Technical Service Bulletin

Mazda North American Operations
Irvine, CA 92618-2922

Subject:	**Bulletin No.:** 01-004/18
ENGINE NO START DUE TO BATTERY DISCHARGE	**Last Issued:** 02/15/2018

APPLICABLE MODEL(S)/VINS

2017 MX-5 RF with VINs lower than JM1ND********106476 (produced before May 17, 2017)

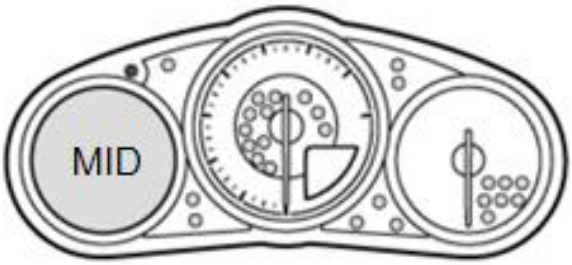
DESCRIPTION

Some customers may complain about engine no start due to the battery being discharged. This may be caused by a software error with the speedometer which allows a dark current of 80 mA can continue to flow after the ignition is turned off. If the vehicle is not used for more than a week and left in this condition, the battery will discharge.
NOTE: A normal dark current value is about 25 – 45 mA.

Condition where dark current of 80mA occurs:
If the ignition is switched OFF while the Cruise Control is ON (one of the Cruise Control indicators is ON in the MID), the microcomputer does not shift into the sleep mode and an operation current of 80 mA will continue to flow.
NOTE: If the ignition is switched OFF after Cruise Control is turned OFF, this concern does not occur.

Cruise Control indicators is ON

Instrument Cluster with MID



To correct this concern, the software of the instrument cluster has been changed.

Customers having this concern should have their vehicle repaired using the following repair procedure.

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REPAIR PROCEDURE

1. Confirm with the customer if the dead battery occurred because of the following:

- The ignition was turned off while Cruise Control was activated.
- The vehicle was not used for more than a week.

2. Reprogram the speedometer (IC) with Mazda Modular Diagnostic System (M-MDS) using IDS **108.04** or later software.

CAUTION: To avoid issues during the IC reprogramming, make sure all VCM cable connections are tight and the battery voltage is good. A poor connection between the vehicle and M-MDS and/or low voltage may result in abnormal termination and/or data corruption.

- Make sure the following connections are firmly connected, and then DO NOT touch the VCM and DLC cable to prevent causing noise or a poor connection.
    - Between the vehicle-side connector and the DLC cable
    - Between the PC-side connector and the USB port of the PC
- Connect an AC adapter to the PC in order to stabilize voltage fluctuation during reprogramming. DO NOT use the vehicle battery as a power source for the PC.
- During reprogramming, connect a battery charger (charge current maintained with 10 to 15A) to the vehicle to stabilize voltage fluctuation.

NOTE: Before reprogramming, pay attention to the vehicle condition and PC environment.

- Turn off all electical loads, especially A/C blower. audio, rear defogger, headlights.
- Perform self test and verify no DTCs are stored. If a DTC is stored, fix the concern and delete the DTC.
- Disconnect all non-genuine aftermarket accessories.
- Verify the latest IDS software is installed on the computer.
- Terminate all programs other than IDS on the PC.
- Perform the reprogramming using a good internet connection. If using wireless, make sure the connection is strong.
- Make sure there is a proper amount of free space on the PC hard drive. Insufficient free space (less than 1 GB) could cause the PC to freeze during reprogramming.

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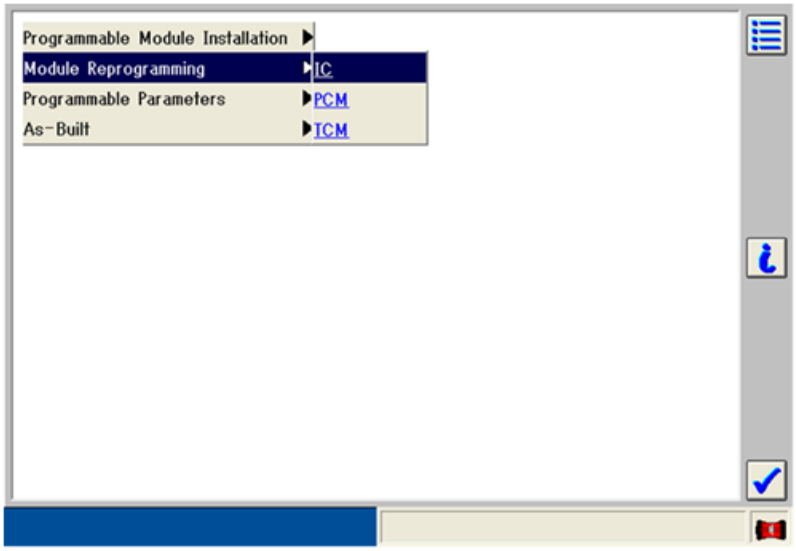
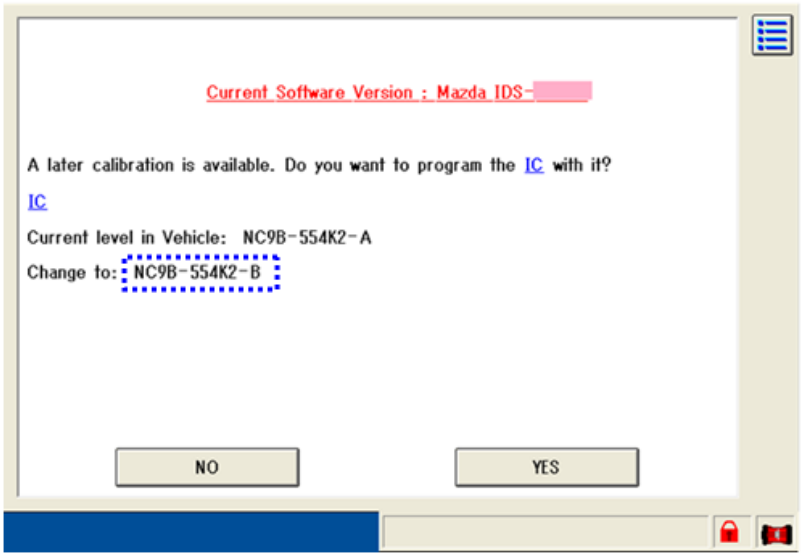
a. Select “Module Reprogramming”, then select “IC”.



b. On the following screen, click “YES” and follow the M-MDS instructions to reprogram the speedometer.

- If the message “No later calibration is available on the system for this IC” is displayed, the speedometer is already at the latest calibration and this TSB does not apply. “Current level in Vehicle” will show the new file name.



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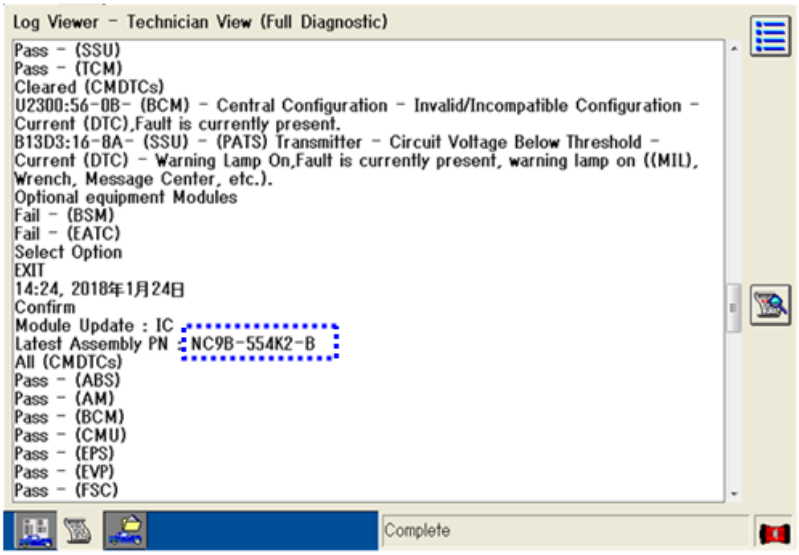
c. After reprogramming, remove the session, then open a new session again and go to the "Log Viewer" screen on which the programmed file name is displayed as shown. If the new file name matches to "NC9B-554K2-B", the reprogramming has been successfully completed.



NOTE: After reprogramming, these possible communication error related DTCs may be stored. This is a normal operation. Delete these DTCs.

B1207:86-0E	ESU - Crash Input Hardwired Signal - Signal Invalid
U0121:00-0A	BSM - Lost Communication With (ABS) Control Module
U0155:00-0A	BSM - Lost Communication With Instrument Panel Cluster Control Module
U0214:00-0A	BSM - Lost Communication With Remote Function Actuation
U0155:00-0A	EATC - Lost Communication With Instrument Panel Cluster Control Module
U0423:68-0A	EATC - Invalid Data Received From (IPC)
U0100:00-48	EPS - Lost Communication With (ECM)/(PCM) A
U0121:00-48	EPS - Lost Communication With (ABS) Control Module
U0155:00-48	EPS - Lost Communication With Instrument Panel Cluster Control Module
U0401:00-48	EPS - Invalid Data Received From (ECM)/(PCM)

3. Verify repair.
NOTE: If any DTCs should remain after performing DTC deletion, diagnose the DTCs according to the appropriate instructions on MGSS.

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WARRANTY INFORMATION

NOTE:

- This warranty information applies only to verified customer complaints on vehicles eligible for warranty repair.
- This repair will be covered under Mazda's New Vehicle Limited Warranty term.
- Additional diagnostic time cannot be claimed for this repair.

Warranty Type	A
Symptom Code	01
Damage Code	9W
Part Number Main Cause	****-55-471* (Enter a part number of the speedometer applicable to the vehicle in repair.)
Quantity	0
Operation Number / Labor Hours:	XXN9YXFX / 0.3 Hrs. Operation: Reprogramming the speedometer If the battery is charged, add the following labor operation and hours. XXNA5XRX / 0.5 Hrs. Operation: Battery, R/R and recharge

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