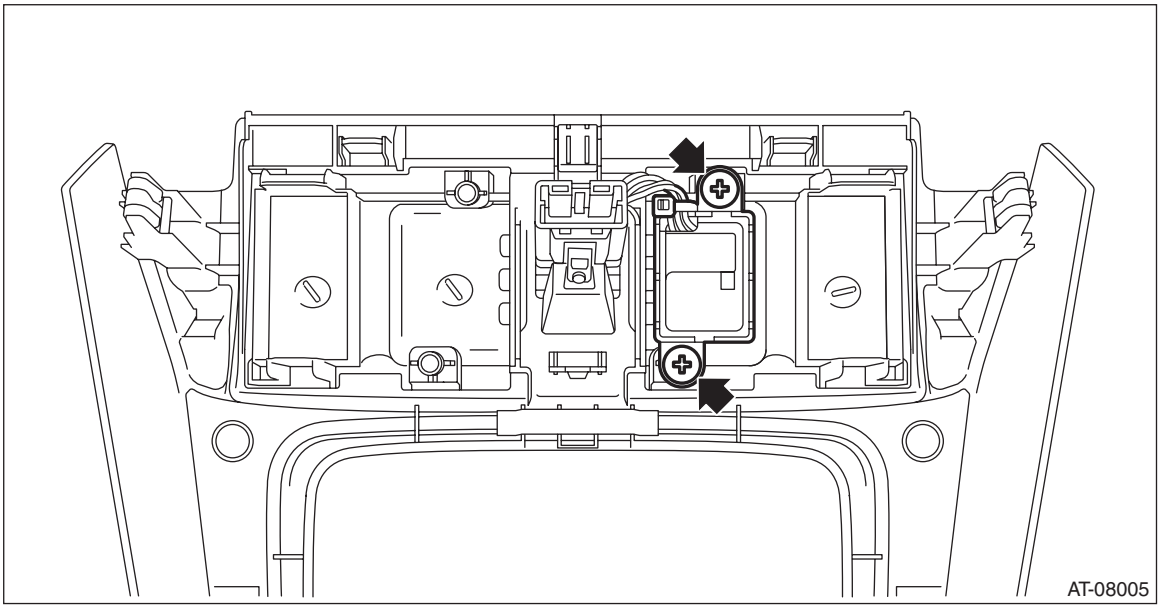
22.X MODE Switch

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the cover - shift lever. <Ref. to EI-65, REMOVAL, Console Box.>
3) Remove the X MODE switch from the cover - shift lever.



4) Remove the X MODE switch connector from the cover - shift lever.

B: INSTALLATION

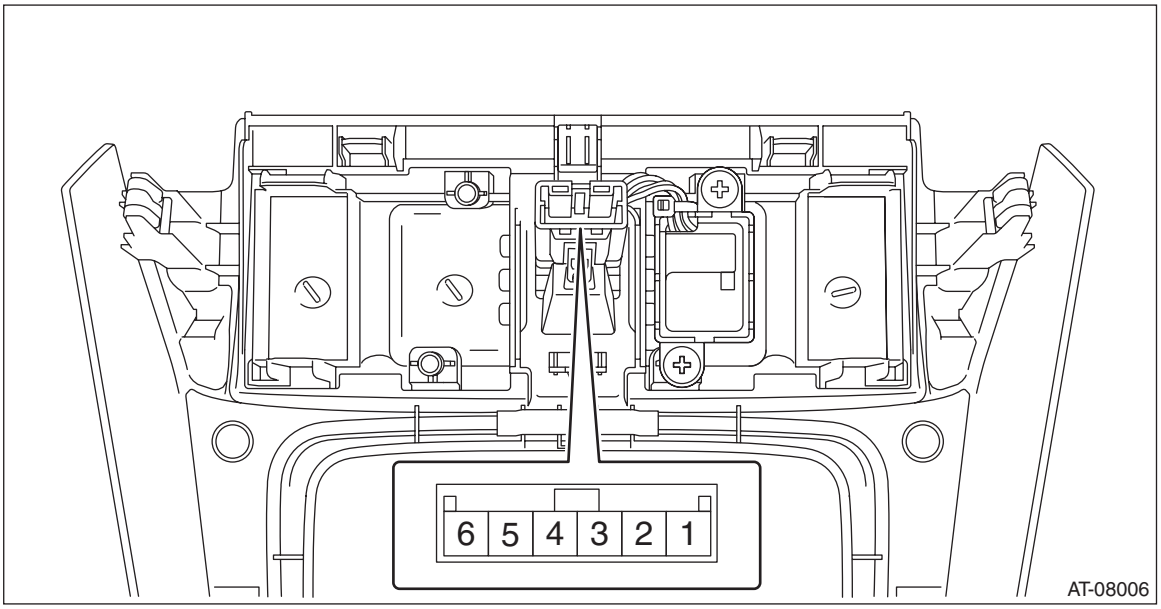
Install in the reverse order of removal.

C: INSPECTION

1. CHECK SWITCH UNIT

Measure the resistance between harness connector terminals of the X MODE switch.

	Terminal No.	Standard
OFF (when measured without operating the switch)	No. 4 — No. 5	1 MΩ or more
ON (when measured with the switch held down)		Less than 1 Ω



2. CHECK X MODE SYSTEM

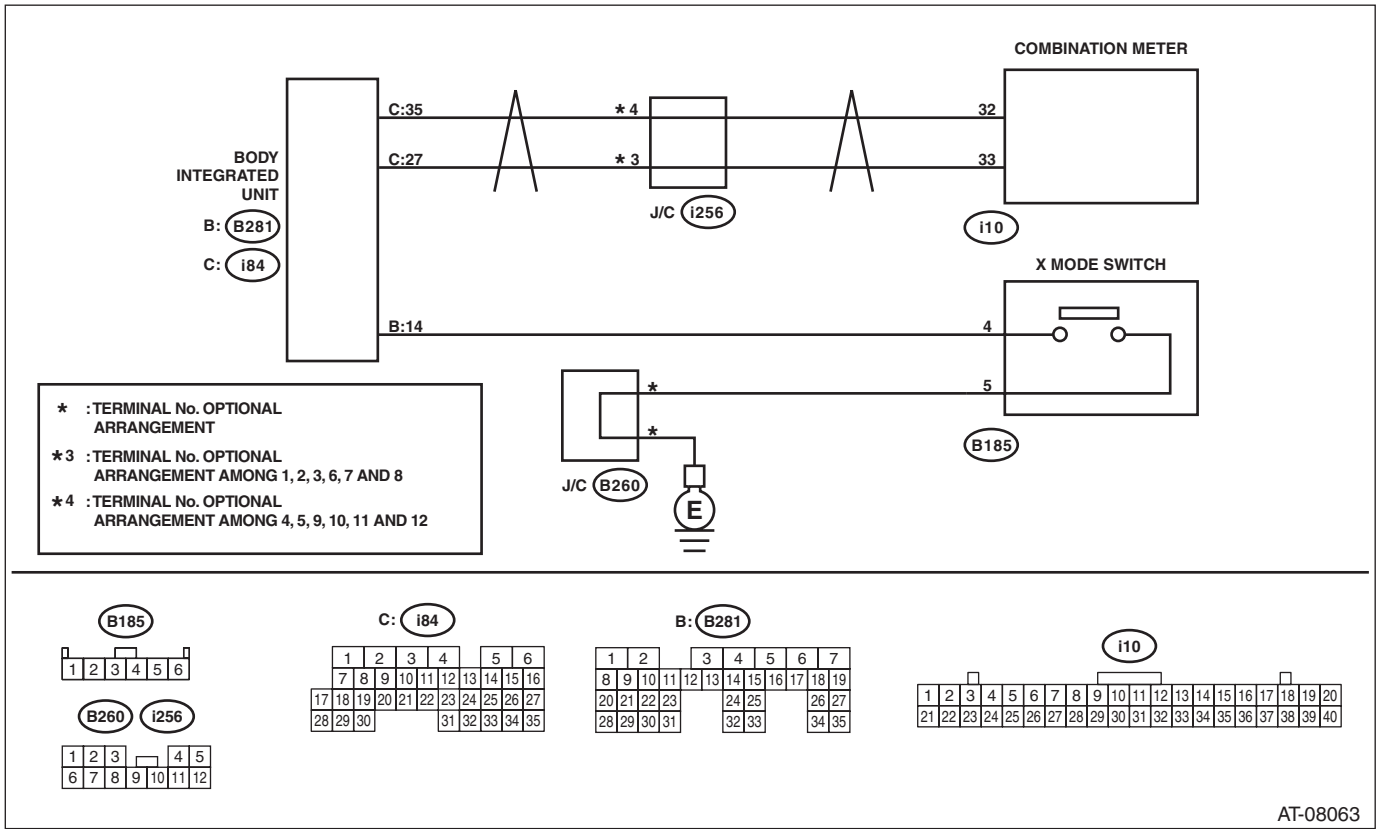
DIAGNOSIS:
It does not switch to X MODE.

CAUTION:
Note that the system performs the following controls when switching to X MODE.
1. When turning the engine OFF and then ON again, it switches to I (intelligent) mode although in the mode prior to engine OFF.
2. Switches to S (Sport) when the malfunction indicator light illuminates while the engine is running. In this case, switching to S# (Sport Sharp), I (Intelligent) or X is not available.
3. If there is a possible engine coolant or engine oil temperature overheat condition, it will not be possible to switch to X MODE. Switches to S (Sport) while driving in X MODE.
4. If the ignition switch is in ON position before starting engine, switching to X MODE is not available.

3. PRESSING X MODE SWITCH DOES NOT CHANGE THE X MODE DISPLAY IN THE COMBINATION METER AND MODE DOES NOT SWITCH TO X MODE

WIRING DIAGRAM:

<Ref. to WI-138, WIRING DIAGRAM, CVT Control System.>



Step		Check	Yes	No
1	**CHECK X MODE SWITCH.** 1) Turn the ignition switch to OFF. 2) Disconnect the connector from body integrated unit. 3) Measure the resistance when the X MODE switch is operated. ***Connector & terminal*** ***(B281) No. 14 — Chassis ground:***	Does the resistance change as below? 1 MΩ or more → less than 10 Ω	Go to step **5**.	Go to step **2**.
2	**CHECK HARNESS BETWEEN BODY INTEGRATED UNIT AND X MODE SWITCH CONNECTOR.** Measure the resistance of harness between the body integrated unit connector and X MODE switch connector. ***Connector & terminal*** ***(B281) No. 14 — (B185) No. 4:***	Is the resistance less than 10 Ω?	Go to step **3**.	Repair the harness and connector. NOTE: In this case, repair the following item: • Open circuit of harness between the body integrated unit connector and X MODE switch connector • Poor contact of connector

	Step	Check	Yes	No
3	**CHECK HARNESS BETWEEN BODY INTEGRATED UNIT AND X MODE SWITCH CONNECTOR.** Measure the resistance of harness between X MODE switch connector and chassis ground. ***Connector & terminal*** ***(B185) No. 4 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Repair the ground short circuit of harness between body integrated unit and X MODE switch connector.
4	**CHECK HARNESS BETWEEN X MODE SWITCH CONNECTOR AND CHASSIS GROUND.** Measure the resistance between body integrated unit connector and chassis ground. ***Connector & terminal*** ***(B185) No. 5 — Chassis ground:***	Is the resistance less than 10 Ω?	Repair the poor contact of X MODE switch connector. Replace the X MODE switch if faulty. <Ref. to CVT(TR580)-137, X MODE Switch.> <Ref. to CVT(TR690)-123, X MODE Switch.>	Repair the harness and connector. NOTE: In this case, repair the following item: • Open circuit in harness between X MODE switch connector and chassis ground • Poor contact of joint connector
5	**RECHECK FAULT.** 1) Connect all connectors. 2) Switch to X MODE.	Is there any fault?	Repair poor contact in the body integrated unit connector. Replace the meter case assembly if defective.	The circuit has returned to a normal condition at this time. Reproduce the failure, and then perform the diagnosis again. NOTE: In this case, temporary poor contact of connector, temporary open or short circuit of harness may be the cause.

4. WHEN SWITCHED TO X MODE, “S”, “I”, “S#” OR “X” MODE DISPLAY IN COMBINATION METER FLASHES IN APPROX. 5 SECONDS

	Step	Check	Yes	No
1	**CHECK DTC.**	Is DTC displayed?	Check the appropriate DTC using the “List of Diagnostic Trouble Code (DTC)” concerning the respective units.	Go to step **2**.
2	**CHECK COMBINATION METER AND CLOCK DISPLAY.** Check for abnormal displays other than “S”, “I”, “S#” or “X” flashing. Examples: • Malfunction indicator light illuminates. • Fuel economy display area is not ON. NOTE: The system enters into fail mode with ignition ON and engine OFF.	Is there an abnormal display other than “S”, “I”, “S#” or “X” flashing?	For the diagnostic procedure, refer to LAN section.<Ref. to LAN(diag)-2, Basic Diagnostic Procedure.>	Go to step **3**.
3	**CHECK ECM AND COMBINATION METER.**	Is the part number of ECM and combination meter correct?	Replace the meter case assembly.<Ref. to IDI-18, Combination Meter.>	Replace ECM or meter case assembly with the one with the correct part number.<Ref. to FU(H4DOTC)-135, Engine Control Module (ECM).> <Ref. to FU(H4DO)-91, Engine Control Module (ECM).> <Ref. to IDI-18, Combination Meter.>

5. WHEN SWITCHED TO X MODE, “S”, “I”, “S#” OR “X” MODE DISPLAY IN COMBINATION METER FLASHES

NOTE:
In this case, there may be a fault other than in X MODE system.

	Step	Check	Yes	No
1	**CHECK MALFUNCTION INDICATOR LIGHT.** 1) Start the engine. 2) Check if malfunction indicator light illuminates.	Does the malfunction indicator light illuminate?	Read the DTC using Subaru Select Monitor and check the indicated DTC. <Ref. to EN(H4DOTC)(diag)-44, Read Diagnostic Trouble Code (DTC).> <Ref. to EN(H4DO)(diag)-43, Read Diagnostic Trouble Code (DTC).>	Go to step **2**.
2	**CHECK COOLANT TEMPERATURE WARNING LIGHT.** 1) Turn the ignition switch to ON. 2) Check the coolant temperature warning light.	Does it indicate overheating?	Inspect for the cause of overheating and repair.	Go to step **3**.
3	**CHECK ENGINE OIL TEMPERATURE.** 1) Turn the ignition switch to ON. 2) Check the value of «Oil Temperature» using Subaru Select Monitor. NOTE: For detailed operation procedures, refer to “Current Data Display For Engine”. <Ref. to EN(H4DOTC)(diag)-37, Subaru Select Monitor.> <Ref. to EN(H4DO)(diag)-36, Subaru Select Monitor.>	Is the value of «Oil Temperature» 117°C (243°F) or more?	Inspect and repair the cause of engine oil temperature rise. NOTE: Ask the customer whether the vehicle has experienced a long drive in low gear or towing of heavy load. If not, drive the vehicle again after the engine oil temperature lowers, and check if the engine oil temperature rises.	Go to step **4**.
4	**CHECK COMBINATION METER INDICATION.** 1) Start the engine. 2) Switch to X MODE. 3) Check X MODE display in the combination meter.	Does “S”, “I”, “S#” or “X” display in the combination meter flash?	Replace the meter case assembly. <Ref. to IDI-18, Combination Meter.>	Perform test operation and check the malfunction indicator light, engine coolant temperature warning light, and engine oil temperature. If they are normal, finish the diagnosis.