

Ignition Coil Testing

Four-Cylinder Non-Turbo Engines

Ignition coil testing is a common diagnostic procedure. Because the types of coils and their resistance values vary by model and year, the procedures and values are listed below. The ignition coil testing specifications should be used with the noted figure.

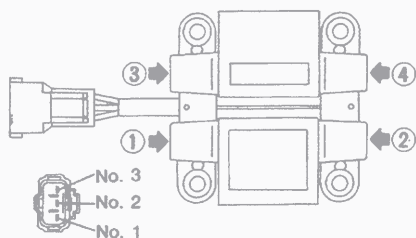
Please refer to the correct service manual or the Subaru Technical Information System website at <http://techinfo.subaru.com> for the specific vehicle you are servicing.

Impreza & Outback Sport

1993-1997

1.8L Engine w/Pigtail Connector & Internal Contacts

- > Primary side (Refer to Fig. A)
 - Between 1 and 2 & between 3 and 4
 - With Manual Transmission: 0.62 - 0.76 Ω
 - With Automatic Transmission: 0.63 - 0.77 Ω
- > Secondary side (Refer to Fig. A)
 - Between No. 1 and No. 2 & between No. 2 and No. 3:
 - With Manual Transmission: 17.9 - 24.5 k Ω
 - With Automatic Transmission: 10.4 - 15.6 k Ω



> **Figure A:** Primary and secondary testing, pigtail connector with internal contacts.

1995-1996

2.2L Engine w/Pigtail Connector & Internal Contacts

- > Primary side (Refer to Fig. A)
 - Between 1 and 2 & between 3 and 4: 0.69 Ω \pm 10%
- > Secondary side (Refer to Fig. A)
 - Between No. 1 and No. 2 & between No. 2 and No. 3: 21.0 k Ω \pm 15%

1997-1998

2.2L Engine w/Terminal Connector & External Contacts

- > Primary side (Refer to Fig. B)
 - Between 1 and 2 & between 2 and 3: 0.73 Ω \pm 10%
- > Secondary side (Refer to Fig. C)
 - Between No. 1 and No. 2 & between No. 2 and No. 3: 12.8 k Ω \pm 15%

1998

2.5L Engine w/Pigtail Connector & Internal Contacts

- > Primary side (Refer to Fig. A)
 - Between 1 and 2 & between 2 and 3: 0.69 Ω \pm 10%
- > Secondary side (Refer to Fig. A)
 - Between No. 1 and No. 2 & between No. 2 and No. 3: 21.0 k Ω \pm 15%

1999-2003

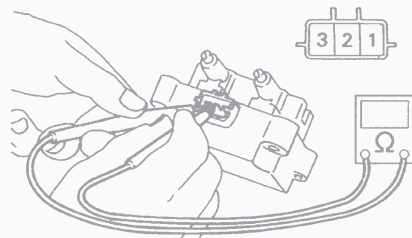
Terminal Connector & External Contacts

- > Primary side (Refer to Fig. D)
 - Between 1 and 2 & between 2 and 4: 0.73 Ω \pm 10%
- > Secondary side (Refer to Fig. E)
 - Between A and B & between C and D: 12.8 k Ω \pm 15%

2004

Terminal Connector & External Contacts

- > Primary side: The igniter is integrated into the coil. Therefore, the resistance of the primary coil cannot be measured.
- > Secondary side (Refer to Fig. E)
 - Between A and B & between C and D: 12.8 k Ω \pm 15%



> **Figure B:** Primary testing, 3-terminal connector with external contacts.

2005

Terminal Connector & External Contacts (U5 - California)

- > Primary side: The igniter is integrated into the coil. Therefore, the resistance of the primary coil cannot be measured.
- > Secondary side (Refer to Fig. E)
 - Between A and B & between C and D: 12.8 k Ω \pm 15%

Terminal Connector & Internal Contacts (US)

- > Primary side: The igniter is integrated into the coil. Therefore, the resistance of the primary coil cannot be measured.
- > Secondary side (Refer to Fig. F)
 - Between A and B & between C and D: 11.2 k Ω \pm 15%

2006

Terminal Connector & Internal Contacts

- > Primary side: The igniter is integrated into the coil. Therefore, the resistance of the primary coil cannot be measured.
- > Secondary side (Refer to Fig. F)
 - Between A and B & between C and D: 11.7 k Ω \pm 15%

2007

Terminal Connector & Internal Contacts

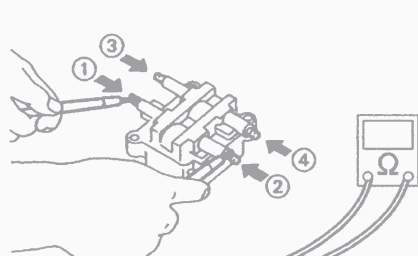
- > Primary side: The igniter is integrated into the coil. Therefore, the resistance of the primary coil cannot be measured.
- > Secondary side (Refer to Fig. E)
 - Between A and B & between C and D: 11.2 k Ω \pm 15%

Legacy & Outback

1995-1996

Pigtail Connector & Internal Contacts

- > Primary side (Refer to Fig. A)
 - Between 1 and 2 & between 3 and 4: 0.69 Ω \pm 10%
- > Secondary side (Refer to Fig. A)
 - Between No. 1 and No. 2 & between No. 2 and No. 3: 21.0 k Ω \pm 15%



> **Figure C:** Secondary testing, 3-terminal connector with external contacts.

1997-1998
Terminal Connector & External Contacts

- **Primary side (Refer to Fig. B)**
Between 1 and 2 & between 2 and 3:
0.73 Ω $\pm 10\%$
- **Secondary side (Refer to Fig. C)**
Between No. 1 and No. 2 & between
No. 2 and No. 3: 12.8 k Ω $\pm 15\%$

1999
2.2L Engine w/Terminal Connector & External Contacts

- **Primary side (Refer to Fig. D)**
Between 1 and 2 & between 2 and 4:
0.73 Ω $\pm 10\%$
- **Secondary side (Refer to Fig. E)**
Between A and B & between C and D:
12.8 k Ω $\pm 15\%$

2.5L Engine w/Terminal Connector & External Contacts

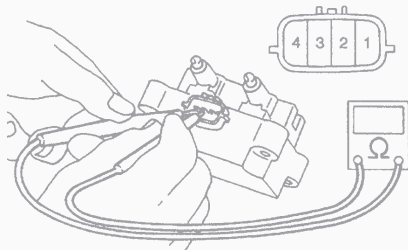
- **Primary side (Refer to Fig. B)**
Between 1 and 2 & between 2 and 3:
0.73 Ω $\pm 10\%$
- **Secondary side (Refer to Fig. E)**
Between A and B & between C and D:
12.8 k Ω $\pm 15\%$

2000-2003
Terminal Connector & External Contacts

- **Primary side (Refer to Fig. D)**
Between 1 and 2 & between 2 and 4:
0.73 Ω $\pm 10\%$
- **Secondary side (Refer to Fig. E)**
Between A and B & between C and D:
12.8 k Ω $\pm 15\%$

2004

Terminal Connector & External Contacts
Primary side: The igniter is integrated into the coil. Therefore, the resistance of the primary coil cannot be measured.
Secondary side (Refer to Fig. E)
 Between A and B & between C and D:
 12.8 k Ω $\pm 15\%$



➤ **Figure D:** Primary testing, 4-terminal connector with external contacts.

2005
Terminal Connector & External Contacts (US - California)

- **Primary side:** The igniter is integrated into the coil. Therefore, the resistance of the primary coil cannot be measured.
- **Secondary side (Refer to Fig. E)**
Between A and B & between C and D:
12.8 k Ω $\pm 15\%$

Terminal Connector & Internal Contacts (US)

- **Primary side:** The igniter is integrated into the coil. Therefore, the resistance of the primary coil cannot be measured.
- **Secondary side (Refer to Fig. F)**
Between A and B & between C and D:
11.2 k Ω $\pm 15\%$

2006-2007
Terminal Connector & Internal Contacts

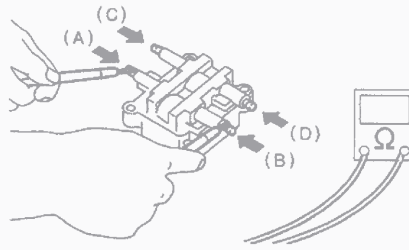
- **Primary side:** The igniter is integrated into the coil. Therefore, the resistance of the primary coil cannot be measured.
- **Secondary side (Refer to Fig. F)**
Between A and B & between C and D:
11.2 k Ω $\pm 15\%$

Forester
1998
Pigtail Connector & Internal Contacts

- **Primary side (Refer to Fig. A)**
Between 1 and 2 & between 3 and 4:
0.69 Ω $\pm 10\%$
- **Secondary side (Refer to Fig. A)**
Between A and B & between C and D:
21.0 k Ω $\pm 15\%$

1999-2004
Terminal Connector & External Contacts

- **Primary side (Refer to Fig. D)**
Between 1 and 2 & between 3 and 4:
0.73 Ω $\pm 10\%$
- **Secondary side (Refer to Fig. E)**
Between A and B & between C and D:
12.8 k Ω $\pm 15\%$



➤ **Figure E:** Secondary testing, integrated igniter with external contacts.

2005
Terminal Connector & Internal Contacts

- **Primary side:** The igniter is integrated into the coil. Therefore, the resistance of the primary coil cannot be measured.
- **Secondary side (Refer to Fig. F)**
Between A and B & between C and D:
11.2 k Ω $\pm 15\%$

2006
Terminal Connector & Internal Contacts

- **Primary side:** The igniter is integrated into the coil. Therefore, the resistance of the primary coil cannot be measured.
- **Secondary side (Refer to Fig. F)**
Between A and B & between C and D:
11.7 k Ω $\pm 15\%$

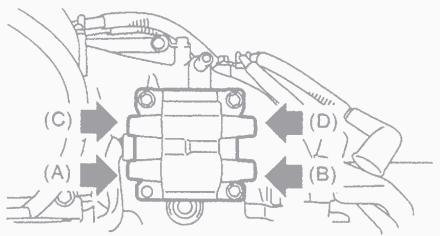
2007
Terminal Connector & Internal Contacts

- **Primary side:** The igniter is integrated into the coil. Therefore, the resistance of the primary coil cannot be measured.
- **Secondary side (Refer to Image F)**
Between A and B & between C and D:
11.2 k Ω $\pm 15\%$

Baja
2003-2006
Terminal Connector & External Contacts

- **Primary side:** The igniter is integrated into the coil. Therefore, the resistance of the primary coil cannot be measured.
- **Secondary side (Refer to Fig. E)**
Between A and B & between C and D:
11.2 k Ω $\pm 15\%$

For correct diagnostic procedures on the vehicle you are servicing, always refer to the specific service manual or the Subaru Technical Information System website at <http://techinfo.subaru.com>. <



➤ **Figure F:** Secondary testing, integrated igniter with internal contacts.