

MULTIPLEX COMMUNICATION SYSTEM

B3E090255430W01

Outline

• If the controller area network (CAN) system is malfunctioning, read the DTCs of the following modules, using the WDS or equivalent to determine the malfunctioning system.

- PCM
- EHPAS control module
- DSC HU/CM (with DSC)
- ABS HU/CM (with ABS)
- Instrument cluster
- Climate control unit
- SAS control module
- Audio unit (base module)
- PJB

Flowchart

• Use the following flowchart to verify the cause of the trouble.

STEP	INSPECTION		ACTION
1	INSPECT DTC INDICATION • Using the WDS or equivalent, inspect if DTCs are displayed for the following module: - PCM - EHPAS control module - DSC HU/CM or ABS HU/CM - Instrument cluster - Climate control unit - SAS control module - PJB • Are any DTCs displayed?	Yes	Go to the next step.
		No	Go to Step 5.
2	INSPECT CAN SYSTEM-RELATED DTC • Are any DTCs other than the following displayed? - U0073 - U0100 - U0121 - U0131 - U0140 - U0155 - U0151 - U0184 - U0516 - U1900 - U2012 - U2023 - U2202 - U2516 - U2523	Yes	Repair the malfunctioning part by following the related DTC inspection. Go to the next step.
		No	Go to the next step.
	INSPECT CAN SYSTEM-RELATED DTC • Are any of the following DTCs displayed?		

3	<ul style="list-style-type: none"> - PCM: U0073, U0121, U0155 - EHPAS control module: U0073, U0100, U2023 - DSC HU/CM or ABS HU/CM: U1900, U2012, U2523 - Instrument cluster: U0073, U0100, U0121, U0131, U0140, U0151, U0184, U2516 - Climate control unit: U0140, U0155, U0184, U0516 - SAS control module: U0073, U1900 - PJB: U1900 	Yes	Repair the malfunctioning part by following the DTC inspection. Go to the next step.
		No	Troubleshooting completed.
4	VERIFY TROUBLESHOOTING COMPLETED <ul style="list-style-type: none"> • Clear the DTC from the CAN system-related modules using the WDS or equivalent. • Start the engine. • Are any of the CAN related DTCs displayed? 	Yes	Go back to Step 3.
		No	Troubleshooting completed.
5	INSPECT COMMUNICATION CONDITION <ul style="list-style-type: none"> • Is there a response from the following modules? <ul style="list-style-type: none"> - PCM - EHPAS control module - DSC HU/CM or ABS HU/CM - Instrument cluster - Climate control unit - SAS control module - PJB 	Yes	Troubleshooting completed.
		No	Go to the next step.
6	INSPECT MODULES THAT DO NOT RESPOND <ul style="list-style-type: none"> • Inspect the power supply and the ground circuit for any units that do not respond. • Are they normal? 	Yes	Go to the next step.
		No	Repair the malfunctioning part, then go back to Step 1.
7	INSPECT CONNECTOR AND WIRING HARNESS BETWEEN MODULES THAT DO NOT RESPOND AND DLC-2 <ul style="list-style-type: none"> • Turn the ignition switch to the LOCK position. • Inspect the wiring harness and connector between any module that does not respond and the DLC-2. PCM (LF)-DLC-2 1AM-F 1AI-E PCM (Z6, ZJ)-DLC-2 1W-F 1S-E EHPAS control module-DLC-2 2B-F 2H-E DSC HU/CM-DLC-2 <ul style="list-style-type: none"> • P-F • D-E ABS HU/CM-DLC-2 <ul style="list-style-type: none"> • H-F • L-E Instrument cluster-DLC-2 1I-F 1K-E 1M-L 1O-K Climate control unit-DLC-2 <ul style="list-style-type: none"> • X-L • W-K SAS control module-DLC-2 1X-L 1T-K PJB-DLC-2 <ul style="list-style-type: none"> • J-04 D-L 	Yes	Go to the next step.
		No	Repair the malfunctioning part, then go back to Step 1.

	• J-04 B-K		
8	INSPECT WIRING HARNESS <ul style="list-style-type: none"> • Turn the ignition switch to the ON position (Engine off). • Measure the voltage between the following terminals. <ul style="list-style-type: none"> - DLC-2 terminals F and E - DLC-2 terminals L and K 	Yes	Go to the next step.
		No	Go to Step 12.
9	INSPECT WIRING HARNESS <ul style="list-style-type: none"> • Turn the ignition switch to the LOCK position. • Measure the resistance between the following terminals. <ul style="list-style-type: none"> - DLC-2 terminals F and E - DLC-2 terminals L and K 	Yes	Replace the modules that do not respond, then go back to Step 1.
		No	Go to the next step.
10	INSPECT PCM <ul style="list-style-type: none"> • Disconnect the PCM connector. • Measure the resistance between following terminals. <ul style="list-style-type: none"> - PCM terminals 1AM and 1AI (LF) (part-side) - PCM terminals 1W and 1S (Z6, ZJ) (part-side) 	Yes	Go to the next step.
		No	Replace the PCM, then go to the next step.
11	INSPECT INSTRUMENT CLUSTER <ul style="list-style-type: none"> • Disconnect the instrument cluster connector. • Measure the resistance between the following terminals. <ul style="list-style-type: none"> - Instrument cluster terminals 1I and 1K (part-side) - Instrument cluster terminals 1M and 1O (part-side) 	Yes	Go to next step.
		No	Replace the instrument cluster, then go to the next step.
12	CLASSIFY WIRING HARNESS MALFUNCTION OR MODULE MALFUNCTION <ul style="list-style-type: none"> • Turn the ignition switch to the LOCK position. • Disconnect the connector of any unit that does not respond. (If there are two or more units that do not respond, disconnect only one of the units.) • Turn the ignition switch to the ON position. • Measure the voltage between the following terminals. <ul style="list-style-type: none"> - DLC-2 terminals F and E - DLC-2 terminals L and K 	Yes	Go to the next step.
		No	Retry this step with other module connector disconnected. If all units that do not respond are disconnected, go to Step 14.
	INSPECT WIRING HARNESS OF ANY UNIT THAT DOES NOT RESPOND <ul style="list-style-type: none"> • Turn the ignition switch to the LOCK position. • Inspect for continuity between the following connector terminals of any disconnected unit. <ul style="list-style-type: none"> PCM (LF) 1AM-other terminals 1AI-other terminals PCM (Z6, ZJ) 1W-other terminals 1S-other terminals EHPAS control module 2B-other terminals 	Yes	Repair or replace the wiring harness, then go back to Step 1.

13	2H-other terminals DSC HU/CM • P-other terminals • D-other terminals ABS HU/CM • H-other terminals • L-other terminals Instrument cluster 1I-other terminals 1K-other terminals 1M-other terminals 1O-other terminals Climate control unit • X-other terminals • W-other terminals SAS control module 1X-other terminals 1T-other terminals PJB • J-04 D-other terminals • J-04 B-other terminals Is there continuity?	No	Replace the disconnected unit, then go back to Step 1.
14	INSPECT CAN RELATED WIRING HARNESS • Inspect the related wiring harnesses (CAN_L and/or CAN_H) for the short circuit (to power supply or ground). • Is the wiring harness normal?	Yes	Repair or replace the wiring harness, then go back to Step 1.
		No	Go back to Step 1.