Headlamps (With Autolamps)

Refer to Wiring Diagrams Cell 87 , Automatic Headlamps/Delayed Exit for schematic and connector information.

Special Tool(s)

 ST1137-A	73 Digital Multimeter or equivalent 105-R0051
 ST1217-A	New Generation STAR (NGS) Tester 418-F048 (007-00500)

Inspection and Verification

1. **NOTE:** If the headlamp switch loses power, the steering column/ignition/lighting (SCIL) module will automatically default to the autolamp mode. With the ignition switch in RUN, the autolamp function will turn on the exterior lamps and the instrument panel lighting depending on the input of the light sensor amplifier as in normal operation. However, the exit delay will be defaulted to the full three minutes.

   Verify the customer concern by operating the autolamp system to duplicate the condition.

2. Inspect to determine if one of the following mechanical or electrical concerns apply:

Visual Inspection Chart

Mechanical	Electrical
• Damaged light sensor amplifier • Damaged headlamp switch	• Circuitry open/shorted

3. If the concern remains after the inspection, connect the New Generation STAR (NGS) Tester to the data link connector (DLC) located beneath the instrument panel and select the vehicle to be tested from the NGS menu. If the NGS does not communicate with the vehicle:
   - checked that the program card is properly installed.
   - check the connections to the vehicle.
   - check the ignition switch position.

4. If the NGS still does not communicate with the vehicle, refer to the New Generation STAR Tester manual.

5. Perform the DATA LINK DIAGNOSTIC TEST. If the NGS responds with:
   - CKT914, CKT915 or CKT70 = ALL ECUS NO RESP/NOT EQUIP, refer to Section 418-00 .
   - NO RESP/NOT EQUIP for SCIL module, go to Pinpoint Test H.
   - SYSTEM PASSED, retrieve and record the continuous diagnostic trouble codes (DTCs), erase the continuous DTCs and perform self-test diagnostics for the SCIL module.

6. If the DTCs retrieved are related to the concern, go to SCIL Diagnostic Trouble Code (DTC) Index to continue diagnostics.

7. If no DTCs related to the concern are retrieved, proceed to Symptom Chart to continue diagnostics.

SCIL Diagnostic Trouble Code (DTC) Index

SCIL Diagnostic Trouble Code (DTC) Index

DTC	Description	DTC Caused By	Action
C1446	Brake Switch Circuit Failure	SCIL	REFER to Section 206-05 .
B1246	Panel Dim Potentiometer Switch Circuit Failure	SCIL	REFER to Section 417-02 .
B1312	Lamp Headlamp Input Circuit Short to Battery	SCIL	GO to Pinpoint Test G .
B1334	Luggage Compartment Door Ajar Circuit Short to Ground	SCIL	REFER to Section 417-02 .
B1342	ECU is Defective	SCIL	GO to Pinpoint Test A .
B1353	Ignition Key-In Circuit Open	SCIL	REFER to Section 501-12 .
B1360	Ignition Run/ACC Circuit Open	SCIL	REFER to Section 501-12 .
B1364	Ignition Run/Start Circuit Open	SCIL	REFER to Section 501-12 .
B1446	Wiper Park Sense Circuit Failure	SCIL	GO to Pinpoint Test B .
B1485	Brake Pedal Input Short to B+	SCIL	GO to Pinpoint Test R .
B1490	Right Front Door Handle Short to Ground	SCIL	This is an invalid DTC. Do not attempt to repair.
B1498	Luggage Compartment Door Punch Out Sensor Shorted to Ground	SCIL	This is an invalid DTC. Do not attempt to repair.
B1509	Flash-to-Pass Switch Circuit Short to Battery	SCIL	GO to Pinpoint Test C .
B1522	Hood Switch Circuit Short to Ground	SCIL	REFER to Section 419-01A .
B1562	Door Lock Cylinder Circuit Short to Ground	SCIL	REFER to Section 419-01A .
B1566	Door Ajar Circuit Short to Ground	SCIL	REFER to Section 417-02 .
B1600	PATS Ignition Key Transponder Signal Is Not Received	SCIL	REFER to Section 419-01B .

B1601	PATS Received Incorrect Key Code From Ignition Key Transponder	SCIL	REFER to Section 419-01B .
B1676	Battery Voltage Out of Range	SCIL	GO to Pinpoint Test D .
B1682	PATS is Disabled (Check Link Between PATS and Transponder)	SCIL	REFER to Section 419-01B .
B1687	Dome Lamp Input Circuit Short to Battery	SCIL	REFER to Section 417-02 .
B1689	Autolamp Delay Circuit Failure	SCIL	GO to Pinpoint Test E .
B1796	Headlamp Low Beam Circuit Short to Battery	SCIL	GO to Pinpoint Test G .
B1875	Turn Signal/Hazard Switch Signal Circuit Short to Battery	SCIL	GO to Pinpoint Test V .
B1980	Bulb Outage Condition Detected	SCIL	GO to Pinpoint Test F .
B2328	Steering Column Reach Feedback Potentiometer Circuit Failure	SCIL	REFER to Section 211-05 .
B2332	Steering Column Tilt Feedback Potentiometer Circuit Failure	SCIL	REFER to Section 211-05 .
B2351	Steering Column Switch Signal Circuit Failure	SCIL	REFER to Section 211-05 .
U1027	SCP Invalid or Missing Data for Engine RPM	PCM	REFER to Powertrain Control/Emissions Diagnosis (PC/ED) manual.
U1041	SCP Invalid or Missing Data for Vehicle Speed	ABS	REFER to Section 206-09 , Inspection and Verification to continue diagnosis.
U1057	SCP Invalid or Missing Data for Vehicle Configuration	SCIL	REFER to Section 501-16 , Inspection and Verification to continue diagnosis.
U1059	SCP Invalid or Missing Data for Transmission/Transaxle/PRNDL	PCM	REFER to Powertrain Control/Emissions Diagnosis (PC/ED) manual.
U1123	SCP Invalid or Missing Data for Odometer	ABS	REFER to Section 206-09 , Inspection and Verification to continue diagnosis.
U1147	SCP Invalid or Missing Data for Vehicle Security	PCM	PERFORM J1850 Communication Network Diagnostics. GO to Communication Network Diagnostics in Section 418-00 .
U1180	SCP Invalid or Missing Data for Personalization (Memory) Features	DDM	GO to Section 501-09 , Inspection and Verification to continue diagnosis.
U1181	SCP Invalid or Missing Data for Personalization (Memory) Features	DDM	GO to Section 501-09 , Inspection and Verification to continue diagnosis.
U1197	SCP Invalid or Missing Data for Door Locks	DDM	GO to Section 501-14B , Inspection and Verification to continue diagnosis.
U1198	SCP Invalid or Missing Data for External Access (Doors)	DDM	GO to Section 501-14B , Inspection and Verification to continue diagnosis.
U1199	SCP Invalid or Missing Data for External Access (Doors)	DDM	GO to Section 417-02 , Inspection and Verification to continue diagnosis.
U1211	SCP Invalid or Missing Data for Restraints	DSM	GO to Section 413-08 , Inspection and Verification to continue diagnosis.
U1222	SCP Invalid or Missing Data for Interior Lamps	DDM	GO to Section 501-14B , Inspection and Verification to continue diagnosis.

SCIL Parameter Identification (PID) Index

SCIL Parameter Identification Index

PID	Description	Expected Values
CCNTSCI	Number of Continuous DTCs on SCIL	one count per bit
BOO_SCI	Brake Switch Input	ON, OFF
PRK_BRK	Parking Brake Switch Input	ON, OFF
TILT	Steering Column Tilt Switch	SHORT, UP, DOWN, OFF
TELESCP	Steering Column Telescope Switch	SHORT, IN, OUT, OFF
TILTPOS	Tilt Position Sensor	SENSED, notSEN
TELEPOS	Telescope Position Sensor	SENSED, notSEN
TURN_SW	Left and Right Turn Signal Switch	OFF, LEFT, RIGHT, SHORT
LBEAMSW	Low Beam Switch	ON, OFF
HBEAMSW	High Beam Switch	ON, OFF
PARK_SW	Parking Lamp Switch	ON, OFF
LIGHTSN	Ambient Light	DAY, NIGHT
FLASH	Flash to Pass Switch	ON, OFF
FTURN_L	Left and Right Front Turn Lamp	R_OPEN, L_OPEN, L/R_OPEN OK
RTURN_L	Left and Right Rear Turn Lamp	R_OPEN, L_OPEN, L/R_OPEN OK
TAILLMP	Left and Right Tail Lamp	OPEN, OK
LOWBEAM	Low Beam Lamp	R_OPEN, L_OPEN, L/R_OPEN OK
AUTOLMP	Autolamp Switch	ON, OFF
ALP_IMP	Autolamp Analog Input	0-100%
DOMESW	Dome Lamp Switch	ACTIVE, notACT
PANLDIM	Panel Dim Intensity Switch	0-100%
HOOD_SW	Hood Ajar Switch	AJAR, CLOSED
DECKLID	Decklid Ajar Switch	AJAR, CLOSED
P_DR_SW	Passenger Door Ajar Switch	AJAR, CLOSED
IGN_KEY	Ignition Key In/Out	IN, OUT
IGN_SCI	Ignition Switch	START, RUN, OFF, ACCSSY
WPPRKSW	Windshield Wiper Park Sense	notPRK, PARKED
NUMKEYS	Number of Ignition Key Codes Supported	BCD (valid range 0-16)
DRLKCYL	Door Lock Cylinder	ON, OFF
ENABLE	PATS System Status	ON, OFF
FAILSAF	PATS System Status	ON, OFF

SCIL Active Command Index

SCIL Active Command Index

Active Command	Display	Action
PID LATCH	PID LATCH	ON, OFF
ONE TOUCH WINDOW DWN & ACCY DELAY	ACCY RLY	ON, OFF
WARNING LAMPS AND CHIME	CHIME	ON, OFF
	ANTI-THEFT	ON, OFF
	AUTOLMP	ON, OFF
	HIGH BEAM	ON, OFF
INTERIOR COURTESY LAMPS	INT LAMPS MIRRORLMP	ON, OFF ON, OFF
DECKLID RELEASE	RELEASE	ON, OFF
TURN SIGNAL AND MARKER LAMPS	LF TURN	ON, OFF
	RF TURN	ON, OFF
	LR TURN	ON, OFF
	RR TURN	ON, OFF
	PARKLAMPS	ON, OFF
HEADLAMP CONTROL	LEFT LOW	ON, OFF
	RIGHT LOW	ON, OFF
	HIGH BEAM	ON, OFF
	DRUN LAMP	ON, OFF
	LF CORNER	ON, OFF
	RF CORNER	ON, OFF
HORN CONTROL	HORN	ON, OFF
BACKLIGHTING INTENSITY	INTENSITY	0%-100%
COURTESY LAMP INTENSITY	INTENSITY	0%-100%
DOOR AJAR SIGNAL	DOOR AJAR	ON, OFF
TRANSMIT SIGNAL COMMAND	TRANSMIT	ON, OFF
BRAKE SYSTEM	BRK/SHIFT	ON, OFF
	PARK BRK	ON, OFF
STEERING COLUMN CONTROL	TILT UP	ONE SECOND TIME OUT
	TILT DOWN	ONE SECOND TIME OUT
	TELSCP IN	ONE SECOND TIME OUT
	TELSCPOUT	ONE SECOND TIME OUT
KEYCODE ERASE TIME SET	MINUTES	8-63 MINUTES

Symptom Chart

Refer to the Electrical and Vacuum Troubleshooting Manual for connector numbers cited in the pinpoint tests.

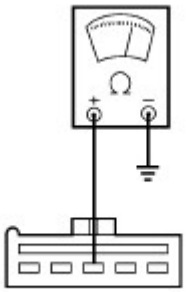
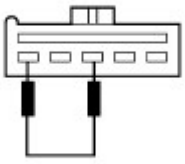
Symptom Chart

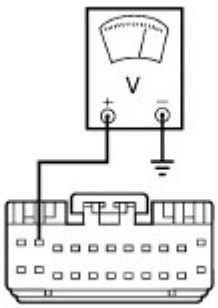
Condition	Possible Sources	Action
• The Autolamps are Inoperative	• Circuitry. • Light sensor amplifier. • Headlamp switch. • SCIL module.	• GO to Pinpoint Test Q .

Pinpoint Tests

PINPOINT TEST Q: THE AUTOLAMPS ARE INOPERATIVE

CONDITIONS	DETAILS/RESULTS/ACTIONS
Q1 CHECK PID LIGHTSN	
1  2 Cover the light sensor amplifier. 3 Set autolamp adjustment to MAX delay setting. 4  5  SCIL Module PID LIGHTSN	• **Does PID LIGHTSN read YES?** → **Yes** GO to Q5 . → **No** GO to Q2 .
Q2 CHECK CIRCUIT 221 (O/W) FOR A SHORT TO GROUND	
1 	

2  Light Sensor Amplifier C241 3  AK1285-A	3 Connect an ohmmeter between light sensor amplifier C241, circuit 221 (O/W), and ground. • **Is the resistance less than 2000 ohms?** → **Yes** REPAIR circuit 221 (O/W). RETEST the system. → **No** GO to Q3 .
Q3 CHECK LIGHT SENSOR AMPLIFIER	
1  2  SCIL Module PID LIGHTSN 3  AK1286-A	3 Connect a jumper wire between light sensor amplifier C241, circuit 221 (O/W), and circuit 640 (R/Y). • **Does PID LIGHTSN read YES?**

	→ **Yes** REPLACE the light sensor amplifier. RETEST the system. → **No** LEAVE the jumper wire in place and GO to Q4 .
Q4 CHECK CIRCUIT 221 (O/W) FOR OPEN	
1  SCIL Module C286 2  AK1287-A	2 Connect a voltmeter to steering column/ignition/lighting (SCIL) module C286-2, circuit 221 (O/W). • **Is the voltage reading B+?** → **Yes** REPLACE the SCIL module. RETEST the system. → **No** REPAIR circuit 221 (O/W). RETEST the system.
Q5 CHECK THE HEADLAMP SWITCH	
1  Headlamp Switch C262 2  SCIL Module PID ALP_IMP	• **Does PID ALP_IMP read 0%?**

	→ **Yes** GO to Q6 . → **No** REPLACE the headlamp switch. RETEST the system.
Q6 CHECK CIRCUIT 188 (W/BK) FOR A SHORT TO BATTERY	
1  SCIL Module C286 2  SCIL Module PID ALP_IMP	• **Does PID ALP_IMP read 0%?** → **Yes** REPLACE the SCIL module. RETEST the system. → **No** REPAIR circuit 188 (W/BK). RETEST the system.