

GENERAL INFORMATION

Breakout Boxes & Connectors - Overview

BREAKOUT BOXES AND CONNECTORS

Model: All

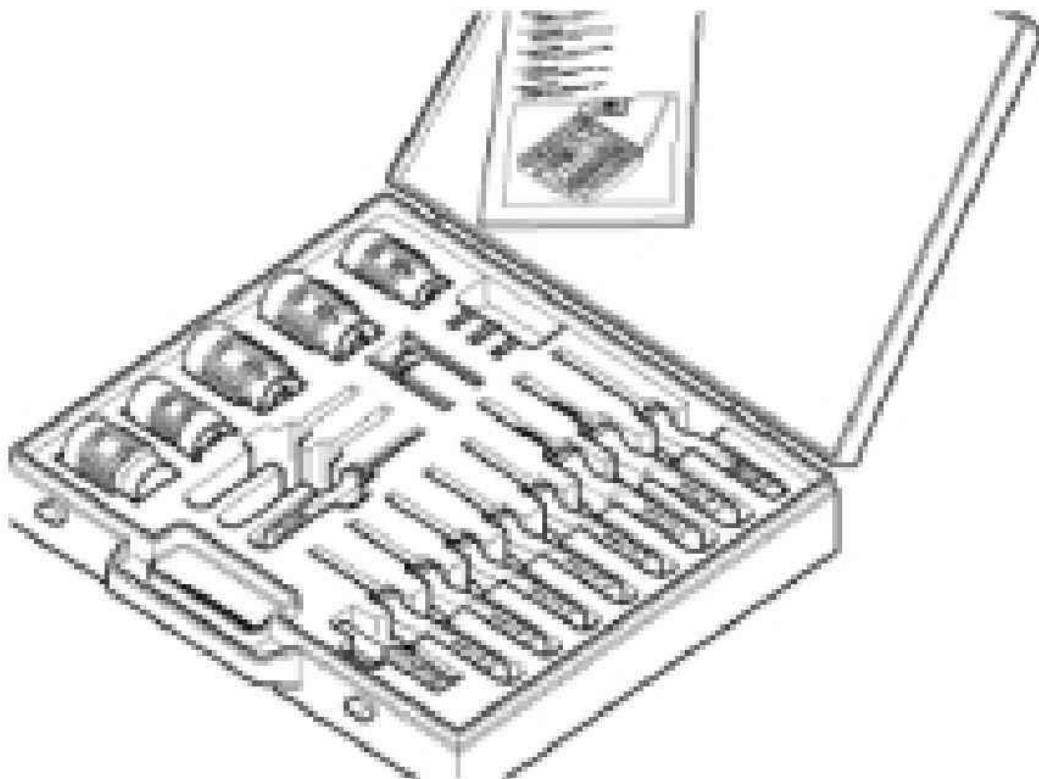
Production Date: All

CONNECTOR CONTACT KIT

Connector Contact Removal Kit

The connector contact removal kit provides tools for the disassembly of connectors. Proper use of these tools enable the technician to access wiring connectors for repairs equal to factory quality.

Always refer to the latest appropriate articles for up to date information regarding new tools.



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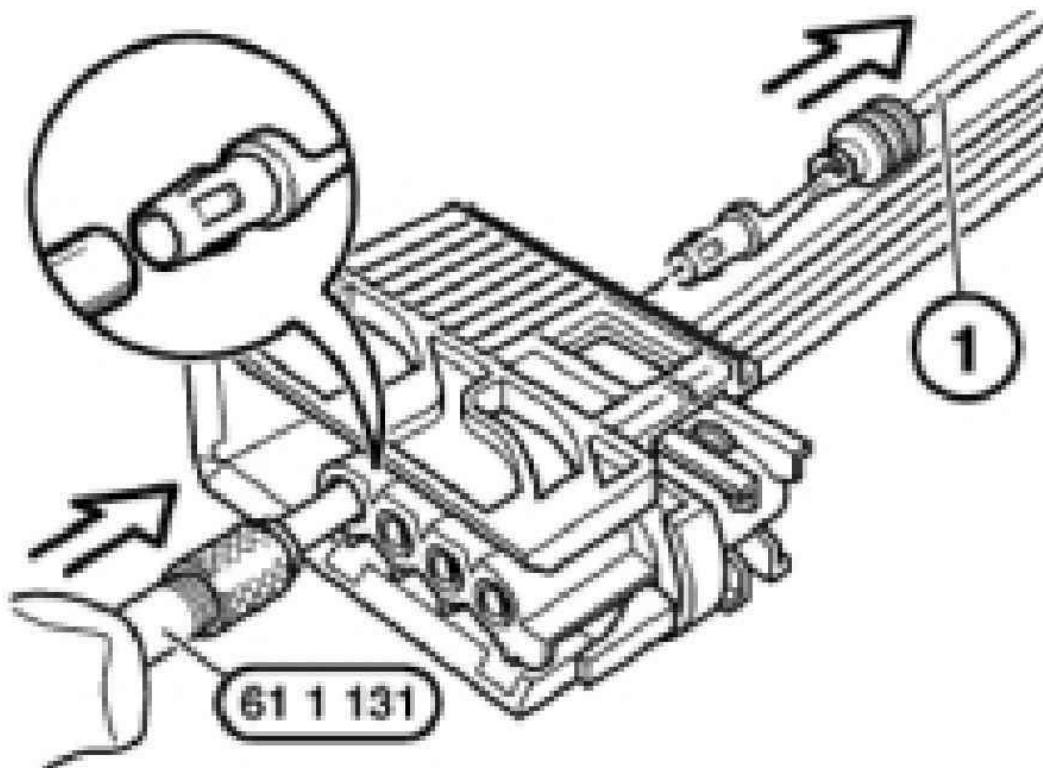
Fig. 1: Identifying Connector Contact Removal Kit
Courtesy of BMW OF NORTH AMERICA, INC.

Current P/N 88 88 6 611 150.

The Connector Contact Removal Kit is used for:

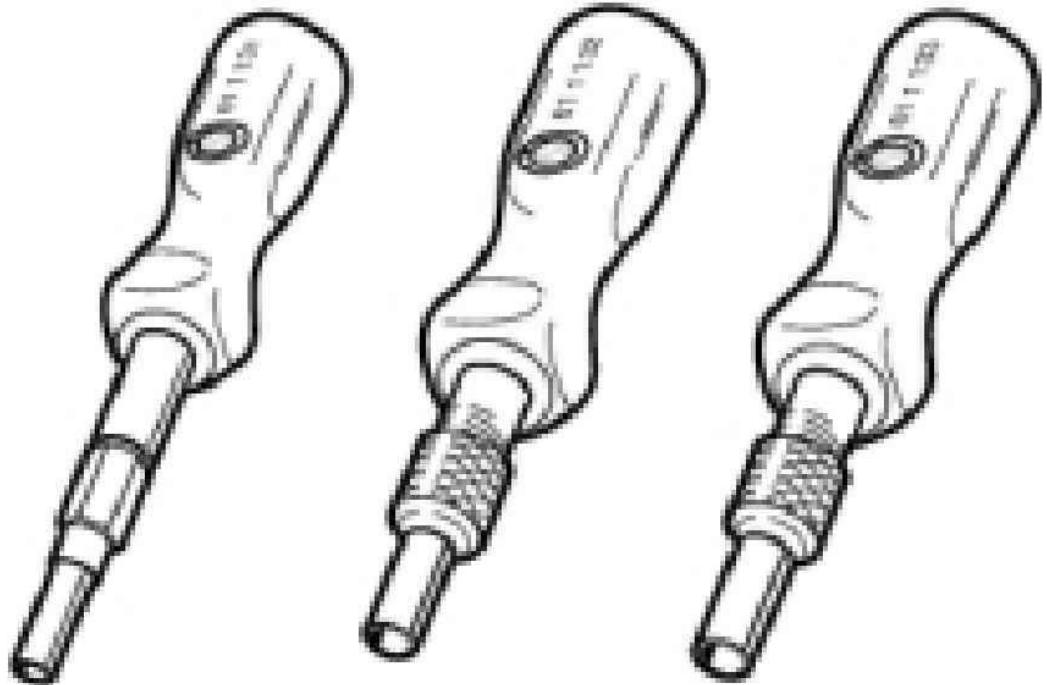
- Releasing round plug housings.
- Releasing relay carriers.
- Pressing out contacts.
- Pulling out indicator lamps.

Socket and Spring Contacts



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Fig. 2: Identifying Spring Contacts
Courtesy of BMW OF NORTH AMERICA, INC.

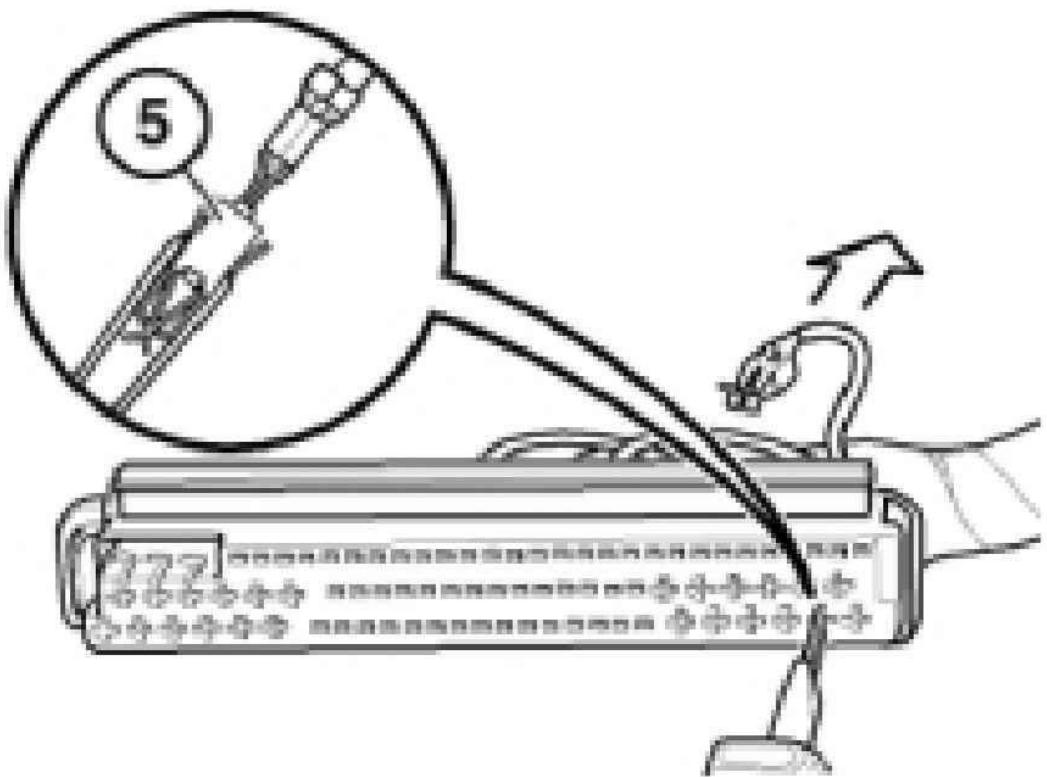


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Fig. 3: View Of Socket Types

Courtesy of BMW OF NORTH AMERICA, INC.

Socket and Spring contacts compress the springs while the connector is pushed from the housing.



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Fig. 4: Identifying Different Sockets

Courtesy of BMW OF NORTH AMERICA, INC.



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Fig. 5: View Of Socket And Spring Contacts

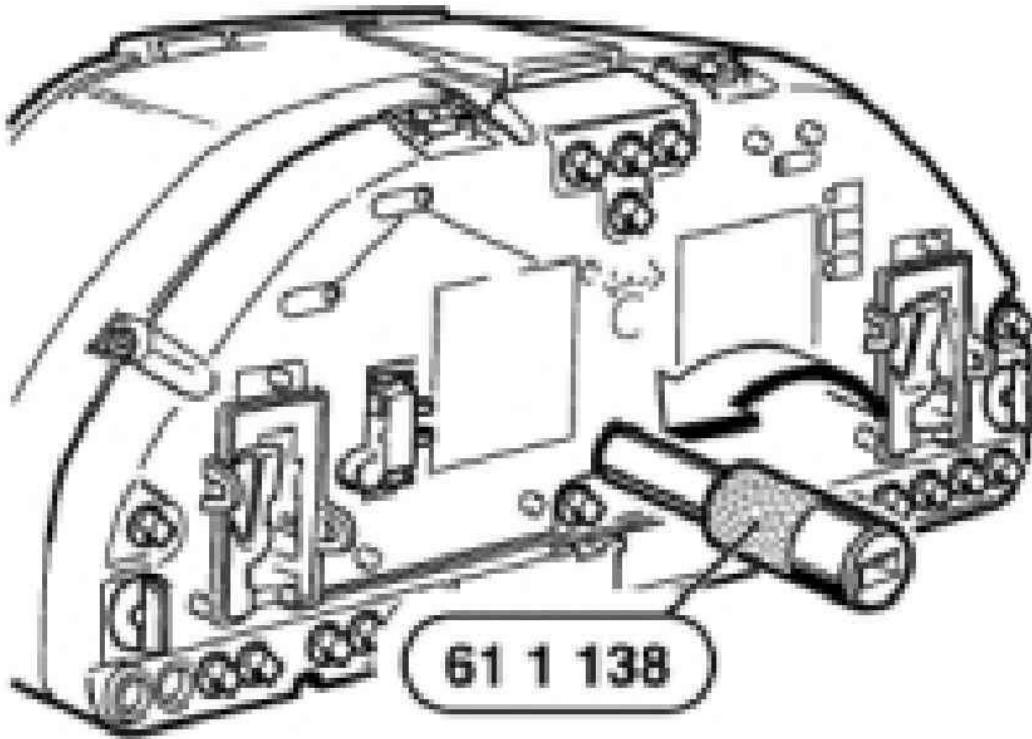
Courtesy of BMW OF NORTH AMERICA, INC.

Flat spring contacts depress the spring allowing the connector to be pushed or gently pulled from the connector housing.

Instrument Cluster Illumination Bulb Holder Removal Socket

The backlighting illumination bulbs are removed from the cluster by placing square head of the socket on the bulb holder and turning 90° counter clockwise.

The bulb removal socket is used on all instrument clusters.

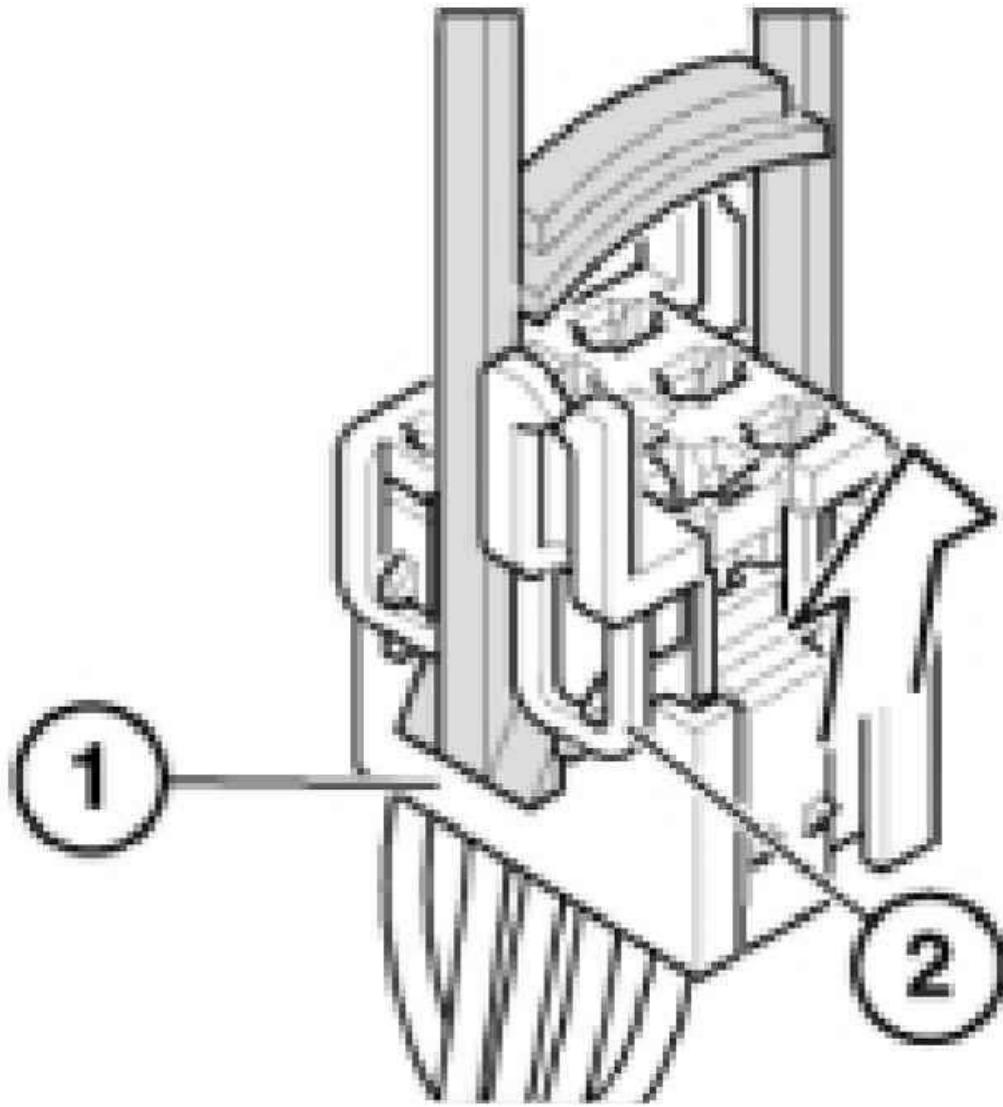


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Fig. 6: Identifying Instrument Cluster Illumination Bulb Holder Removal Socket
Courtesy of BMW OF NORTH AMERICA, INC.

Relay Holder Disengaging Tool

This tool allows the relay holder (2) to disengage the relay connector (1).



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Fig. 7: Identifying Relay Holder Disengaging Tool
Courtesy of BMW OF NORTH AMERICA, INC.

Circular Connector Lock Disengager

These tools unlock the circular connector housings allowing the individual connectors to be removed.

The various sizes are reflected in the part numbers:

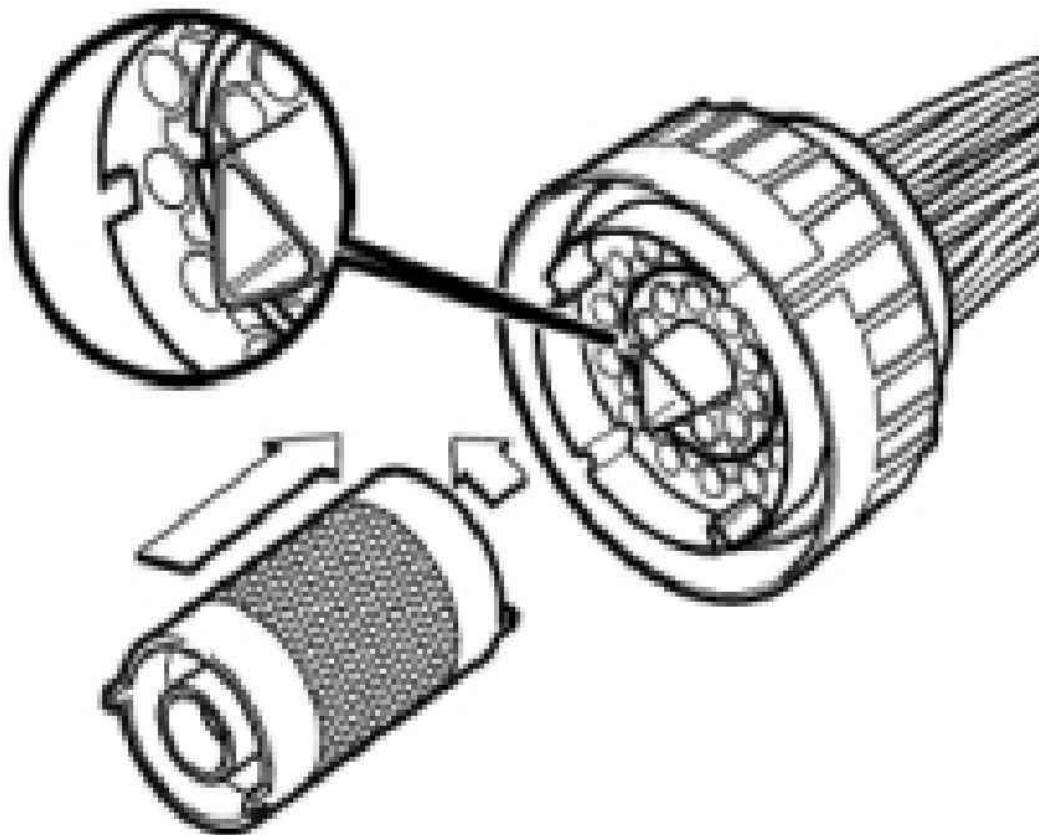
4 pin = 61 1 141.

7 pin = 61 1 142.

10 pin = 61 1 145.

12 pin = 61 1 143.

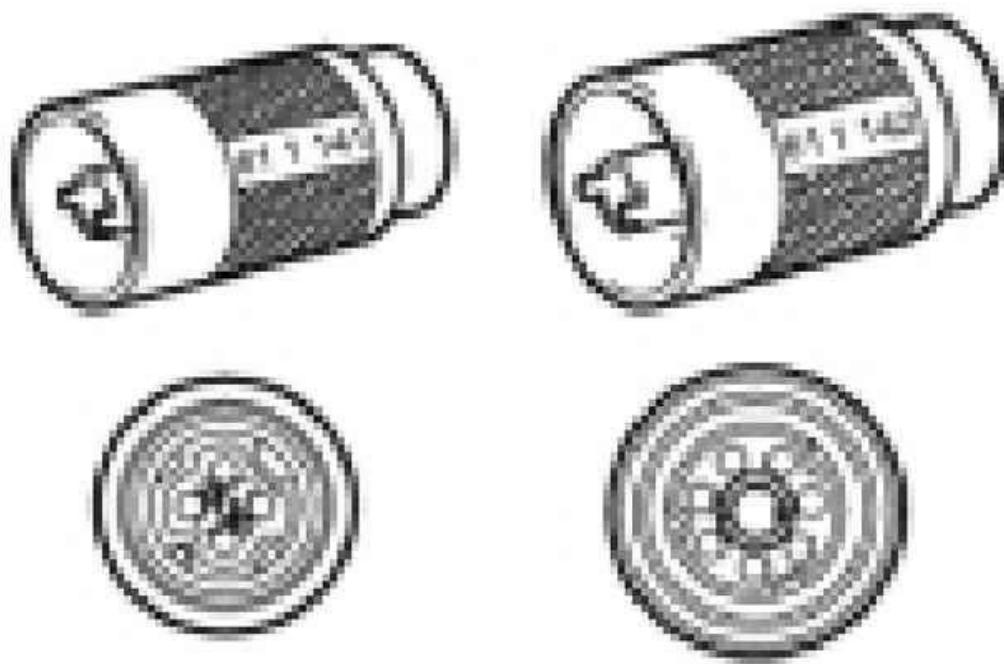
25 Pin = 61 1 144.



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Fig. 8: Identifying Circular Connector Lock Disengager (1 Of 4)

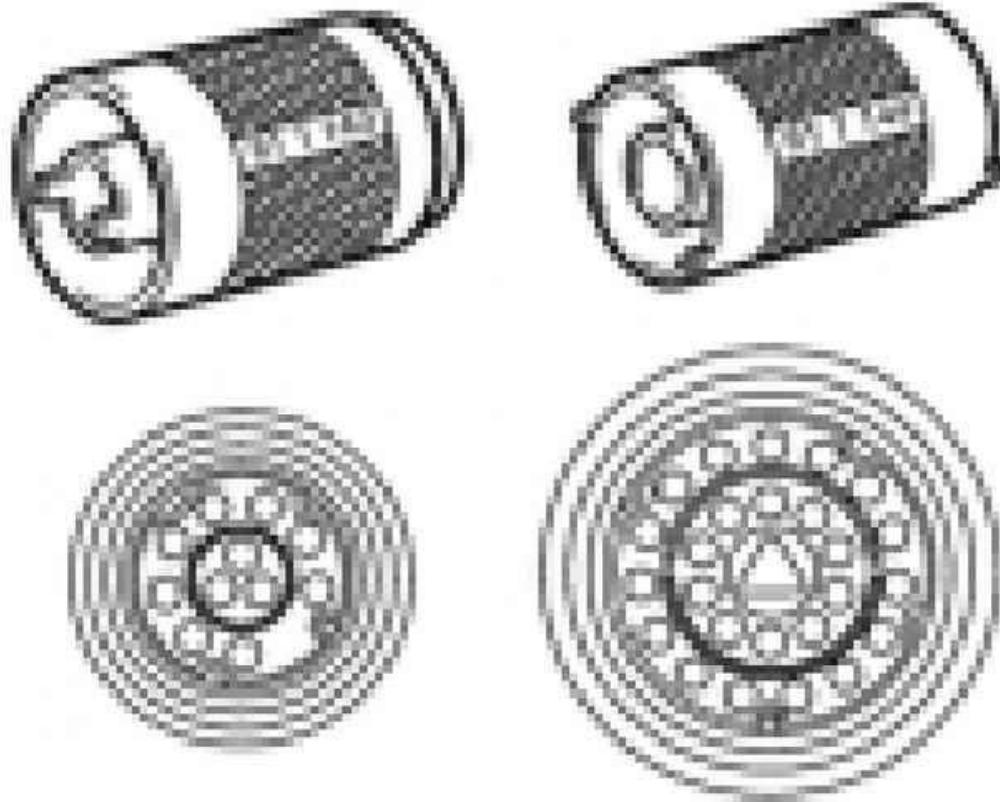
Courtesy of BMW OF NORTH AMERICA, INC.



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Fig. 9: Identifying Circular Connector Lock Disengager (2 Of 4)

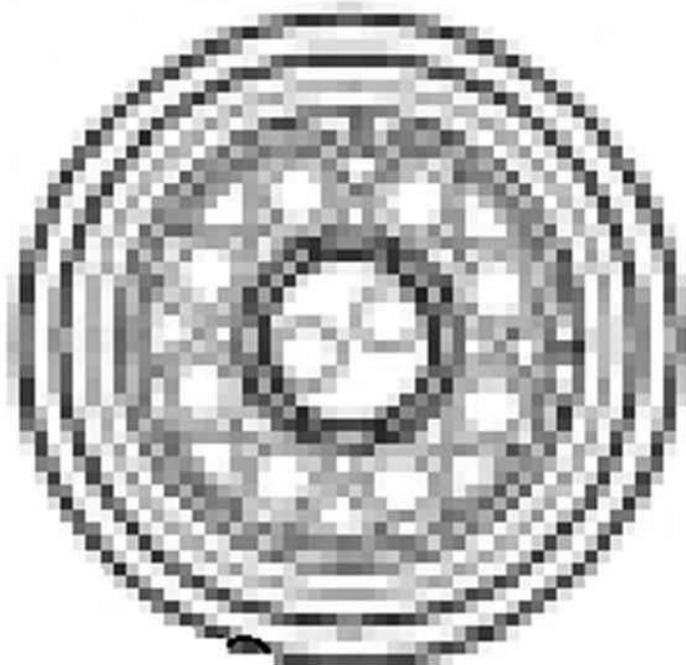
Courtesy of BMW OF NORTH AMERICA, INC.



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Fig. 10: Identifying Circular Connector Lock Disengager (3 Of 4)

Courtesy of BMW OF NORTH AMERICA, INC.



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Fig. 11: Identifying Circular Connector Lock Disengager (4 Of 4)
Courtesy of BMW OF NORTH AMERICA, INC.

BMW PLUG SYSTEM ABBREVIATIONS

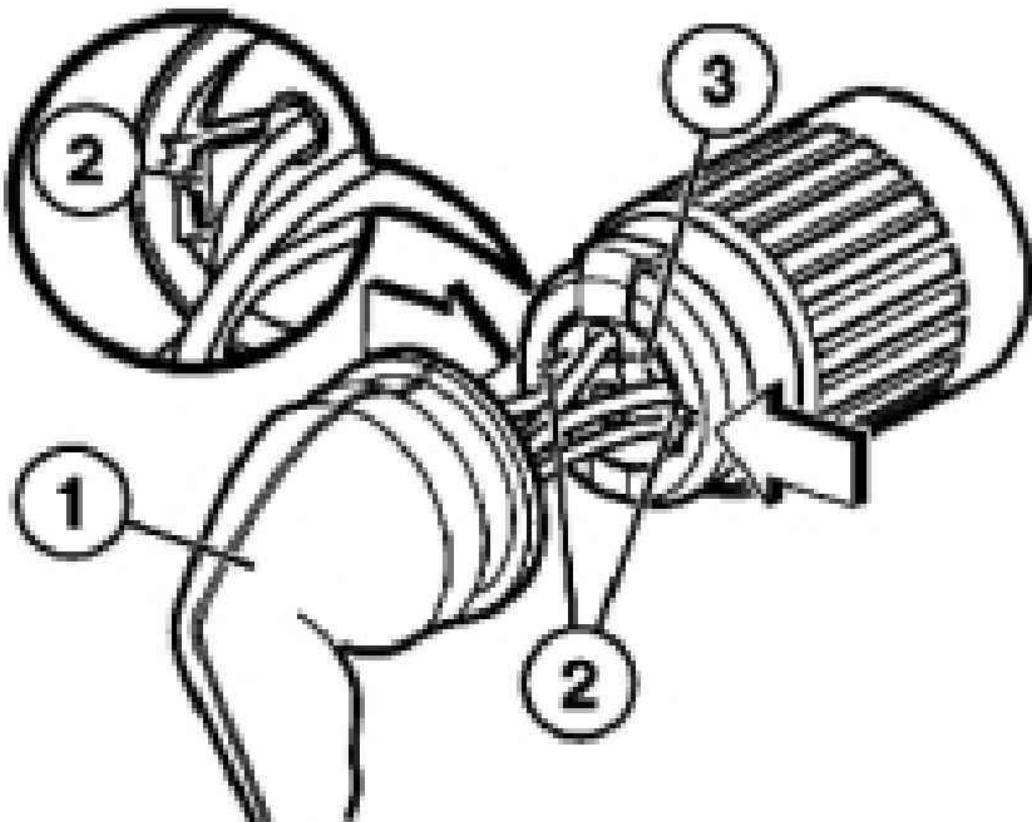
BMW PLUG SYSTEM ABBREVIATIONS

D 1.5/2.5	Round contacts of 1.5mm or 2.5mm diameter
MDK 3 Plus	Miniature double flat spring contact
JPT ELA	Junior Power Timer flat spring contacts with strand sealing
DFK ELA	Double flat spring contacts with strand sealing
Elo	Electronic contacts with and without strand sealing Manufacturer: Siemens
Elo	Power Electronic contacts for heavy loads with and without strand sealing Manufacturer: Siemens
MQS	Micro Quadlock System electronic contacts with and without strand sealing Manufacturer: AMP
MPQ	Micro Power Quadlock electronic contacts for heavy loads with and without strand sealing Manufacturer: AMP

PLUG SYSTEM D1.5/D2.5

Circular Plug 7--8 Pin System D2.5

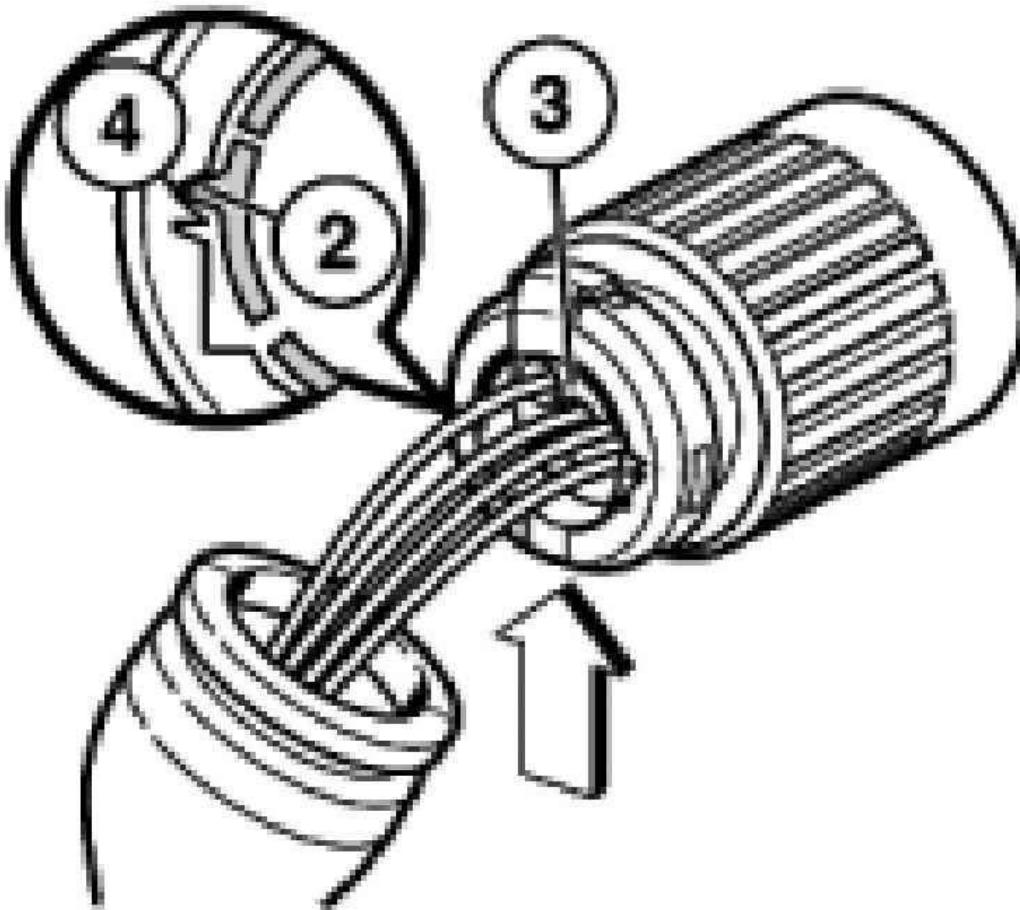
- Pull off the rubber boot (1).
- Push the retaining lugs (2) of the inner connector section 3 inward carefully to disengage the lock notch.
- Push the inner connector section (3) in the direction of the arrow in the illustration until the retaining lugs (2) are in the recessed notch (4) and use the appropriate sized spring contact tool and remove the connector from the housing.



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Fig. 12: Identifying Inner Connector Retaining Lugs

Courtesy of BMW OF NORTH AMERICA, INC.



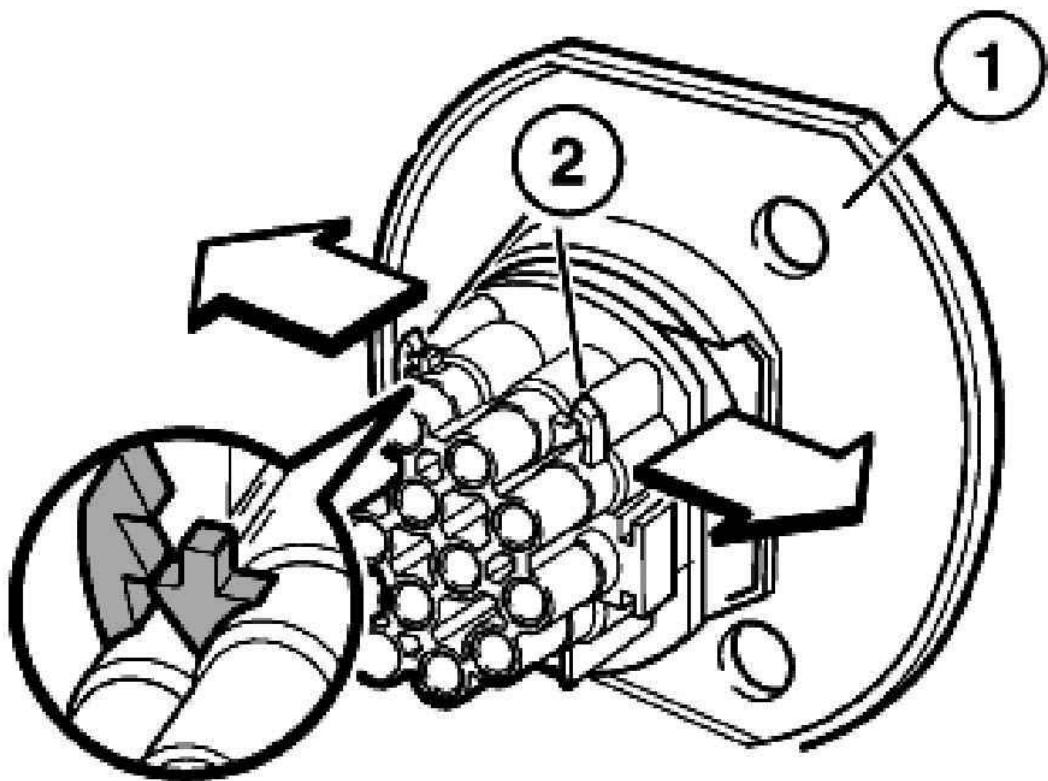
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Fig. 13: Locating Recessed Notch In Inner Connector

Courtesy of BMW OF NORTH AMERICA, INC.

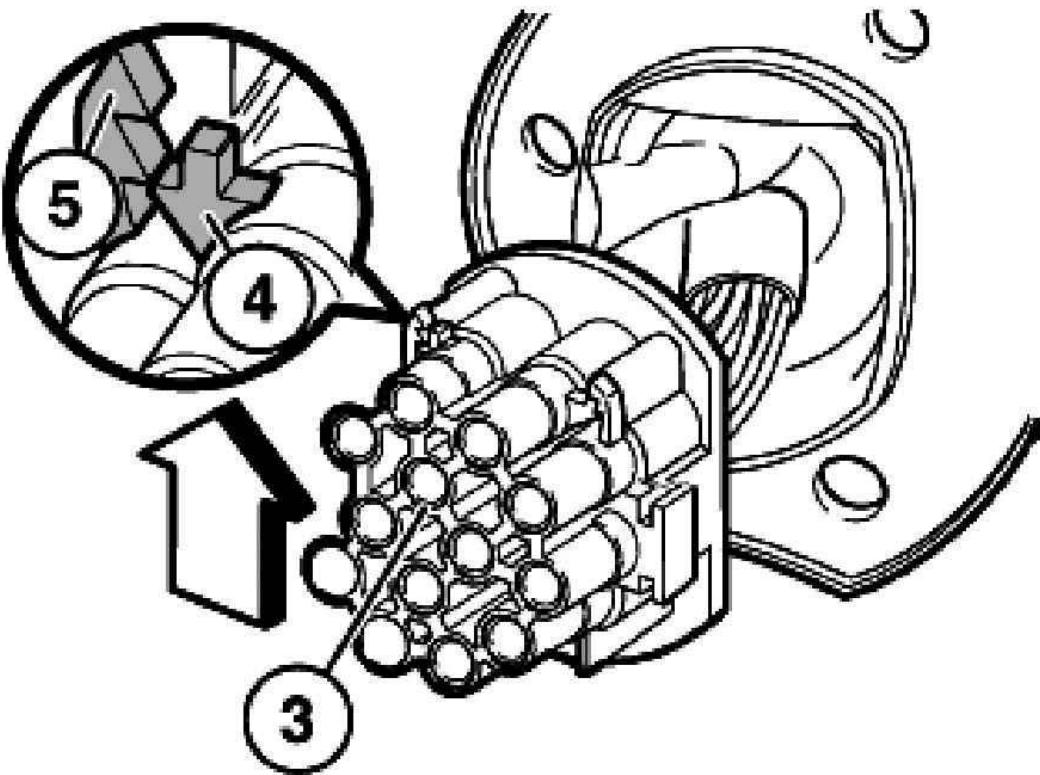
Circular plug 13 Pin System D2.5

- Carefully pull off the rubber grommet (1).
- Pull the lock retainers (2) outward (direction of arrows) to allow the lock notch to disengage.
- Pull the inner section (3) upward as shown in the illustration until the lock notches (4) are in the released position of the lock retainers (5) and use the appropriate size spring contact and remove the connector from the housing.



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Fig. 14: Locating Circular Plug Lock Retainers
Courtesy of BMW OF NORTH AMERICA, INC.

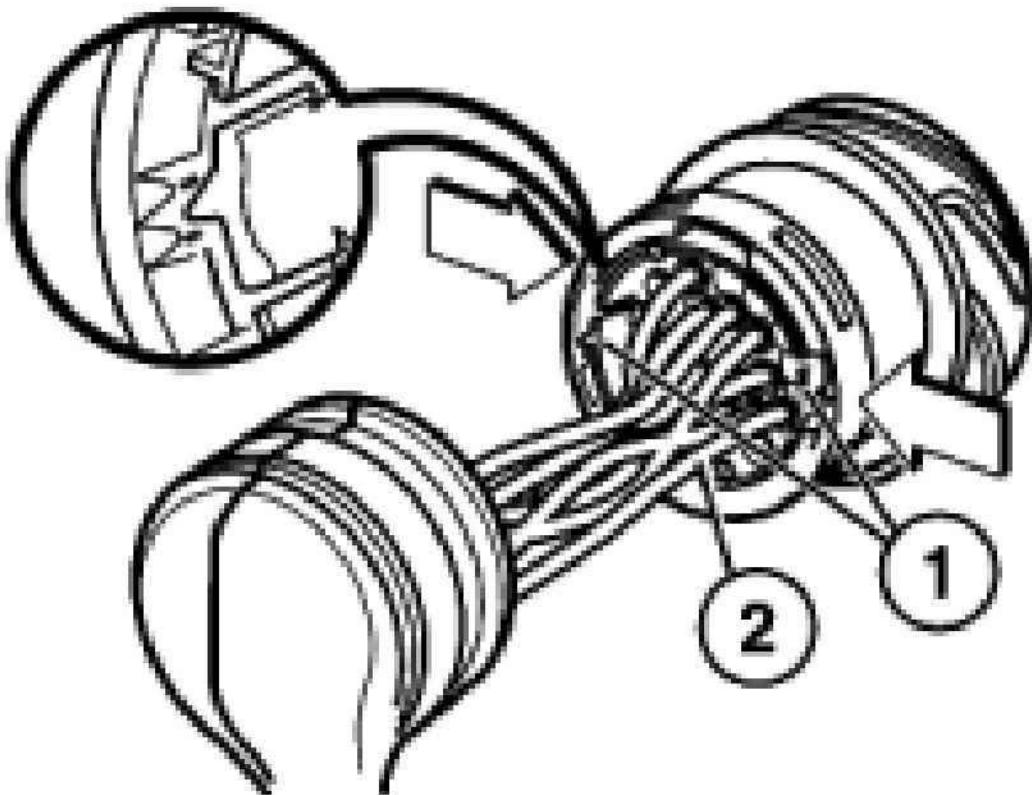


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Fig. 15: View Of Lock Notch In Circular Plug
Courtesy of BMW OF NORTH AMERICA, INC.

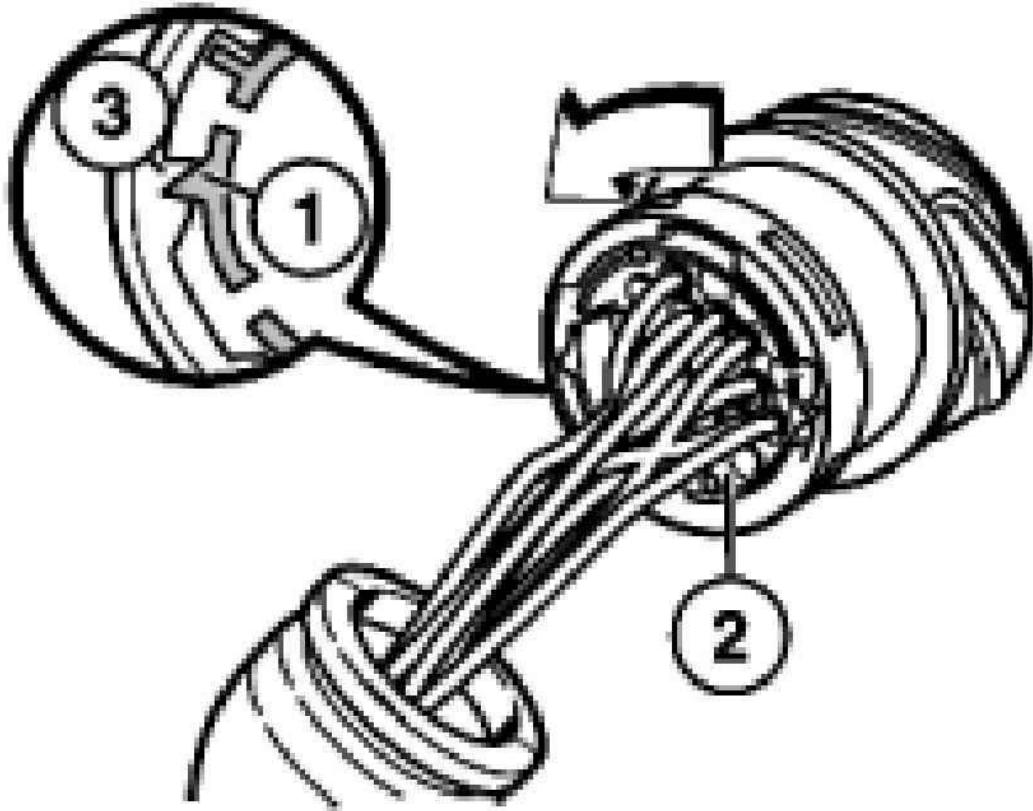
Circular Plug 20 Pin System D2.5

- With the boot pulled back, press the lock tabs (1) of the inner connector section (2) inward.
- Simultaneously, rotate the inner connection section (2) counter clockwise to allow the lock tabs (1) to engage in the unlocked position and use the appropriate sized spring contact and remove connector from the housing.



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Fig. 16: Identifying Circular Plug Lock Tabs
Courtesy of BMW OF NORTH AMERICA, INC.

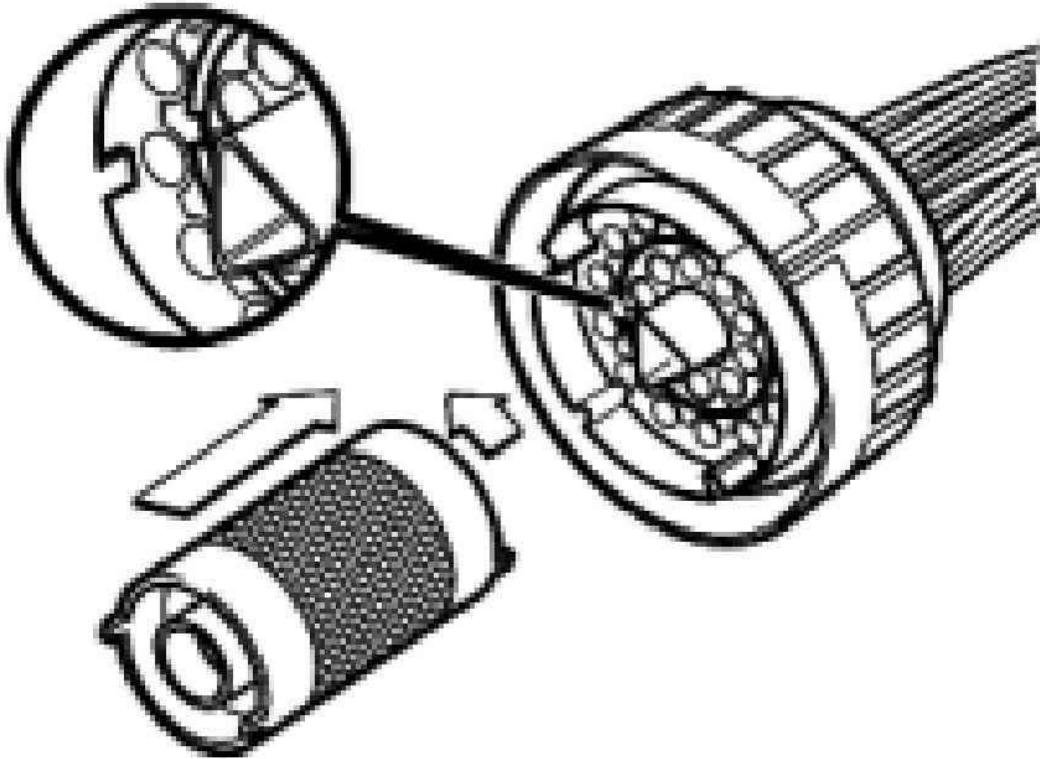


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Fig. 17: View Of Inner Connection Of Circular
Courtesy of BMW OF NORTH AMERICA, INC.

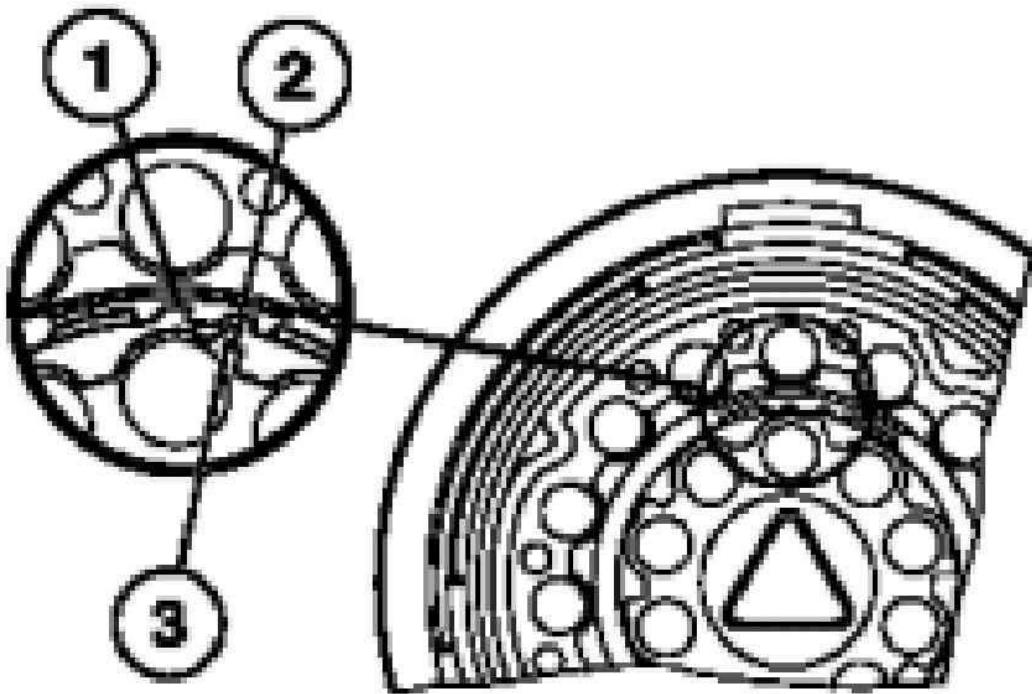
Circular Plug 4-7-10-12-25 Pin System D1.5/D2.5

- Insert the appropriate unlocking tool (determined by the number of pins) into the connector.
- The connector is unlocked when the lock tab (3) is in the unlocked position (1). The connector is locked when the lock tab (3) is in the locked position (2).
- Use the appropriate sized spring contact and remove connector from the housing.



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Fig. 18: View Of Circular Plug And Special Tool
Courtesy of BMW OF NORTH AMERICA, INC.

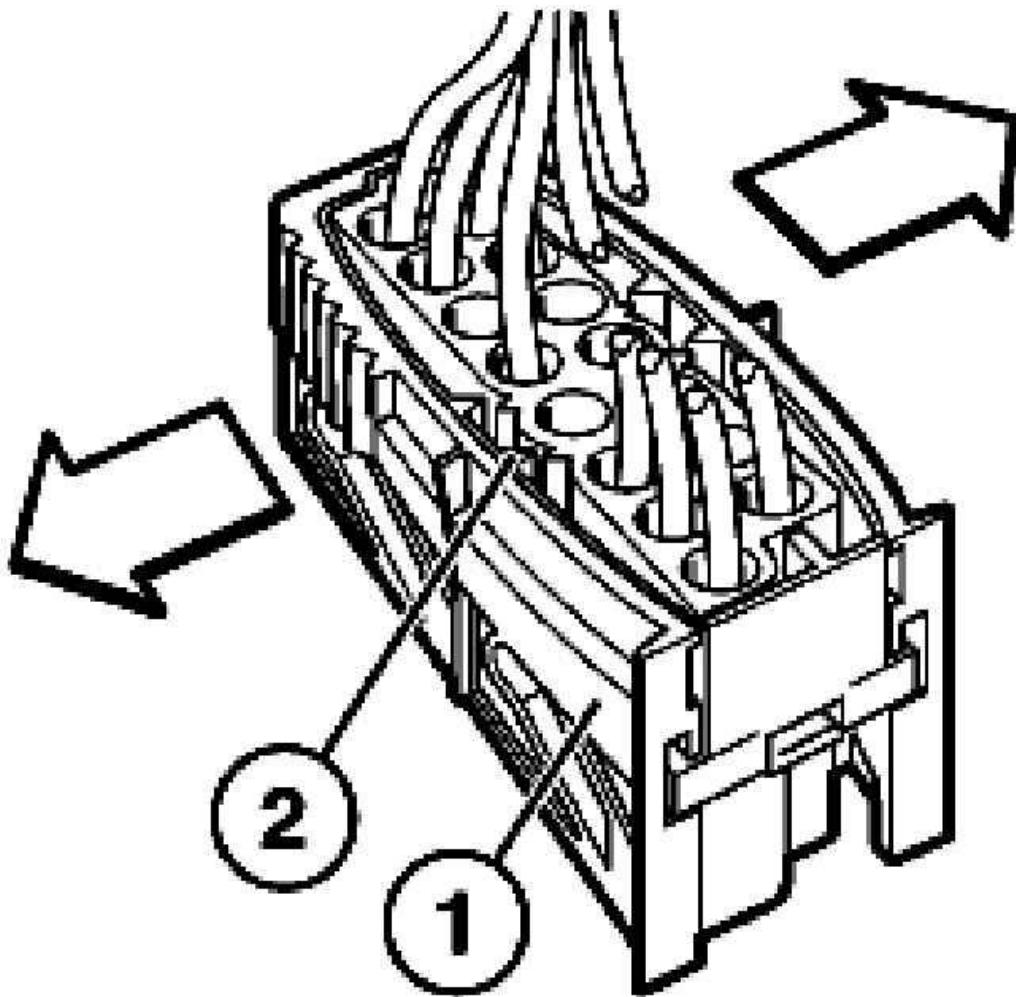


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Fig. 19: Identifying Lock Tab Of Circular Plug
Courtesy of BMW OF NORTH AMERICA, INC.

In-line Plug 15 Pin System D2.5

- Pull the outer connector section (1) slightly outward in the area of lock tabs (2).
- Simultaneously, slide the inner connector section (3) in the direction of the arrow to the unlocked position.
- Use the appropriate sized spring contact and remove connector from housing.



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Fig. 20: Identifying In-Line Plug Lock Tabs
Courtesy of BMW OF NORTH AMERICA, INC.