below includes the number of the vehicles built with the same Williams accelerator pedal by make, model, and model year that were not included in the PRODUCTION DATA spreadsheet quantities including:

- Navistar Model Year 2011 and 2012 vehicles manufactured prior to 1/1/2011 for sale or lease in the US.
- Navistar vehicles manufactured for sale or lease in Canada from 3/4/2010 thru 7/31/2015.
- Navistar vehicles manufactured for sale or lease in the US and Canada with non-Navistar engines from 12/11/2012 thru 7/31/2015.

| Make          | Model             | Model Year 2011 | Model Year 2012 | Model Year 2013 | Model Year 2014 | Model Year 2015 | Model Year 2016 |
|---------------|-------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Navistar      | DuraStar          | 7,623           | 2,095           | 1,690           | 1,119           | 573             | 218             |
| Navistar      | IC School Bus     | 1,286           | 4,040           | 1,343           | 1,069           | 914             | 1,078           |
| Navistar      | IC Commercial Bus | 38              | 121             | 97              | 44              | 60              | 17              |
| Navistar      | LoneStar          |                 |                 | 177             | 61              | 137             | 139             |
| Navistar      | ProStar           | 3,776           | 2,113           | 1,748           | 1,786           | 1,847           | 1,346           |
| Navistar      | TerraStar         |                 | 1,122           | 480             | 462             | 230             | 102             |
| Navistar      | TranStar          | 944             | 229             | 178             | 226             | 266             | 113             |
| Navistar      | WorkStar          | 3,479           | 1,854           | 1,300           | 994             | 926             | 723             |
| <i>Totals</i> |                   | <i>17,146</i>   | <i>11,574</i>   | <i>7,013</i>    | <i>5,761</i>    | <i>4,953</i>    | <i>3,736</i>    |
| <b>Total</b>  |                   |                 |                 |                 |                 |                 | <b>50,183</b>   |

The applicable date of production and service usage spans from 1/12/2010 thru current.

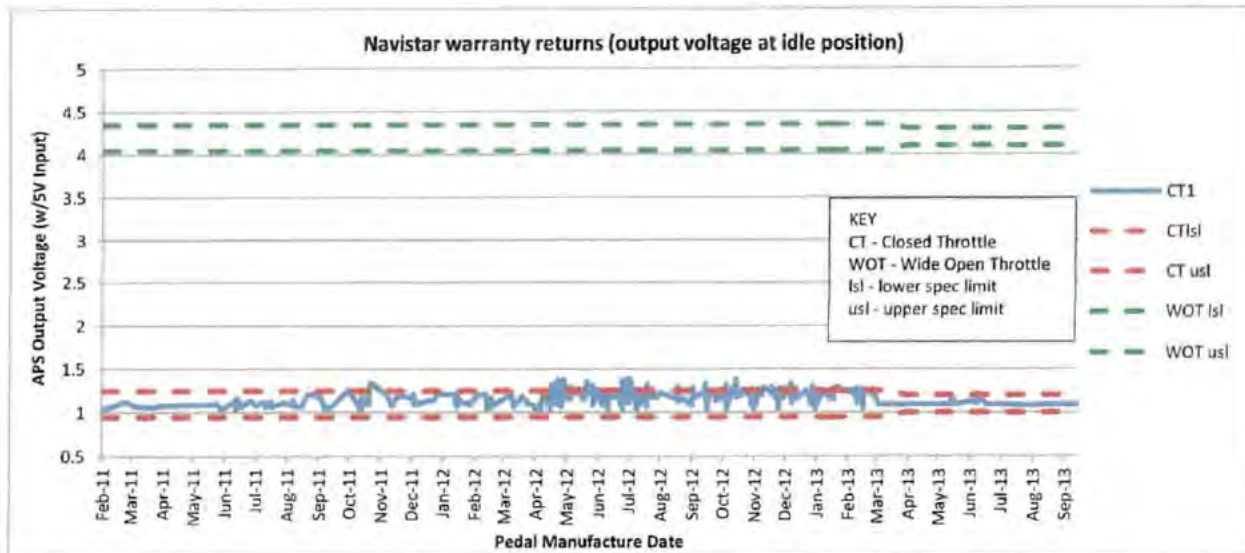
12. Furnish Navistar's assessment of the alleged defect in the subject vehicle, including:

- a. The causal or contributory factor(s);
- b. The failure mechanism(s);
- c. The failure mode(s);
- d. The risk to motor vehicle safety that it poses; and
- e. What warnings, if any, the operator and the other persons both inside and outside the vehicle would have that the alleged defect was occurring or subject component was malfunctioning;

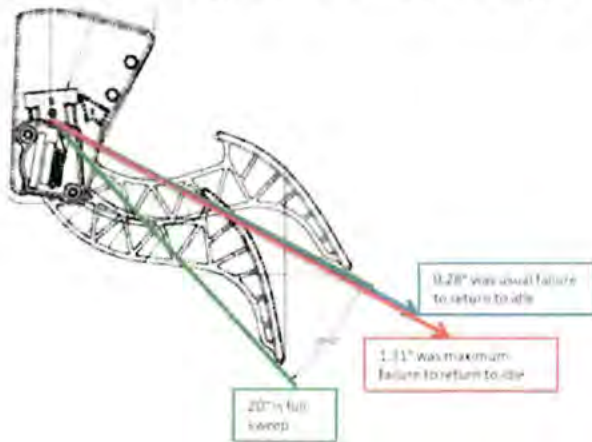
Response 12:

- a. Navistar's assessment of the cause or contributory factors of the accelerator pedal not returning completely to the idle position after being depressed is due to relative motion between components within the accelerator pedal sensor.
- b. The failure mechanism is the possibility that the Accelerator pedal will not return to the original idle position after being depressed.
- c. The failure mode is an increased idle speed.
- d. Navistar's assessment is that the increased idle speed condition does not present a vehicle safety issue because the increased idle speed will require only minimal increased brake pedal effort to stop the vehicle in the same distance.
- e. The warning that persons inside and/or outside the vehicle would have that the alleged defect was occurring would be increased idle speed, increasing engine speed when clutch pedal is depressed, inhibited shifts (Automatic and Automated Manual Transmissions), difficulty shifting (Manual Transmission), and disabled engine brake (if equipped). These issues could cause customer complaint and require shop repairs.

In summary, the accelerator pedal in question was cause for a number of the complaints due to slightly elevated accelerator pedal sensor voltage output levels at the closed throttle (CT) position causing an increase in the idle speed. This phenomenon with the pedal does not, and cannot occur at any position other than at the idle position. The chart below shows the output voltage of the CT position of 496 returned accelerator pedals by pedal manufacture date. The chart shows the increased voltage output within a small band slightly above the intended idle position. Also evident in the chart is the number of alleged accelerator pedals with slightly elevated CT output increased in the May 2012 timeframe and the number decreased in the March 2013 timeframe.



This issue physically equates to a maximum of 1.31 degrees of increased pedal angle at the CT position relative to a 20 degree accelerator pedal angle associated with the full throttle position.



An increased idle speed condition does create vehicle performance characteristics that may result in customer complaints, but in Navistar's assessment, does not present a vehicle safety issue. We have demonstrated that only minimal additional brake pedal effort (both hydraulic and air) is required to stop the vehicle in the same distance due to increased idle speeds. No recorded crashes, property damage, injuries or fatalities related to this issue have been reported.

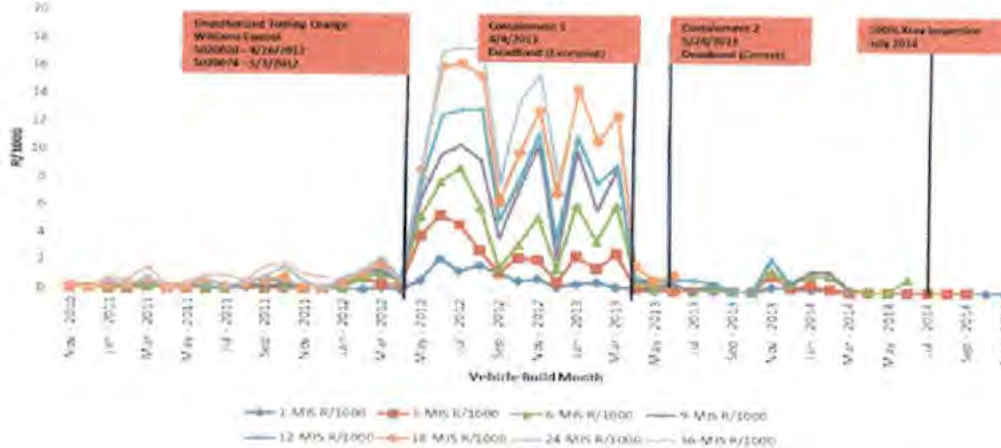
The Chart below shows the repairs per 1000 vehicles by vehicle build date. This clearly shows the increased APS warranty repairs for various "months in service" (MIS) for vehicles built in the April 2012 to March 2013 timeframe which corresponds to the April 26, 2012 tooling change by Williams Controls and the updates implemented on April 4, 2013.

## Truck R/1000 chart

Nov 2010 thru Nov 2014

### Sticky APS R/1000 Trend chart, US/CAN

WC: 01,03,39,98



The increased warranty during this timeframe was what drove the change request (Pyxis Concern) which was included in Navistar's third quarter 2013 TREAD report. The resulting investigation and correction of the accelerator pedal issue has resulted in having only 17 related warranty claims on vehicles built since January 1, 2014.

The undersigned should be contacted for any additional information regarding this issue on (331) 332-1590.

Sincerely,

*R. L. Van Laar*

R. L. Van Laar  
Product Compliance Manager  
Navistar, Inc.

