Service Alert

Mazda North American Operations
Irvine, CA 92618-2922

Subject:	**Service Alert No.:** SA-010/21
M-MDS (MDARS) SHOWS FRONT RADAR SENSOR DYNAMIC AIMING IS INCOMPLETE	**Last Issued:** 01/29/2021

BULLETIN NOTES

This service alert supersedes the previously issued service alert listed below. The changes are noted in Red text.

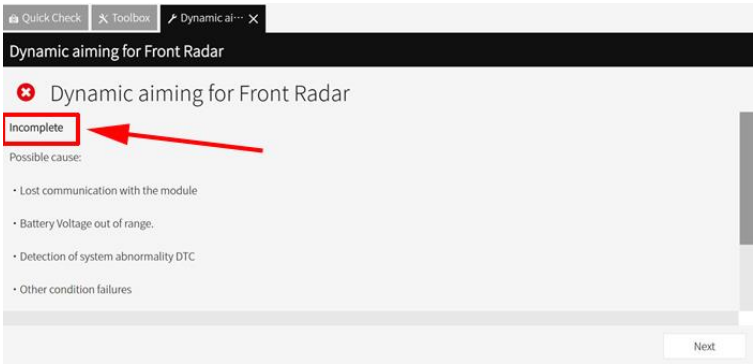
Previous Service Alert:	Date(s) Issued:
SA-050/20	05/05/20
SA-009/19	11/17/19 and 05/13/19

APPLICABLE MODEL(S)/VINS
2019-2021 Mazda3
2020-2021 CX-30

DESCRIPTION

Some vehicles may experience M-MDS (MDARS) showing the front radar dynamic aiming is incomplete. This may be caused by:

- Faulty front radar sensor software logic (MDARS showing the front radar dynamic aiming is incomplete although the procedure is completed).
- Front radar sensor out of alignment due to vehicle accident.



REPAIR PROCEDURE

Perform the appropriate Repair Procedure according to the table if M-MDS (MDARS) is showing the front radar sensor dynamic aiming is incomplete.

APPLICABLE MODEL(S)/VINS	Repair Procedure
2019-2020 Mazda3 (Mexico built) with VINS starting with 3MZ (produced before September 29, 2020) 2019-2020 Mazda3 (Japan built) with VINS starting with JM1 (produced before April 20, 2020) 2020-2021 CX-30 (produced before September 29, 2020)	Repair Procedure A
2021 Mazda3 (Mexico built) with VINS starting with 3MZ (produced after September 29, 2020) 2020-2021 Mazda3 (Japan built) with VINS starting with JM1 (produced after April 20, 2020) 2021 CX-30 (produced after September 29, 2020)	Repair Procedure B

Repair Procedure A

1.Check for a “Front Radar Malfunction. Drive Safely/Safety and Driver Support Systems Partially Disabled” warning message and warning light ON?

Is the warning message displayed and warning light ON?

- **Yes:** Go to step 3.
- **No:** Go to step 2.

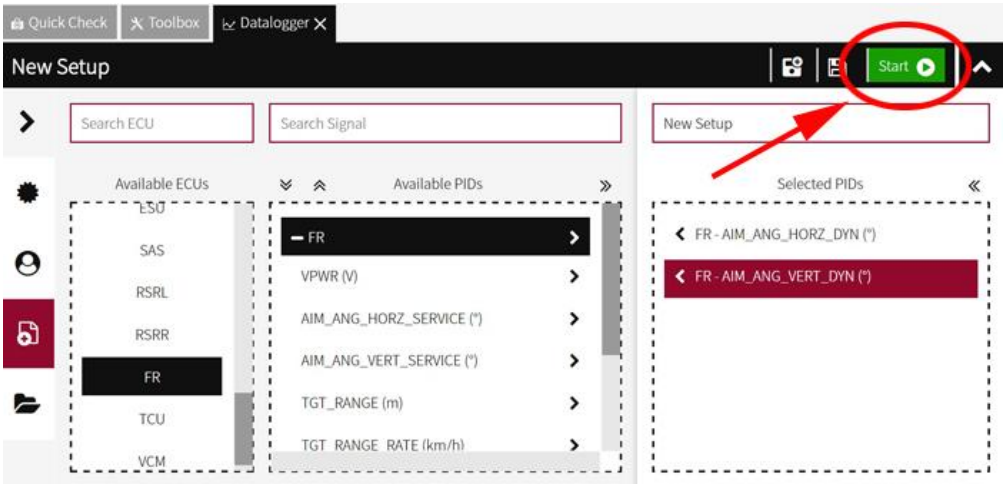
2. Erase DTC's. The front radar dynamic aiming is completed. NO further action is needed.

3. Check if any DTCs are stored.
Are C1A67:54 (Front radar sensor aiming adjustment not implemented) and C1A67:76 (Front radar sensor aiming error) stored?

- **Yes:** Go to next step.
- **No:** This service information does not apply. Go to MGSS for normal diagnosis.

4. Inspect Front Radar Sensor alignment. Go to M-MDS (MDARS).

a. Datalogger
b. New Setup
c. ECU - FR
d. Select PIDsHorizontal deviation: FR-AIM_ANG_HORZ_DYNVertical deviation: FR-AIM_ANG_VERT_DYNe. Select Start



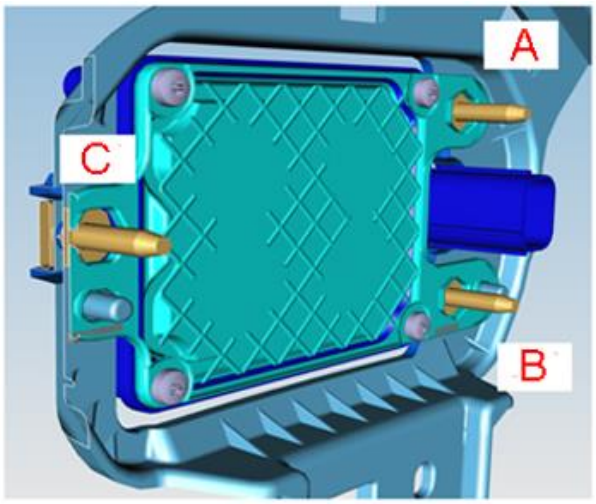
Horizontal and Vertical deviation specification: Lower than 4.2 degrees**NOTE:**If either of the PIDs exceeds 4 deg, front radar sensor dynamic aiming will fail.

NOT Correct: Horizontal or Vertical deviation is out of specification Go to next step.	

Correct: Horizontal and Vertical deviation is within specification Repeat front radar sensor dynamic aiming • Mazda3 - FRONT RADAR SENSOR AIMING • CX-30 - FRONT RADAR SENSOR AIMING	

5. Adjust the Front Radar Sensor alignment.

- AIM_ANG_VERT_DYN is between +4.0 and +4.5deg：Add one 0.5mm thick washer at A.
- AIM_ANG_VERT_DYN is between +4.6 and +5.1deg：Add two 0.5mm thick washers at A.
- AIM_ANG_VERT_DYN is between -4.0 and -4.5deg：Add one 0.5mm thick washer at B.
- AIM_ANG_VERT_DYN is between -4.6 and -5.1deg：Add two 0.5mm thick washers at B.
- AIM_ANG_HORZ_DYN is between +4.0 and +4.5deg：Add one 0.5mm thick washer at C.
- AIM_ANG_HORZ_DYN is between -4.0 and -4.5deg：Add one 0.5mm thick washer on the both A and B.



6. Repeat front radar sensor dynamic aiming.

- Mazda3 - FRONT RADAR SENSOR AIMING
- CX-30 - FRONT RADAR SENSOR AIMING

NOTE:

- If the “Front Radar Malfunction. Drive Safely/Safety and Driver Support Systems Partially Disabled” warning message and warning light are no longer diplayed, erase DTC's. The front radar dynamic aiming is completed. NO further action is needed.
- If the front radar sensor dynamic aiming fails after following MGSS instructions, contact Hotline for latest repair information.

Repair Procedure B

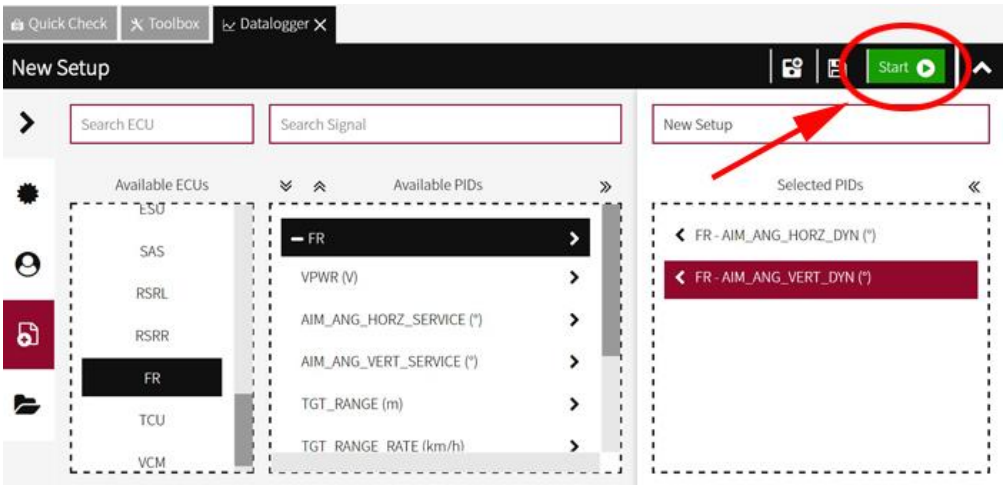
1. Check if any DTCs are stored.

Are C1A67:54 (Front radar sensor aiming adjustment not implemented) and C1A67:76 (Front radar sensor aiming error) stored?

- **Yes:** Go to next step.
- **No:** This service information does not apply. Go to MGSS for normal diagnosis.

2. Inspect Front Radar Sensor alignment. Go to M-MDS (MDARS).

a. Datalogger
b. New Setup
c. ECU - FR
d. Select PIDsHorizontal deviation: FR-AIM_ANG_HORZ_DYNVertical deviation: FR-AIM_ANG_VERT_DYNe. Select Start

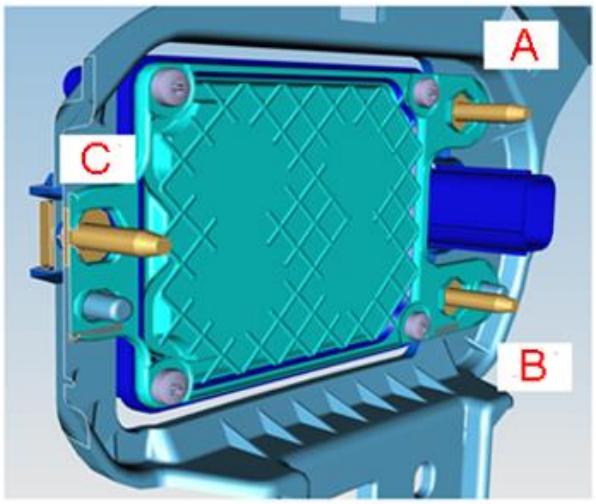


Horizontal and Vertical deviation specification: Lower than 4.2 degrees**NOTE:**If either of PIDs exceeds 4 deg, front radar sensor dynamic aiming will fail.

NOT Correct: Horizontal or Vertical deviation is out of specification. Go to next step.	
Correct: Horizontal and Vertical deviation is within specification. Repeat front radar sensor dynamic aiming. • Mazda3 - FRONT RADAR SENSOR AIMING • CX-30 - FRONT RADAR SENSOR AIMING	

3. Adjust the Front Radar Sensor alignment.

- AIM_ANG_VERT_DYN is between +4.0 and +4.5deg：Add one 0.5mm thick washer at A.
- AIM_ANG_VERT_DYN is between +4.6 and +5.1deg：Add two 0.5mm thick washers at A.
- AIM_ANG_VERT_DYN is between -4.0 and -4.5deg：Add one 0.5mm thick washer at B.
- AIM_ANG_VERT_DYN is between -4.6 and -5.1deg：Add two 0.5mm thick washers at B.
- AIM_ANG_HORZ_DYN is between +4.0 and +4.5deg：Add one 0.5mm thick washer at C.
- AIM_ANG_HORZ_DYN is between -4.0 and -4.5deg：Add one 0.5mm thick washer on the both A and B.



4. Repeat front radar sensor dynamic aiming.

- Mazda3 - FRONT RADAR SENSOR AIMING
- CX-30 - FRONT RADAR SENSOR AIMING

NOTE:

- If the front radar sensor dynamic aiming completes, erase DTC's. The front radar dynamic aiming is completed.
- If the front radar sensor dynamic aiming fails after following MGSS instructions, contact Hotline for latest repair information.