

IMPORTANT UPDATE

TECHNICAL INSTRUCTIONS FOR SPECIAL SERVICE CAMPAIGN JLH INTELLIGENT CLEARANCE SONAR (ICS) SYSTEM REPROGRAM

**CERTAIN:
2018 LS 500 and LS 500h
2018 NX 300 and NX 300h
2018 RX 350L and RX 450hL
2017-2018 RX 350 and RX 450h**

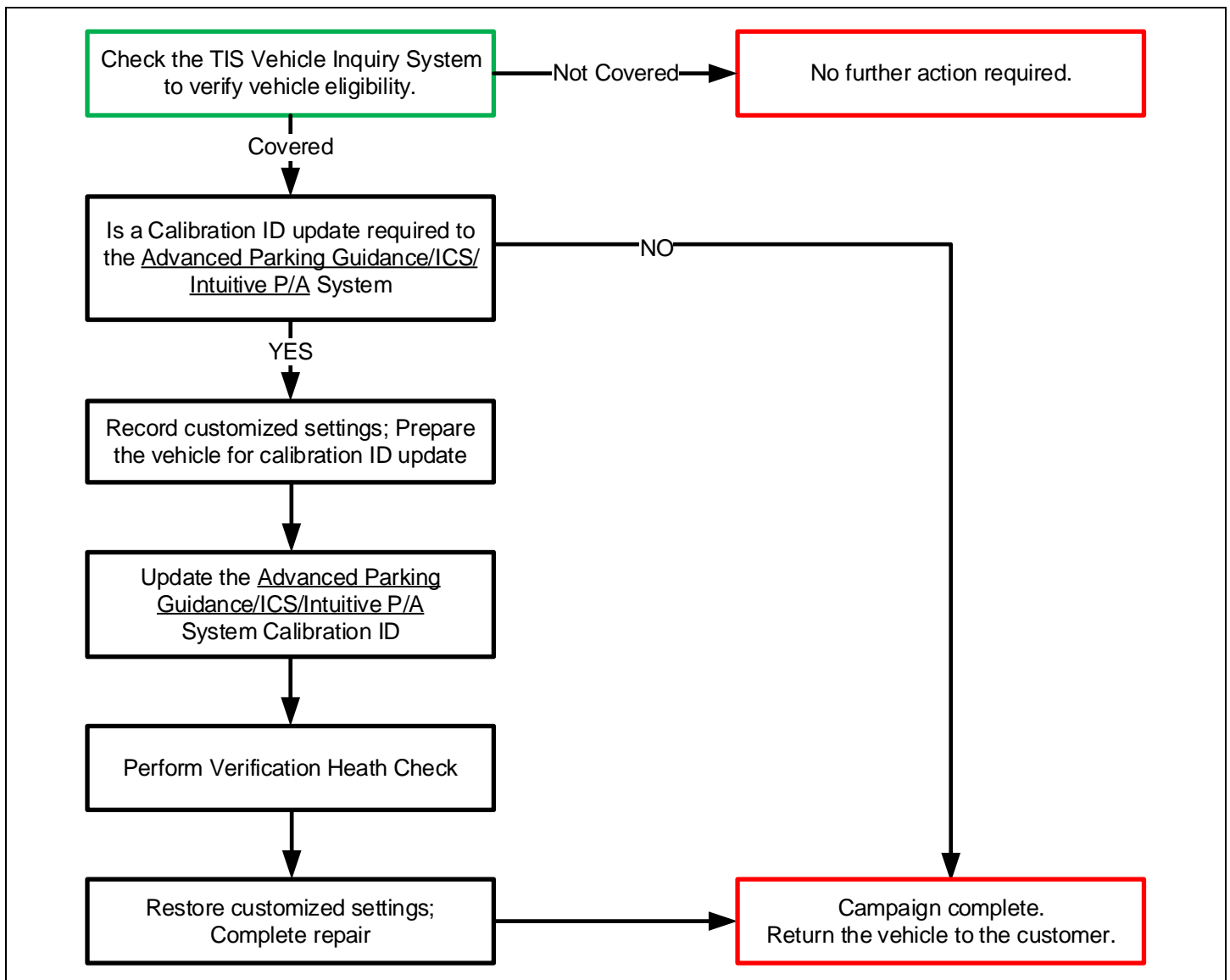
Update 4/9/2019: Note added on p. 5.

The repair quality of covered vehicles is extremely important to Lexus. All dealership technicians performing this recall are required to successfully complete the most current version of the E-Learning course "Safety Recall and Service Campaign Essentials". To ensure that all vehicles have the repair performed correctly; technicians performing this recall repair are required to currently hold at least one of the following certification levels:

- Certified
- Senior
- Master

It is the dealership's responsibility to select technicians with the above certification level or greater to perform this recall repair. Carefully review your resources, the technician skill level, and ability before assigning technicians to this repair. It is important to consider technician days off and vacation schedules to ensure there are properly trained technicians available to perform this repair at all times.

I. OPERATION FLOW CHART



II. IDENTIFICATION OF AFFECTED VEHICLES

- Check the TIS Vehicle Inquiry System to confirm the VIN is involved in this Campaign, and that it has not already been completed prior to dealer shipment or by another dealer.
- TMS warranty will not reimburse dealers for repairs completed on vehicles that are not affected or were completed by another dealer.

III. PREPARATION

1. TOOLS, SUPPLIES & EQUIPMENT

- Standard Hand Tools
- Techstream 2.0 / TIS Techstream / Techstream Lite
- GR8 Battery Diagnostic Station
- L-SB-0001-18

IV. BACKGROUND

The involved vehicles are equipped with Intelligent Clearance Sonar (ICS). When an involved vehicle enters a conveyor-type carwash and is placed into neutral, due to a programming error in the ICS system, the front sonar sensors in the system may incorrectly interpret the carwash brushes as a pedestrian or vehicle, and activate the ICS system. If the ICS system activates, the ICS system will exhibit warnings and the system may apply the brakes.

V. DETERMINE STATUS OF CURRENT CALIBRATION



1. CHECK FOR DTC'S

- Using a Techstream, perform a Health Check to check for any Diagnostic Trouble Codes.

Note: This Campaign covers only the Calibration ID update to the Advanced Parking Guidance/ICS/Intuitive P/A System, as detailed in these instructions. It does not cover the diagnosis or replacement of any other systems on the vehicle.

2. CHECK CURRENT CALIBRATION

- Locate the Update column for the **ADVANCED PARKING GUIDANCE/ICS/INTUITIVE P/A** System in the Stored Data tab for this vehicle.
- Determine the status of an available update; indicated by a YES or NO.

System Select: **Stored Data**

2018 RX350
2GR-FKS
006483 mile

2018_RX350_2G
File Notes
Health Check
Data 1-10/

Tire Pressure / Threshold Value [psi(gauge)]

Sensor 1: 30.93 / 26.69 Sensor 2: 30.68 /
Sensor 3: 30.18 / 26.44 Sensor 4: 29.93 /
Sensor 5: N/A / N/A

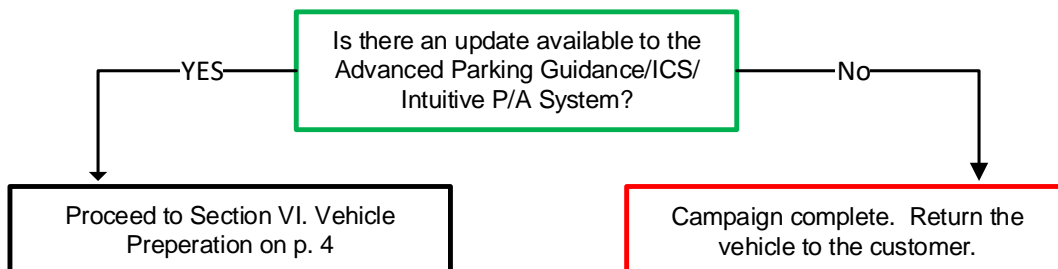
Health Check Results

- Health Check does not display live data.
- Changes in vehicle condition will not update automatically.
- To update Health Check, click the Refresh button on the bo

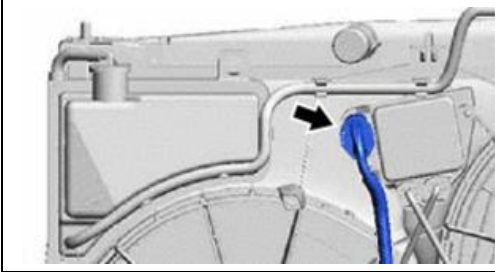
Enhanced | Generic |

Campaign Status: **Y**
PERMANENT: **NO**

System	Test iled	RoB	Calibration	Update
Sliding Roof	-	-	-	-
Master Switch	-	-	-	-
Back Door	-	-	8922G4808001	No
Driver Seat	-	-	897134808001	No
Tilt&Telescopic	-	-	-	-
Advanced Parking Guidance/ICS/Intuitive P/A	-	-	8934F481800	Yes
SRS Airbag	-	-	8917F0E115	No
Rain and/or Humidity Sensor	-	-	-	-
Pre-Collision 2	-	-	881514810700	No



VI. VEHICLE PREPERATION



1. DISCONNECT COOLING FAN

- Disconnect the electrical connector from the cooling fan ECU on the radiator shroud.

Note: If the cooling fans run during the Calibration update procedure, the battery voltage will be inconsistent and could cause damage the control module.

RX 350 shown. Other models are similar.

2. PRESSURIZE HYDRO-BOOSTER (LS 500, all hybrid models)

- Depress the brake pedal fully 2 times within 2 seconds.
- Release the brake pedal.
- Wait 10 seconds.

Note: The hydro-boost pump may run for a few seconds when completing these steps. The procedure will pressurize the system and prevent the pump from running during the Calibration update procedure. Not all vehicles are equipped with the Hydro-booster.

3. VEHICLE PREPARATION

- Confirm the following conditions:
 - Vehicle in the IG position (engine off).
 - Transaxle in Park.
 - Parking brake engaged.
 - Turn off all electrical accessories (i.e. climate control, audio system, etc.)
 - Headlight switch in the DRL OFF position.
 - Windshield wiper switch in the OFF position.

4. CONNECT THE 12v BATTERY TO A POWER SUPPLY (GR8)

- Connect the GR8 or other type of a power supply (not a battery charger) to the 12v battery.
- Select the Power Supply Mode from the Charge Menu of the GR8.



A power supply *MUST* be used during reprogramming. ECU damage will occur if the battery voltage is not properly maintained during this re-flash procedure.

Note: A power supply must be connected directly to the 12v battery terminals and NOT the remote jump posts under the hood (if equipped).

5. VERIFY TECHSTREAM SETUP

- Verify that the Techstream meets the following conditions:
 - The latest version of software is loaded.
 - The Techstream battery is fully charged. If not, connect the Techstream to a 120v source.
 - The DLCIII cable is in good condition.



The Techstream's battery voltage must be maintained during the update procedure. If necessary, plug the Techstream into a 120v outlet during this procedure.

Note: If the Techstream's communication with the vehicle fails during the update procedure, the Clearance Warning ECU will be damaged.

6. RECORD CUSTOMIZED SETTINGS

The customized setting for this System will be lost during the Calibration update. It will be necessary to record the customers settings, prior to the update, to return the vehicle to its original condition.

- a. Use a Techstream to access the following data:
 - Advance Parking Guidance/ICS/Intuitive P/A → Customize → Warning, Sensor, Display, and Others.
- b. Record the Customized Settings on the sheets provided in Section: X APPENDIX on p. 10.
 - STEP A** (LS500 & LS500h)
 - STEP B** (RX350 & RX450h & RX350L & RX450hL)
 - STEP C** (NX300 & NX300h)

VII. UPDATE CALIBRATION

1. UPDATE THE ADVANCED PARKING GUIDANCE/ICS/INTUITIVE P/A SYSTEM

- a. Identify the vehicles Original CID for the Advanced Parking Guidance/ICS/Intuitive P/A System on the Stored Data tab.

System Select: **Stored Data**

2018 RX350
2GR-FKS

006483 mile

2018_RX350_2G
File Notes
Health Check
Data 1-10/

Sort
Expand>>

Tire Pressure / Threshold Value [psi(gauge)]

Sensor 1: 30.93 / 26.69 Sensor 2: 30.68 /
Sensor 3: 30.18 / 26.44 Sensor 4: 29.93 /
Sensor 5: N/A / N/A

Health Check Results

- Health Check does not display live data.
- Changes in vehicle condition will not update automatically.
- To update Health Check, click the Refresh button on the bo

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Campaign Status: **Y**
PERMANENT: **NO**

System	Test	Calibration	Update
Sliding Roof	-	-	-
Master Switch	-	-	-
Back Door	-	8922G4808001	No
Driver Seat	-	897134808001	No
Tilt&Telescopic	-	-	-
Advanced Parking Guidance/ICS/Intuitive P/A	-	8934F481800	Yes
SRS Airbag	-	8917F0E115	No
Rain and/or Humidity Sensor	-	-	-
Pre-Collision 2	-	881514810700	No

- b. Locate the vehicles Original CID in the chart on the following page.
- c. Select the corresponding NEW CID link to load the update.
- d. Follow the on-screen instructions to complete the Calibration Update procedure.

The CID Update Procedure is detailed in [L-SB-0001-18](#) Please reference this Bulletin for more detailed procedures and information.

Note: To insure the update process is completed before turning the ignition off, it is recommended to add a 10 second delay between step H and step I of [L-SB-0001-18](#). For example, after the Flash Calibration process has completed (step H), wait 10 seconds before turning off the ignition (step I).



Be extremely careful to select the correct NEW CID that corresponds to the Original CID.

Vehicle Specification		Clearance Warning ECU Calibrations	
Model	MY	Current CID	New CID
LS500 & LS500h	18	8934F500 904	<u>8934F500906</u>
RX350 & RX450h	17 - 18	8934F481 700	<u>8934F482900</u>
		8934F481 701	
		8934F481 800	<u>8934F483000</u>
		8934F481 801	
RX350L & RX450hL	17 - 18	8934F482 201	<u>8934F483100</u>
		8934F482 301	<u>8934F483200</u>
NX300 & NX300h	18	8934F780 302	<u>8934F780303</u>
		8934F780 402	<u>8934F780403</u>
		8934F780 502	<u>8934F780503</u>

Note: If the Advance Parking Guidance/ICS/Intuitive P/A system has already been calibrated with the new CID, the campaign is complete.

VIII. COMPLETE REPAIR



1. PERFORM VERIFICATION HEALTH CHECK

- Using a Techstream, perform a Health Check.
- Clear DTC's that may have set during the re-flash procedure.
- Re-run the Health Check to confirm that no DTC's reappear.**



THIS VERIFICATION HEALTH CHECK IS NECESSARY to update the results and CID's to the National database.

2. CONFIRM CID UPDATE

a. On the Stored Data tab, confirm the following for the Advanced Parking Guidance/ICS/Intuitive P/A ECU:

- The Update column lists “No”

System Selected: **Stored Data**

2018 RX350
2GR-FKS
006483 mile

Tire Pressure / Threshold Value [psi(gauge)]
Sensor 1: 30.93 / 26.69 Sensor 2: 30.68 / 26.69
Sensor 3: 30.18 / 26.44 Sensor 4: 29.93 / 26.44
Sensor 5: N/A / N/A

Health Check Results
- Health Check does not display live data.
- Changes in vehicle condition will not update automatically.
- To update Health Check, click the Refresh button on the bottom right.

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System	Test iled	RoB	Calibration	Update
Sliding Roof	-	-	-	
Master Switch	-	-	-	
Back Door	-	-	8922G4808001	No
Driver Seat	-	-	897134808001	No
Tilt/Telescopic	-	-	-	
Advanced Parking Guidance/ICS/Intuitive P/A	-	-	8934F483000	No
SRS Airbag	-	-	8917F0E115	No
Rain and/or Humidity Sensor	-	-	-	
Pre-Collision 2	-	-	881514810700	No

Campaign Status: **Y**
PERMANENT: **NO**

MUST say "No"

Note: If you receive the following message after the Verification Health Check, you have not properly completed the Required Calibration Updates!!

S312-01

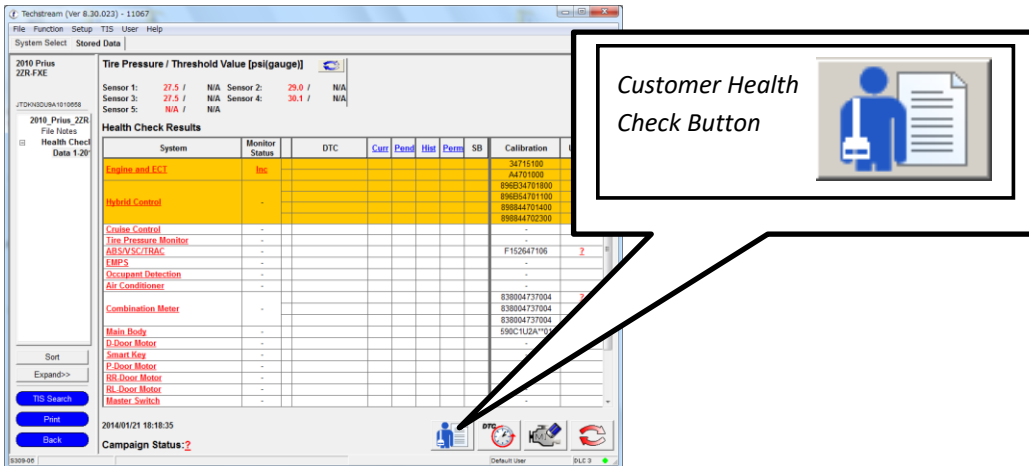
! Critical Message

! Important Calibration Update Required

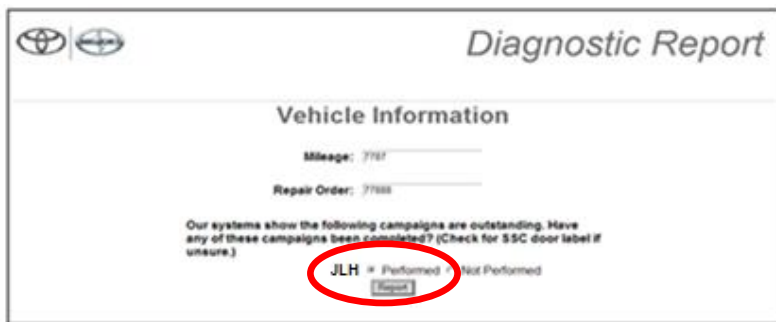
Please reference the [TECHNICAL INSTRUCTIONS](#) of campaign JLH on TIS. After completing calibration update, an **on-network health check must** be performed to satisfy campaign completion requirements.

3. PRINT CUSTOMER HEALTH CHECK REPORT

- a. From the Stored Data tab, select the Customer Health Check Report button (TIS will launch when button is pressed).



- b. Log in to TIS.
- c. Input Vehicle Mileage and Repair Order number.
- d. Check the “Performed” campaign button for campaign JLH.
- e. Select the Report button.



- f. Confirm Customer Health Check Report information is correct.
- g. Print Customer Health Check Report from TIS.
- h. Sign and provide to the customer.

IX. REASSEMBLY

1. RESTORE CUSTOMIZED SETTINGS

- a. Use a Techstream to access the following data:
 - Advance Parking Guidance/ICS/Intuitive P/A → Customize → Warning, Sensor, Display, and Others.
- b. Restore the customized settings to their prior selections using the Customized Settings Sheets that you previously recorded.

2. CONNECT COOLING FAN

- a. Lower the lock lever and engage the claw to connect the cooling fan motor connector.

3. INITIALIZE PKSB OR ICS SYSTEM

- a. If the PKSB indicator (LS models) or ICS indicator (RX & NX models) blinks after reflash, perform steering sensor zero point calibration.

LS 500		2018
LS 500h		2018
RX 350	2017	2018
RX 450h	2017	2018
RX 350L		2018
RX 450hL		2018
NX 300		2018
NX 300h		2018

4. REMOVE THE POWER SUPPLY FROM THE BATTERY

◀ VERIFY REPAIR QUALITY ▶

- Verify the operation of the cooling fans
- Confirm the system Calibration has been updated successfully.
- Confirm there are no DTC's after the Calibration update.

X. APPENDIX

A. CUSTOMIZED SETTING SHEET (for LS500 & LS500h)

a) Techstream: Warning

Function	Settings (Put a check into applicable setting.)				
Fr Corner Sensor Onset Range	<input type="checkbox"/> Short	<input type="checkbox"/> Long			
Rr Corner Sensor Onset Range	<input type="checkbox"/> Short	<input type="checkbox"/> Long			
Fr Sensor Onset Range	<input type="checkbox"/> Narrow	<input type="checkbox"/> Wide			
Rr Sensor Onset Range	<input type="checkbox"/> Narrow	<input type="checkbox"/> Wide			
Keep Sense Buzzer	<input type="checkbox"/> Not Avail	<input type="checkbox"/> Avail			
Fr & Rr Buzzer Volume	<input type="checkbox"/> L	<input type="checkbox"/> M	<input type="checkbox"/> H		
Object Not Moving 3s Buzz Vol	<input type="checkbox"/> Keep Vol	<input type="checkbox"/> L	<input type="checkbox"/> M1	<input type="checkbox"/> M2	
Leave Buzzer Volume	<input type="checkbox"/> Keep Vol	<input type="checkbox"/> L	<input type="checkbox"/> M1	<input type="checkbox"/> M2	
Temporary Mute Reset Speed Adjust	<input type="checkbox"/> System Link	<input type="checkbox"/> 15km/h	<input type="checkbox"/> 20km/h	<input type="checkbox"/> 30km/h	
Temporary Mute Function	<input type="checkbox"/> OFF	<input type="checkbox"/> ON			
Clearance Sonar Auto Mute Function	<input type="checkbox"/> OFF	<input type="checkbox"/> ON			
Clearance Sonar Judgement of Obstacle on Course	<input type="checkbox"/> Valid	<input type="checkbox"/> Invalid			

b) Techstream: Sensor

Function	Settings (Put a check into applicable setting.)				
Sensor Condition N	<input type="checkbox"/> Not Avail	<input type="checkbox"/> Avail			

c) Techstream: Display

Function	Settings (Put a check into applicable setting.)				
Approach Display OFF	<input type="checkbox"/> Not Avail	<input type="checkbox"/> Avail			
Display Mode	<input type="checkbox"/> All	<input type="checkbox"/> Undisp			

To be continued.

d) Techstream: Others

Function	Settings (Put a check into applicable setting.)				
ICS Function	<input type="checkbox"/> ON	<input type="checkbox"/> OFF			
ICS SW Status Memory	<input type="checkbox"/> Yes	<input type="checkbox"/> No			
ICS Stop Distance	<input type="checkbox"/> Short	<input type="checkbox"/> Long			
RCTAB Function	<input type="checkbox"/> ON	<input type="checkbox"/> OFF			
RCTAB Operation Timing Setting	<input type="checkbox"/> Late	<input type="checkbox"/> Standard			
RCTAB Sensitivity	<input type="checkbox"/> Standard	<input type="checkbox"/> Low			
Pedestrian ICS Function	<input type="checkbox"/> ON	<input type="checkbox"/> OFF			
Pedestrian ICS Target Stopping Distance	<input type="checkbox"/> Close	<input type="checkbox"/> Normal			
Pedestrian ICS Width Adjustment (Y Axis)	<input type="checkbox"/> Narrow	<input type="checkbox"/> Normal			

B. CUSTOMIZED SETTING SHEET (for RX350 & RX450h & RX350L & RX450hL)

a) Techstream: Warning

Function	Settings (Put a check into applicable setting.)				
Fr Corner Sensor Onset Range	<input type="checkbox"/> Short	<input type="checkbox"/> Long			
Rr Corner Sensor Onset Range	<input type="checkbox"/> Short	<input type="checkbox"/> Long			
Fr Sensor Onset Range	<input type="checkbox"/> Narrow	<input type="checkbox"/> Wide			
Rr Sensor Onset Range	<input type="checkbox"/> Narrow	<input type="checkbox"/> Wide			
Keep Sense Buzzer	<input type="checkbox"/> Not Avail	<input type="checkbox"/> Avail			
Fr & Rr Buzzer Volume	<input type="checkbox"/> L	<input type="checkbox"/> M1	<input type="checkbox"/> M2	<input type="checkbox"/> M3	<input type="checkbox"/> H
Object Not Moving 3s Buzz Vol	<input type="checkbox"/> Keep Vol	<input type="checkbox"/> L	<input type="checkbox"/> M1	<input type="checkbox"/> M2	
Leave Buzzer Volume	<input type="checkbox"/> Keep Vol	<input type="checkbox"/> L	<input type="checkbox"/> M1	<input type="checkbox"/> M2	
Temporary Mute Reset Speed Adjust	<input type="checkbox"/> System Link	<input type="checkbox"/> 15km/h	<input type="checkbox"/> 20km/h	<input type="checkbox"/> 30km/h	
Temporary Mute Function	<input type="checkbox"/> OFF	<input type="checkbox"/> ON			

b) Techstream: Sensor

Function	Settings (Put a check into applicable setting.)				
Sensor Condition N	<input type="checkbox"/> Not Avail	<input type="checkbox"/> Avail			

c) Techstream: Display

Function	Settings (Put a check into applicable setting.)				
Approach Display OFF	<input type="checkbox"/> Not Avail	<input type="checkbox"/> Avail			
Display Mode	<input type="checkbox"/> All	<input type="checkbox"/> Undisp			

d) Techstream: Others

Function	Settings (Put a check into applicable setting.)				
ICS Function	<input type="checkbox"/> ON	<input type="checkbox"/> OFF			
ICS SW Status Memory	<input type="checkbox"/> Yes	<input type="checkbox"/> No			
ICS Stop Distance	<input type="checkbox"/> Short	<input type="checkbox"/> Long			
RCTAB Function	<input type="checkbox"/> ON	<input type="checkbox"/> OFF			
RCTAB Operation Timing Setting	<input type="checkbox"/> Late	<input type="checkbox"/> Standard			
RCTAB Sensitivity	<input type="checkbox"/> Standard	<input type="checkbox"/> Low			

C. CUSTOMIZED SETTING SHEET (for NX300 & NX300h)

a) Techstream: Warning

Function	Settings (Put a check into applicable setting.)				
Fr Sensor Onset Range	<input type="checkbox"/> Narrow	<input type="checkbox"/> Wide			
Rr Sensor Onset Range	<input type="checkbox"/> Narrow	<input type="checkbox"/> Wide			
Keep Sense Buzzer	<input type="checkbox"/> Not Avail	<input type="checkbox"/> Avail			
Fr & Rr Buzzer Volume	<input type="checkbox"/> L	<input type="checkbox"/> M1	<input type="checkbox"/> M2	<input type="checkbox"/> M3	<input type="checkbox"/> H
Object Not Moving 3s Buzz Vol	<input type="checkbox"/> Keep Vol	<input type="checkbox"/> L	<input type="checkbox"/> M1	<input type="checkbox"/> M2	
Leave Buzzer Volume	<input type="checkbox"/> Keep Vol	<input type="checkbox"/> L	<input type="checkbox"/> M1	<input type="checkbox"/> M2	
Temporary Mute Reset Speed Adjust	<input type="checkbox"/> System Link	<input type="checkbox"/> 15km/h	<input type="checkbox"/> 20km/h	<input type="checkbox"/> 30km/h	
Temporary Mute Function	<input type="checkbox"/> OFF	<input type="checkbox"/> ON			

b) Techstream: Sensor

Function	Settings (Put a check into applicable setting.)				
Sensor Condition N	<input type="checkbox"/> Not Avail	<input type="checkbox"/> Avail			

c) Techstream: Display

Function	Settings (Put a check into applicable setting.)				
Approach Display OFF	<input type="checkbox"/> Not Avail	<input type="checkbox"/> Avail			

d) Techstream: Others

Function	Settings (Put a check into applicable setting.)				
ICS Function	<input type="checkbox"/> ON	<input type="checkbox"/> OFF			
ICS SW Status Memory	<input type="checkbox"/> Yes	<input type="checkbox"/> No			
ICS Stop Distance	<input type="checkbox"/> Short	<input type="checkbox"/> Long			

A. PARTS DISPOSAL

As required by Federal Regulations, please make sure all recalled parts (original parts) removed from the vehicle are disposed of in a manner in which they will not be reused, ***unless requested for parts recovery return.***

B. CAMPAIGN DESIGNATION DECORDER

