

Chronology of Defect / Noncompliance Determination

Provide the chronology of events leading up to the defect decision or test data for the noncompliance decision.

June 2013 - November 2014: Ford's routine analysis of warranty and field data identified reports of wheel slip on 2011-2012 F-150 related to transmission lead frame replacements. This issue was opened in Ford's Critical Concern Review Group (CCRG) for further review. Extensive analysis of field return parts and ongoing analysis of field data did not identify a trend pertaining to any particular cause. In the vast majority of reports, drivers were able to maintain vehicle control, safely stop the vehicle, and immediately resume driving. No defect trend was identified. Accordingly, this issue was closed by Ford's CCRG. However, Ford continued to monitor this issue.

August 2015 – February 2016: This issue and ongoing data analysis were reviewed in September 2015 by Ford's CCRG for further review. Analysis of field return parts and review of the lead frame supplier's records identified resistor solder joint cracks located on the OSS circuit board. These were found to result from a lack of maintenance and cleaning of solder dispensing equipment at the lead frame supplier's manufacturing facility during the months of August – December 2011. Analysis of all of the field reports indicated that nearly 98% of reports relating to OSS failure did not result in a downshift into 1st gear or wheel slip. An intermittent signal from the OSS could be misinterpreted by the transmission control module resulting in a downshift to 1st gear; however, by design, the complete loss of the OSS signal will always set a fault code and result in 5th gear operation if the vehicle was in 4/5/6th gears when the fault occurred, or 3rd gear operation if the vehicle was in 1/2/3rd gears, none of which would be expected to result in wheel slip. This fault code would be accompanied by a wrench light and can be cleared by stopping the vehicle and restarting. In February 2016 Transport Canada contacted Ford regarding reports of sudden deceleration caused by unexpected/un-commanded down-shifting of the automatic transmission.

March – April 2016: Ford's investigation and updated data analysis identified a trend of new reports of temporary, unintended downshifts into 1st gear with some degree of rear wheel lock-up. Ford is aware of three accident allegations (including one VOQ) on the affected vehicles that might relate to this condition, with no injuries.

On April 17, 2016, the subject was brought to Ford's Field Review Committee (FRC) for review, and a field action was approved.

September 1, 2016: Ford revised the number of vehicles potentially involved from 184,000 to 153,581 along with the vehicle build dates based on traceability data. Transmission serial numbers provided by the supplier were used to identify the actual vehicle VINS affected. Owner letters were mailed on June 20, 2016 only to owners included in the revised population.