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2004 LEXUS LX OEM Service and Repair Workshop Manual

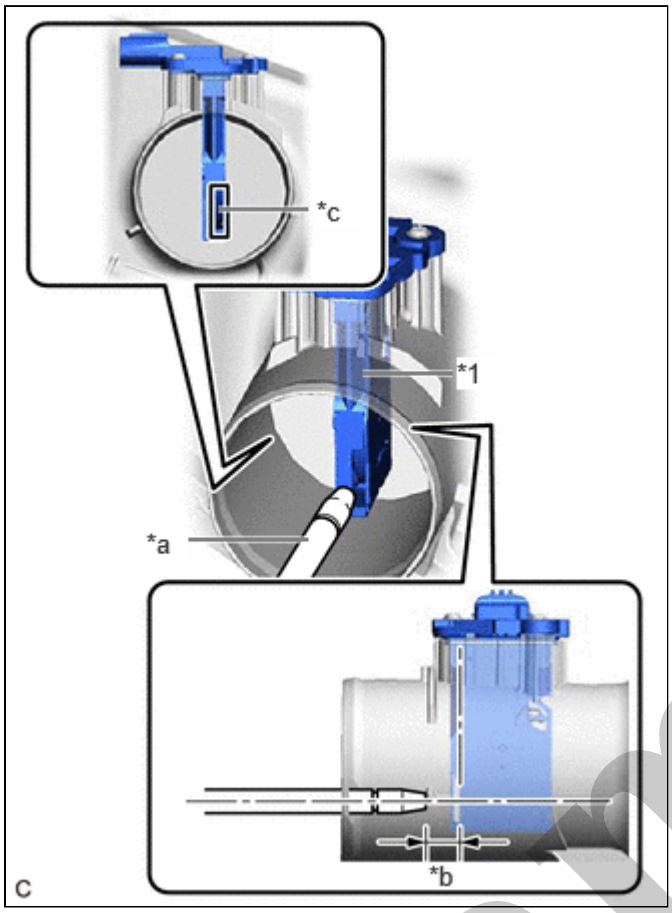
Go to manual page

(a) Remove the air cleaner cap sub-assembly.

(b) Clean the intake mass air flow meter sub-assembly.

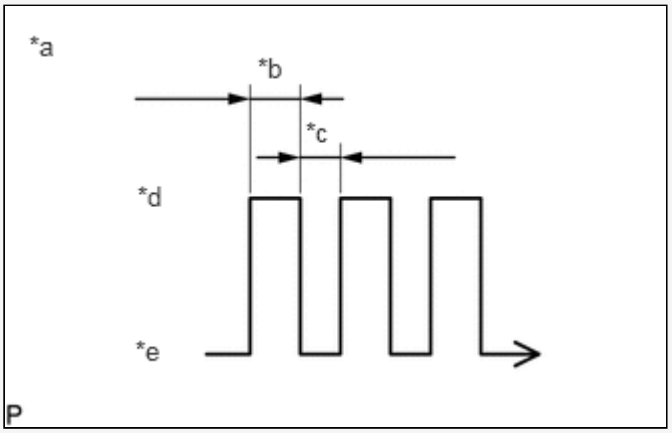
NOTICE:

- Do not contact the intake mass air flow meter sub-assembly with the nozzle of the air blow gun.
- Do not insert the nozzle of the air blow gun into the airflow hole.



*1	Intake Mass Air Flow Meter Sub-assembly
*a	Air Blow Gun
*b	10 mm (0.394 in.)
*c	Airflow Hole

(1) Using an air blow gun, clean the hole of the intake mass air flow meter sub-assembly by applying approximately 10 intermittent bursts of air to the airflow hole at a pressure of approximately 392 to 981 kPa (4.0 to 10.0 kgf/cm 2 , 57 to 142 psi).



*a	Air Blow Duration
*b	3 to 6 Seconds
*c	1 Second

Last Modified: 10-07-2024	6.11:8.1.0	**Doc ID:** RM100000002HAJU
Model Year Start: 2024	**Model:** GX550	**Prod Date Range:** [12/2023 -]
Title: JF2BM (TRANSFER / 4WD / AWD): TRANSFER SYSTEM: PRECAUTION; 2024 MY GX550 [12/2023 -]		

PRECAUTION

PRECAUTION

(a) Before disassembling the transfer assembly, clean the outside and remove any sand, mud or other foreign matter to prevent it from entering the transfer assembly during disassembly and installation.

(b) When disassembling the connecting parts of light alloy parts such as the transfer case, do not pry them off with a screwdriver or other tool. Instead, tap the parts with a plastic-faced hammer.

(c) Disassembled parts should be arranged in the order they were removed and protected from dust, etc.

(d) Before installation, thoroughly clean and dry each part, and then apply transfer gear oil LF to required locations.

Do not clean aluminum parts or rubber parts with alkaline chemicals.

Also, do not clean rubber parts such as O-rings and oil seals with wash oil such as non-residue solvent.

(e) Apply a sufficient amount of transfer gear oil LF to sliding surfaces and rotating parts before installation.

(f) When securing a part in a vise, be sure to place an aluminum plate between the part and vise. Do not secure the part directly in the vise.

(g) Be careful not to damage the contact surfaces of the case. Such damage may cause oil leaks.

(h) Before applying seal packing 1281, fully remove any old sealant remaining on the part to be sealed and clean the part to be sealed with non-residue solvent.

(i) Do not add oil soon after installing the sealed part. Leave for 1 hour or more.

(j) Be careful not to damage the contact surfaces of oil seals, O-rings or gaskets. Such damage may cause oil leaks.

(k) When press-fitting oil seals, make sure not to damage the lip or outside edge of the oil seal.

(l) Replace damaged or deformed snap rings with new ones.

(m) Unless otherwise specified in the inspection procedure, be sure to turn the ignition switch off before removing or installing the 4 wheel drive control ECU, switches or other parts.

(n) When the 4 wheel drive control ECU, switches or any other part is removed and installed, be sure to check for DTCs. If the DTCs are not normal, clear the DTCs and check that abnormal codes have been restored to normal.

TROUBLESHOOTING PRECAUTION

(a) When there is a malfunction in the contact point of the terminals or installation problems with parts, removal and installation of the suspected problem parts may return the system to the normal condition either completely or temporarily.

(b) In order to determine the malfunctioning area, be sure to check the conditions at the time the malfunction occurred, such as by DTC output, and record them before disconnecting each connector or removing and installing parts.

(c) Since the transfer system may be influenced by a malfunction in other systems, be sure to check for DTCs in the other systems.

CAN COMMUNICATION SYSTEM PRECAUTION

(a) The CAN communication system is used for data communication between each of the ECUs and sensors. If there is trouble in the CAN communication line, a CAN communication line DTC is output.

(b) If a CAN communication line DTC is output, repair the malfunction in the communication line and troubleshoot the transfer system.

(c) Since the CAN communication line has its own length and route, it cannot be repaired temporarily with a bypass wire, etc.

PRECAUTIONS FOR REPLACEMENT OF 4 WHEEL DRIVE CONTROL ECU

(a) When replacing the 4 wheel drive control ECU, preform an ECU security key update.

Last Modified: 10-07-2024	6.11:8.1.0	**Doc ID:** RM100000002HAJV
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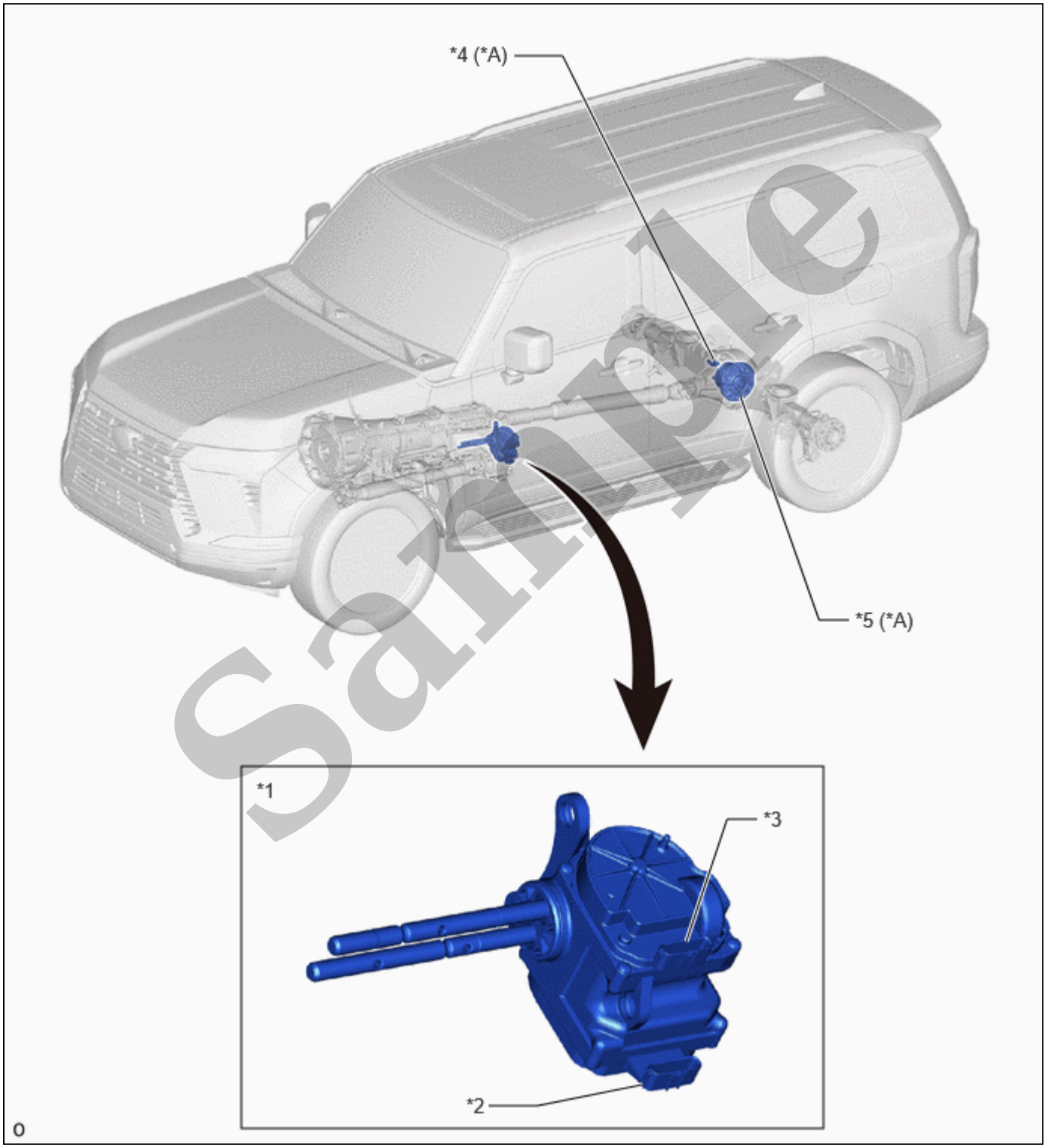
Title: JF2BM (TRANSFER / 4WD / AWD): TRANSFER SYSTEM: PARTS LOCATION; 2024 MY GX550 [12/2023 -]		

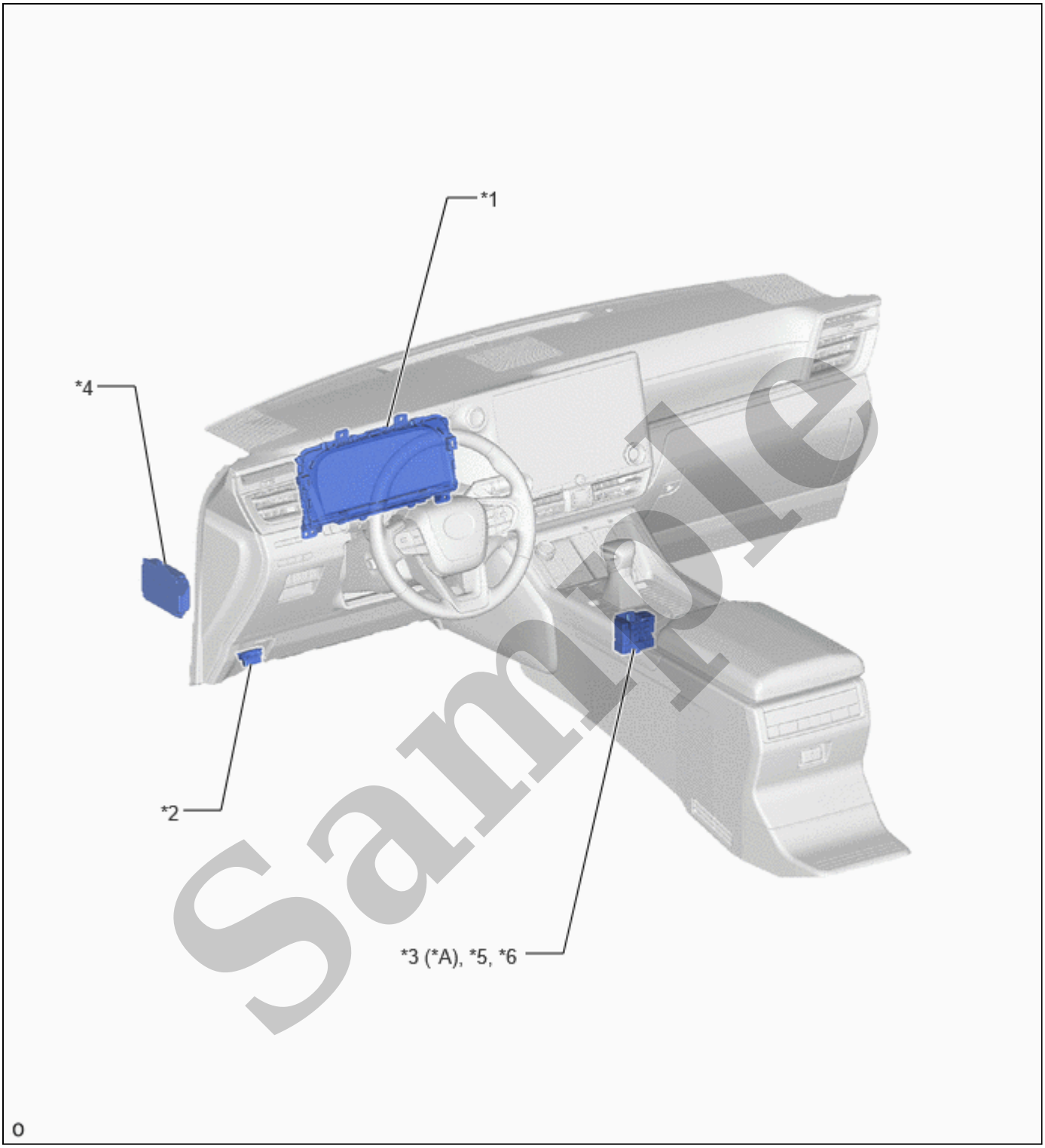
PARTS LOCATION

ILLUSTRATION

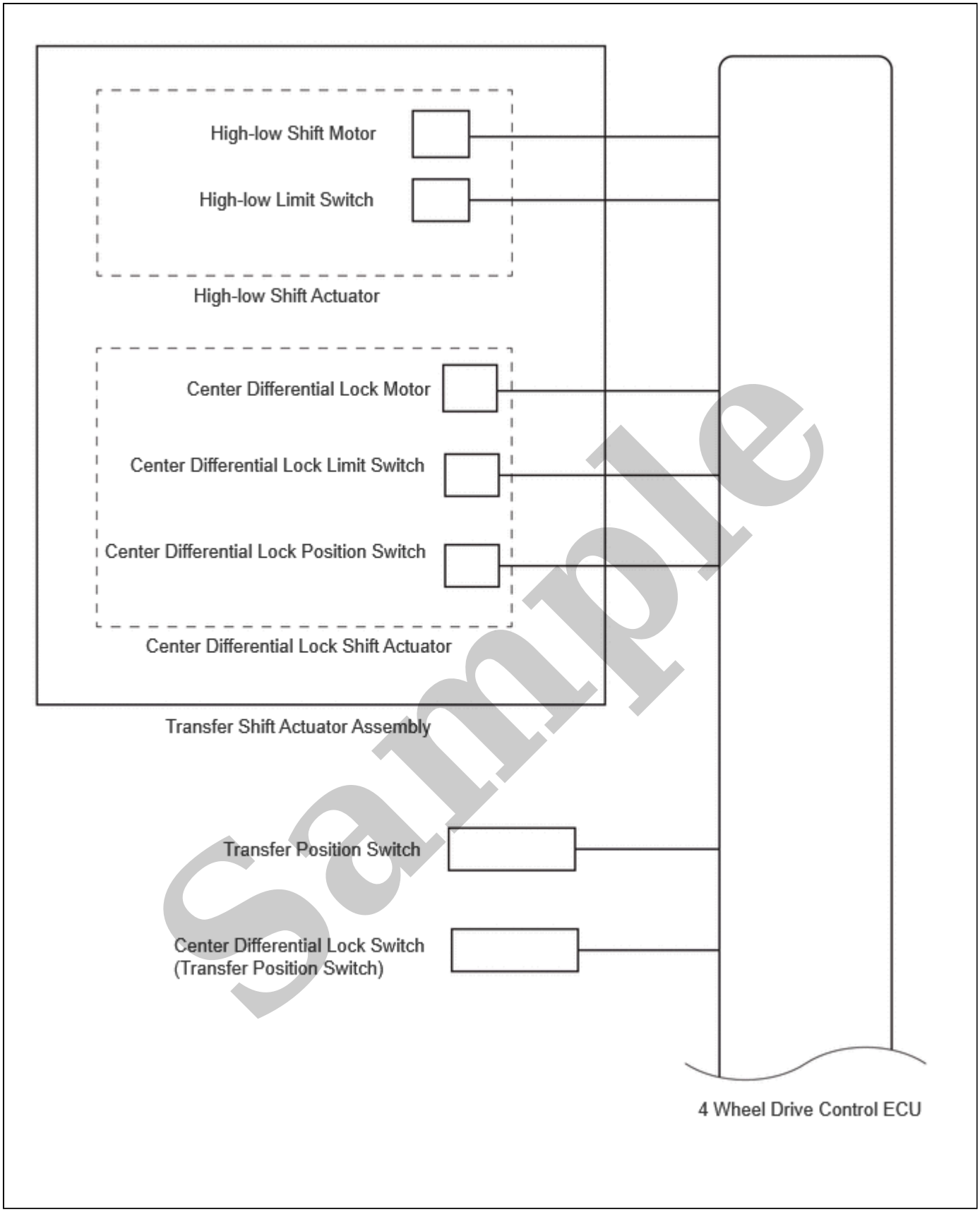


*A	w/ Rear Differential Lock	-	-

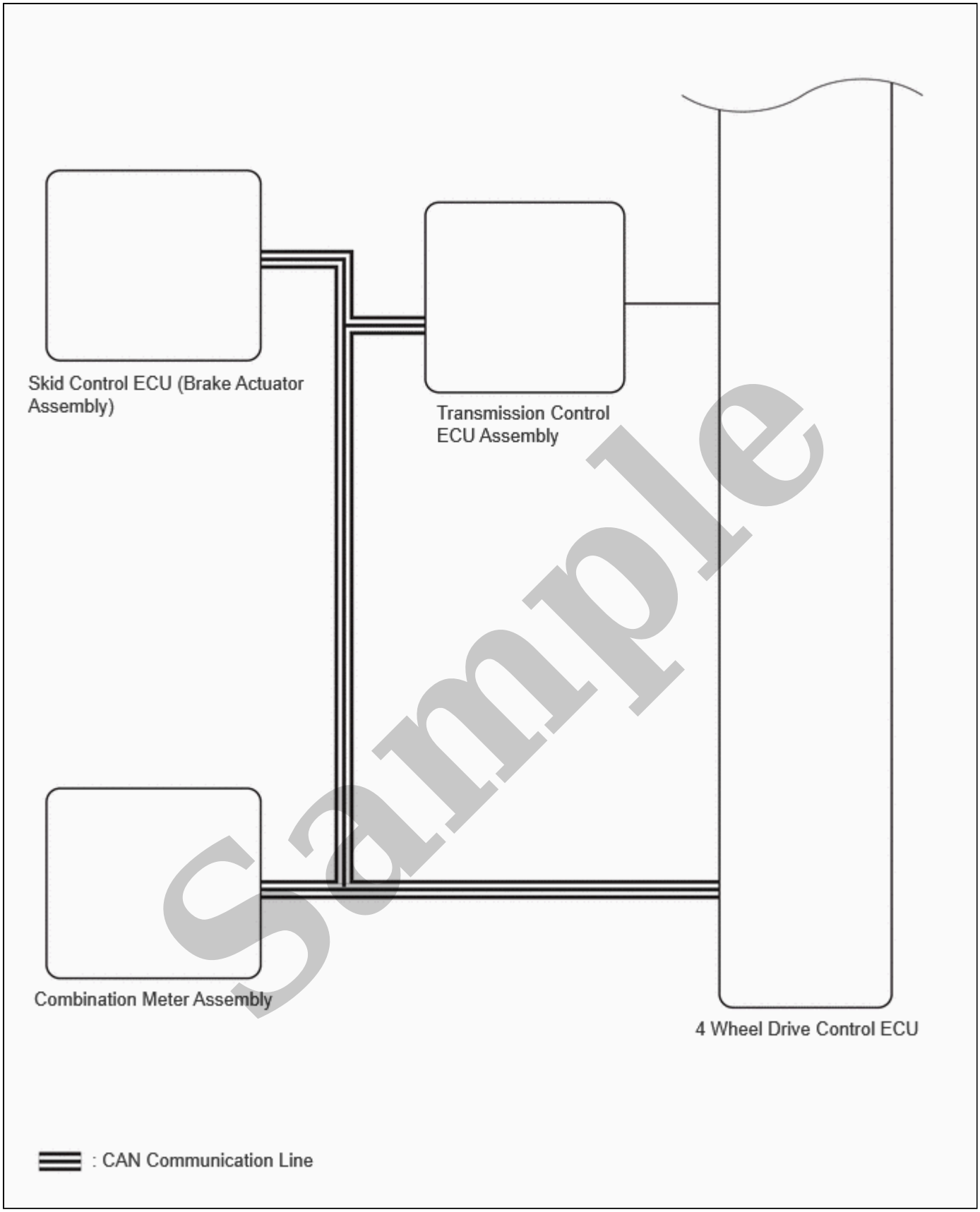
ILLUSTRATION



*A	w/ Rear Differential Lock	-	-
*1	COMBINATION METER ASSEMBLY	*2	DLC3
*3	REAR DIFFERENTIAL LOCK SWITCH (TRANSFER POSITION SWITCH)	*4	4 WHEEL DRIVE CONTROL ECU
*5	TRANSFER POSITION SWITCH	*6	CENTER DIFFERENTIAL LOCK SWITCH (TRANSFER POSITION SWITCH)



w/ Rear Differential Lock:


Skid Control ECU (Brake Actuator Assembly)
Transmission Control ECU Assembly
Combination Meter Assembly
4 Wheel Drive Control ECU
: CAN Communication Line

A

5.	CHECK DTC AND FREEZE FRAME DATA

(a) Check for DTCs.

Powertrain > Four Wheel Drive > Trouble Codes

(b) Check for freeze frame data.

HINT:

Record or print DTCs and freeze frame data if necessary.

(c) Clear the DTCs and freeze frame data.

Powertrain > Four Wheel Drive > Clear DTCs

(d) Recheck for DTCs.

Powertrain > Four Wheel Drive > Trouble Codes

(1) Simulate the malfunction condition and check if the DTCs are output again.

RESULT	PROCEED TO
DTCs are not output	A
DTCs are output	B

B **GO TO STEP 10**

A

6.	PROBLEM SYMPTOMS TABLE

(a) Refer to Problem Symptoms Table.

Click here INFO

RESULT	PROCEED TO
Fault not listed in problem symptoms table	A
Fault listed in problem symptoms table	B

B **GO TO STEP 8**

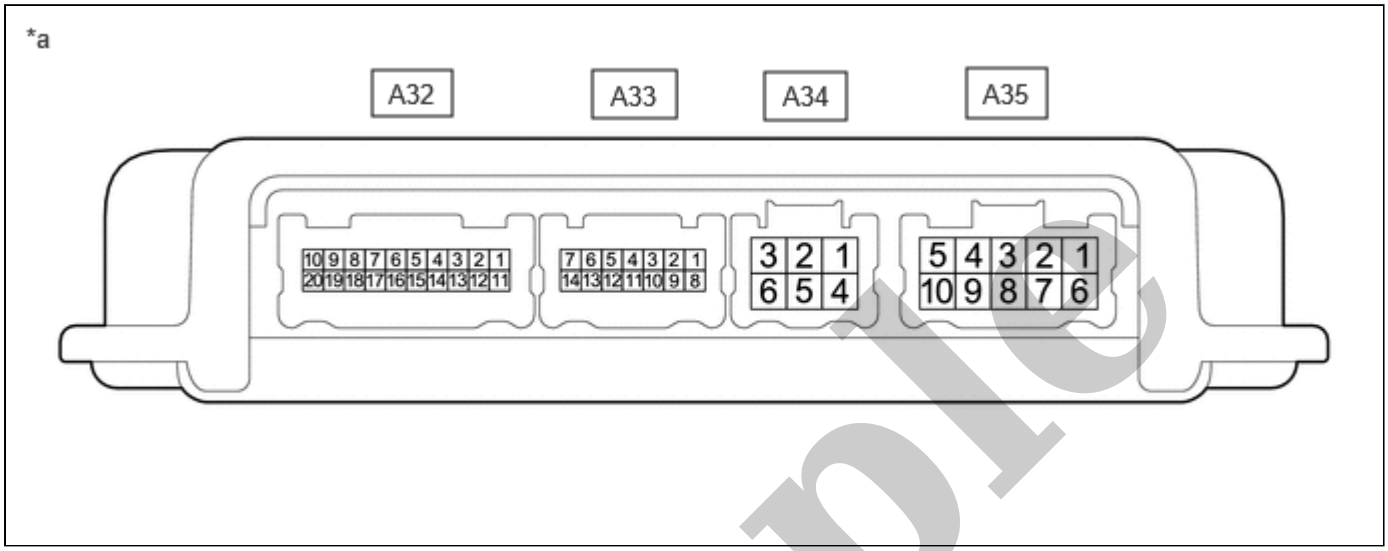
A

7.	OVERALL ANALYSIS AND TROUBLESHOOTING

Last Modified: 10-07-2024	6.11:8.1.0	**Doc ID:** RM100000002HAJY
Model Year Start: 2024	**Model:** GX550	**Prod Date Range:** [12/2023 -]
Title: JF2BM (TRANSFER / 4WD / AWD): TRANSFER SYSTEM: TERMINALS OF ECU; 2024 MY GX550 [12/2023 -]		

TERMINALS OF ECU

CHECK 4 WHEEL DRIVE CONTROL ECU



*a	Component with harness connected (4 Wheel Drive Control ECU)	-	-

TERMINAL NO.	SYMBOL	TERMINAL DESCRIPTION	NOTE
A32-1	-	-	-
A32-2	-	-	-
A32-3	L4	L4 status signal output	-
A32-4	-	-	-
A32-5	HL2	High-low limit switch input	-
A32-6	HL1	High-low limit switch input	-
A32-7	TL3	Center differential lock limit switch input	-
A32-8	TL2	Center differential lock limit switch input	-
A32-9	-	-	-
A32-10	-	-	-
A32-11	-	-	-
A32-12	-	-	-
A32-13	-	-	-
A32-14	-	-	-
A32-15	HL3	High-low limit switch input	-
A32-16	-	-	-
A32-17	P1	Center differential lock limit switch input	-
A32-18	SLS	Rear differential lock position switch input	w/ Rear Differential Lock
A32-19	-	-	-

TERMINAL NO. (SYMBOL)	CONDITION	SPECIFIED CONDITION
A32-5 (HL2) - A34-1 (GND)	• Ignition switch: ON • Transfer: H4	10 to 16 V
	• Ignition switch: ON • Transfer: L4	Below 1.5 V
A32-6 (HL1) - A34-1 (GND)	• Ignition switch: ON • Transfer: H4	Below 1.5 V
	• Ignition switch: ON • Transfer: L4	10 to 16 V
A32-7 (TL3) - A34-1 (GND)	• Ignition switch: ON • Center differential lock: Free	Below 1.5 V
	• Ignition switch: ON • Center differential lock: Lock	10 to 16 V
A32-8 (TL2) - A34-1 (GND)	• Ignition switch: ON • Center differential lock: Free	10 to 16 V
	• Ignition switch: ON • Center differential lock: Lock	Below 1.5 V
A32-15 (HL3) - A34-1 (GND)	• Ignition switch: ON • Transfer: H4	10 to 16 V
	• Ignition switch: ON • Transfer: Switching between H4 and L4	Below 1.5 V
	• Ignition switch: ON • Transfer: L4	10 to 16 V
A32-17 (P1) - A34-1 (GND)	• Ignition switch: ON • Center differential lock: Free	10 to 16 V
	• Ignition switch: ON • Center differential lock: Lock	Below 1.5 V
A32-18 (SLS) - A34-1 (GND)	• Ignition switch: ON • Transfer: L4 • Center differential lock: Lock • Rear differential lock: Free	10 to 16 V
	• Ignition switch: ON	Below 1.5 V