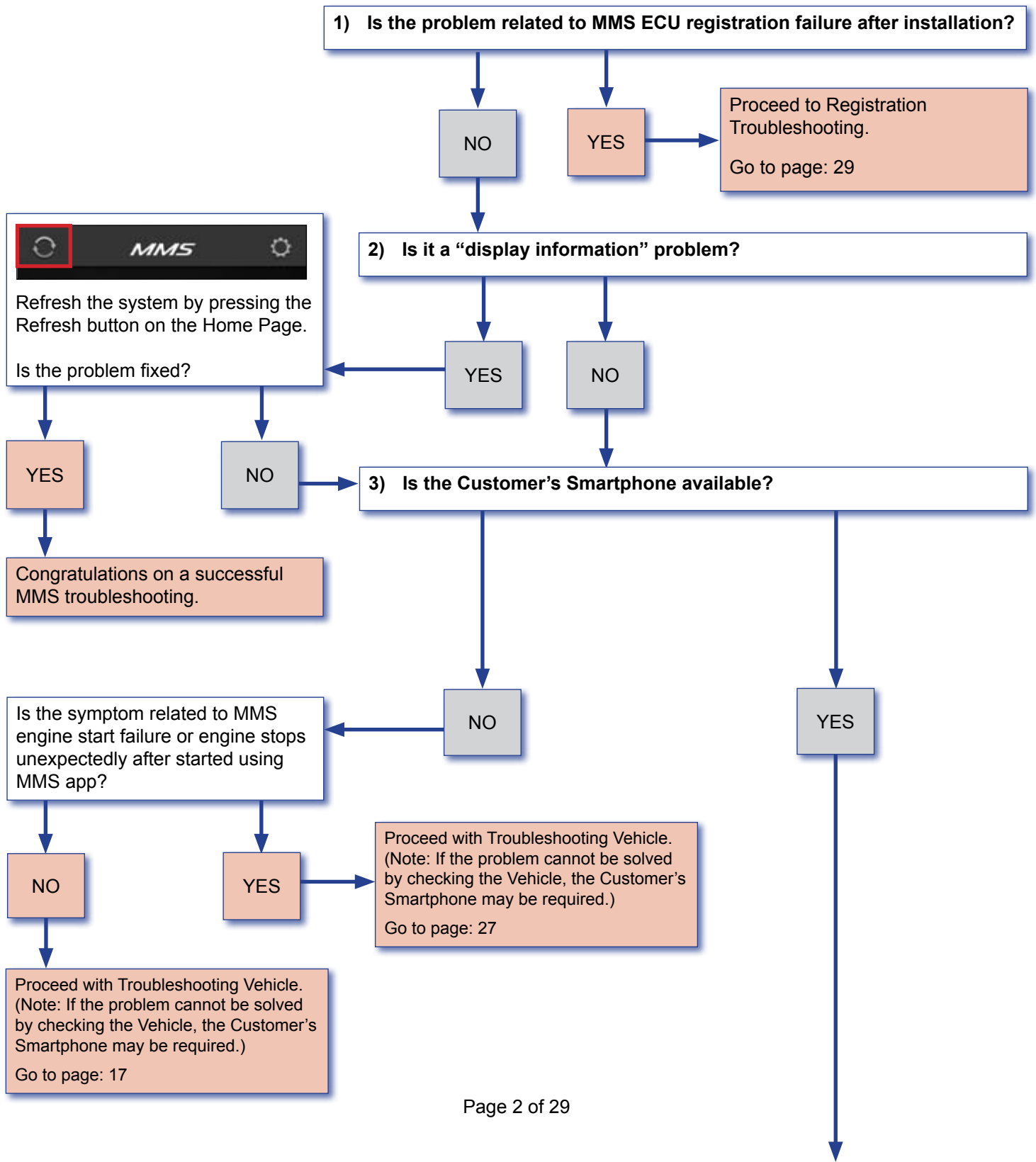


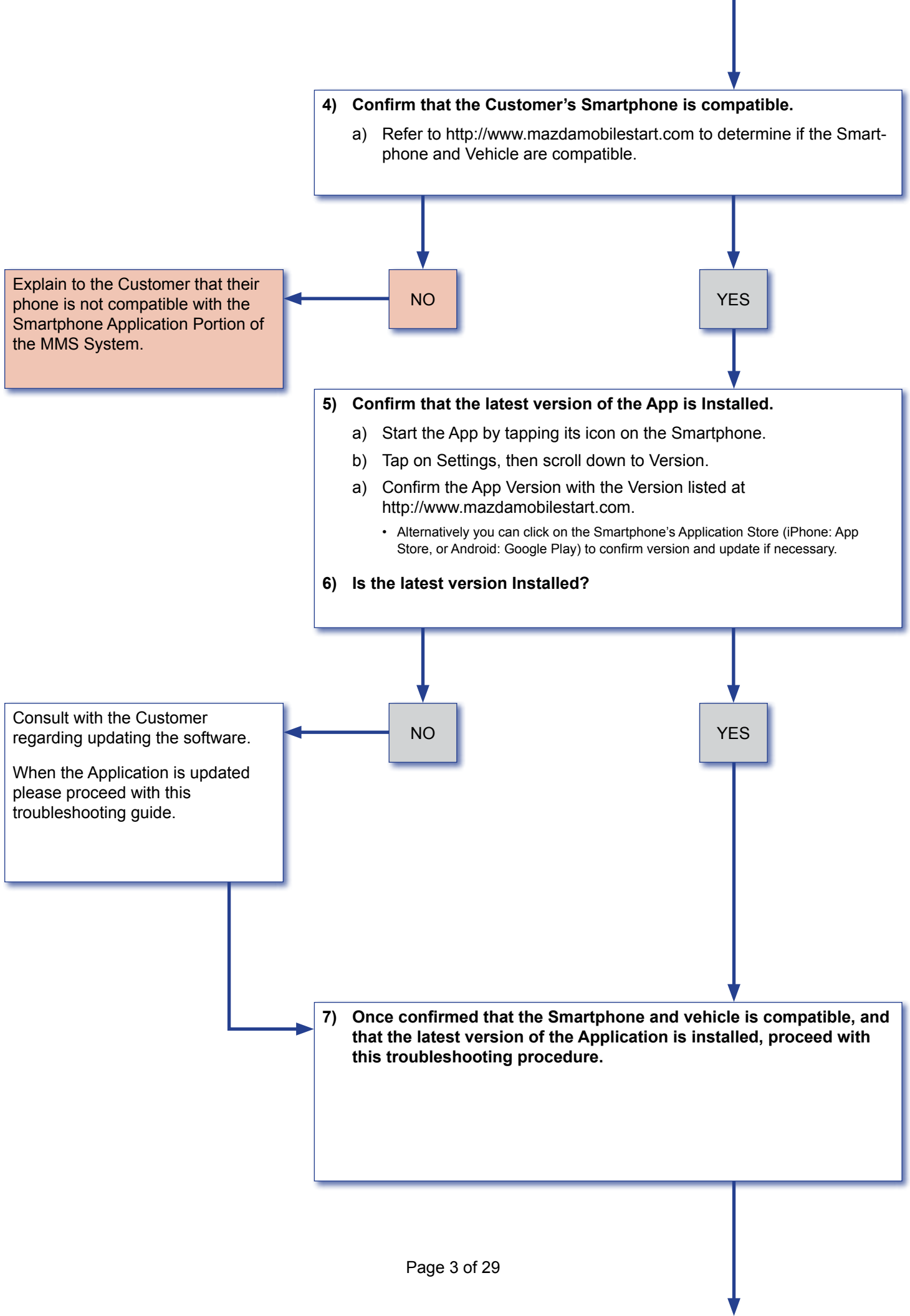
MAZDA MOBILE START (MMS) TROUBLESHOOTING GUIDE

The Mazda Mobile Start (MMS) system consists of Hardware components (integrated communication module) located on the Vehicle, and Software components installed on a Smartphone that has access to the “cloud,” and GPS signal.

- **This troubleshooting guide will first attempt to distinguish which of these two components is the source of the problem. We will begin with the MMS ECU component and the Smartphone.**

NOTE: If the issue is related to logging into the application, go to page 4 and consult line item 1.





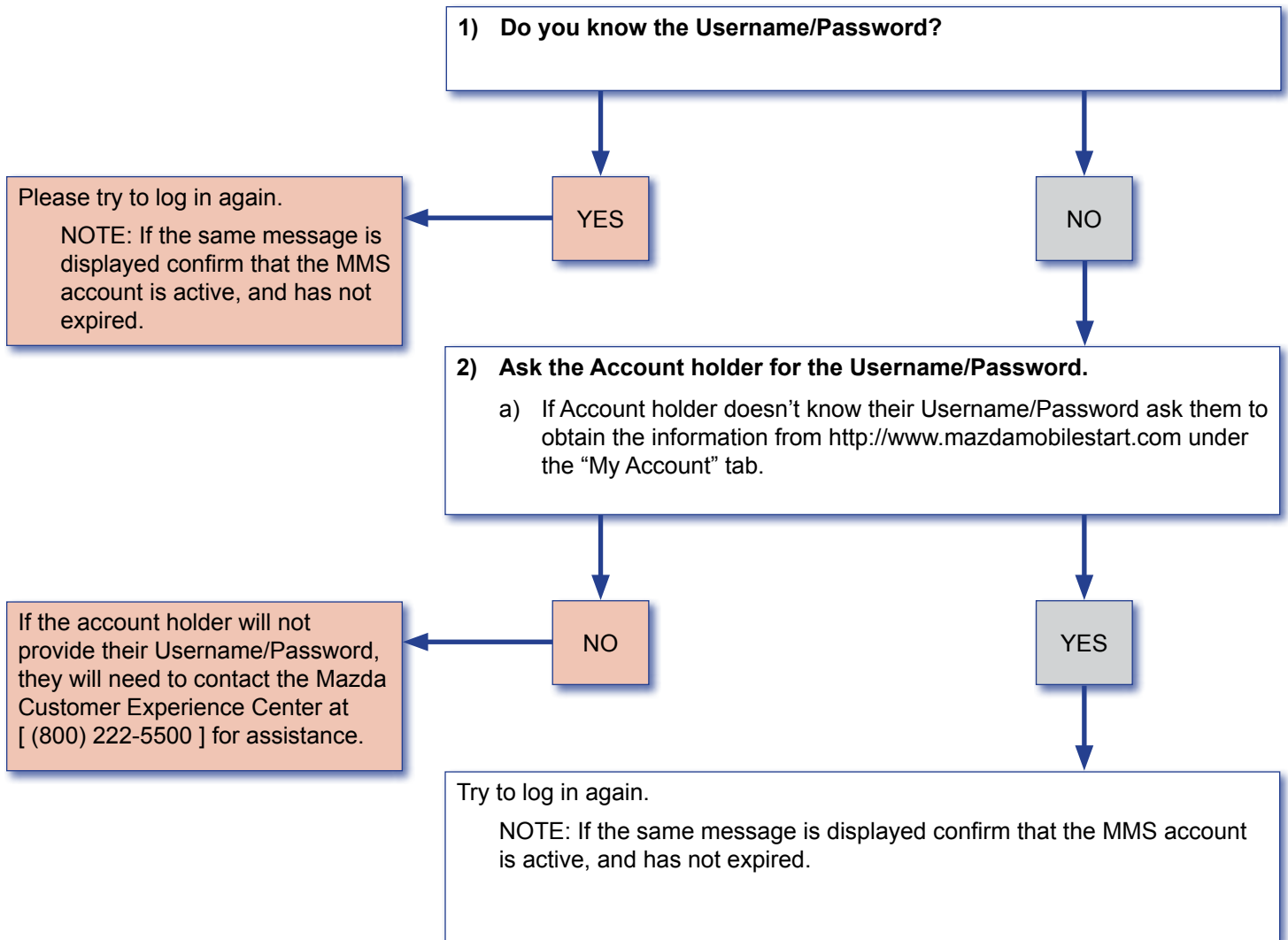
- 1) Using the Smartphone, attempt to duplicate the issue described by the Customer.
- 2) If the problem is duplicated take note of what is displayed on the Smartphone when the issue occurs and use the table below to troubleshoot.
 - a) The table below is divided into Display issues and Messages.
 - Messages displayed as a pop-up on the phone are indicated below as an **M**.
 - Display issues are issues related to incorrect, or no information being displayed are indicated below as a **D**.
- 3) If the issue is not related to either of these, proceed to the hardware troubleshooting section on page 17.

No.	Symptom	M or D	Detail	Page
1	Cannot log in	M	"Username or password you entered is incorrect, please try again."	5
		M	"Your account is temporarily locked. Please try again later."	6
		M	"Network connection error. Please confirm that your phone has reception and service and/or WiFi are turned on."	7
		M	"Server cannot be reached. Please try again later." or "Communication with the vehicle was interrupted. Please try again."	8
2	App home Page	D	Vehicle (Engine, Stops in, Rear defroster) status is not shown.	9
		M	"Network connection error. Please confirm that your phone has reception and service and/or WiFi are turned on."	7
		M	"Server cannot be reached. Please try again later." or "Your vehicle status cannot be updated at this time. Please try again." or "Communication with the vehicle was interrupted. Please try again."	8
		M	"Your vehicle status cannot be updated at this time because another user is operating the vehicle through the Mazda Mobile Start app. Please try again later."	10
3	Cannot start engine	M	"Server cannot be reached. Please try again later." or "Your vehicle status cannot be updated at this time. Please try again." or "Communication with the vehicle was interrupted. Please try again."	8
		M	"Your engine cannot be started at this time because another user is operating the vehicle through the Mazda Mobile Start app. Please try again later." or "Your engine cannot be started because the vehicle is in use."	10
		M	"Your account is not authorized to start/stop the engine. Please contact the Account Owner to authorize your account." or "Not authorized to start/stop the Engine."	11
		M	"Your engine cannot be started at this time because... ...one of the doors on the vehicle is opened. Please close the vehicle door and try again." ...the hood is opened. Please close the hood and try again." ...the shifter is not in Park (P). Please move the shifter to Park (P) and try again." ...the brake pedal is pressed. Please release the brake and try again." ...the alarm is sounding. Please try again later." ...total remote runtime of the vehicle has exceeded 30 minutes. Please start the car manually." ...a key is in the car. Please remove any keys from the car and try again." ...the Panic Alarm is active. The Panic Alarm has been stopped. Please try again."	12
4	Cannot stop engine	M	"Server cannot be reached. Please try again later." or "Your vehicle status cannot be updated at this time. Please try again." or "Communication with the vehicle was interrupted. Please try again."	8
		M	"Your engine cannot be started at this time because another user is operating the vehicle through the Mazda Mobile Start app. Please try again later." or "Your engine cannot be started because the vehicle is in use."	10
		M	"Your account is not authorized to start/stop the engine. Please contact the Account Owner to authorize your account." or "Not authorized to start/stop the Engine."	11
5	Cannot lock / unlock door	M	"Server cannot be reached. Please try again later." or "Your vehicle status cannot be updated at this time. Please try again." or "Communication with the vehicle was interrupted. Please try again."	8
		M	"Your car cannot be locked/unlocked at this time because another user is operating the vehicle through the Mazda Mobile Start app. Please try again later." or "The doors cannot be locked/unlocked because the vehicle is in use." or "Your car cannot be locked at this time because the Panic Alarm is active. The Panic Alarm has been stopped. Please try again."	10
6	Cannot activate Panic Alarm	M	"Communication with the vehicle was interrupted. Please try again."	8
		M	"The Panic Alarm cannot be activated because the vehicle is in use." or "The Panic Alarm cannot be activated at this time because another user is operating the vehicle through the Mazda Mobile Start app. Please try again later."	10
		M	"Not authorized to operate the Panic Alarm."	11
7	Cannot use CarFinder or Hazard and Horn	M	"Server cannot be reached. Please try again later." or "Your vehicle status cannot be updated at this time. Please try again." or "Communication with the vehicle was interrupted. Please try again."	8
		M	"Your car location cannot be determined because of poor vehicle GPS reception." or "Your car location is temporarily unavailable due to poor GPS reception. Please tap the refresh button on the Home screen and try again."	13
		M	"Your account is not authorized to use the Carfinder. Please contact the Account Owner to authorize your account."	11
		M	"Position of your device cannot be determined. Please ensure you have cellphone/GPS reception." or "Position of your device cannot be determined. Please ensure you have cellphone/GPS reception, and turn on Location Services to allow MMS Mazda Mobile Start to determine your location."	14
		M	"Please turn on the camera function and try again. For help, please refer to the User Manual for your phone."	15
		M	"The Hazard Lights and Horn cannot be activated because the vehicle is in use." or "The Hazard Lights and Horn cannot be activated at this time because another user is operating the vehicle through the Mazda Mobile Start app. Please try again later." or "The Hazard Lights and Horn cannot be activated at this time because the Panic Alarm was active. The Panic Alarm has been stopped. Please try again."	10
		D	Discrepancy between actual vehicle position and CarFinder position.	16

Cannot Log In

Message: "Username or password you entered is incorrect, please try again."

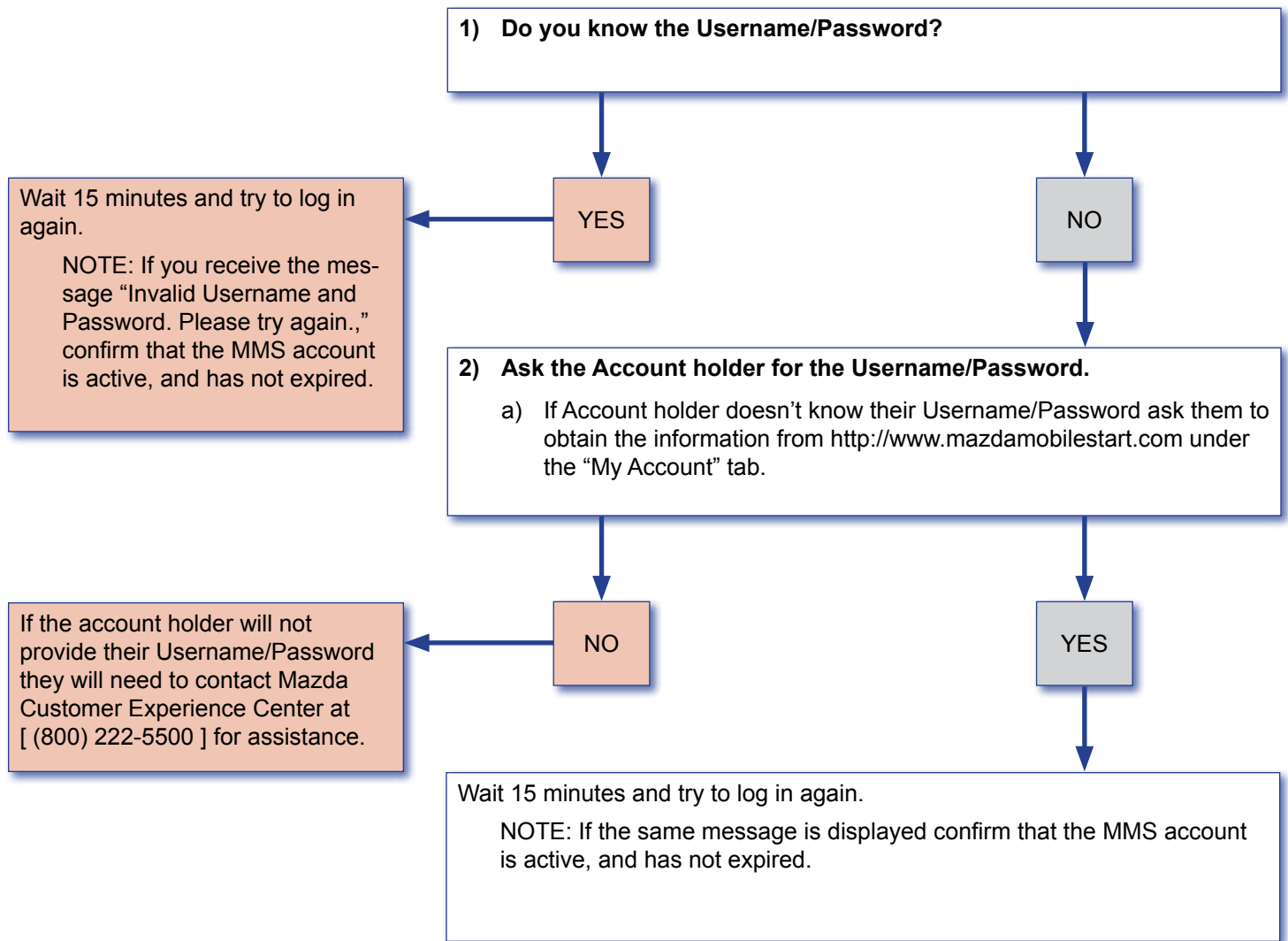
Cause: Wrong username/password entered or username/password not registered.



Log in locked

Message: "Your account is temporarily locked. Please try again later."

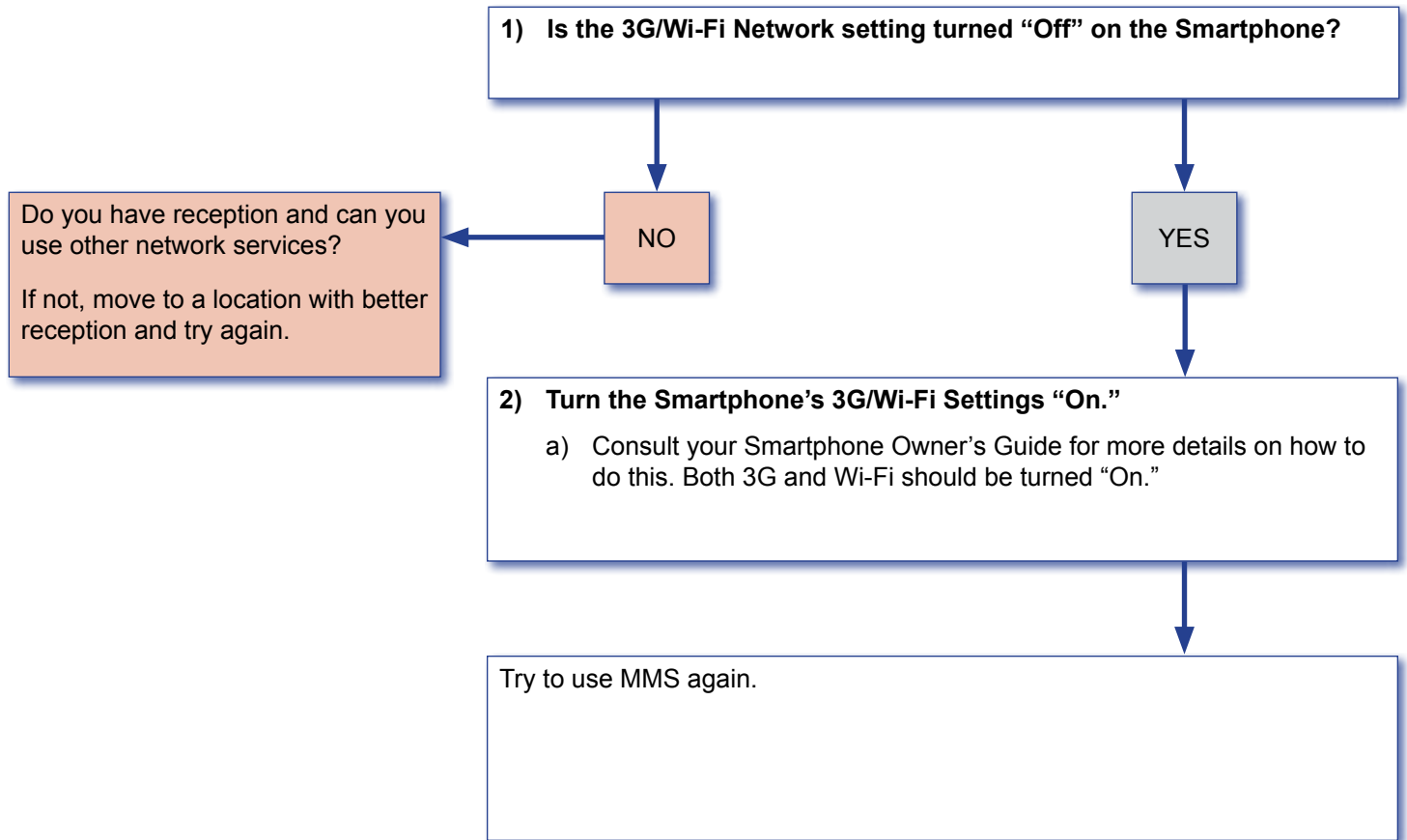
Cause: Wrong username/password entered 5 times in a row.



Network Connection Error

Message: "Network connection error. Please confirm that your phone has reception and service and/or WiFi are turned on."

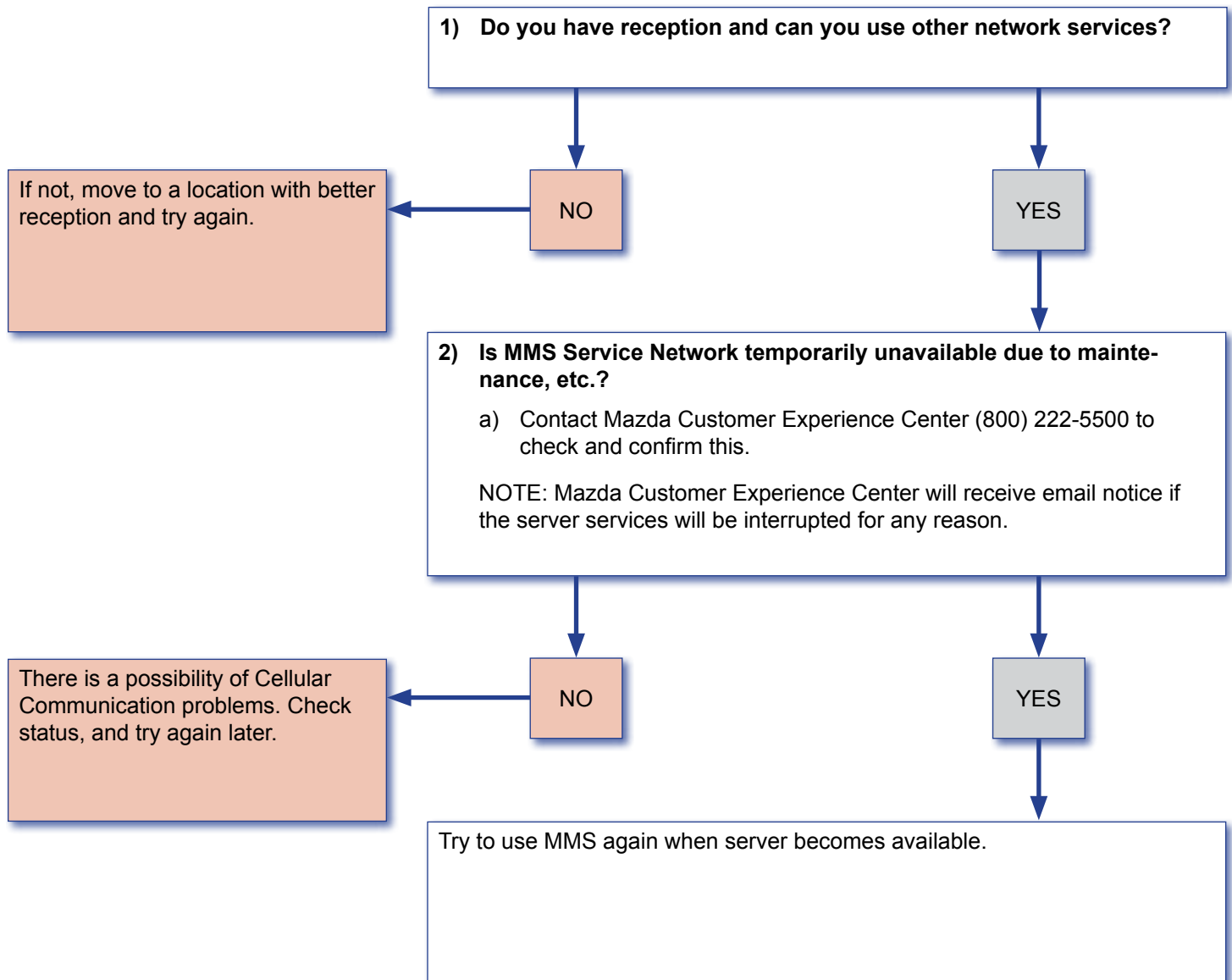
Cause: Either Smartphone network settings are turned "Off" or the Smartphone is out of the range.



Server not Accessible.

Message: "Server cannot be reached. Please try again later."
"Your vehicle status cannot be updated at this time. Please try again."
"Communication with the vehicle was interrupted. Please try again."

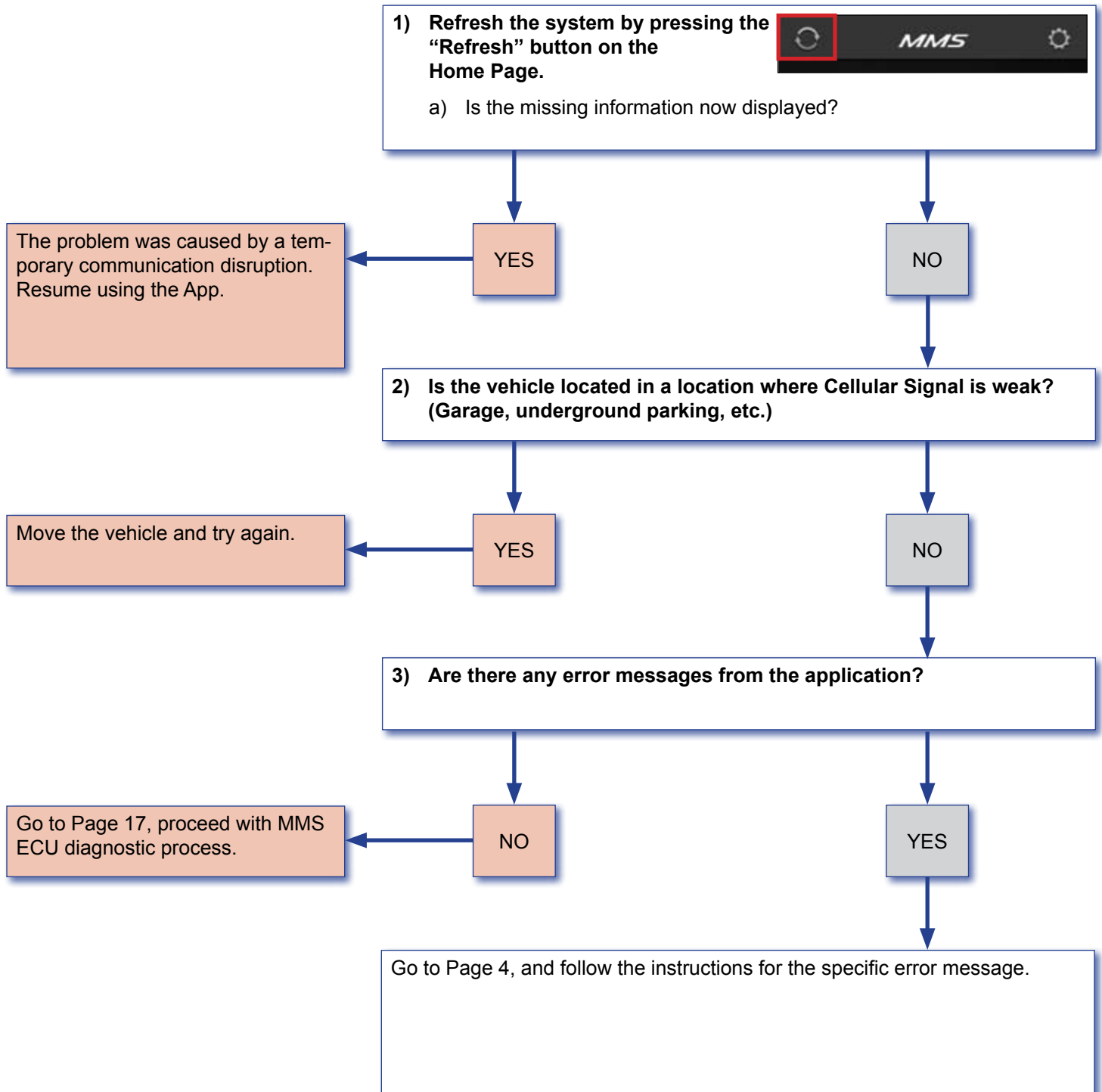
Cause: Cellular signal is weak and a connection cannot be established with the server, or the server is under-going maintenance.



Vehicle status (Engine, Stops In, Rear Defroster) is not shown.

Symptom: Vehicle status is not shown.

Cause: There was a communication error or the Cellular/GPS Signal is poor.



Operation conflict with other users or panic alarm is active.

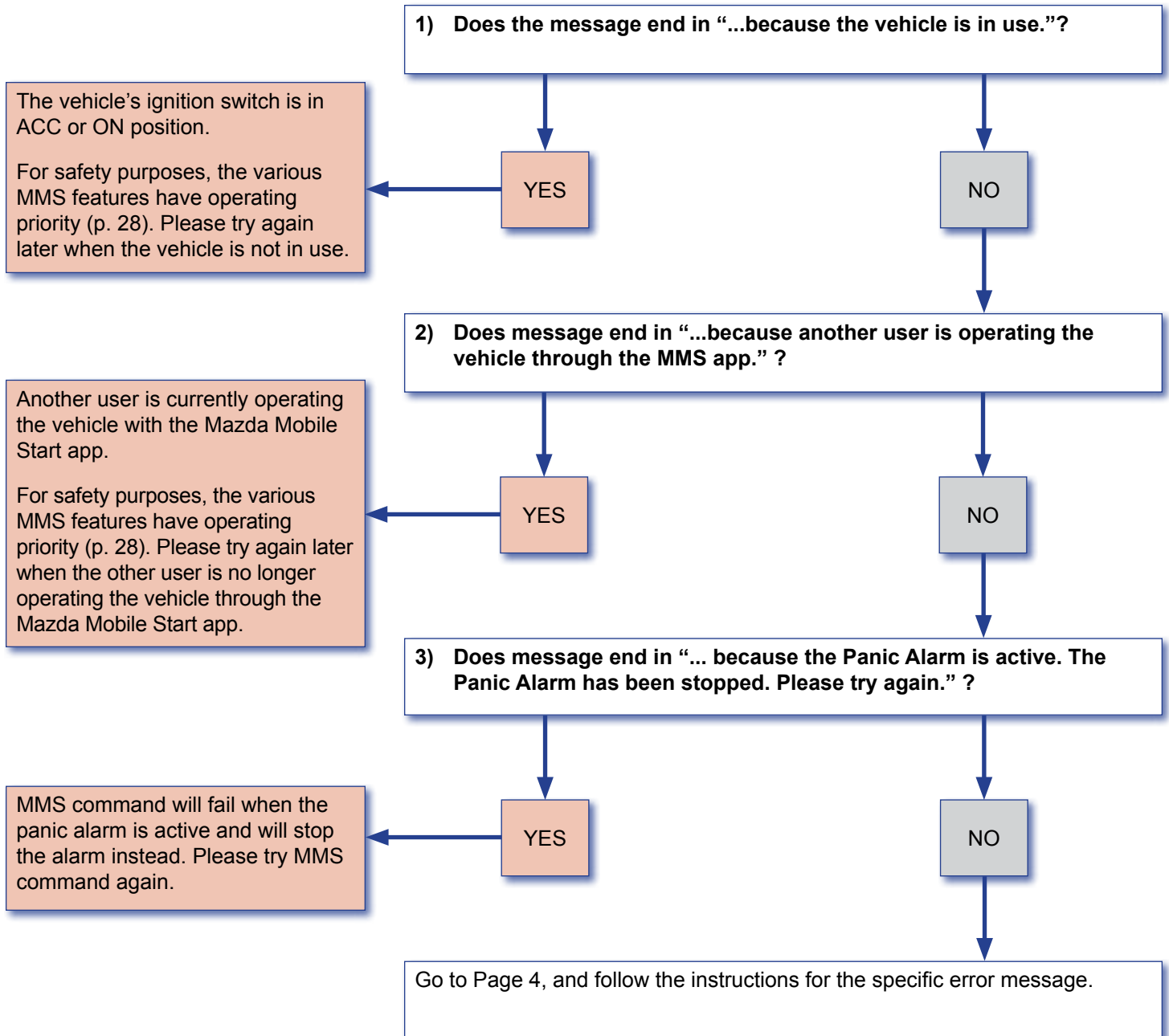
Message ends in: "...because the vehicle is in use."

"...because another user is operating the vehicle through the MMS app."

"...because the Panic Alarm is active. The Panic Alarm has been stopped. Please try again."

Cause:

Operation failure due to operation conflict because another user is currently operating the vehicle through the MMS app. Panic alarm is active or the vehicle's ignition switch is in ACC or ON position.



Account not authorized

Message: "Your account is not authorized to start/stop the engine. Please contact the Account Owner to authorize your account."

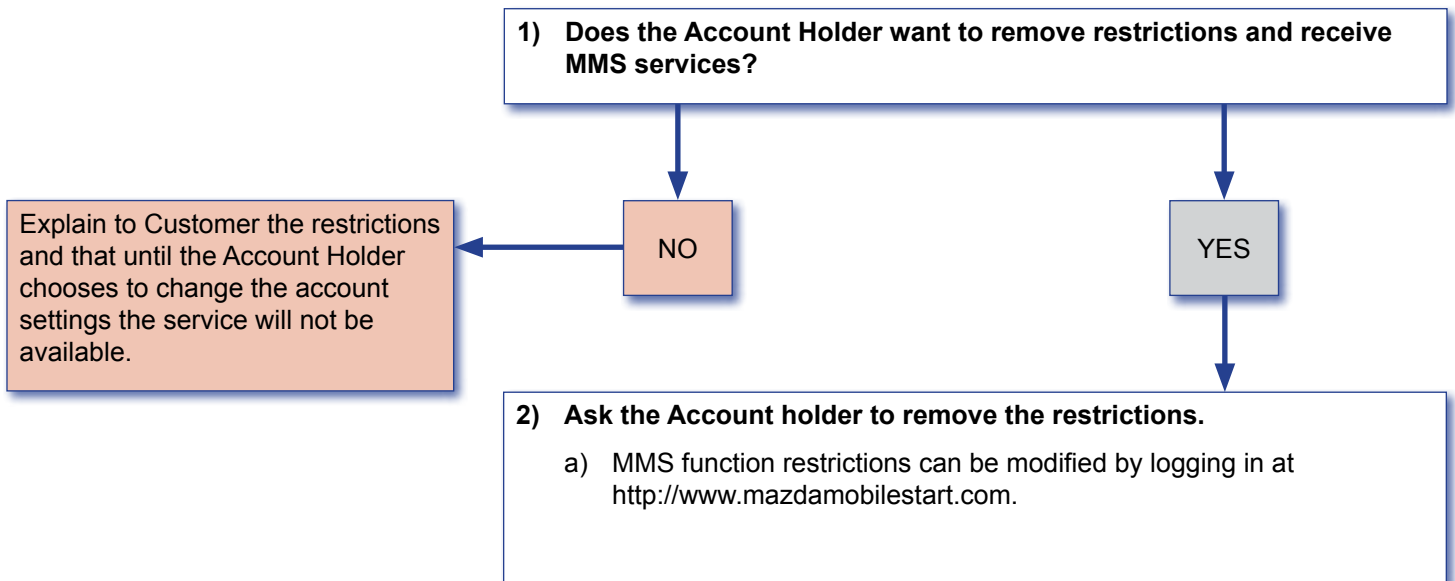
"Your account is not authorized to lock the car. Please contact the Account Owner to authorize your account."

"Your account is not authorized to unlock the car. Please contact the Account Owner to authorize your account."

"Your account is not authorized to activate the Panic Alarm. Please contact the Account Owner to authorize your account."

"Your account is not authorized to use the Carfinder. Please contact the Account Owner to authorize your account."

Cause: Requested MMS function is restricted for use by the Account holder.

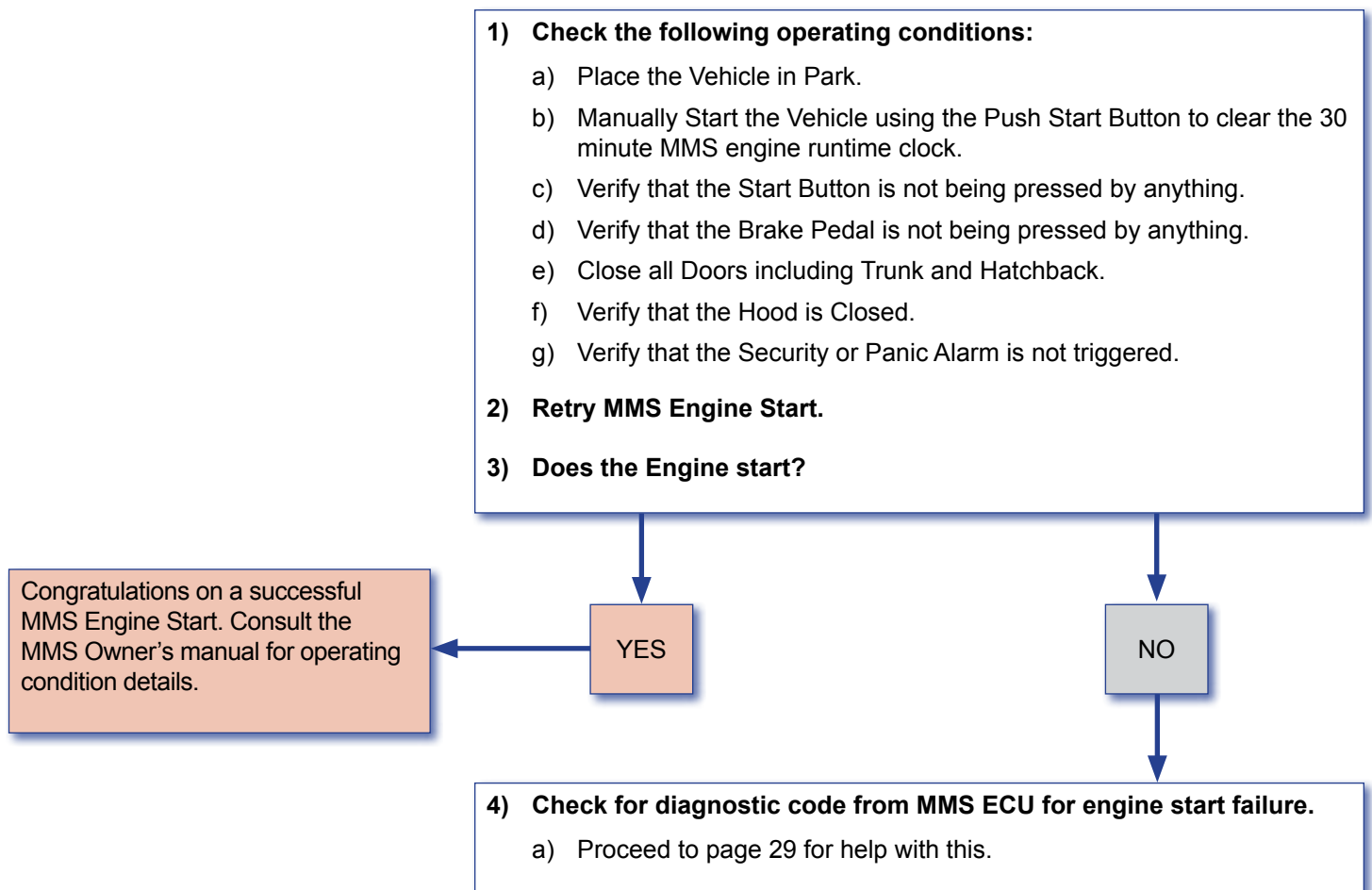


Operating Conditions

Message: "Your engine cannot be started at this time because..."

- ...one of the doors on the vehicle is opened. Please close the vehicle door and try again."
- ...the hood is opened. Please close the hood and try again."
- ...the shifter is not in Park (P). Please move the shifter to Park (P) and try again."
- ...the brake pedal is pressed. Please release the brake and try again."
- ...the alarm is sounding. Please try again later."
- ...total remote runtime of the vehicle has exceeded 30 minutes. Please start the car manually."
- ...a key is in the car. Please remove any keys from the car and try again."
- ...the Panic Alarm is active. The Panic Alarm has been stopped. Please try again."

Cause: For safety and security reasons, MMS will not start the engine due to above operating conditions.



Vehicle Position cannot be determined, vehicle signal issue or poor reception.

Message:

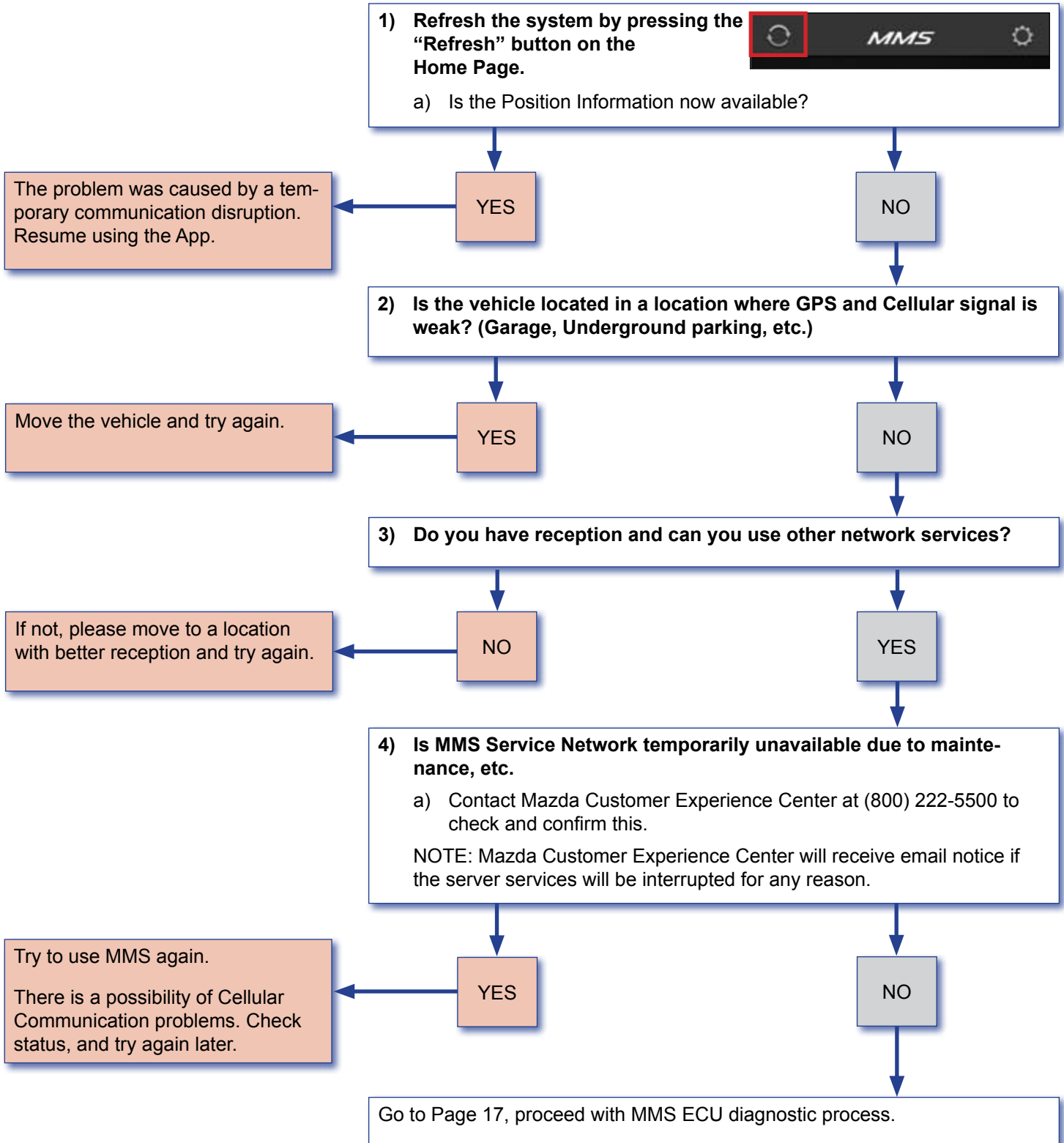
"Your car location cannot be determined because of poor vehicle GPS reception."

"Your car location is temporarily unavailable due to poor GPS reception. Please tap the refresh button on the Home screen and try again."

"Due to poor vehicle GPS reception this function is not available."

Cause:

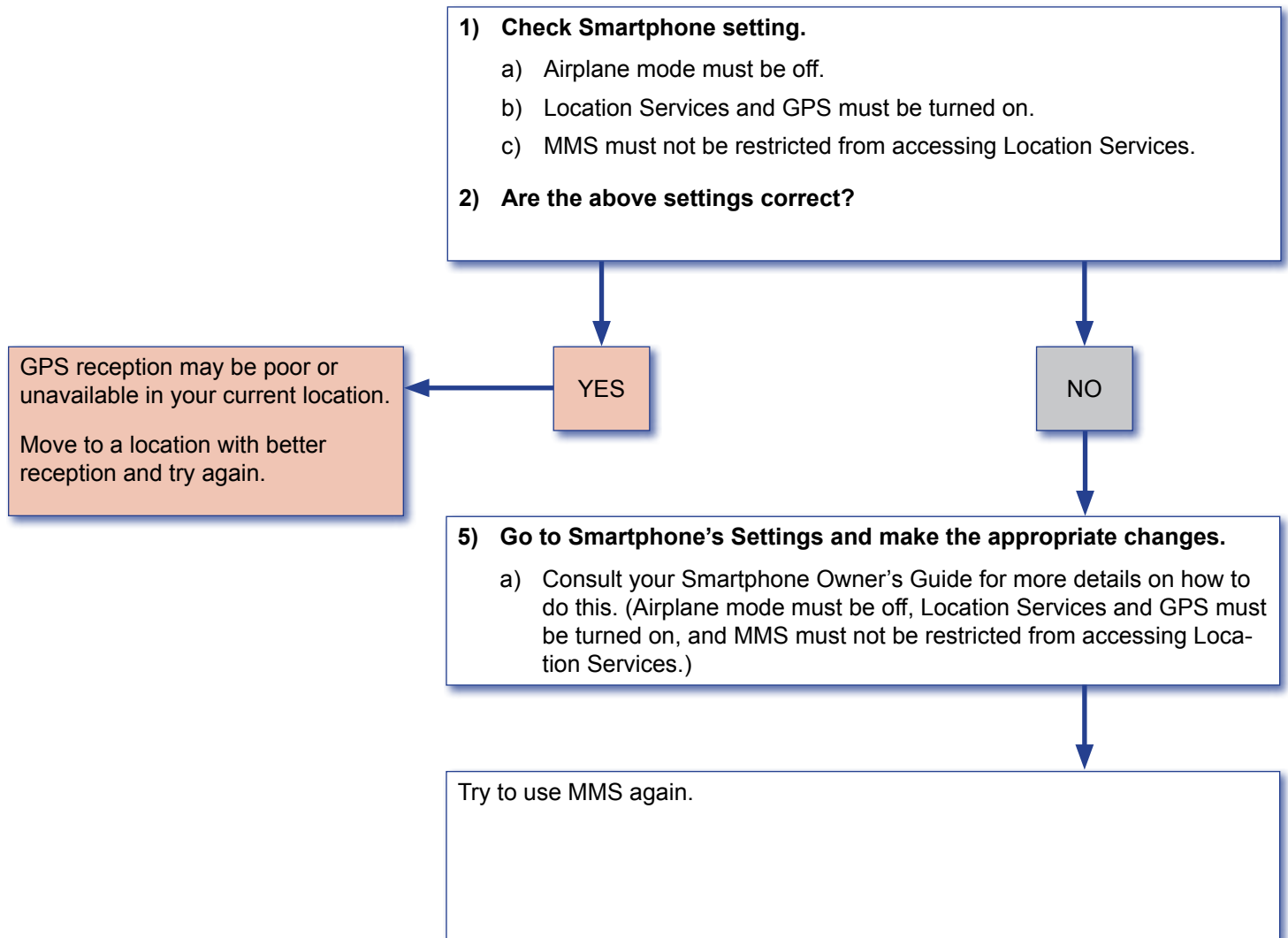
Vehicle position was not acquired to vehicle signal issue or poor reception.



Smartphone Position cannot be determined, Smartphone issue.

Message: "Position of your device cannot be determined. Please ensure you have cellphone/GPS reception."
"Position of your device cannot be determined. Please ensure you have cellphone/GPS reception, and turn on Location Services to allow MMS Mazda Mobile Start to determine your location."

Cause: Position information of Smartphone can not be determined.

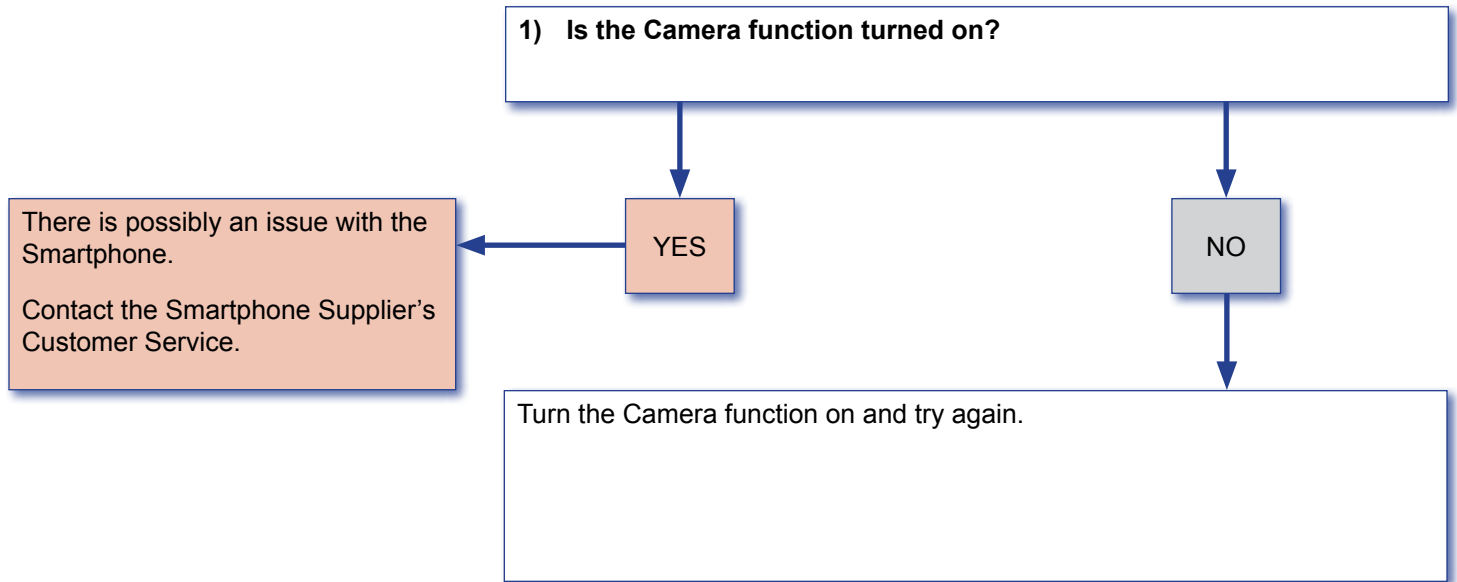


Camera Function is not working in CarFinder.

Message: "Please turn on the camera function and try again. For help, please refer to the User Manual for your phone."

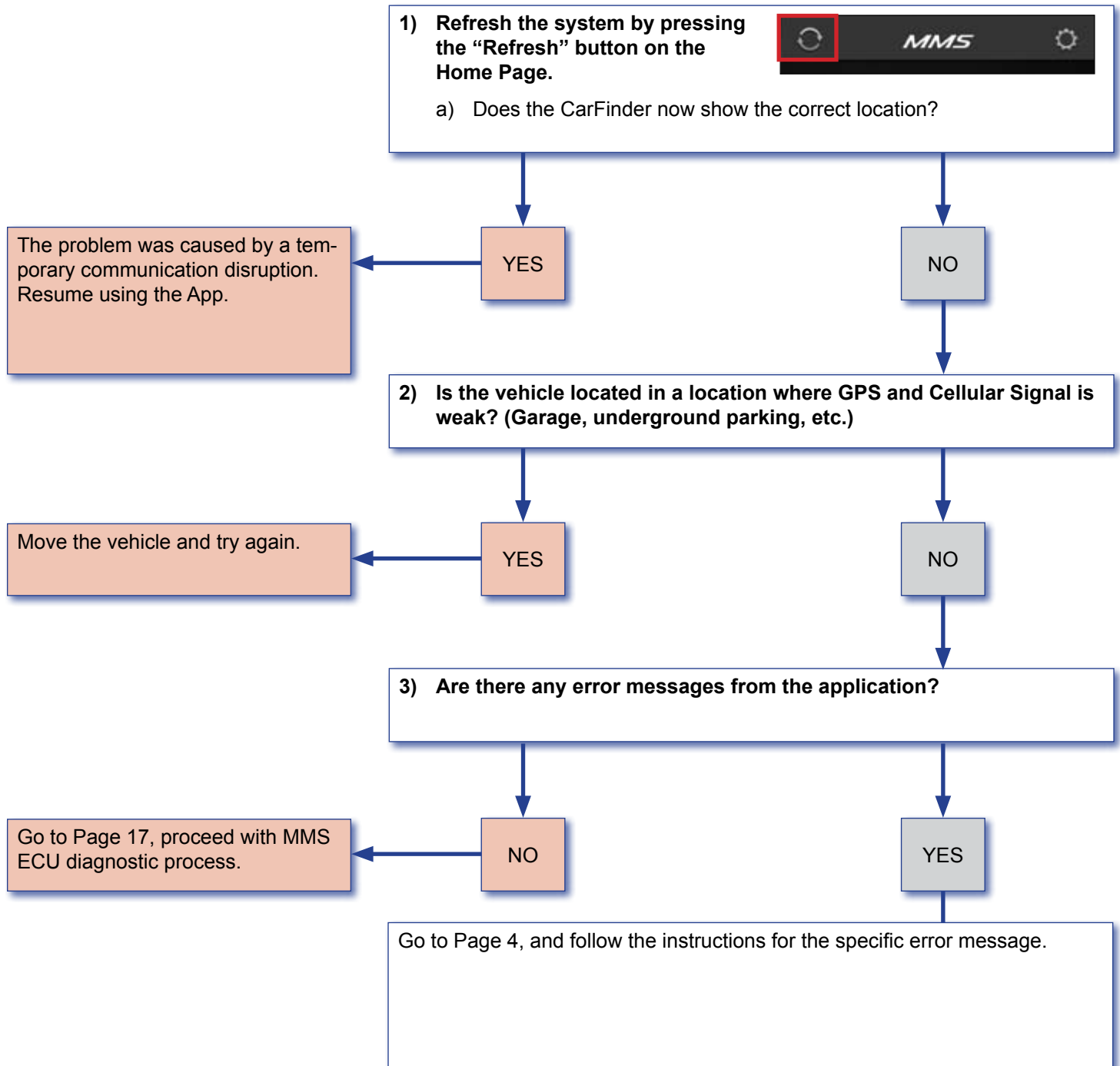
"In order to use the Carfinder, all other applications using the camera must be closed. Please try again."

Cause: Camera function is turned off.



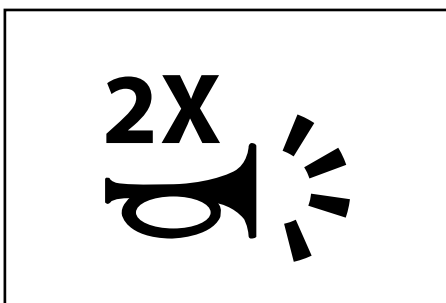
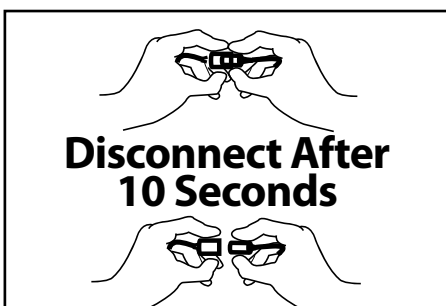
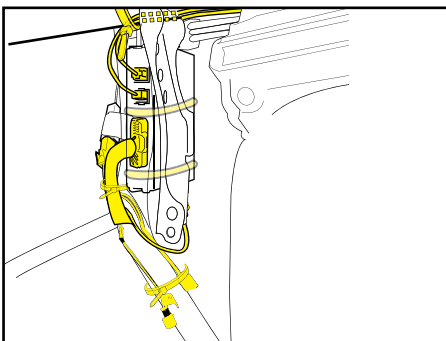
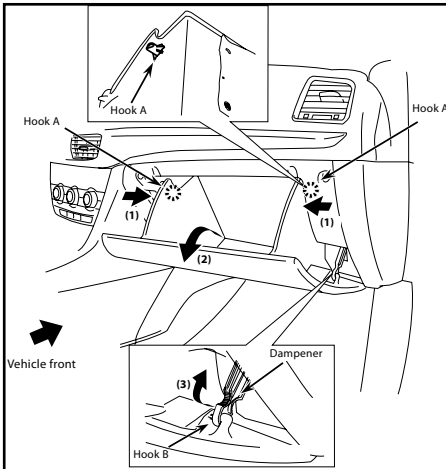
There is a difference between the Vehicle location and where CarFinder shows its position.

Cause: There was a communication error, or the GPS Signal is poor.



This portion of the MMS Troubleshooting Guide is for the MMS hardware components Troubleshooting.

1) Begin by checking the hardware system for Problem Codes.

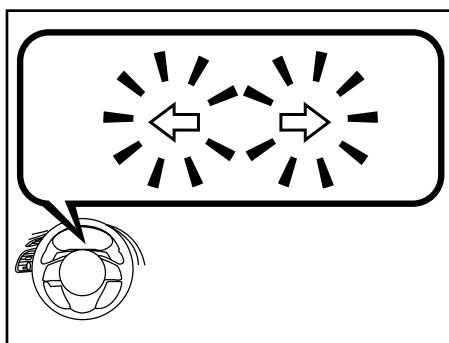
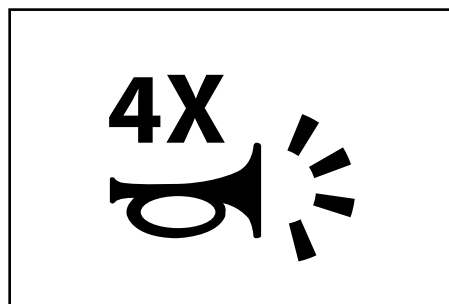
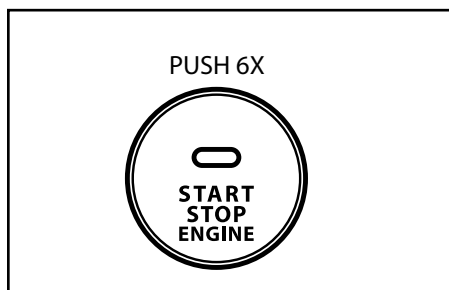


2) Remove the Glove box.

3) Locate the RES Diagnostic Connectors located behind the Glove box area.

4) Connect the 1P RES Diagnostic Connectors for at least 10 seconds, then disconnect.

5) Horn sounds 2 times.



6) Cycle the Ignition switch twice by pressing the Start Button 6 times.

7) Horn sounds 4 times.

8) After 2 seconds, look for the Hazard Lights to flash. Record the number of Flashes.

- a) If there are more than 1 cause for the Problem the Hazard Lights will flash based on the “order of priority.” See the fourth column in the Table below.


No.	Cause of Problem	Flashes	Priority*	For Detailed Instructions
1	MMS ECU problem.	4**	1	Page 19
2	TEL Antenna connection problem.	6	2	Page 20-21
3	GPS Antenna connection problem.	8	3	Page 20-21
4	No reception	10	4	Page 22-23
5	No problem with the system.	2	5	If the problem is related to CarFinder, go to Page 24-25

* There is a priority for diagnosis code. If MMS ECU has any code in No.1~No.4, you need to check the diagnosis until the hazards flash 2 times.


** If the problem is related to the MMS, it may take up to 2 minutes for the Vehicle's Hazard Lights to flash.

1) During Vehicle Diagnostic Check, the Vehicle's Hazard Lights flashed 4 times after at least a 2 minute wait.

2) Disconnect the Vehicle's Negative Battery Terminal.

 Wait 30 Seconds.

3) Reconnect the Vehicle's Negative Battery Terminal.


 Wait another 15 Seconds.

4) Re-Check diagnosis code of MMS ECU. Page 17-18, Steps 4-8.


5) Again note the Number of times the Hazard Lights Flash.

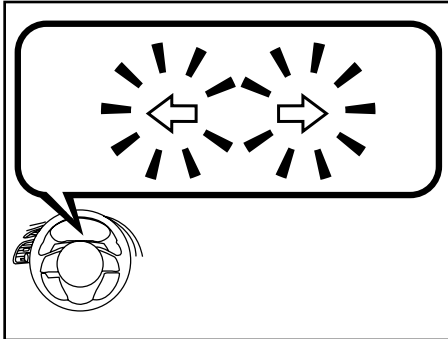
a) Perform the appropriate step below.

No.	Cause of Problem	Flashes	Priority*	For Detailed Instructions
1	MMS ECU problem.	4**	1	Replace the MMS ECU. ***
2	TEL Antenna connection problem.	6	2	Page 20-21
3	GPS Antenna connection problem.	8	3	Page 20-21
4	No reception	10	4	Page 22-23
5	No problem with the system.	2	5	Finish

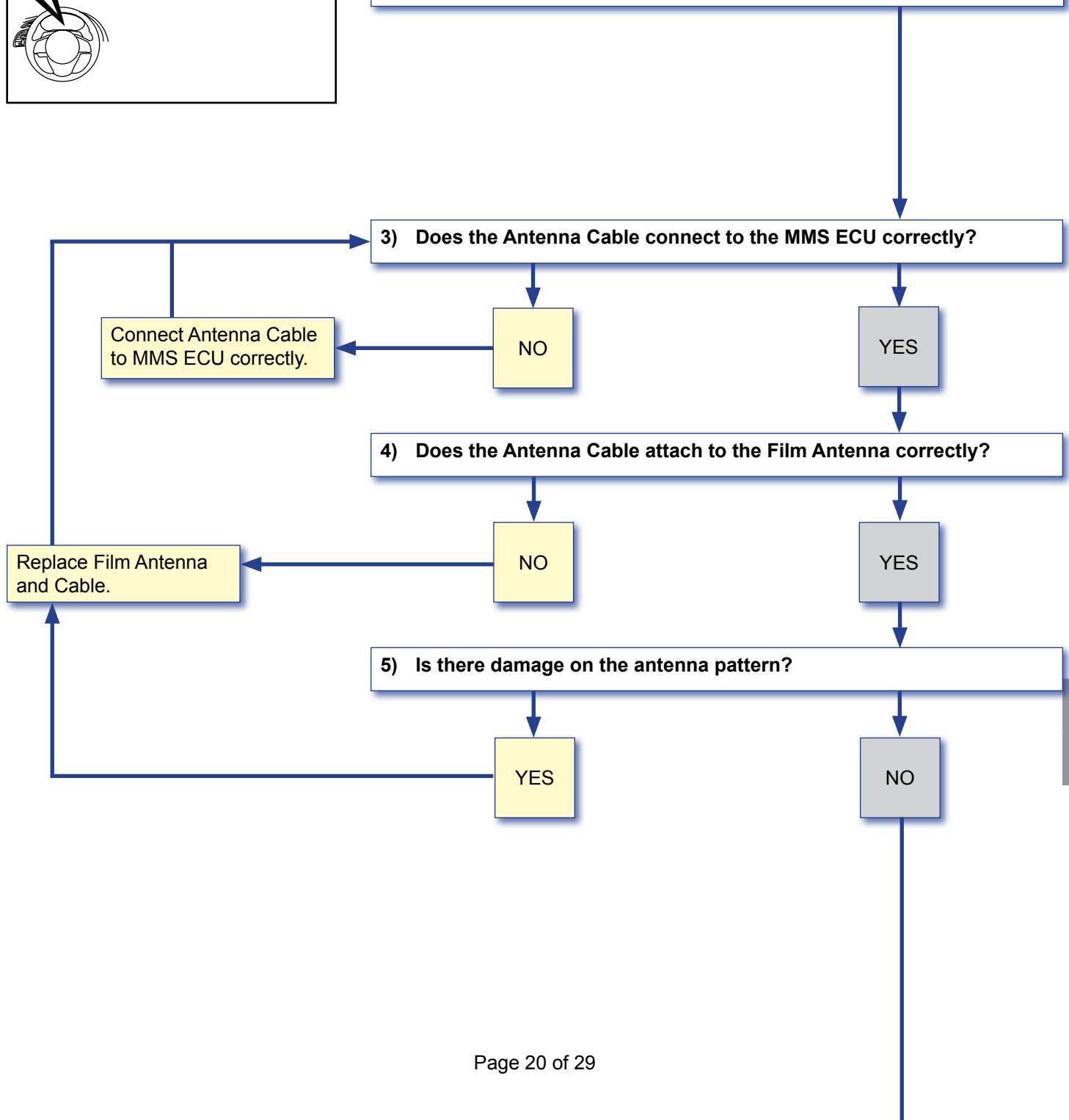
 * There is a priority for diagnosis code. If MMS ECU has any code in No.1~No.4, you need to check the diagnosis until the hazards flash 2 times.

 ** If the problem is related to the MMS ECU, it may take up to 2 minutes for the vehicle's hazard lights to flash.


 *** After replacing the MMS ECU, you must Register the ECU and perform the MMS Check Mode per the Installation Instructions. The Serial Number of the replacement MMS ECU must be registered at www.mazdamobilestart.com. If there are still problems with the MMS Function please restart this Troubleshooting Guide.




- 1) Vehicle Hazard Lights flashed 6 or 8 times.
- 2) Disconnect the Negative Battery Terminal.



6) **Has 30 Seconds passed since you disconnected the Vehicle's Negative Battery Terminal?**

 If not, please wait 30 Seconds.

7) **Reconnect the Vehicle's Negative Battery Terminal.**


 Wait another 15 Seconds.

8) **Re-Check diagnosis code of MMS ECU. Page 17-18, Steps 4-8.**


9) **Again note the Number of times the Hazard Lights flash.**

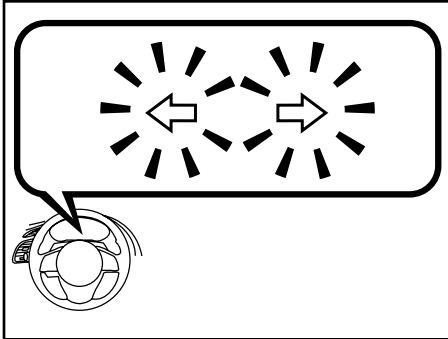
a) Perform the appropriate step below.

No.	Cause of Problem	Flashes	Priority*	For Detailed Instructions	
1	MMS ECU problem.	4**	1	Page 19	»
2	TEL Antenna connection problem.	6	2	Replace MMS ECU and check diagnostic code again.***	
3	GPS Antenna connection problem.	8	3		
4	No reception	10	4	Page 22-23	»
5	No problem with the system.	2	5	If the problem is related to CarFinder, go to Page 24-25	»

 * There is a priority for diagnosis code. If MMS ECU has any code in No.1~No.4, you need to check the diagnosis until the hazards flash 2 times.

 ** If the problem is related to the MMS ECU, it may take up to 2 minutes for the vehicle's hazard lights to flash.

 *** After replacing the MMS ECU, you must Register the ECU and perform the MMS Check Mode per the Installation Instructions. The Serial Number of the replacement MMS ECU must be registered at www.mazdamobilestart.com. If there are still problems with the MMS Function please restart this Troubleshooting Guide.



1) Vehicle Hazard Lights flashed 10 times.

2) Is the vehicle inside or underground?

NO

a) Move vehicle to a different open area.



• NOTE: Make sure it is in a location that is not surrounded by buildings or other tall structures.

b) Check diagnosis again. Page 17-18, Steps 4-8.

YES

a) Move vehicle outdoors.



• NOTE: Make sure it is in a location that is not surrounded by buildings or other tall structures.

b) Check diagnosis again. Page 17-18, Steps 4-8.

3) Vehicle Hazard Lights flashed 10 times.

a) All other diagnostic flashes should refer to page 20.

NO

YES

4) Disconnect the Vehicle's Negative Battery Terminal.



Wait 30 Seconds.



5) Reconnect the Vehicle's Negative Battery Terminal.

Wait another 15 Seconds.

6) Check diagnosis again. Page 17-18, Steps 4-8.

7) Vehicle Hazard Lights flashed 10 times.

NO

YES

Congratulations on a successful Troubleshooting.

No Reception

- 8) Turn the Vehicle's Ignition from OFF to ON. (MMS ECU will send a message to server).
- 9) Turn the Ignition OFF.

- 10) Call Mazda Customer Experience Center (800) 222-5500 and request them to make an inquiry regarding the status of the message.


11) Did the server receive the correct message?

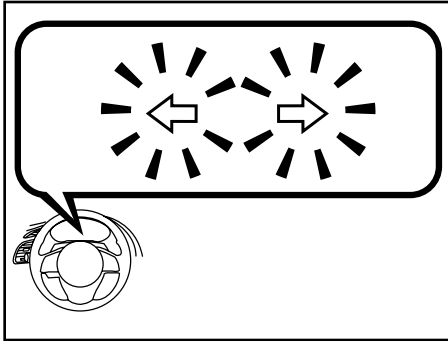
NO

1. Call Customer Experience Center at (800) 222-5500 for assistance on this matter.

YES

Replace MMS ECU.

-  12) After replacing the MMS ECU you must Register the ECU and perform the Check mode per the Installation Instructions. The Serial Number of the Replacement MMS ECU must be registered at www.mazdamobile-start.com. If there are still problems with the MMS Function please restart this Troubleshooting Guide.



Congratulations on a successful MMS Troubleshooting.

1) Vehicle Hazard Lights flashed 2 times.

2) Does CarFinder show the wrong position?

NO

YES

3) Turn the Vehicle's Ignition from OFF to ON. (MMS ECU will send a message to server).

4) Turn the Ignition OFF.

5) Call Mazda Customer Experience Center (800) 222-5500 and request them to make an inquiry regarding the status of the message.

6) Does Mazda CEC have the MMS ECU position?

NO

YES

Replace MMS ECU.

8) After replacing the MMS ECU you must Register the ECU and perform the MMS Check Mode per the Installation Instructions. The Serial Number of the Replacement MMS ECU must be registered on www.mazdamobilestart.com. If there are still problems with the MMS Function please restart this Troubleshooting Guide.

7) Is there a difference between GPS information and your location?

NO

YES

Problem with GPS feature on Smartphone. Go to page 4.

- 9) Depending on your location and the current GPS Satellite reception status, there may be up to a 50 meter difference between the CarFinder and the Vehicle's actual location.
- 10) Is the difference less than 50 meters or are you in a location with bad GPS reception?

NO

Replace MMS ECU

YES




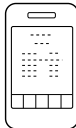

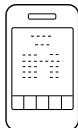

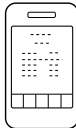
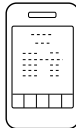

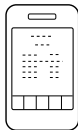

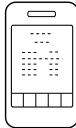
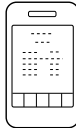
- 11) Explain to the Customer details of GPS reception and how it can vary depending on current reception.



- 12) After replacing the MMS ECU you must Register the ECU and perform the MMS Check Mode per the Installation Instructions. The Serial Number of the replacement MMS ECU must be registered at www.mazdamobilestart.com. If there are still problems with the MMS Function please restart this Troubleshooting Guide.

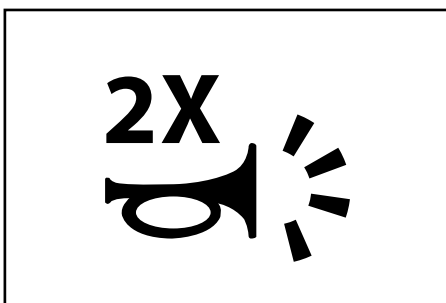
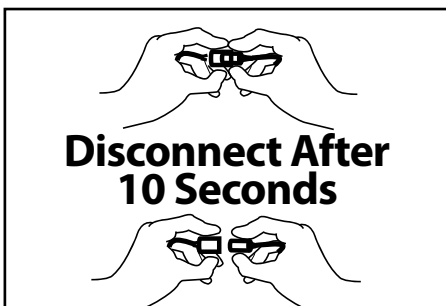
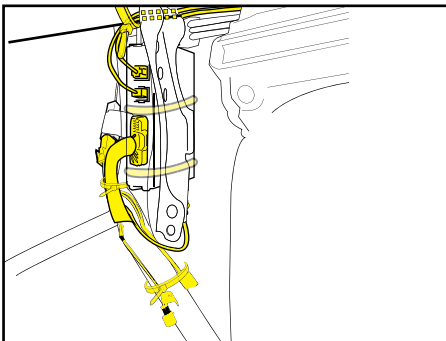
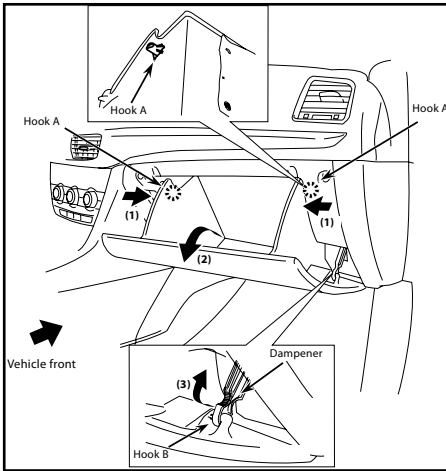
Operating Priority List

The following Table provides an overview of the operation priorities. This priority list was designed to provide optimal safety and security.

<p>If Engine is started by push start switch</p>  	<p>Engine can be shut off by push start switch</p> 	<p>Engine can NOT be shut off by smartphone</p> 	
<p>If Engine is started by smartphone 1 (User A)</p>  	<p>Engine can be shut off by push start switch</p> 	<p>Engine can be shut off by smartphone 1 (User A)</p> 	<p>Engine can NOT be shut off by smartphone 2 (User B)</p> 
<p>If Engine is started by smartphone 2 (User B)</p>  	<p>Engine can be shut off by push start switch</p> 	<p>Engine can NOT be shut off by smartphone 1 (User A)</p> 	<p>Engine can be shut off by smartphone 2 (User B)</p> 

This portion of the MMS Troubleshooting Guide is for Vehicle and MMS Hardware Troubleshooting to determine MMS Engine start failure or cause of unexpected Engine stop after MMS Engine start.

1) Begin by checking the hardware system for Problem Codes.

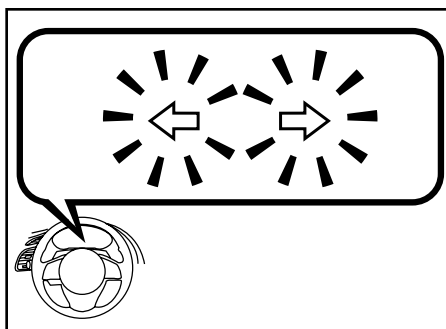
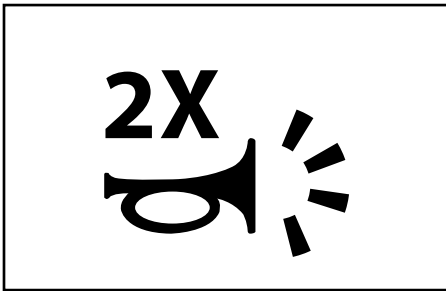
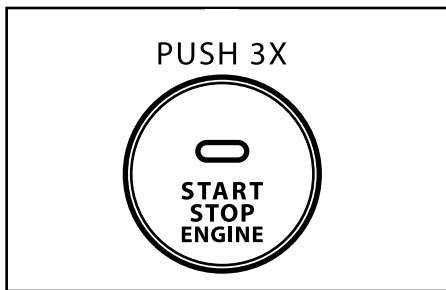


2) Remove the Glove box.

3) Locate the RES Diagnostic Connectors located behind the Glove box area.

4) Connect the 1P RES Diagnostic Connectors for at least 10 seconds, then disconnect.

5) Horn sounds 2 times.



6) Cycle the Ignition switch once by pressing the Start Button 3 times.

7) Horn sounds 2 times.

8) After 2 seconds, look for the Hazard Lights to flash. Record the number of Flashes.

Meaning of Flashes	Flashes	Priority**	Affected Terminal
No abnormal stop in the past	0	6	N/A
Ignition switch is in ACC or ON	2	3	STX, SRX
Any door is open (including hatchback and trunk)			
Hood is open			
Shifter is not in Park (P)			
Brake pedal has been pressed			
Engine Start Stop Button is pressed			
Advanced Key is inside the vehicle			
Alarm is triggered	4	2	STX, SRX
MMS Registration not completed			
ID certification	6	1	STX, SRX
Idling time out	8	4	STX, SRX
SSU-MMS serial abnormal communication	10	5	STX, SRX
Others*			

* If there is a signal being transmitted in the surrounding area that is close to the frequency band used by this device, Cellular transmission between the MMS ECU and Smartphone shall be restricted, which results in a communication error.

** There is a priority for diagnosis code. If MMS ECU shows any code, you need to re-check the diagnosis until the hazard lights do not flash.

MMS ECU Registration Failed.

So, you are having problems Registering the MMS ECU after installation. Registration result is shown by flashes made by the MMS harness LED. Refer to section 9 of the MMS installation instructions for MMS Registration procedure. Two flashes indicates a successful registration, otherwise see below for the number of LED flashes if registration failed.

# of LED Flashes	Cause of Failed Registration	Item to check
1	Missed operation or step	<ol style="list-style-type: none">1. Do not operate the doors, hood and trunk or hatchback during registration.2. Make sure you connected and disconnected the RES diagnostic connectors twice within 10 seconds and the LED flashed 2 times at step 2.3. Make sure you set the ignition status from ON to OFF within 4 seconds after the security indicator turns off at step 4.
3	3 MMS ECU's are already registered to the vehicle	<p>You can only register a maximum of 3 MMS ECU's to the vehicle.</p> <ol style="list-style-type: none">1. Using the M-MDS, perform the "Advanced key code - Erase", then perform the "Program - additional - Advanced key" to register all the Advanced keys. <p>Note: The "Advanced key code - Erase" erases all the registered Advanced keys from memory. Therefore, you need to register all the Advanced keys to the vehicle.</p>
4	Vehicle condition is not satisfied or MMS ECU is already registered	<ol style="list-style-type: none">1. MMS ECU may already be registered, proceed to section 10 of the installation instructions for MMS Check Mode. If the engine starts during check mode, then MMS registration was successful.2. Check if there are any diagnostic codes related to SSU by using M-MDS.
5	Time limit have elapsed	<ol style="list-style-type: none">1. Perform MMS ECU registration steps 3 to 6 within 60 seconds.
6	Advanced Keys are not registered	<ol style="list-style-type: none">1. Register all the Advanced Keys to the vehicle.
7	Communication error between MMS ECU and SSU	<ol style="list-style-type: none">1. Check whether the MMS ECU and MMS harness are installed in the vehicle correctly and all the harness connectors are connected properly.