Chronology of Defect <u>Hand-operated parking brake system may be inoperative on MY 2014-2015</u> <u>Mazda6 and</u> <u>MY2014-2016 Mazda3</u>

- April, 2015 Mazda received the first field information from the Canadian market, reporting that brake drag occurred on a Mazda6. Mazda investigated the returned brake caliper and received details of the incident. Mazda found that the actuating shaft in the rear brake caliper, which operates the parking brake, became corroded and seized in the brake caliper. Mazda assumed the cause was due to direct spraying around the brake caliper with high pressure water which was beyond Mazda design specification. Mazda had not received similar reports to this, so Mazda decided to monitor for future field occurrences.
- August, 2015 Mazda received seven field reports from the U.S, market, reporting that the parking brake could not be fully applied or released properly. Mazda started to investigate the root cause.
- November, 2015 Mazda received an additional field report of the same parking brake issue on Mazda6 from the U.S. market. There were a total of eight reports received in the U.S. as of this point.

As a result of investigation, Mazda identified the root cause. Due to improper design of the protective boot in the rear brake caliper, the sealing performance was not sufficient. Mazda began to change the design of the brake caliper protective boot to improve its robustness against water entry.

- December, 2015 Mazda developed a new sealing design of the brake caliper protective boot and subsequently started to evaluate its effectiveness in preventing water entry.
- February, 2016 As a result of several evaluations of the improved parts, they proved to be effective at preventing water entry. Mazda began to prepare for using the improved brake caliper in mass-production for Axela vehicles equipped with hybrid engines, which were not sold in the U.S. market. In January 2014, the parking brake system of Mazda6 was changed from a conventional mechanical parking brake with hand-operated lever and cable actuator to a newer type of electric parking brake system with an electric motor actuator. The brake caliper design for the electric parking brake system and has better sealing performance to prevent water entry. Therefore, Mazda considered the same issue could not occur on the current model of Mazda6 and judged no countermeasure was necessary for those vehicles.
- March, 2016 The protective boot of the brake caliper used for Mazda3, which was for sale in the U.S, was similar to that of the Mazda6. Compared to Mazda6, Mazda3 had some advantages in terms of actuator shaft design to protect against corrosion, so Mazda judged a countermeasure for the brake caliper of Mazda3 was not necessary.

April, 2016 Mazda was informed of a collision incident which involved a Mazda6 in

Germany. Despite the driver applying the parking brake, the vehicle unexpectedly moved backward and had the rear end damaged.

- June, 2016 Mazda installed the returned parts from the Germany collision incident vehicle into a test vehicle and examined parking brake performance and found that the parking brake could operate and keep the vehicle stationary on a slope as long as the parking brake lever was pulled strongly. Mazda received additional information that the concerned vehicle was parked with gear shifter in neutral position on a manual transmission when the collision occurred.
- July, 2016 Mazda was informed of a collision incident which involved a Mazda6 in the U.K. Although the parking brake was applied, the vehicle unexpectedly moved backward along a slope and had its rear bumper damaged. Mazda started to proactively collect brake calipers from Mazda3 vehicles in the U.S market to confirm whether the actuator shaft in the brake caliper may possibly become corroded despite not receiving any similar complaints from the U.S. market up to this point.
- August, 2016Mazda received a field report that brake drag had occurred on Mazda3 vehicle in
the U.S. At that point, there were a total of nine reports in the U.S.

September, 2016 Mazda considered how to address this issue in the field.

- October, 2016 Mazda confirmed that returned parts from some Mazda3 vehicles in the U.S had become corroded. The root cause was the same as Mazda6's case. Therefore, Mazda decided to improve the sealing design of the brake caliper protective boot on Mazda3 for sale in North America
- January, 2017 Mazda set up an improved protective boot replacement kit for Mazda6 for repair in the field.

February, 2017 Mazda implemented the countermeasure for mass-production Mazda3 vehicles for sale in North America.

Meanwhile, Mazda receive an additional four field reports of the same issue on Mazda6 from the U.S. market. There were a total of thirteen reports in the U.S at this time. Also, Mazda did not receive any information regarding collision incidents in North America on both Mazda3 and Mazda6.

- May, 2017 Mazda set up an improved protective boot replacement kit for Mazda3 for repair in the field.
- June, 2017 Mazda decided to conduct a recall on MY2014 through 2016 Mazda3, and MY2014 through 2015 Mazda6 to address this safety issue.