
Connector Repair Procedures (00)

Connector Repair Procedures

A large proportion of the plugs in the electrical systems of this vehicle are new generation plugs first introduced on the Fiesta '89 and since then progressively brought into use on other vehicles. These plugs not only provide a very reliable contact, they are also easy to repair.

A wiring loom repair kit is available for such repairs. This allowed individual replacement of single connectors. The repair kit includes the required replacement connectors, the tools needed for assembly and an illustration of the most important repair procedures.

The Ford wiring loom repair kit, FDEP number 0472513 is obtainable from the following suppliers:

V. Loewener
Maschinen GmbH
Industriestraße 67
Postfach 20 71
D-40764 Langenfeld

V. L. Churchill Ltd.
P. O. Box 3
London Road
Daventry NN 11 4NF
England

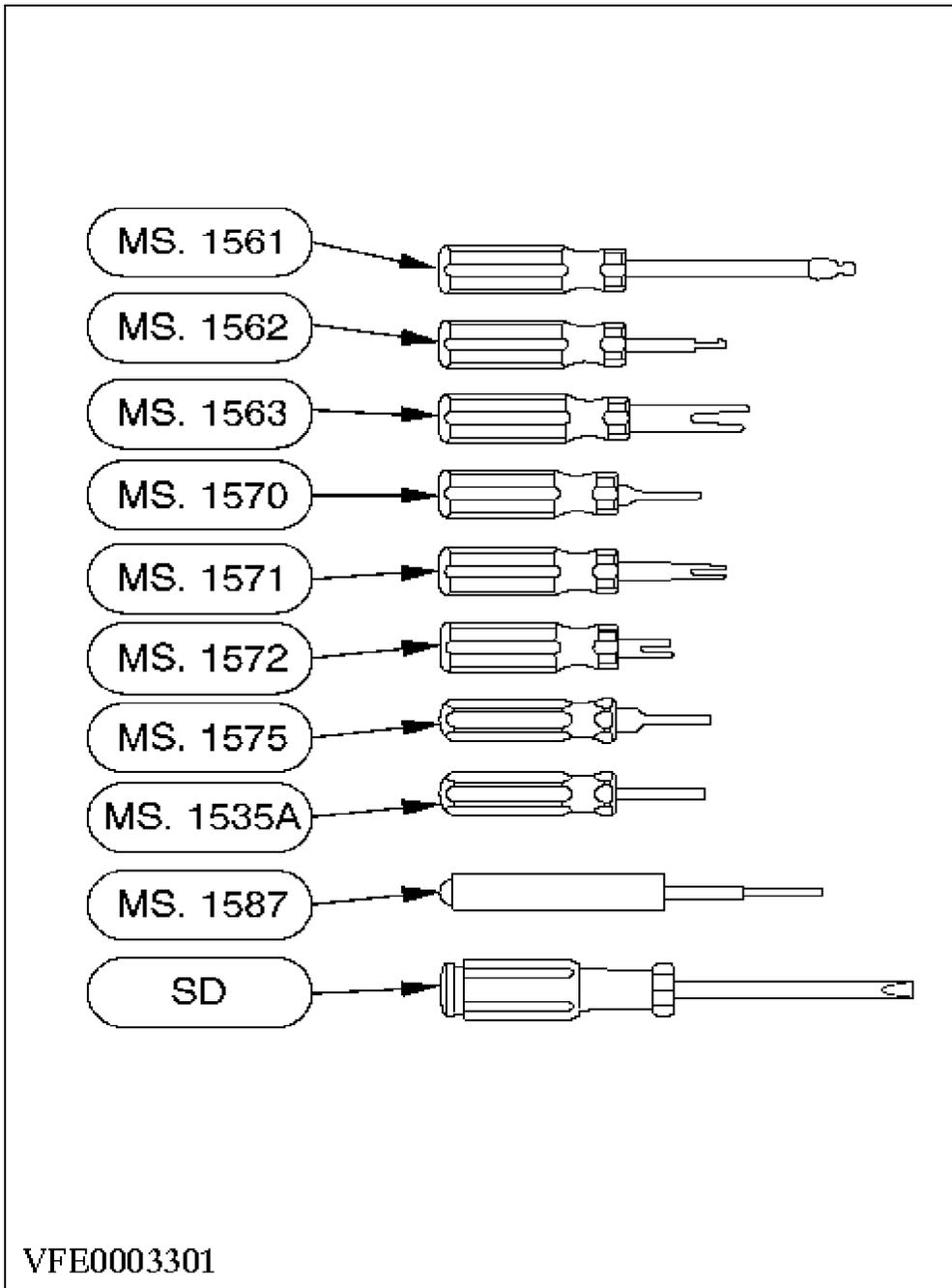
Plug Repairs Using the Wiring Loom Repair Kit

Do not use excessive force while repairing plugs. When inserting the replacement terminals listen or feel for the "click" to make sure that the terminal engages correctly.

Special Tools

(Included in the wiring loom repair kit)

1. MS. 1561 = Extractor
2. MS. 1562 = Extractor
3. MS. 1563 = Releasing tool I
4. MS. 1570 = Extractor
5. MS. 1571 = Releasing tool II
6. MS. 1572 = Releasing tool III
7. SD = Screwdriver
8. MS. 1535A = Releasing tool IV
9. MS. 1575 = Releasing tool V
10. MS. 1587 = Releasing tool VI

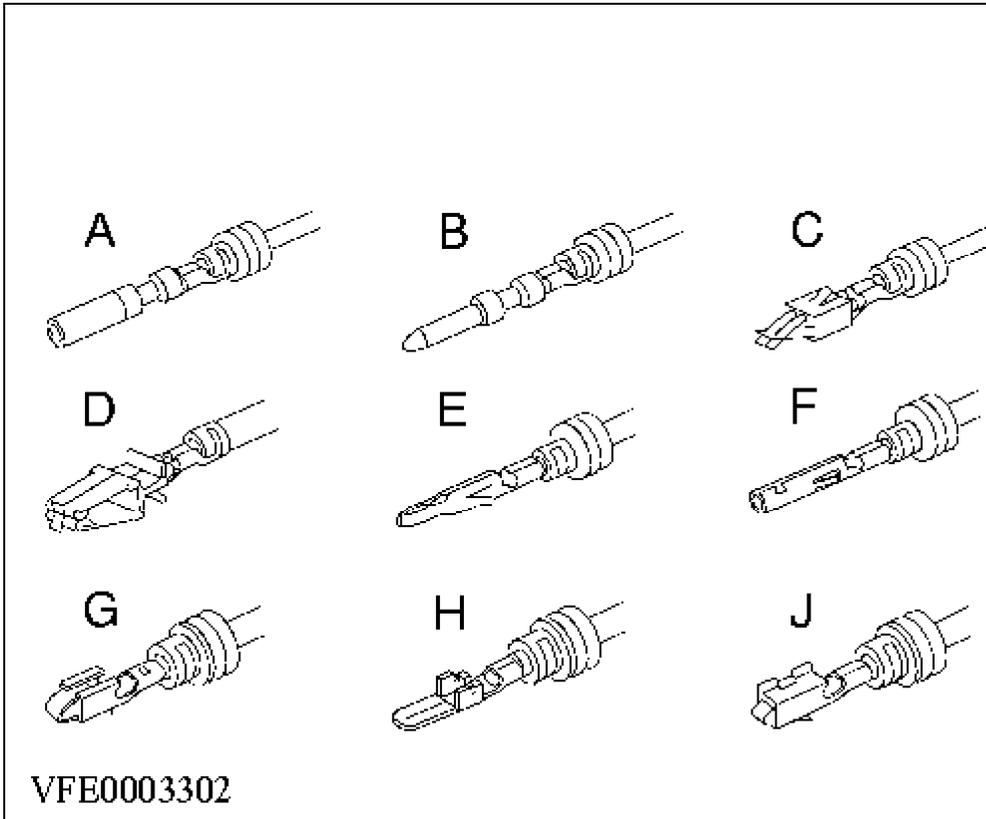


Available Individual Connectors

(Included in the wiring loom repair kit)

1. A = Socket terminal
2. B = Pin
3. C = DFK flat-pin terminal
4. D = ESPA DFK-1 flat-pin terminal
5. E = Pin terminal

- 6. F = Socket terminal
- 7. G = Flat socket terminal
- 8. H = Flat pin terminal
- 9. J = Socket terminal



These connectors are already provided with cable terminations of different cross sections. The repair kit also includes various crimp-on sleeves for connection to the loom cable.

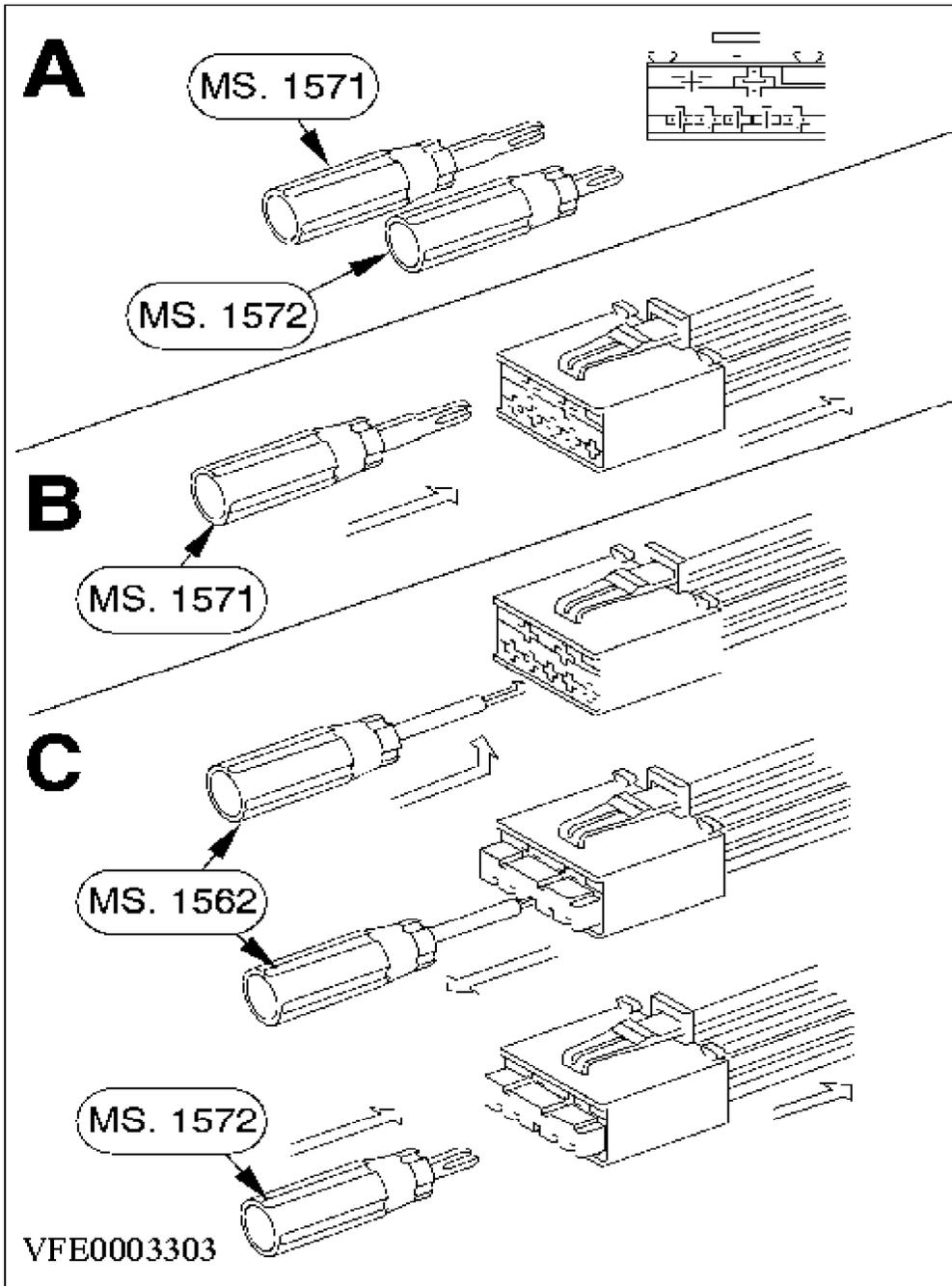
Dismantling Double-Row Multiplugs

Note: Two different releasing tools are used (A),

- 1. MS. 1571 with two legs of equal length
- 2. MS. 1572 with two legs of different lengths

To remove the larger (upper) flat-pin terminal, insert releasing tool MS. 1571 and press the flat-pin terminal out towards the rear (B).

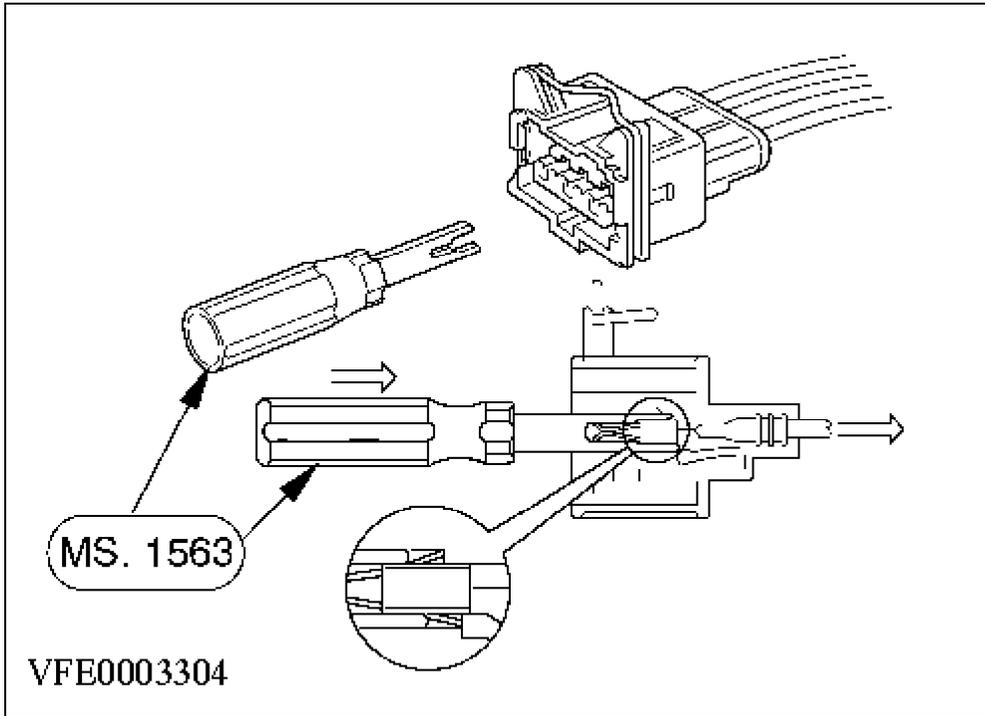
To remove the smaller (lower) flat-pin terminals, first pull out the unlocking device as far as the first stop using extractor MS. 1562 (C). Then insert releasing tool MS. 1572 with the longer leg adjacent to the red locking device and press the small flat-pin terminal out to the rear (C). Insert the replacement terminal and then engage the locking device fully again.



Dismantling Type DFK Multipugs

Insert releasing tool MS. 1563 with the longer leg adjacent to the red locking device and press terminal out.

When inserting the replacement terminal, make sure that it engages correctly.

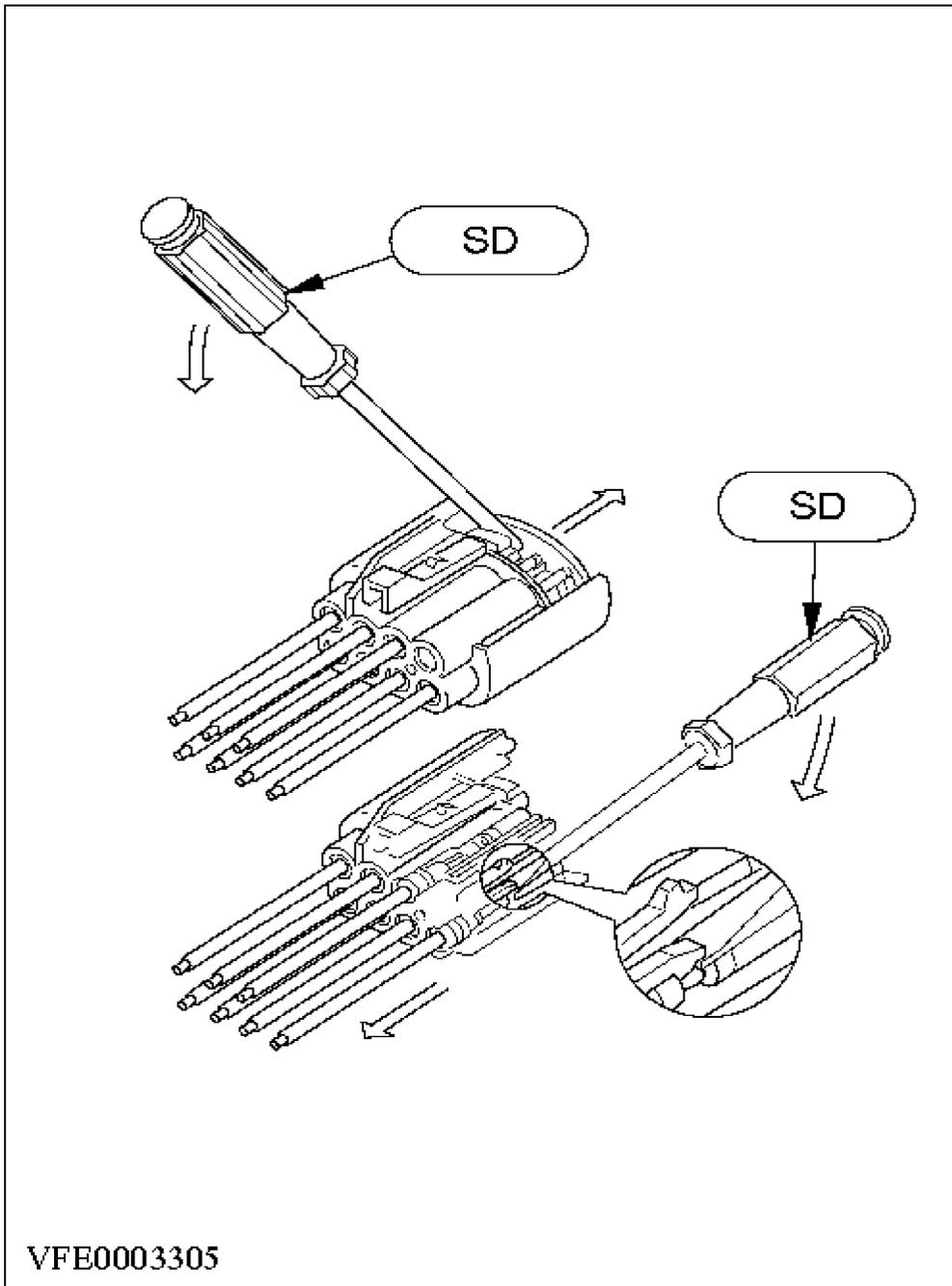


Dismantling Oval Plugs

a) Pin side

Prise out the cover using screwdriver SD. Then lift the locking device of the pin in question and pull out the pin from the cable at the end of the cable.

When inserting the replacement pin, make sure that it engages correctly.

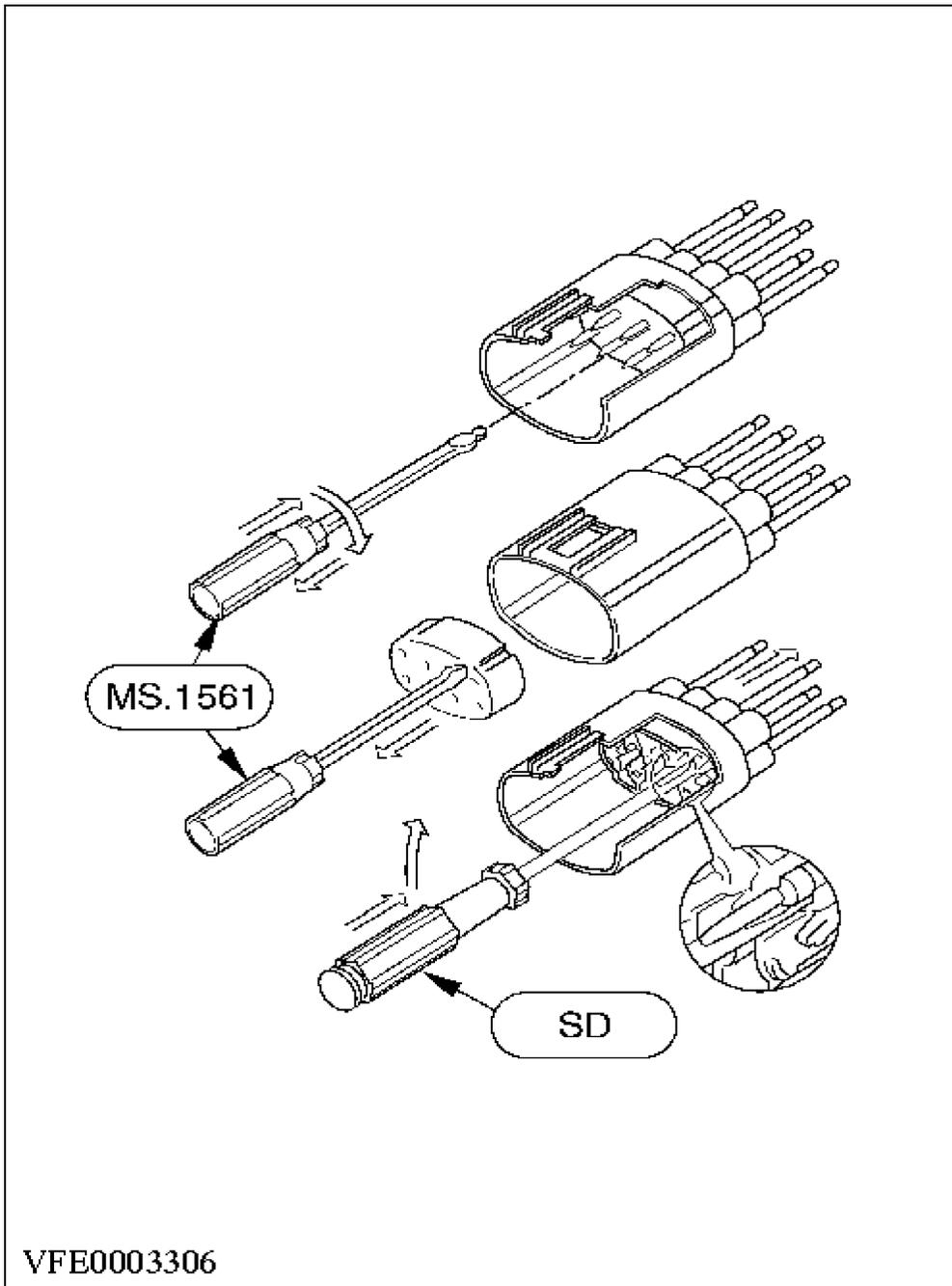


VFE0003305

b) Socket side

Remove the locking cap completely using extractor MS. 1561. Then lift the locking device with screwdriver and pull out the socket terminal at the end of the cable.

When inserting the replacement socket terminal, make sure that it engages properly.



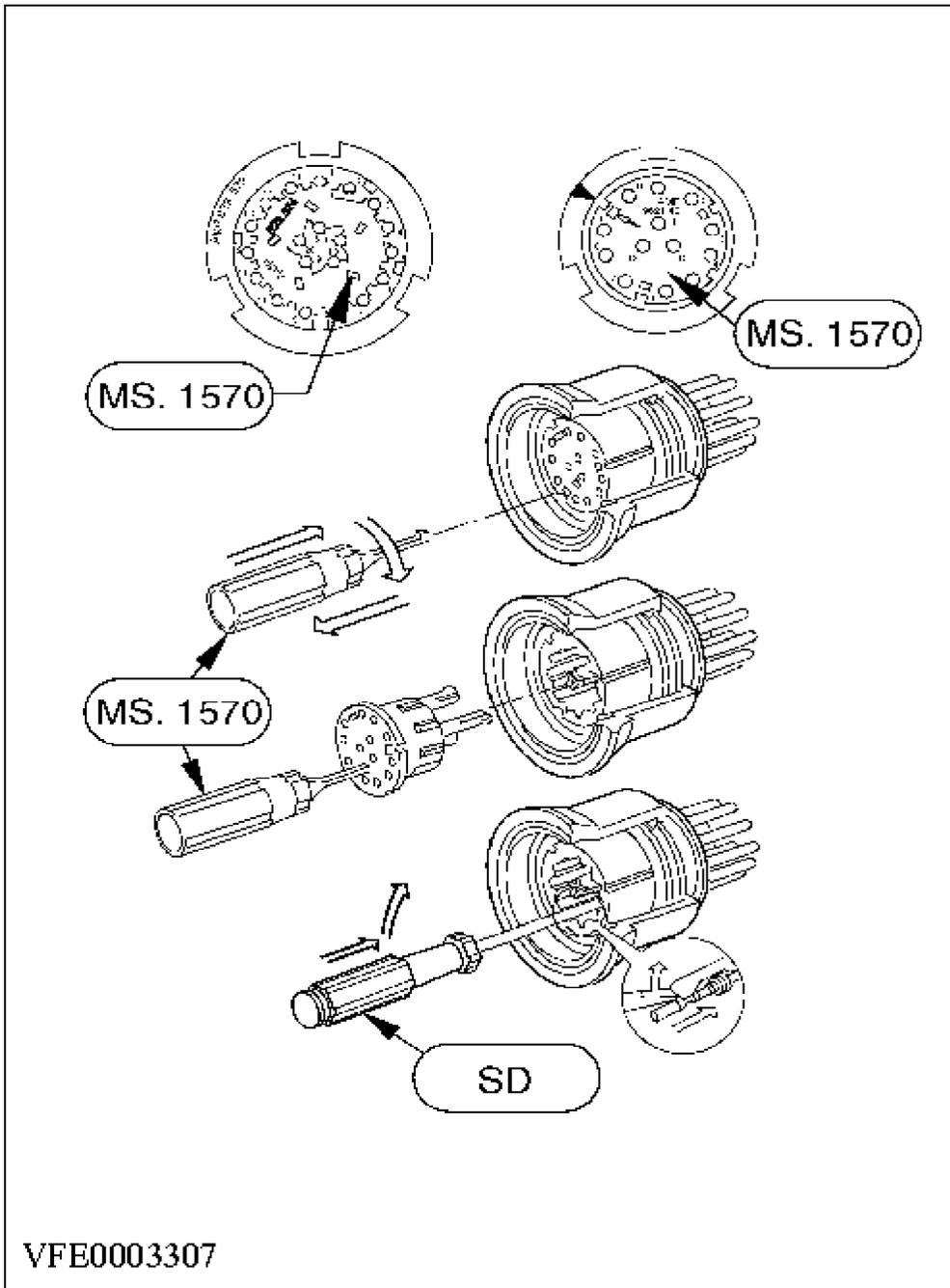
VFE0003306

Dismantling Round Plugs

Insert extractor MS. 1570 in one of the rectangular openings, turn through 90° and pull out device completely.

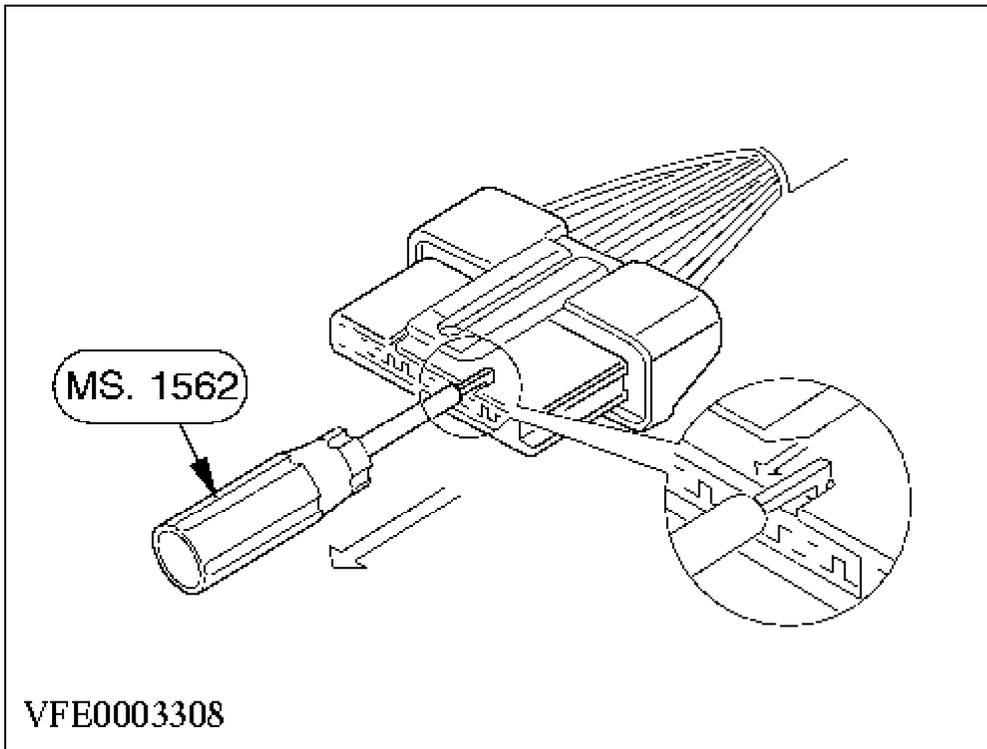
Then lift the locking tab of the pin or sleeve-type terminal in question slightly with screwdriver SD and pull the terminal on the cable.

When inserting the replacement terminal, make sure that the terminal and red locking device engage.



Dismantling Single-Row Multi-lugs

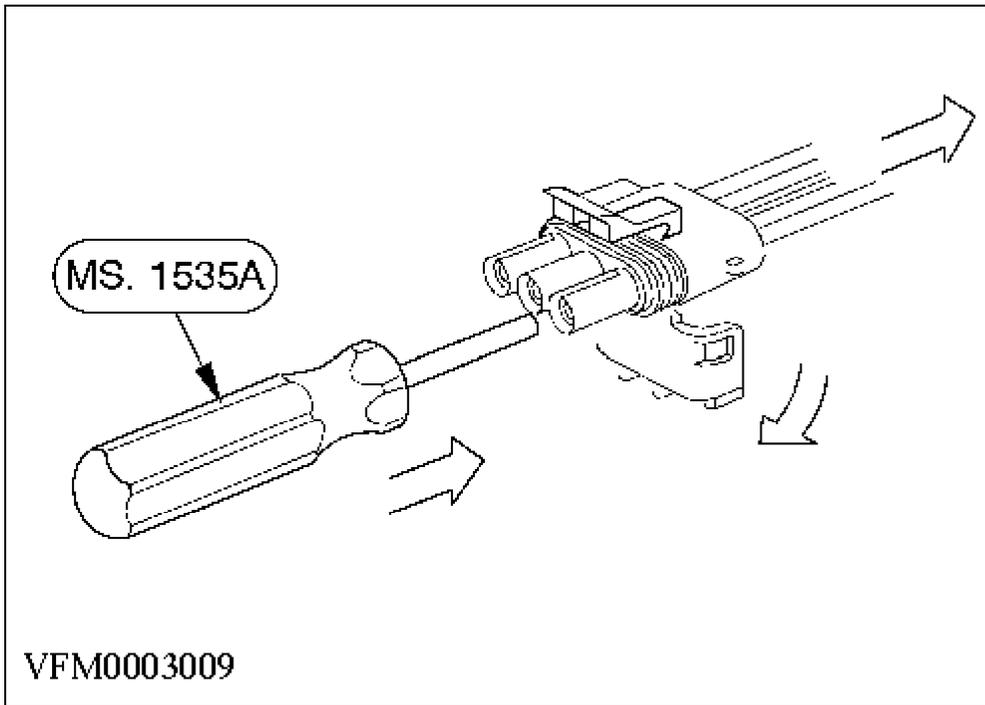
Pull the locking device towards the front using extractor MS. 1562 (to c
 Then pull out the single terminal in question on its cable towards the rear.
 The locking device must engage correctly after insertion of the replacement terminal.



Dismantling 3-Pin Plugs

Open the locking device. Then press in the pin in question - as shown - with the available releasing tool 1535A and pull out the cable towards the rear.

When inserting the replacement terminal, listen or feel for the "click" to make sure that the pin and locking device engage correctly.



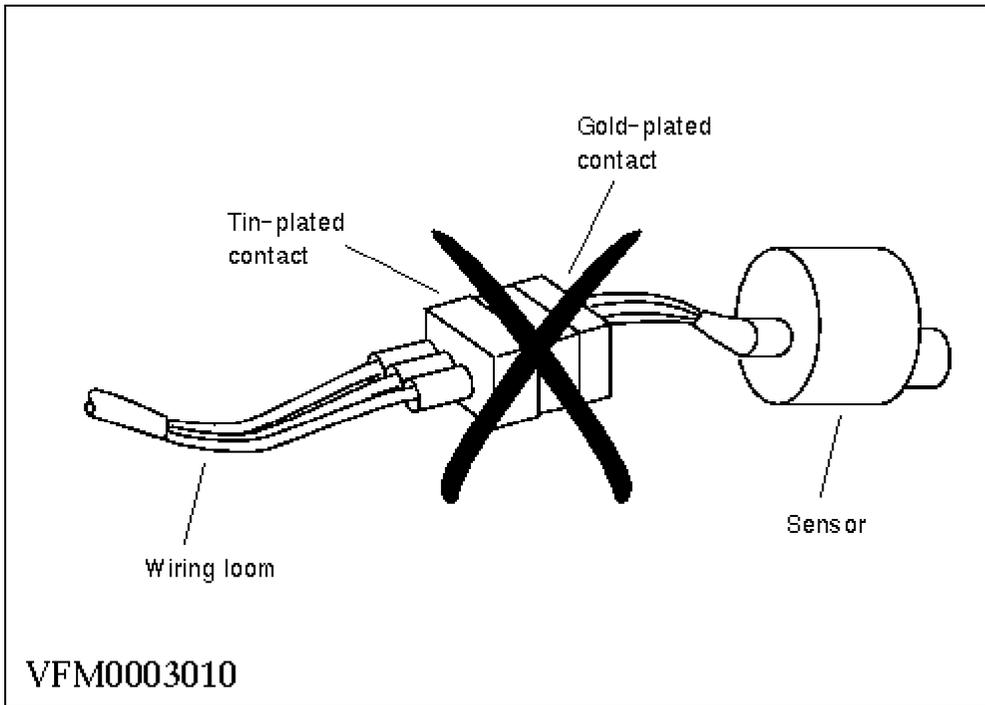
Gold-plated contacts

Servicing sensors and connectors with gold-plated contacts for engine control systems

Connectors with gold-plated contacts have been introduced at various critical connections (current less than 100 mA, voltage under 5V) in the engine control systems. Gold-plated contacts have significantly less resistance than the tin-plated contacts which have been used previously. Uninterrupted, interference-free signal transmission to the engine control unit can thus be guaranteed.

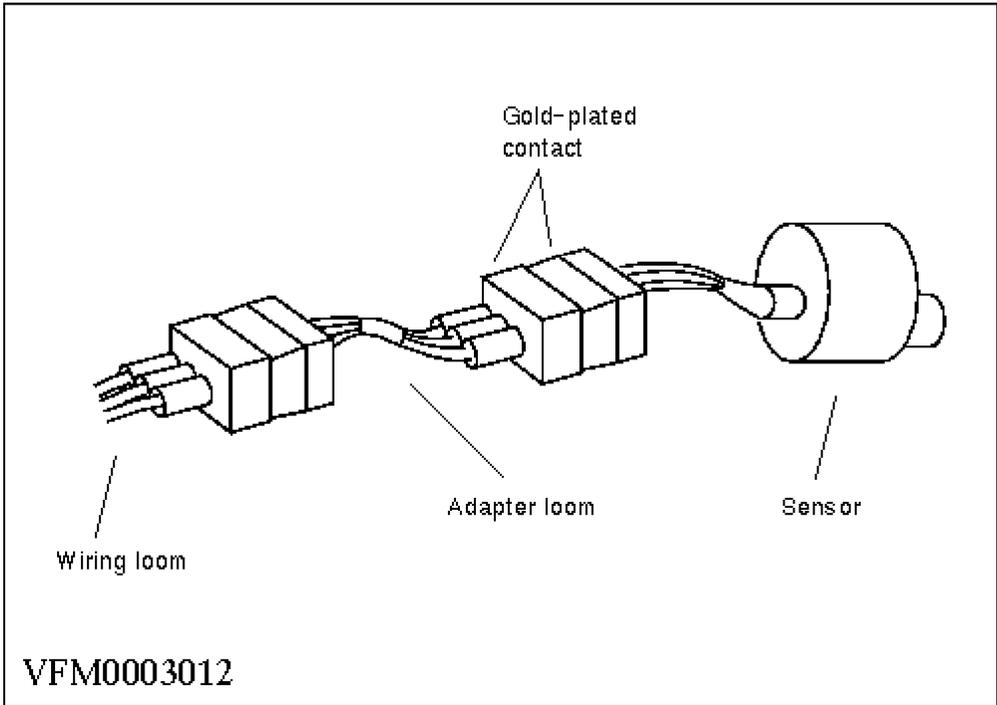
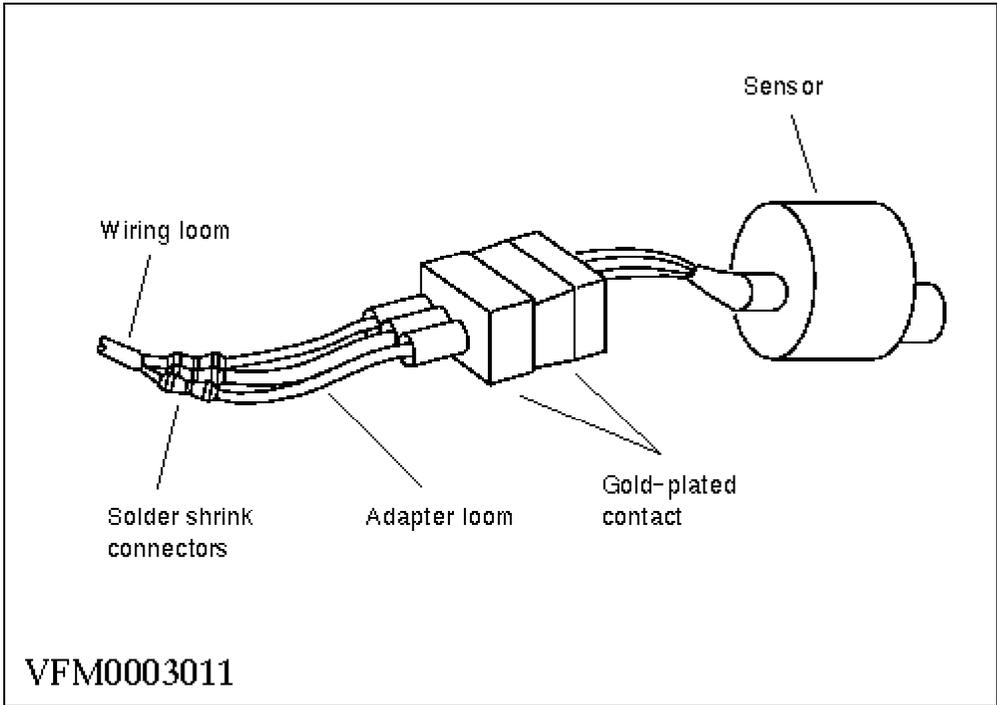
NOTE

Gold-plated contacts must never be connected with tin-plated contacts (figure VFM0003010). Not only the gold plating be damaged, but the resulting resistance is much higher than either a gold-gold connection or a tin-tin connection.



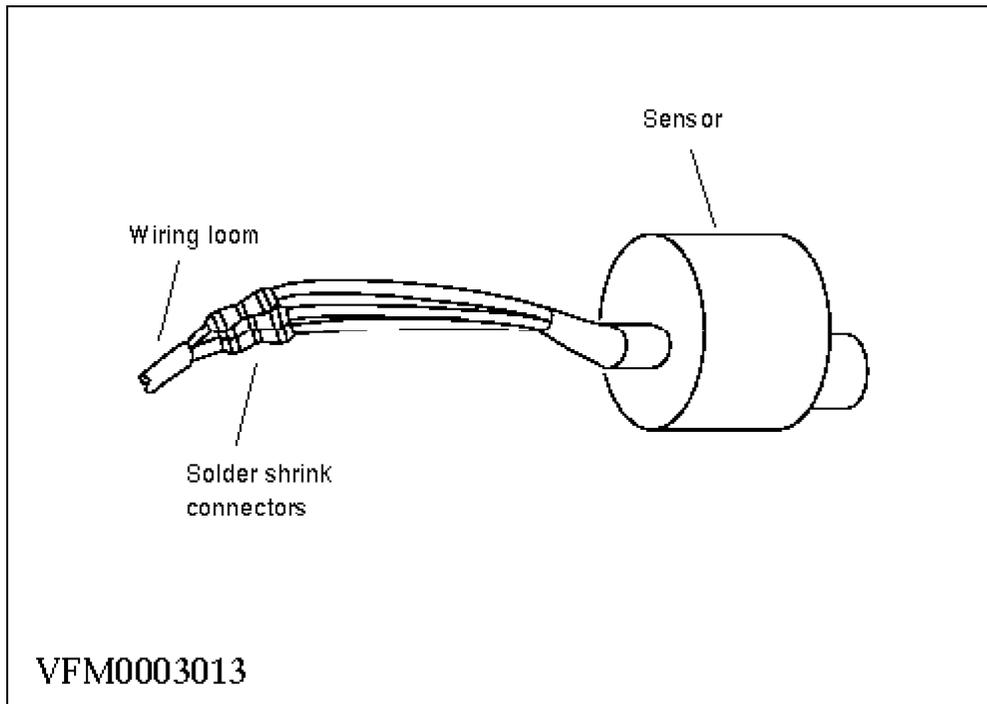
The contacts which are needed to repair the gold-plated connections can be obtained as an additional wiring loom repair kit 0472510 from Loewener/Churchill. The addition to the kit includes gold with white pigtailed and a tube of special grease. Connectors with gold-plated contacts are protected with grease which is applied during production and therefore must never be treated with lithium grease. When a connector or a sensor needs to be replaced, the new replacement may include gold-plated contacts. Sensors with gold-plated contacts must only be replaced with those which also have gold-plated contacts. If a sensor with tin-plated contacts is to be replaced with a new sensor with gold-plated contacts, a special adapter loom must be used. The same applies to replacement wiring looms with gold-plated contacts being connected to sensors with tin-plated contacts.

The adapter loom for the throttle position sensor (TPS) and the camshaft position sensor must have solder shrink connectors (figure VFM0003011). The adapter loom for the crankshaft position sensor must have a connector at both ends and only needs to be plugged in between the sensor and the wiring loom (figure VFM0003012).



The throttle position sensor (TPS) for 1,1/1,3/1,4/1,6 litre CFI, 2,0 litre EFI and 2,8 litre V6 engines c

replaced with a new sensor (with gold-plated contacts) by cutting the wiring loom, removing the connector and attaching the wires back together with solder shrink connectors (figure VFM0003013).



Only solder shrink connectors should be used to attach cut wires together (order from Ford parts). The solder shrink connectors that are available in the wiring loom repair kit from Loewener/Churchill are approximately the same.
