4. Security System

A: WIRING DIAGRAM

<Ref. to WI-154, WIRING DIAGRAM, Security System.>

B: ELECTRICAL SPECIFICATION

1. BODY INTEGRATED UNIT

Refer to Control Module I/O Signal in the LAN SYSTEM (DIAGNOSTICS). <Ref. to LAN(diag)-9, ELECTRICAL SPECIFICATION, Control Module I/O Signal.>

C: INSPECTION

1. BASIC DIAGNOSTIC PROCEDURE

	Step	Check	Yes	No
1	**INITIAL CHECK.** Check keyless entry system.	Does the keyless entry system operate normally?	Go to step **2**.	Check keyless entry system. <Ref. to SL-13, INSPECTION, Keyless Entry System.>
2	**CHECK SECURITY ON/OFF SETTING.** 1) Remove the key from ignition switch, and close all doors. 2) Press the UNLOCK button of the keyless transmitter. 3) Check the security indicator light blinking patterns.	Does the security indicator light blink at 3 second intervals?	Go to step **3**.	Check the security indicator light circuit. <Ref. to SL-30, CHECK SECURITY INDICATOR LIGHT CIRCUIT, INSPECTION, Security System.>
3	**CHECK SECURITY ON/OFF SETTING.** 1) Press the LOCK button of the transmitter. 2) Check the security indicator light blinking patterns.	Is the security indicator light blinking patterns as follows? •When monitoring lag is set to 0 seconds: Blinks twice within 0.5 seconds at 2 second intervals. •When monitoring lag is set to 30 seconds: Blinks three times within 1 second at 0.4 second intervals.	Go to step **6**.	Go to step **4**.
4	**CHANGE SETTING OF SECURITY SYSTEM.** Change the setting of security system to ON. <Ref. to SL-27, SECURITY SYSTEM ON/OFF SETTING, INSPECTION, Security System.>	Is setting change completed correctly?	Go to step **5**.	• Check the ignition switch circuit. <Ref. to SL-31, CHECK IGNITION SWITCH CIRCUIT, INSPECTION, Security System.> • Check the door lock switch circuit. <Ref. to SL-21, CHECK DOOR LOCK SWITCH, INSPECTION, Keyless Entry System.>

	Step	Check	Yes	No
5	**CHECK SETTING CHANGE OF SECURITY SYSTEM.** 1) Remove the key from ignition switch, and close all doors. 2) Press the LOCK button of the transmitter. 3) Check the security indicator light blinking patterns.	Is the security indicator light blinking patterns as follows? •When monitoring lag is set to 0 seconds: Blinks twice within 0.5 seconds at 2 second intervals. •When monitoring lag is set to 30 seconds: Blinks three times within 1 second at 0.4 second intervals.	Go to step **6**.	Replace the body integrated unit. <Ref. to SL-51, Body Integrated Unit.>
6	**CHECK SECURITY SYSTEM OPERATION.** Press the LOCK button of keyless transmitter, and wait for 30 seconds.	Is the blinking pattern of security indicator light blink twice within 0.5 seconds in 2 second cycles?	Go to step **7**.	Replace the body integrated unit. <Ref. to SL-51, Body Integrated Unit.>
7	**CHECK SECURITY ALARM OPERATION.** 1) Unlock all doors using the door lock switch on driver's door. 2) Open any door or rear gate.	Does the security alarm operate when opening any door or rear gate?	Go to step **8**.	• Check the door switch. <Ref. to SL-28, CHECK DOOR SWITCH, INSPECTION, Security System.> • Check the rear gate latch switch. <Ref. to SL-29, CHECK REAR GATE LATCH SWITCH, INSPECTION, Security System.>
8	**CHECK SECURITY ALARM OPERATION.** Check the security alarm operation.	Does all of the following security alarm operate? •Horn sounds •Hazard light blinks •Security indicator light illuminates	Go to step **9**.	• Check horn. <Ref. to SL-30, CHECK HORN, INSPECTION, Security System.> • Check the hazard light. <Ref. to SL-31, CHECK HAZARD LIGHT OPERATION, INSPECTION, Security System.>
9	**CHECK SECURITY ALARM CANCEL OPERATION.** Press any button of transmitter while operating security alarm. Or turn the ignition switch to OFF → ON once.	Does all of the following security alarm stop? •Horn stops •Hazard light stops	Go to step **10**.	Check the ignition switch circuit. <Ref. to SL-31, CHECK IGNITION SWITCH CIRCUIT, INSPECTION, Security System.>
10	**CHECK SECURITY SYSTEM CONDITION MEMORY.** Check that the system function properly when the battery is not connected temporally. <Ref. to SL-27, CHECK SECURITY SYSTEM CONDITION MEMORY, INSPECTION, Security System.>	Does the system function properly when the battery is not connected temporally?	Go to step **11**.	Replace the body integrated unit. <Ref. to SL-51, Body Integrated Unit.>

	Step	Check	Yes	No
11	**CHECK IMPACT SENSOR.** Check the sensibility of impact sensor. <Ref. to SL-48, CHECK IMPACT SENSOR, ADJUSTMENT, Impact Sensor.>	Is the sensibility set properly?	Press the UNLOCK button of keyless transmitter, and finish the diagnosis.	Adjust the sensibility. <Ref. to SL-48, IMPACT SENSITIVITY ADJUSTMENT, ADJUSTMENT, Impact Sensor.>

NOTE:
Check the function setting of body integrated unit if any of the following symptoms appear. <Ref. to LAN(diag)-2, Basic Diagnostic Procedure.>
- The horn does not sound even when the security system operates.
- The horn sounds when setting the security to ON using the keyless transmitter.

2. CHECK SECURITY SYSTEM CONDITION MEMORY

1) Remove the key from ignition switch.
2) Close all doors and the rear gate.
3) Open the front hood.
4) Press the LOCK button of transmitter, and then wait until the security indicator light flashes twice for 0.5 seconds at intervals of 2 seconds.
5) Disconnect the ground cable from the battery.
6) Connect the battery ground cable to the battery.
7) Check that the security indicator light blinks twice within 0.5 seconds at 2 second intervals. When it does not blink, replace the body integrated unit.

3. SECURITY SYSTEM ON/OFF SETTING

1) Close all doors and the rear gate, and sit down on the driver's seat. Press the UNLOCK button of the keyless transmitter.
2) Turn the ignition switch to ON.
3) Push the centralized door lock switch down and open the driver's side door at the same time, and hold in this condition for 10 seconds
4) If the security system is ON, it will turn OFF. If OFF, it will turn ON.

4. CHECK DOOR SWITCH

	Step	Check	Yes	No
1	**CHECK INPUT FROM EACH DOOR SWITCH.** 1) Prepare the Subaru Select Monitor kit. 2) Turn the ignition switch to ON (engine OFF), and run the "Application for Subaru Select Monitor III". 3) On the System Selection Menu, select the {Integ. unit mode}. 4) Select the {Current Data Display & Save}. 5) Check the door switch input to the body integrated unit when opening the each door (front RH and LH, rear RH and LH).	Is the input signal detected when opening the each door (front RH and LH, rear RH and LH)?	The door switch circuit is OK.	When the input signal cannot be detected in some door switch, Go to step **2**.
2	**CHECK DOOR SWITCH CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Disconnect the harness connector of body integrated unit (i84). 3) Disconnect the defective door switch harness connector (any of R9, R12, R16, R22). 4) Measure the resistance between harness connector terminals. ***Connector & terminal*** ***(i84) No. 19 — (R12) No. 1: (front door LH)*** ***(i84) No. 32 — (R9) No. 1: (front door RH)*** ***(i84) No. 31 — (R22) No. 1: (rear door LH)*** ***(i84) No. 18 — (R16) No. 1: (rear door RH)***	Is the resistance less than 10 Ω?	Go to step **3**.	Repair the harness.
3	**CHECK GROUND CIRCUIT OF DOOR SWITCH.** 1) Disconnect the defective door switch harness connector (any of R9, R12, R16, R22). 2) Measure the resistance of harness connector and chassis ground. ***Connector & terminal*** ***(R9) No. 3 — Chassis ground: (front door LH)*** ***(R12) No. 3 — Chassis ground: (front door RH)*** ***(R22) No. 3 — Chassis ground: (rear door LH)*** ***(R16) No. 3 — Chassis ground: (rear door RH)***	Is the resistance less than 10 Ω?	Go to step **4**.	Repair the harness.
4	**CHECK DOOR SWITCH.** 1) Disconnect the defective door switch harness connector (any of R9, R12, R16, R22). 2) Measure the resistance between door switch terminals. ***Terminals*** ***No. 1 — No. 3:***	Is the resistance 1 MΩ or more when door switch is pushed?	Go to step **5**.	Replace the door switch.
5	**CHECK DOOR SWITCH.** Measure the resistance between door switch terminals. ***Terminals*** ***No. 1 — No. 3:***	Is the resistance less than 1 Ω when door switch is released?	Check the body integrated unit. <Ref. to LAN(diag)-2, Basic Diagnostic Procedure.>	Replace the door switch.

5. CHECK REAR GATE LATCH SWITCH

	Step	Check	Yes	No
1	**CHECK INPUT FROM REAR GATE LATCH SWITCH.** 1) Prepare the Subaru Select Monitor kit. 2) Turn the ignition switch to ON (engine OFF), and run the "Application for Subaru Select Monitor III". 3) On the System Selection Menu, select the {Integ. unit mode}. 4) Select the {Current Data Display & Save}. 5) Check the input signal to the body integrated unit when opening the rear gate.	Is the input signal detected when opening the rear gate?	Rear gate latch switch circuit is OK.	Go to step **2**.
2	**CHECK REAR GATE LATCH SWITCH CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Disconnect the harness connector of body integrated unit (i84). 3) Disconnect the rear gate latch switch harness connector (D140). 4) Measure the resistance between harness connector terminals. ***Connector & terminal*** ***(i84) No. 17 — (D140) No. 3:***	Is the resistance less than 10 Ω?	Go to step **3**.	Repair the harness.
3	**CHECK REAR GATE LATCH SWITCH GROUND CIRCUIT.** 1) Disconnect the rear gate latch switch harness connector (D140). 2) Measure the resistance between harness connector terminal and chassis ground. ***Connector & terminal*** ***(D140) No. 4 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **4**.	Repair the harness.
4	**CHECK REAR GATE LATCH SWITCH.** 1) Disconnect the rear gate latch switch harness connector. 2) Measure the resistance between switch terminals. ***Terminals*** ***No. 3 — No. 4:***	Is the resistance 1 MΩ or more when switch is pushed?	Go to step **5**.	Replace the rear gate latch switch.
5	**CHECK REAR GATE LATCH SWITCH.** Measure the resistance between switch terminals. ***Terminals*** ***No. 3 — No. 4:***	Is the resistance less than 1 Ω when switch is released?	Check the body integrated unit. <Ref. to LAN(diag)-2, Basic Diagnostic Procedure.>	Replace the rear gate latch switch.

6. CHECK SECURITY INDICATOR LIGHT CIRCUIT

	Step	Check	Yes	No
1	**CHECK SECURITY INDICATOR LIGHT.** 1) Turn the ignition switch to OFF. 2) Disconnect the harness connector of body integrated unit (i84). 3) Connect the resistor (100 Ω) between body integrated unit harness connector terminal (i84) No. 33 and chassis ground. ***Connector & terminal*** ***(i84) No. 33 — Chassis ground:***	Does the security indicator light illuminate?	Check the body integrated unit. <Ref. to LAN(diag)-2, Basic Diagnostic Procedure.>	Go to step **2**.
2	**CHECK POWER SUPPLY FOR SECURITY INDICATOR LIGHT.** 1) Disconnect the connector (i116) from the warning box. 2) Measure the voltage between warning box harness connector terminal and chassis ground. ***Connector & terminal*** ***(i116) No. 1 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **3**.	Check the harness for open or short circuits between warning box and fuse.
3	**CHECK SECURITY INDICATOR LIGHT CIRCUIT.** Measure the resistance between the warning box harness connector terminal and security control unit harness connector terminal. ***Connector & terminal*** ***(i116) No. 2 — (i84) No. 33:***	Is the resistance less than 10 Ω?	Replace the warning box. <Ref. to IDI-18, Warning Box.>	Check the harness for open or short circuits between warning box and body integrated unit.

7. CHECK HORN

	Step	Check	Yes	No
1	**CHECK HORN OPERATION.** Check the horn sounds when the horn switch is pushed.	Does the horn sound?	Go to step **2**.	Check the horn circuit.
2	**CHECK OUTPUT TO HORN RELAY.** 1) Prepare the Subaru Select Monitor kit. 2) Turn the ignition switch to ON (engine OFF), and run the “Application for Subaru Select Monitor III”. 3) On the System Selection Menu, select the {Integ. unit mode}. 4) Select {Function check}. 5) Select {Horn Output} and execute.	Does the horn sound?	Horn circuit is OK.	Go to step **3**.
3	**CHECK HORN RELAY CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Disconnect the harness connector of body integrated unit (B280). 3) Disconnect the main fuse box harness connector (B186). 4) Measure the resistance between harness connector terminals. ***Connector & terminal*** ***(B280) No. 11 — (B186) No. 1:***	Is the resistance less than 10 Ω?	Check the body integrated unit. <Ref. to LAN(diag)-2, Basic Diagnostic Procedure.>	Repair the harness.

8. CHECK HAZARD LIGHT OPERATION

	Step	Check	Yes	No
1	**CHECK HAZARD LIGHT OPERATION.** Make sure the hazard light blinks when hazard switch is turned to ON.	Does the hazard light blink?	Go to step **2**.	Check the hazard light circuit.
2	**CHECK OUTPUT TO HAZARD LIGHT.** 1) Turn the ignition switch to OFF. 2) Disconnect the key warning switch harness connector. 3) Prepare the Subaru Select Monitor kit. 4) Turn the ignition switch to ON (engine OFF), and run the "Application for Subaru Select Monitor III". 5) On the System Selection Menu, select the {Integ. unit mode}. 6) Select {ECM customizing}. 7) Check the {Hazard answer-back setup}, and then switch to ON setting. 8) Select the {Current Data Display & Save}. 9) Remove the key from ignition switch. 10) Check the hazard output signal of body integrated unit when operating the LOCK/UNLOCK button of transmitter.	Is output signal is present when operating the transmitter LOCK/UNLOCK button?	Go to step **3**.	Check the body integrated unit. <Ref. to LAN(diag)-2, Basic Diagnostic Procedure.>
3	**CHECK CIRCUIT OF HAZARD LIGHT.** 1) Turn the ignition switch to OFF. 2) Disconnect the harness connector of body integrated unit (B280). 3) Disconnect the turn signal and hazard unit harness connector (B32). 4) Measure the resistance between harness connector terminals. ***Connector & terminal*** ***(B280) No. 12 — (B32) No. 8:***	Is the resistance less than 10 Ω?	Check the body integrated unit. <Ref. to LAN(diag)-2, Basic Diagnostic Procedure.>	Repair the harness.

9. CHECK IGNITION SWITCH CIRCUIT

	Step	Check	Yes	No
1	**CHECK IGNITION SWITCH VOLTAGE.** 1) Prepare the Subaru Select Monitor kit. 2) Turn the ignition switch to ON (engine OFF), and run the "Application for Subaru Select Monitor III". 3) On the System Selection Menu, select the {Integ. unit mode}. 4) Select the {Current Data Display & Save}. 5) Check the {BATT voltage} and {IG power supply voltage}.	Is the {IG power supply voltage} within ±1 V against {BATT voltage}?	The ignition switch input circuit is OK.	Go to step **2**.
2	**CHECK IGNITION SWITCH CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Disconnect the harness connector of body integrated unit (i84). 3) Turn the ignition switch to ON. 4) Measure the voltage between harness connector terminal and chassis ground. ***Connector & terminal*** ***(i84) No. 1 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Check the body integrated unit. <Ref. to LAN(diag)-2, Basic Diagnostic Procedure.>	Check the harness for open or short circuit between body integrated unit and fuse.