## 2011-2017 My Optima, 2011-2018 MY Sportage, 2012-2017 MY Sorento High Pressure Fuel Pump Outlet Inspection Basis of Safety Defect Determination 573.6(c)(6) [AMENDED]

| March 31, 2017    | Kia Motors America, Inc. ("KMA") initiates recall of 2011-<br>2014MY Optima, 2012-2014MY Sorento and 2011-2013MY  |
|-------------------|---|
|                   | Sportage due to engine stalling (17v224).   |
| August 2018       | KMA identifies that some reports of engine fires may be related to<br>vehicles which have been repaired under recall 17v224. No cause<br>identified. KMA expands its fire investigation efforts by creating<br>a dedicated portion of its customer assistance call center to  |
|                   | manage every allegation of fire received and acquiring services of  |
|                   | selected team of vehicle fire investigators to investigate and  |
|                   | inspect reported fires.   |
| August 21, 2018   | NHTSA opens Defect Petition (DP18-003) to investigate non crash fires involving 2011-2014MY Kia Optima and Sorento vehicles. Additional KMA focus added to already ongoing fire investigation efforts.  |
| September 2018    | KMA issues to its dealers Engine Replacement Practices  |
|                   | Reminder technical service bulletin emphasizing importance of<br>proper engine replacement practices and verification of proper   |
| October 20, 2018  | repairs.<br>NHTSA and KMA begin holding weekly telephone conferences  |
| Octobel 20, 2016  | regarding vehicle fire inspections that have been or will be  |
|                   | conducted in the future so that KMA and NHTSA can share   |
|                   | inspection results and potential defect trends in real time.  |
| November 20, 2018 | KMA advises NHTSA during weekly telephone conference that it  |
| ,                 | believes, although not confirmed, that fires occurring in 11-14 MY  |
|                   | vehicles with post-recall engine replacement may be related to  |
|                   | leaking fuel or engine oil.   |
| November 27, 2018 | NHTSA/Kia weekly telephone conference. KMA identifies focus<br>of investigation of post-recall engine replacement fires is potential<br>fuel leaking from high pressure fuel line and fuel pump outlet<br>area. Possible misalignment and/or improper torqueing of fuel<br>pipe to fuel pump by certain technicians during engine<br>replacement. |
| December 4, 2018  | KMA meets with Kia Motors Corporation ("KMC") in Korea to   |
|                   | advise details of vehicle fire inspection results and its analysis of   |
|                   | potential causes.   |
| December 11, 2018 | KMA advises NHTSA that KMC is evaluating the issue. Final   |
|                   | decision expected shortly.  |
| December 14, 2018 | KMA confirms fuel leaking due to improper repair for fire   |
|                   | incident vehicle identified to NHTSA during 12/11/18 call. KMA  |
|                   | reports results to KMC.   |
| December 17, 2018 | KMC immediately makes decision to conduct a voluntary safety  |
|                   | recall. No accidents or injuries reported. Six (6) post engine  |

|                       | replacement recall repairs leading to fires have been identified or |
|-----------------------|---|
|                       | suspected.  |
| December 19, 2018     | KMA initiates recall SC172 High Pressure Fuel Pump Outlet           |
|                       | Inspection by providing a 573 notice to NHTSA. This recall          |
|                       | covers vehicles which have received replacement engines under       |
|                       | prior recall 17v224.  |
| January 6-7, 2019     | Evaluation of 2015-2018 MY Optima, Sorento and Sportage             |
|                       | vehicles with 2.4L and 2.0L Gasoline Direct Injection (GDI)         |
|                       | engines ("evaluation vehicles") indicates that dealer service techs |
|                       | who replaced engines under warranty for those vehicles would        |
|                       | have received the same replacement instructions as for the          |
|                       | recalled vehicles under 17v224. KMA decides to investigate          |
|                       | whether such vehicles have experienced any leaking fuel pipes or    |
|                       | engine fires.   |
| January 7January 11,  | KMA conducts search for engine replacements for evaluation          |
| 2019                  | vehicles. KMA then reviews customer complaint and Techline          |
|                       | data to determine existence of any alleged engine compartment       |
|                       | fires following engine replacement. No leaking fuel pipes or fire   |
|                       | incidents are identified. KMA engineers can find no indication of   |
|                       | a needed action at this time.                                       |
| January 12 - 21, 2019 | KMA continues to evaluate risk of fire and discuss with Kia         |
|                       | Motors Corporation (KMC).   |
| January 22, 2019      | Despite the absence of any fires in 2015-2018MY vehicles, KMA       |
|                       | proposes field action to KMC based on the potential risk of dealer  |
|                       | service techs having not followed engine replacement instructions   |
|                       | when conducting fuel pipe reinstallation/replacement.               |
| January 23, 2019      | KMA conducts additional search for engine replacement claims        |
|                       | under warranty and the KSDS Product Improvement Campaign            |
|                       | for the 2014MY Optima and Sportage vehicles outside scope of        |
|                       | 17v224. Further evaluation of existence of fire reports associated  |
|                       | with those claims conducted. No fire incidents reported post        |
|                       | engine replacement.   |
| January 24, 2019      | KMC decides to expand the scope of recall SC172 to have the         |
|                       | evaluation vehicles inspected to confirm the fuel pipes have been   |
|                       | correctly and safely installed.                                     |