

# Headlight System

## LIGHTING SYSTEM

### 3. Headlight System

#### A: WIRING DIAGRAM

Refer to “Headlight System” in the wiring diagram. <Ref. to WI-196, WIRING DIAGRAM, Headlight System.>

#### B: INSPECTION

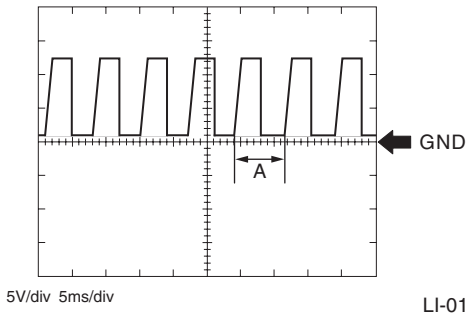
##### 1. AUTO HEADLIGHT SYSTEM CHECK

**Preparation tool:**

**Subaru Select Monitor III kit**

**Circuit tester**

| Step                                                                                                                                                                                                                                                                                                                                  | Check                                                                                        | Yes                                                                                                                                                                     | No                                                                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| <b>1 CHECK HEADLIGHT ILLUMINATION.</b><br>Set the lighting switch to the switch 1 (TAIL) and switch 2 (HEAD).                                                                                                                                                                                                                         | Do the tail and headlight illuminate?                                                        | Go to step 2.                                                                                                                                                           | Check the combination switch (light) and headlight bulb.                    |
| <b>2 CHECK INPUT SIGNAL.</b><br>1) Prepare the Subaru Select Monitor kit.<br>2) Turn the ignition switch to ON (engine OFF) and run the “PC application for Subaru Select Monitor”.<br>3) On «System Selection Menu» display, select {Integ. unit mode}.<br>4) Select the {Lighting AUTO input} from {Current Data Display & Save}.   | Does the display switch between OFF ↔ ON when the lighting switch is moved to AUTO position? | Go to step 3.                                                                                                                                                           | Go to step 8.                                                               |
| <b>3 CHECK INPUT SIGNAL.</b><br>1) From {Current Data Display & Save}, select {Illumination Sensor Output}.<br>2) Light up the darkness around light control sensor.                                                                                                                                                                  | Is the value depending on the brightness output? (darkness: 47 — 53 Hz)                      | Check and replace the body integrated unit.<br>• Inspection: <Ref. to BC(diag)-2, Basic Diagnostic Procedure.><br>• Replacement: <Ref. to SL-84, Body Integrated Unit.> | Go to step 4.                                                               |
| <b>4 CHECK HARNESS.</b><br>1) Disconnect the body integrated unit connector and light control sensor connector.<br>2) Check the harness between body integrated unit connector and light control sensor connector.<br><b>Connector &amp; terminal</b><br><b>(B280) No. 19 — (i194) No. 4:</b><br><b>(B280) No. 29 — (i194) No. 6:</b> | Is harness normal?                                                                           | Go to step 5.                                                                                                                                                           | Repair or replace the harness.                                              |
| <b>5 CHECK HARNESS.</b><br>1) Turn the ignition switch to ON.<br>2) Measure the voltage between light control sensor connector and chassis ground.<br><b>Connector &amp; terminal</b><br><b>(i194) No. 3 (+) — Chassis ground (-):</b>                                                                                                | Is the voltage 10 V or more?                                                                 | Go to step 6.                                                                                                                                                           | Repair or replace the harness.                                              |
| <b>6 CHECK BODY INTEGRATED UNIT.</b><br>1) Connect the body integrated unit connector.<br>2) Measure the resistance between body integrated unit connector and chassis ground.<br><b>Connector &amp; terminal</b><br><b>(B280) No. 29 — Chassis ground:</b>                                                                           | Is the resistance less than 10 Ω?                                                            | Go to step 7.                                                                                                                                                           | Replace the body integrated unit.<br><Ref. to SL-84, Body Integrated Unit.> |

| Step                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Check                                                                                       | Yes                                                                                                                                                                     | No                                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| <b>7 CHECK LIGHT CONTROL SENSOR.</b><br>1) Connect the light control sensor connector.<br>2) Turn the ignition switch to ON.<br>3) Set the lighting switch to AUTO position.<br>4) Connect the Subaru Select Monitor, and read the waveform data between light control sensor connector.<br><b>Connector &amp; terminal</b><br><b>(i194) No. 4 — No. 6:</b><br><br>LI-01097 | Is waveform normal?<br>(Interval of A becomes shorter as the surrounding becomes brighter.) | Go to step 8.                                                                                                                                                           | Replace the light control sensor.       |
| <b>8 CHECK COMBINATION SWITCH (LIGHT).</b><br>Check the combination switch (light). <Ref. to LI-23, INSPECTION, Combination Switch (Light).>                                                                                                                                                                                                                                                                                                                 | Is the combination switch (light) normal?                                                   | Go to step 9.                                                                                                                                                           | Replace the combination switch (light). |
| <b>9 CHECK HARNESS.</b><br>1) Disconnect the body integrated unit connector.<br>2) Check the harness between body integrated unit connector and combination switch (light) connector.<br><b>Connector &amp; terminal</b><br><b>(B71) No. 19 — (B281) No. 16:</b>                                                                                                                                                                                             | Is harness normal?                                                                          | Check and replace the body integrated unit.<br>• Inspection: <Ref. to BC(diag)-2, Basic Diagnostic Procedure.><br>• Replacement: <Ref. to SL-84, Body Integrated Unit.> | Repair or replace the harness.          |

## 2. CHECK LIGHTING SWITCH

Measure the resistance between lighting switch terminals. <Ref. to LI-23, INSPECTION, Combination Switch (Light).>

## 3. CHECK DIMMER & PASSING SWITCH

Measure the resistance between dimmer & passing switch terminals. <Ref. to LI-23, INSPECTION, Combination Switch (Light).>

## C: NOTE

For operation procedures of each component of the headlight system, refer to the respective section.

- Headlight Assembly: <Ref. to LI-27, Headlight Assembly.>
- Headlight bulb: <Ref. to LI-32, Headlight Bulb.>
- Combination switch (light): <Ref. to LI-19, Combination Switch (Light).>
- Light control sensor: <Ref. to LI-25, Light Control Sensor.>