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# INSTRUMENTATION DRIVER INFO

# 1. General Description

## **A: SPECIFICATION**

General Description  INSTRUMENTATION/DRIVER INFO  1. General Description A: SPECIFICATION    Model   Except for STI model   STI model   Speedometer   Electric pulse type   Stepping motor type				
	Description CATION	NOT FOR	RESALE	dios
	Model	Except for STI model	STI model	-3
	Speedometer	Electric pulse type	Stepping motor type	
	Engine coolant temperature gauge	Cross coil type	Stepping motor type	
	Fuel gauge	Cross coil type	Stepping motor type	
	Tachometer	Electric pulse type	Stepping motor type	
	Turn signal indicator light	14 V — 1.4 W	LED	
	Charge indicator light	14 V — 1.4 W	LED	
	Oil pressure warning light	LE	:D	
	ABS warning light	LED		
	Malfunction indicator light	LED		
	HI-beam indicator light	14 V — 1.4 W	LED	
	Door open warning light	LED		
	Seat belt warning light	LED		
	Brake fluid and parking brake warning light	14 V — 1.4 W	LED	
	AWD indicator light	LED	_	
Combination meter	AIRBAG warning light	LED		
	Meter illumination light	14 V — 3 W, 14 V — 2 W	LED	
	AT OIL TEMP. warning light	LED	_	
	Security indicator light	LE	:D	
	Cruise set indicator light	14 V — 1.4 W	LED	
	Cruise indicator light	14 V — 1.4 W	LED	
	Low fuel warning light	LE	:D	
	AT select lever position indicator light	14 V — 100 mA	_	
	Intercooler water spray warning light	_	LED	
	Rear differential oil temperature warning light	_	LED	
	Driver's control center differential indicator light	_	LED	
	REV indicator light	_	LED	
	Light illumination indicator light	_	LED	
	LCD back light	14 V — 1.4 W	LED	

#### **B: CAUTION**

- Be careful not to damage the meters and instrument panel.
- Be careful not to damage the meter glass.
- Make sure the electrical connector is connected securely.
- After installation, make sure that each meter operates normally.
- Use gloves to avoid damage and getting fingerprints on the glass surface and meter surfaces.
- Do not apply an excessive force on the printed circuit.
- · Do not drop or otherwise apply impact.

#### C: PREPARATION TOOL

#### 1. GENERAL TOOL

TOOL NAME	REMARKS
Circuit tester	Used for measuring resistance and voltage.

# 2. Combination Meter System

#### A: WIRING DIAGRAM

#### 1. COMBINATION METER

<Ref. to WI-152, WIRING DIAGRAM, Combination Meter System.>

#### 2. OUTSIDE TEMPERATURE INDICATOR

<Ref. to WI-165, WIRING DIAGRAM, Outside Temperature Display System.>

#### **B: INSPECTION**

#### **CAUTION:**

When measuring the voltage and resistance of the ECM, TCM and each sensor, use a tapered pin with a diameter of less than 0.64 mm (0.025 in) in order to avoid poor contact. Do not insert the pin more than 2 mm (0.08 in).

#### 1. SYMPTOM CHART

Symptom	Repair order	Reference
Combination meter assembly does not operate.	Power supply     Ground circuit	<ref. check<br="" idi-4,="" to="">POWER SUPPLY AND GROUND CIRCUIT, INSPECTION, Combi- nation Meter System.&gt;</ref.>
Speedometer does not operate.	Vehicle speed sensor (MT model)     TCM (AT model)     Harness     Speedometer	MT: <ref. idi-5,<br="" to="">CHECK VEHICLE SPEED SENSOR, INSPECTION, Combi- nation Meter System.&gt;</ref.>
		AT: <ref. idi-6,<br="" to="">CHECK TRANSMIS- SION CONTROL MOD- ULE (TCM), INSPECTION, Combi- nation Meter System.&gt;</ref.>
Tachometer does not operate.	<ol> <li>ECM</li> <li>Harness</li> <li>Tachometer</li> </ol>	<ref. check<br="" idi-6,="" to="">ENGINE CONTROL MODULE (ECM), INSPECTION, Combi- nation Meter System.&gt;</ref.>
Fuel gauge does not operate.	<ol> <li>Fuel level sensor</li> <li>Harness</li> <li>Fuel gauge</li> </ol>	<ref. check<br="" idi-7,="" to="">FUEL LEVEL SEN- SOR, INSPECTION, Combination Meter System.&gt;</ref.>
Engine coolant temperature gauge does not operate.	<ol> <li>Engine coolant temperature sensor</li> <li>Harness</li> <li>Engine coolant temperature gauge</li> </ol>	<ref. check<br="" idi-8,="" to="">ENGINE COOLANT TEMPERATURE SEN- SOR, INSPECTION, Combination Meter System.&gt;</ref.>
Outside temperature indicator does not operate.	<ol> <li>Ambient sensor</li> <li>Harness</li> <li>Combination meter</li> <li>Auto A/C control module</li> </ol>	<ref. check<br="" idi-9,="" to="">OUTSIDE TEMPERA- TURE INDICATOR, INSPECTION, Combi- nation Meter System.&gt;</ref.>

# Combination Meter System

# 2. CHECK POWER SUPPLY AND GROUND CIRCUIT

INS	NSTRUMENTATION/DRIVER INFO				
2.	2. CHECK POWER SUPPLY AND GROUND CIRCUIT				
	Step	Check	Yes	S No	dios
1	CHECK POWER SUPPLY FOR COMBINATION METER.  1) Remove the combination meter. <ref. combination="" idi-11,="" meter.="" removal,="" to=""> 2) Disconnect the combination meter harness connector. 3) Turn the ignition switch to ON. 4) Measure the voltage between combination meter connector and chassis ground.  Connector &amp; terminal  (i11) No. 7 (+) — Chassis ground (-):</ref.>	Is the voltage 10 V or more?	Go to step 2.	Check the harness for open or short between the igni- tion switch and combination meter.	.03
2	CHECK POWER SUPPLY FOR COMBINATION METER.  Measure the voltage between combination meter connector and chassis ground.  Connector & terminal  (i11) No. 10 (+) — Chassis ground (-):	Is the voltage 10 V or more?	Go to step 3.	Check the harness for open or short between the fuse and combination meter.	
3	CHECK GROUND CIRCUIT OF COMBINATION METER.  1) Turn the ignition switch to OFF.  2) Measure the resistance of harness between combination meter connector and chassis ground.  Connector & terminal  (i11) No. 6 — Chassis ground:	Is the resistance less than 10 $\Omega$ ?	Except for STI model: Replace the combination meter print circuit. STI model: Replace the meter main assembly.	Repair the wiring harness.	

# 3. CHECK VEHICLE SPEED SENSOR

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3.	CHECK VEHICLE SPEED SENSOR		TFORD	ES_No	
	Step	Check	Yes	S No	$ q_{ic} $
1	CHECK VEHICLE SPEED SENSOR.  1) Lift up the vehicle.  2) Remove the combination meter with harness connector.  3) Drive the vehicle faster than 20 km/h (12 MPH).  WARNING: Be careful not to get caught in the running wheels.  4) Measure the voltage between combination meter connector and chassis ground.  Connector & terminal  (i11) No. 2 (+) — Chassis ground (-):		model: Check the speedometer. <ref. idi-15,="" removal,="" speedometer.="" to=""> STI model: Replace the meter main assembly.</ref.>		
2	CHECK VEHICLE SPEED SENSOR POWER SUPPLY.  1) Turn the ignition switch to OFF.  2) Disconnect the vehicle speed sensor harness connector.  3) Turn the ignition switch to ON.  4) Measure the voltage between the speed sensor connector and the engine ground.  Connector & terminal  (B17) No. 3 (+) — Chassis ground (-):	Is the voltage 10 V or more?	Go to step 3.	Check the harness for open or short between the igni- tion switch and vehicle speed sen- sor.	
3	CHECK HARNESS BETWEEN VEHICLE SPEED SENSOR AND ENGINE GROUND.  1) Turn the ignition switch to OFF.  2) Measure the resistance between the speed sensor connector and the engine ground.  Connector & terminal (B17) No. 2 — Chassis ground:	Is the resistance less than 10 $\Omega$ ?	Go to step 4.	Repair the wiring harness.	
4	CHECK HARNESS BETWEEN VEHICLE SPEED SENSOR AND COMBINATION METER.  1) Disconnect the connector from the combination meter.  2) Measure the resistance between the speed sensor harness connector and combination meter.  Connector & terminal (B17) No. 1 — (i11) No. 2:	Is the resistance less than 10 $\Omega$ ?	Replace the vehi- cle speed sensor.	Repair the wiring harness.	

# 4. CHECK TRANSMISSION CONTROL MODULE (TCM)

Combination weter System					
INS	STRUMENTATION/DRIVER INFO	Oill	TO VO.		_
4. CHECK TRANSMISSION CONTROL MODULE (TCM)					
	Step	Check	Yes	No	dios
1	CHECK TCM SIGNAL.  1) Lift up the vehicle.  2) Drive the vehicle faster than 10 km/h (6 MPH).  WARNING: Be careful not to get caught in the running wheels.  3) Measure the voltage between TCM connector and chassis ground.  Connector & terminal  (B55) No. 21 (+) — Chassis ground (-):	Is the voltage less than 1 V ←→ 5 V or more?	Go to step 2.	Check the TCM. <ref. 4at(d)(diag)-2,="" basic="" diagnostic="" procedure.="" to=""></ref.>	
2	CHECK THE HARNESS BETWEEN TCM AND COMBINATION METER.  1) Turn the ignition switch to OFF. 2) Disconnect the connectors from TCM and combination meter. 3) Measure the resistance between TCM harness connector and combination meter harness connector.  Connector & terminal (B55) No. 21 — (i11) No. 2:	Is the resistance less than 10 $\Omega$ ?	Check the speed- ometer. <ref. to<br="">IDI-15, REMOVAL, Speedometer.&gt;</ref.>	Repair the wiring harness.	

# 5. CHECK ENGINE CONTROL MODULE (ECM)

	Step	Check	Yes	No
1	CHECK ECM SIGNAL.  1) Start the engine.  2) Measure the voltage between ECM connector and engine ground.  Connector & terminal  (B136) No. 22 (+) — Chassis ground (-):	Is the voltage 0 $\longleftrightarrow$ 14 V or more?	Go to step 2.	Inspect the ECM. <ref. 2,="" basic="" diagnostic="" en(h4so)(diag)-="" procedure.="" to=""> or <ref. )-2,="" basic="" diagnostic="" en(h4dotc)(diag="" procedure.="" to=""> or refer to "EN(STI) Section".</ref.></ref.>
2	CHECK HARNESS BETWEEN COMBINA- TION METER AND ECM.  1) Turn the ignition switch to OFF. 2) Disconnect the connector from ECM and combination meter. 3) Measure the resistance between ECM harness connector and combination meter harness connector.  Connector & terminal (B136) No. 22 — (i11) No. 5:	Is the resistance less than 10 $\Omega$ ?	Except for STI model: Check the tachometer. <ref. idi-16,="" removal,="" tachometer.="" to=""> STI model: Replace the meter main assembly.</ref.>	Repair the wiring harness.

# 6. CHECK FUEL LEVEL SENSOR

_			NSTRUMENTATI	ON/DRIVER INFO	_
6.	CHECK FUEL LEVEL SENSOR	NO	TFORD	ES No	
	Step	Check	Yes	ES No	dios
1	CHECK FUEL LEVEL SENSOR.  1) Remove the fuel level sensor. <ref. fu(h4so)-53,="" fuel="" level="" removal,="" sensor.="" to=""> or <ref. fu(h4dotc)-65,="" fuel="" level="" removal,="" sensor.="" to=""> or refer to "FU(STI) Section".  2) Measure the resistance between fuel level sensor terminals when the float is in FULL or EMPTY position.  Terminals</ref.></ref.>	Is the resistance 0.5 — 2.5 $\Omega$ (FULL) and 50 — 52 $\Omega$ (EMPTY)?	Go to step 2.	Replace the fuel level sensor.	
_	No. 2 — No. 3:			5	
2	CHECK FUEL SUB LEVEL SENSOR.  1) Remove the fuel sub level sensor. <ref. fu(h4so)-54,="" fuel="" level="" removal,="" sensor.="" sub="" to=""> or <ref. fu(h4dotc)-66,="" fuel="" level="" removal,="" sensor.="" sub="" to=""> or refer to "FU(STI) Section".  2) Measure the resistance between fuel sub level sensor terminals when the float is in FULL or EMPTY position.  Terminals  No. 1 — No. 2:</ref.></ref.>		Go to step 3.	Replace the fuel sub level sensor.	
3	CHECK HARNESS BETWEEN FUEL SUB LEVEL SENSOR AND COMBINATION METER.  1) Disconnect the connector from the combination meter.  2) Measure the resistance between the fuel sub level sensor harness connector terminal and combination meter harness connector terminal.  Connector & terminal  Except for STI model  (R59) No. 1 — (i12) No. 2:  STI model  (R59) No. 1 — (i12) No. 3:	Is the resistance less than 10 $\Omega$ ?	Go to step 4.	Repair the wiring harness.	
4	CHECK HARNESS BETWEEN FUEL LEVEL SENSOR AND FUEL SUB LEVEL SENSOR.  Measure the resistance between fuel level sensor harness connector terminal and fuel sub level sensor harness connector terminal.  Connector & terminal  (R58) No. 3 — (R59) No. 2:	Is the resistance less than 10 $\Omega$ ?	Go to step 5.	Repair the wiring harness.	
5	CHECK FUEL LEVEL SENSOR GROUND CIRCUIT.  Measure the resistance between fuel level sensor harness connector terminal and chassis ground.  Connector & terminal  (R58) No. 2 — Chassis ground:	Is the resistance less than 10 $\Omega$ ?	Except for STI model: Check the fuel gauge. <ref. fuel="" gauge.="" idi-17,="" removal,="" to=""> STI model: Replace the meter main assembly.</ref.>	Repair the wiring harness.	

# Combination Meter System

# 7. CHECK ENGINE COOLANT TEMPERATURE SENSOR

INSTRI	NSTRUMENTATION/DRIVER INFO				
7. CH	ECK ENGINE COOLANT TEMPERA	NO	TFORD	Eris St.	_
	Step	Check	Yes	S No	dios
1	CHECK ENGINE COOLANT TEMPERATURE SENSOR.  Check the engine coolant temperature sensor. <ref. basic="" diagnostic="" en(h4so)(diag)-2,="" procedure.="" to=""> or <ref. basic="" diagnostic="" en(h4dotc)(diag)-2,="" procedure.="" to=""> or <ref. basic="" diagnostic="" en(sti)(diag)-2,="" procedure.="" to=""></ref.></ref.></ref.>	Is the engine coolant tempera- ture sensor OK?	Go to step 2.	Replace the engine coolant temperature sensor.	.03
2	CHECK HARNESS BETWEEN ENGINE COOLANT TEMPERATURE SENSOR AND COMBINATION METER.  1) Turn the ignition switch to OFF. 2) Disconnect the connector from the engine coolant temperature sensor and combination meter. 3) Measure the resistance between the engine coolant temperature sensor harness connector and combination meter harness connector.  Connector & terminal Except for STI model (E8) No. 3 — (i12) No. 9: STI model (E8) No. 3 — (i12) No. 11:	Is the resistance less than 10 $\Omega$ ?	Except for STI model: Check the engine coolant temperature gauge. <ref. coolant="" engine="" gauge.="" idi-18,="" removal,="" temperature="" to=""> STI model: Replace the meter main assembly.</ref.>	Repair the wiring harness.	

# 8. CHECK OUTSIDE TEMPERATURE INDICATOR

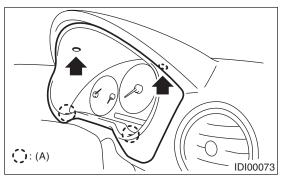
			VK R	F 3 3/11
	Step	Check	Yes	No Y
1	CHECK AIR CONDITIONER TYPE.	Is the vehicle equipped with auto A/C?	Go to step 6.	Go to step 2.
2	CHECK POWER SUPPLY FOR AMBIENT SENSOR.  1) Turn the ignition switch to OFF.  2) Disconnect the connector from the combination meter.  3) Turn the ignition switch to ON.  4) Measure the voltage between the combination meter terminal and chassis ground.  Connector & terminal  (i10) No. 11 (+) — Chassis ground (-):	Is the voltage 4 V or more?	Go to step 3.	Except for STI model: Replace the combination meter print circuit. STI model: Replace the meter main assembly.
3	CHECK HARNESS BETWEEN AMBIENT TEMPERATURE SENSOR AND COMBINATION METER.  1) Turn the ignition switch to OFF. 2) Disconnect the connector from ambient sensor. 3) Measure the resistance between the ambient temperature sensor harness connector terminal and combination meter harness connector terminal.  Connector & terminal  (F78) No. 1 — (i10) No. 11:  (F78) No. 2 — (i10) No. 8:	Is the resistance less than 10 $\Omega$ ?	Go to step 4.	Repair the wiring harness.
4	CHECK AMBIENT SENSOR.  1) Remove the ambient temperature sensor.  2) Check the ambient temperature sensor. <ref. ambient="" idi-19,="" inspection,="" sensor.="" to=""></ref.>	Is the ambient temperature sensor OK?	Go to step 5.	Replace the ambient sensor.
5	<ul> <li>CHECK OUTSIDE TEMPERATURE INDICATOR.</li> <li>1) Connect the combination meter harness connector.</li> <li>2) Connect a resistor (2.2 kΩ) between the terminals of ambient sensor harness connector.</li> <li>3) Turn the ignition switch to ON and check the outside temperature indicator display.</li> </ul>	Is the outside temperature indi- cator indicating 25°C (77°F)?	Repair the poor contact of ambient temperature sensor harness connector.	Except for STI model: Replace the combination meter print circuit. STI model: Replace the meter main assembly.
6	CHECK POWER SUPPLY FOR COMBINATION METER.  1) Turn the ignition switch to OFF.  2) Disconnect the connector from the auto A/C control module.  3) Turn the ignition switch to ON.  4) Measure the voltage between the auto A/C control module terminal and chassis ground.  Connector & terminal  (B282) No. 11 (+) — Chassis ground (-):	Is the voltage 4 V or more?	Go to step 7.	Replace the auto A/C control module.

		NO	3 - 4 D	
	Step	Check	Yes	C No
7	CHECK HARNESS BETWEEN AUTO A/C	Is the resistance less than 10 $\Omega$ ?	Go to step 8.	Repair the wiring
	CONTROL MODULE AND COMBINATION			harness.
	METER.			
	<ol> <li>Turn the ignition switch to OFF.</li> </ol>			
	2) Disconnect the connector from the combi-			
	nation meter.			
	3) Measure the resistance between the auto A/			
	C control module harness connector terminal			
	and combination meter harness connector ter-			
	minal.			
	Connector & terminal			
	(B282) No. 11 — (i10) No. 12:	1 11 11 11	0 1 1 0	D 1 11 1
8	CHECK POWER SUPPLY FOR AMBIENT	Is the voltage 4 V or more?	Go to step 9.	Replace the auto
	SENSOR.			A/C control mod-
	1) Turn the ignition switch to ON.			ule.
	<ol><li>Measure the voltage between the auto A/C control module terminal and chassis ground.</li></ol>			
	Connector & terminal			
	(B283) No. 9 (+) — Chassis ground (–):			
9	CHECK HARNESS BETWEEN AMBIENT	Is the resistance less than 10 $\Omega$ ?	Go to sten 10	Repair the wiring
ľ	TEMPERATURE SENSOR AND COMBINA-	To the resistance less than 10 12.	GO to stop 10.	harness.
	TION METER.			names.
	Turn the ignition switch to OFF.			
	2) Disconnect the connector from the ambient			
	sensor.			
	3) Measure the resistance between ambient			
	temperature sensor harness connector termi-			
	nal, combination meter harness connector ter-			
	minal and auto A/C control module harness			
	connector terminal.			
	Connector & terminal			
	(F78) No. 1 — (i10) No. 11:			
	(F78) No. 1 — (B283) No. 9:			
	(F78) No. 2 — (i10) No. 8:			
10	CHECK AMBIENT SENSOR.	Is the ambient temperature	Go to step 11.	Replace the ambi-
	Remove the ambient temperature sensor.	sensor OK?		ent sensor.
	2) Check the ambient temperature sensor.			
	<ref. ambient="" idi-19,="" inspection,="" sen-<="" td="" to=""><td></td><td></td><td></td></ref.>			
	sor.>		5	
11	CHECK OUTSIDE TEMPERATURE INDICA-	Is the outside temperature indi-	Repair the poor	Except for STI
	TOR.  1) Connect the combination mater and auto A/	cator indicating 25°C (77°F)?		model:
	<ol> <li>Connect the combination meter and auto A/ C control module harness connector.</li> </ol>		temperature sen-	Replace the com-
	2) Connect a resistor (2.2 k $\Omega$ ) between the ter-		sor harness con- nector.	bination meter print circuit.
	minals of ambient sensor harness connector.		I I CCIOI.	STI model:
	3) Turn the ignition switch to ON and check the			Replace the meter
	outside temperature indicator display.			main assembly.
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# 3. Combination Meter

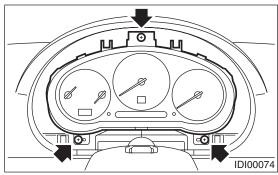
#### A: REMOVAL

- 1) Disconnect the ground cable from the battery.
- 2) Set the tilt steering at the lowest position.
- 3) Remove the screws and detach the meter visor.



(A) Hook

4) Remove the screws of combination meter and pull out the meter.



5) Disconnect the connector in the upper area of combination meter to remove the meter.

#### **CAUTION:**

- Be careful not to damage the meters and instrument panel.
- Pay particular attention to avoid damaging the meter glass.

#### **B: INSTALLATION**

Install in the reverse order of removal.

#### CAUTION:

- Make sure the electrical connector is connected securely.
- Make sure that each meter operates normally.

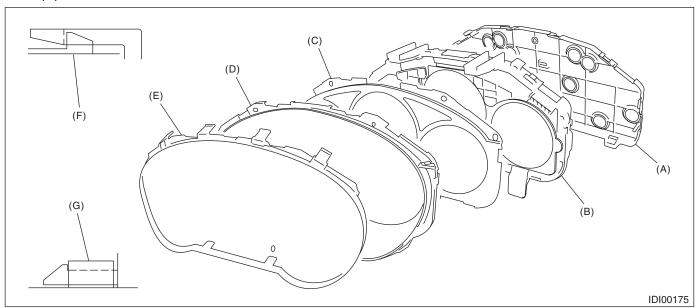
#### C: DISASSEMBLY

#### 1. EXCEPT FOR STI MODEL

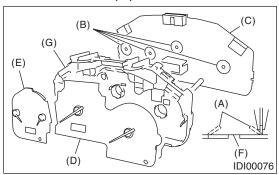
#### **CAUTION:**

T FOR RESALE Use gloves to avoid damage and getting fingerprints on the glass surface and meter surfaces.

- 1) Disengage the claw (F) to remove the inner case (B) from the back cover (A).
- 2) Disengage the claw (G) to remove the meter glass (E), reflector (D), and window plate (C) from the inner case (B).



- 3) Pull up claw (A) in portion (B) of combination meter printed circuit (C) with combination pliers. Push out the speedometer and tachometer assembly (D) and fuel gauge and engine coolant temperature gauge assembly (E) using the hole (F).
- 4) Pull up the claw in the center of the combination meter printed circuit (C), and remove the printed circuit from the case (G).

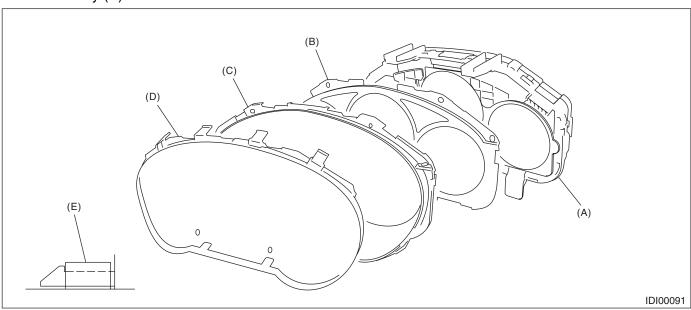


#### 2. STI MODEL

#### **CAUTION:**

- Use gloves to avoid damage and getting fingerprints on the glass surface and meter surfaces.
- Do not disassemble the meter main assembly of STI model.

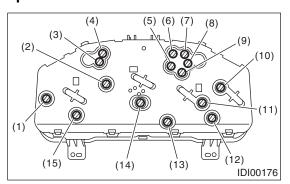
Disengage the claw (E) to remove the meter glass (D), reflector (C), and window plate (B) from the meter main assembly (A).



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#### 3. BULB REPLACEMENT

#### **Except for STI model**



- Tachometer (non-turbo model) or speedometer (turbo model)
- (2) Speedometer and tachometer
- (3) Turn signal indicator light (Right)
- (4) HI-beam indicator light
- (5) Speedometer (non-turbo model) or tachometer (turbo model)
- (6) Cruise set indicator light
- (7) Cruise indicator light
- (8) Turn signal indicator light (Left)
- (9) Parking brake/brake fluid level warning light
- (10) Fuel gauge
- (11) Engine coolant temperature gauge
- (12) LCD (outside temperature indicator)
- (13) Charge indicator light
- (14) LCD (odometer and tripmeter) (non-turbo model)
- (15) LCD (odometer and tripmeter) (turbo model)

#### STI model

Since LEDs are used for all of warning lights and indicator lights of meters for STI model, replace the meter main assembly if faulty.

#### D: ASSEMBLY

Assemble in the reverse order of disassembly.

# 4. Speedometer

#### A: REMOVAL

#### NOTE:

Since the meter main assembly of STI model cannot be disassembled. Do not remove or inspect the speedometer as a single unit.

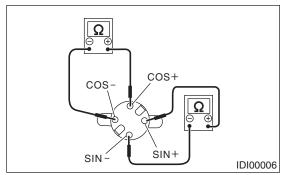
Disassemble the combination meter, and then remove the speedometer and tachometer assembly. <Ref. to IDI-12, DISASSEMBLY, Combination Meter.>

#### **B: INSTALLATION**

Install in the reverse order of removal.

#### C: INSPECTION

Measure the speedometer resistance.



Terminals	Resistance
SIN+ and SIN- terminal	200±8 Ω
COS+ and COS- terminal	200±8 Ω

If NG, replace the speedometer and tachometer assembly.

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### 5. Tachometer

#### A: REMOVAL

#### NOTE:

Since the meter main assembly of STI model cannot be disassembled. Do not remove or inspect the tachometer as a single unit.

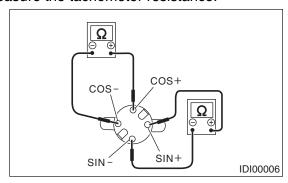
Disassemble the combination meter, and then remove the speedometer and tachometer assembly. <Ref. to IDI-12, DISASSEMBLY, Combination Meter.>

#### **B: INSTALLATION**

Install in the reverse order of removal.

#### C: INSPECTION

Measure the tachometer resistance.



Terminals	Resistance
SIN+ and SIN- terminal	200±8 Ω
COS+ and COS- terminal	200±8 Ω

If NG, replace the speedometer and tachometer assembly.

# 6. Fuel Gauge

### A: REMOVAL

#### NOTE:

Since the meter main assembly of STI model cannot be disassembled. Do not remove or inspect the fuel gauge as a single unit.

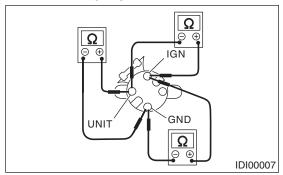
Disassemble the combination meter, and then remove the engine coolant temperature gauge and fuel gauge assembly. <Ref. to IDI-12, DISASSEMBLY, Combination Meter.>

#### **B: INSTALLATION**

Install in the reverse order of removal.

#### C: INSPECTION

Measure the fuel gauge resistance.



Terminals	Resistance
IGN and GND terminal	170±10 Ω
IGN and UNIT terminal	35±10 Ω
UNIT and GND terminal	136±10 Ω

Replace the engine coolant temperature gauge and fuel gauge assembly if defective.

# 7. Engine Coolant Temperature Gauge

# A: REMOVAL

#### NOTE:

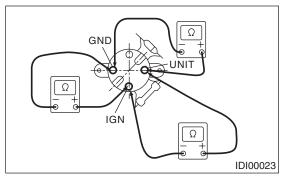
Since the meter main assembly of STI model cannot be disassembled. Do not remove or inspect the engine coolant temperature gauge as a single unit. Disassemble the combination meter, and then remove the tachometer and engine coolant temperature gauge and fuel gauge assembly. <Ref. to IDI-12, DISASSEMBLY, Combination Meter.>

#### **B: INSTALLATION**

Install in the reverse order of removal.

#### C: INSPECTION

Measure the engine coolant temperature gauge resistance.



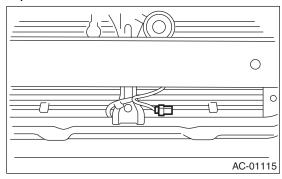
Terminals	Resistance
IGN and GND terminal	208±10 Ω
IGN and UNIT terminal	56±10 Ω
UNIT and GND terminal	264±10 Ω

Replace the engine coolant temperature gauge and fuel gauge assembly if defective.

# 8. Ambient Sensor

## A: REMOVAL

- 1) Disconnect the ground cable from the battery.
- 2) Disconnect the ambient sensor connector.
- 3) Remove the ambient sensor from the radiator lower panel.

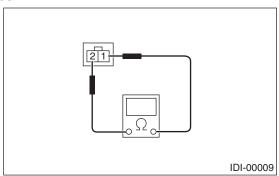


#### **B: INSTALLATION**

Install in the reverse order of removal.

## C: INSPECTION

Measure the ambient temperature sensor resistance.



Terminals	Resistance
1 and 2	2.2 kΩ/25°C (77°F)

If NG, replace the ambient temperature sensor.