

J1

Preparations

Drive car forward on a level surface so that wheels are straight.

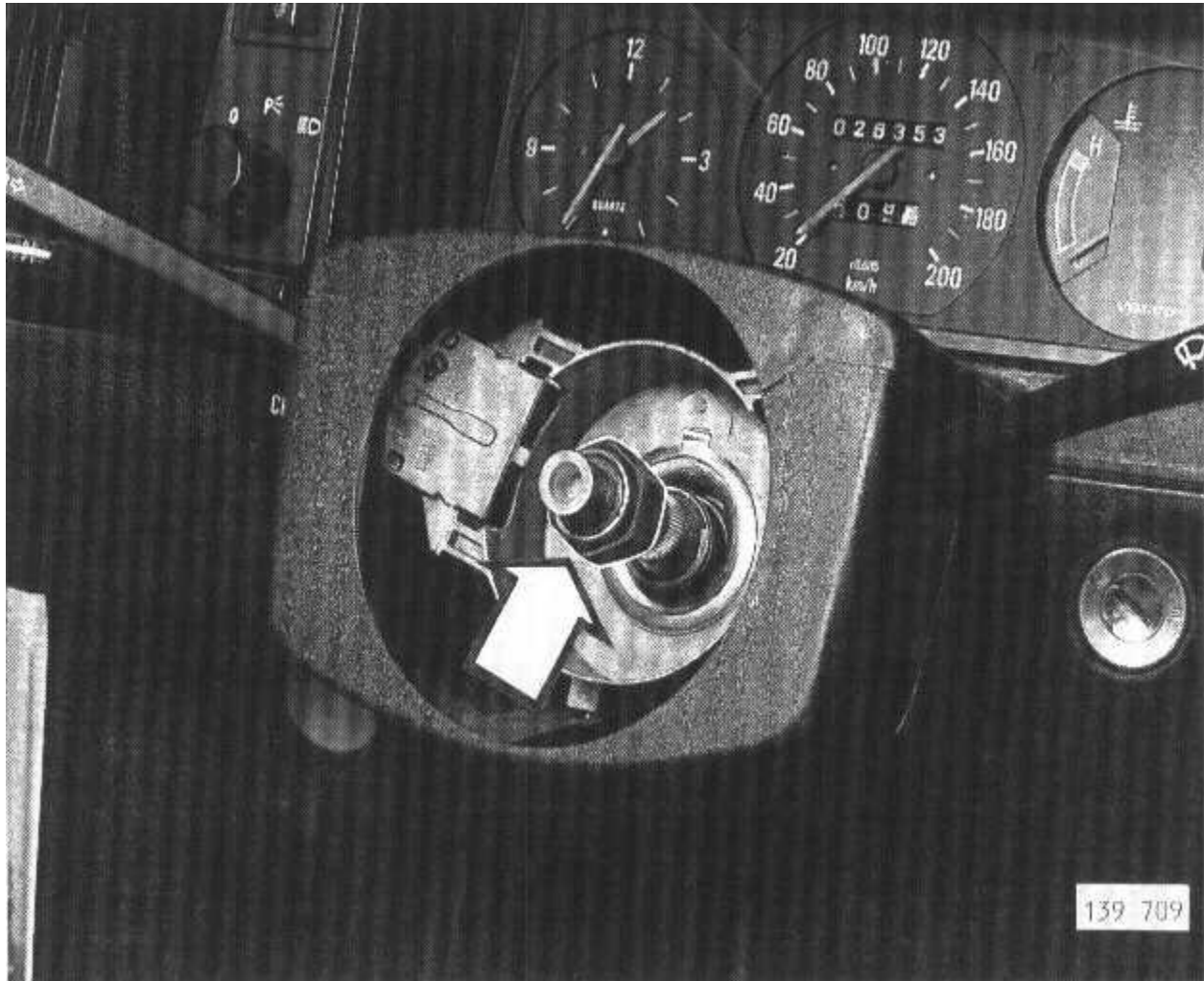
Disconnect battery negative lead.

Turn ignition key to position 1 so that steering lock is off.

J2

Remove sound insulation/knee guard 1 and side panel 2 on center console

With SRS: continue with J4.



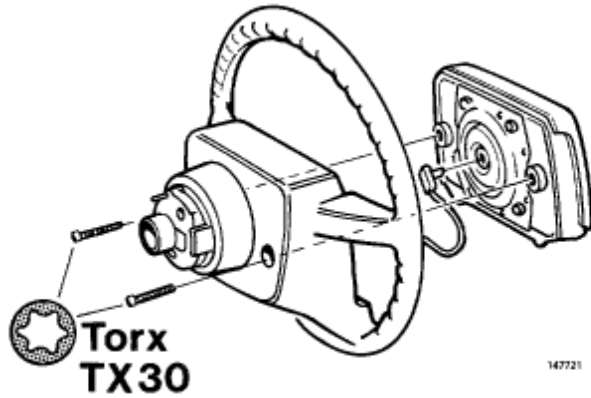
Without SRS

J3

Remove steering wheel

Replace nut on steering shaft. This is to ensure that steering shaft does not fall out of upper mount when steering shaft is separated.

Without SRS: continue with J9.



With SRS

J4

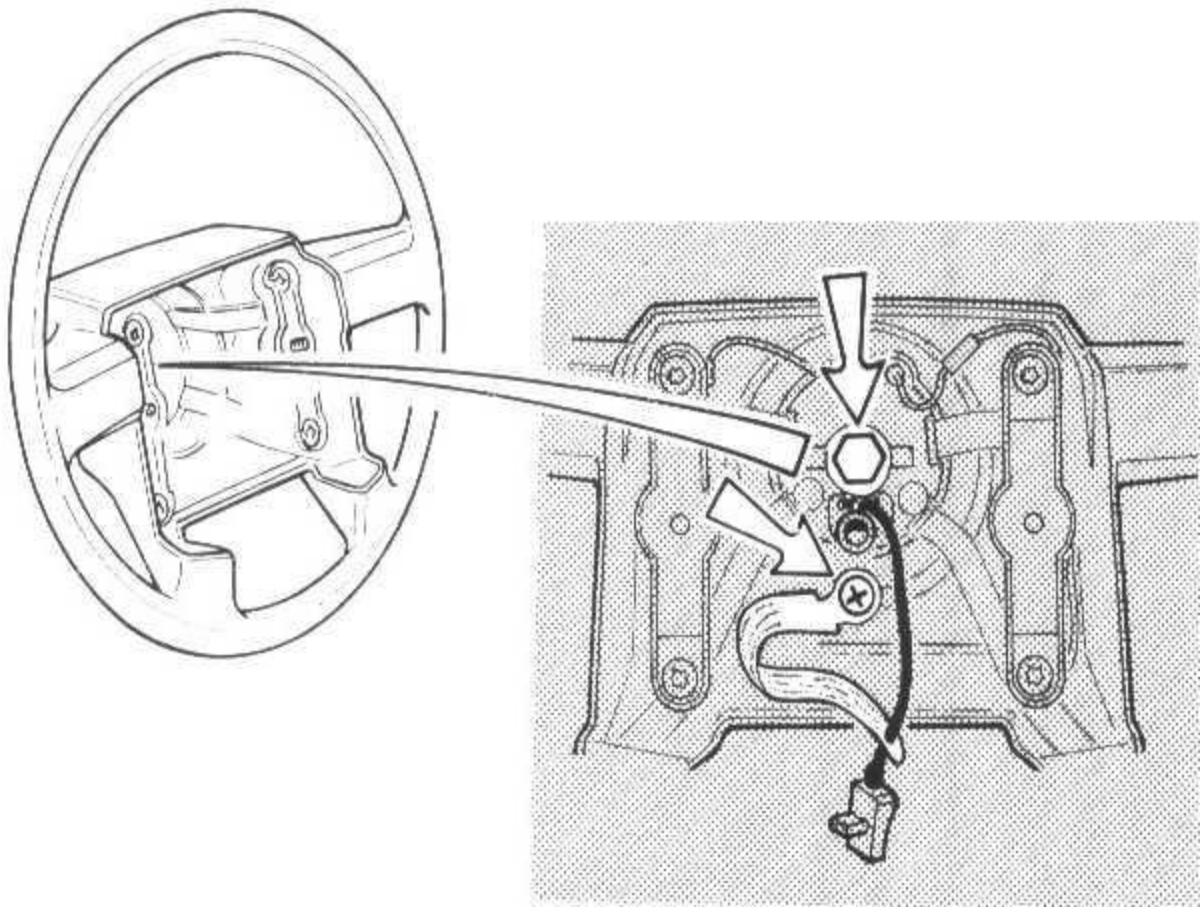
Remove bag assembly

Turn steering wheel slightly in order to reach bolts. Undo bag assembly by removing the two torx bolts on back of steering wheel.

Undo connector and lift bag assembly clear. Ensure road wheels are still straight.

Important!

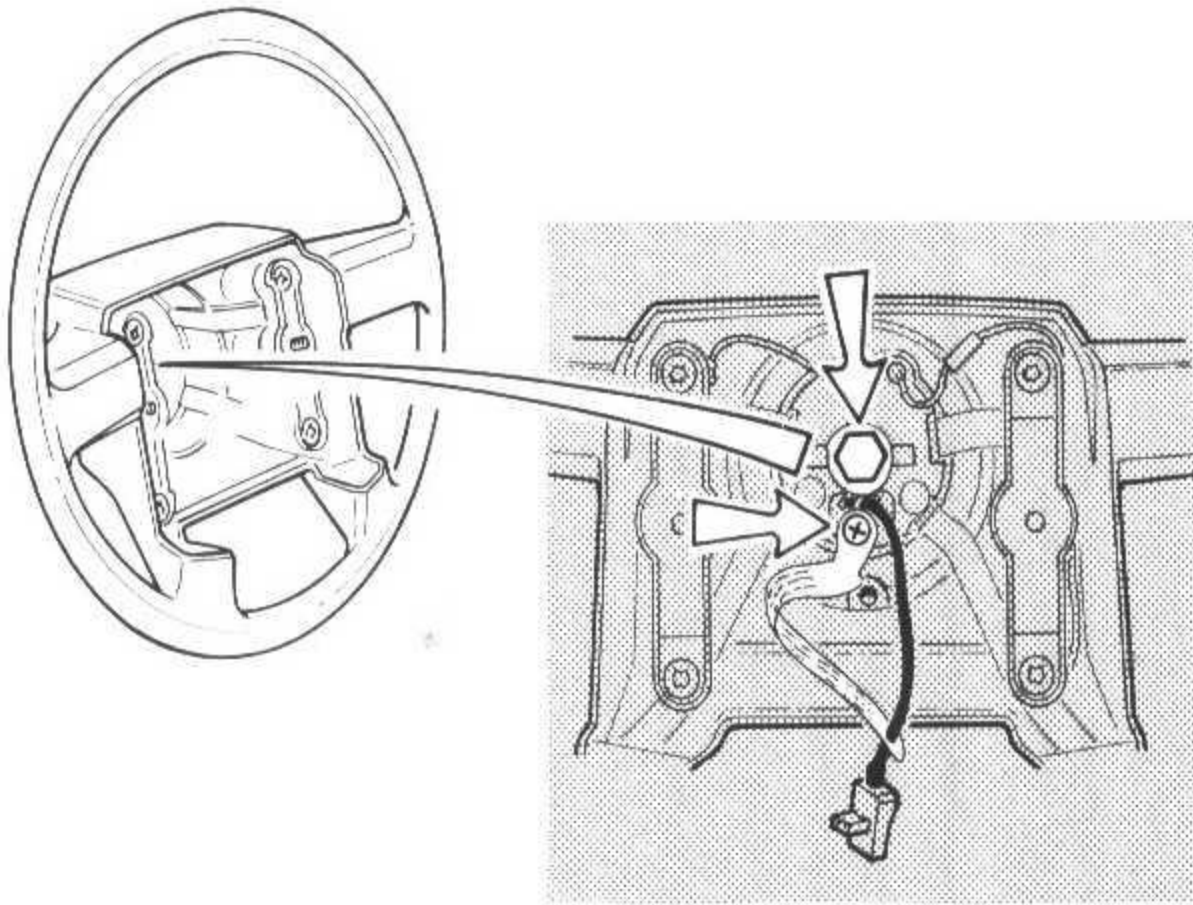
Do not switch on ignition while bag assembly is removed, as this will register a fault code, which will then need to be cancelled.



J5
Remove steering wheel bolt

J6
Lock contact reel

Release locking screw in end of plastic strip from its parking hole in steering wheel. Screw must always remain in plastic strip.



J7

Attach locking screw to contact reel pin

Contact reel is now locked in zero position

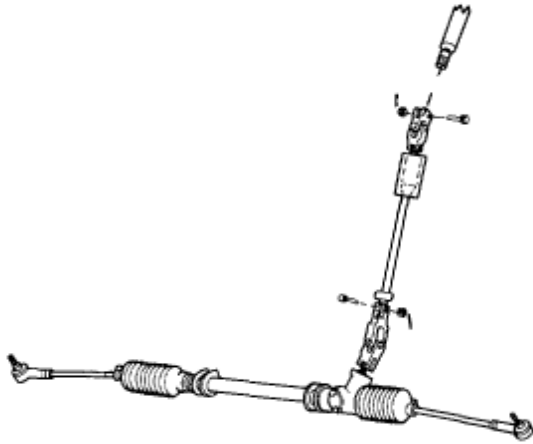
Important!

Do not turn steering wheel as this will cause pin to snap and necessitate replacement of whole contact reel!

J8

Remove steering wheel

Lift steering wheel clear and pull lead and plastic strip with screw through hole in middle.
Remove connector for contact reel on back of fascia.
Remove contact reel.



With and without SRS

J9

Pull up cover from lower steering shaft joint

(Does not apply to cars with power steering).

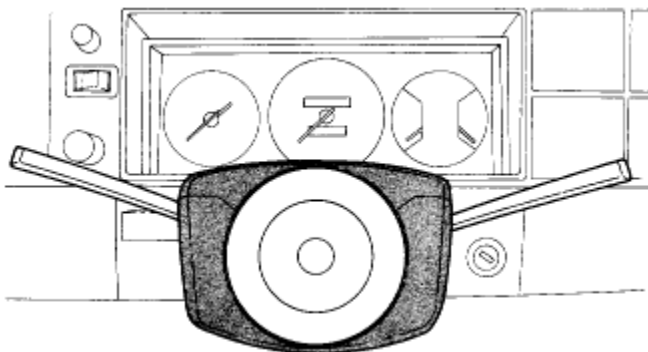
J10

Loosen upper bolts in upper and lower joints

Pry apart joints slightly with screwdriver.

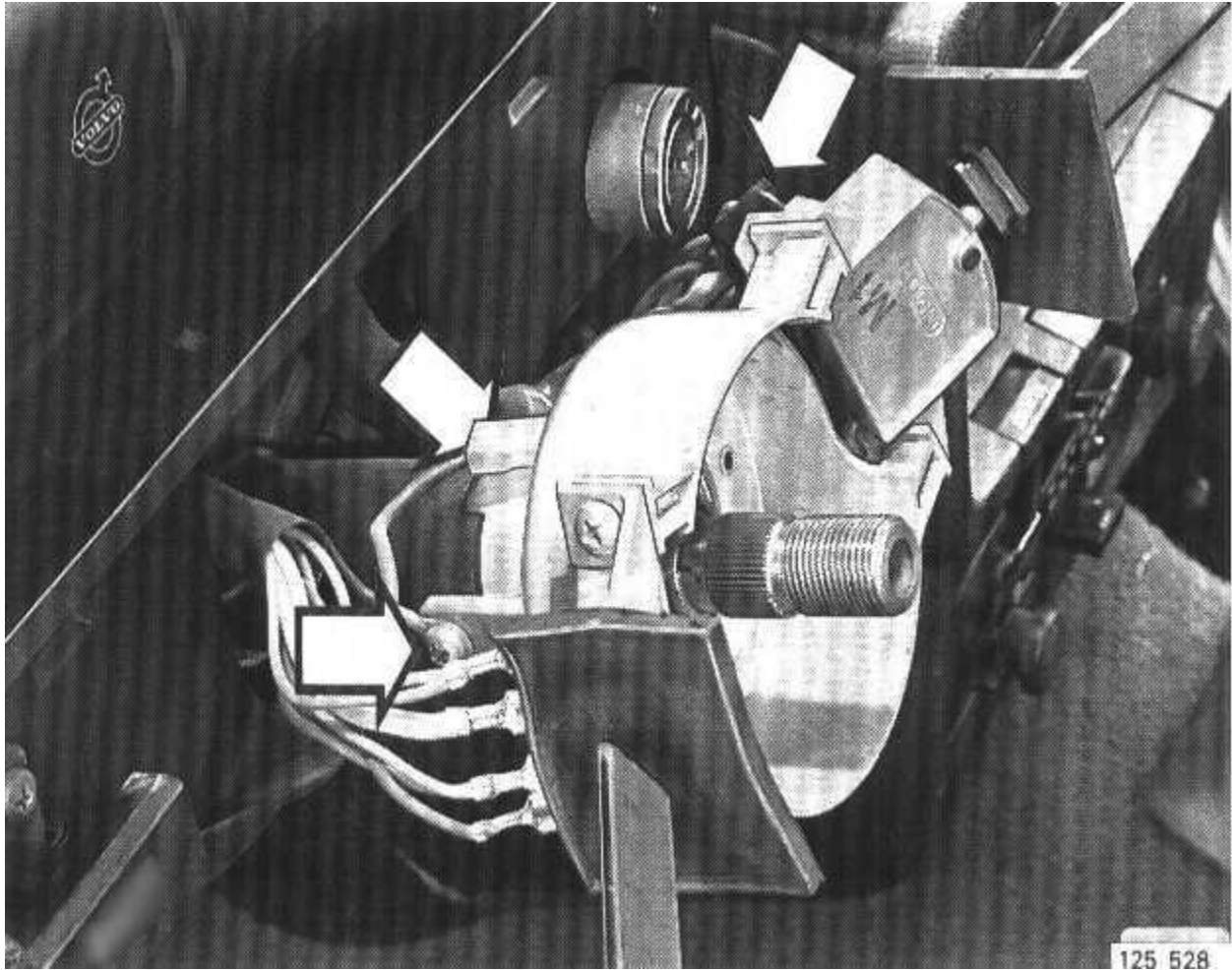
J11

Pull down lower steering shaft so that upper joint is freed from upper steering shaft



J12

Remove upper and lower steering column covers



J13

Remove holder for wiper and indicator controls

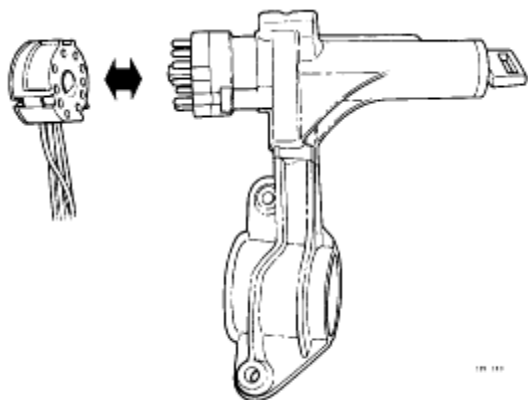
Disconnect connector for wiper control.

Unscrew holder's two retaining bolts and lift holder over steering shaft.

J14

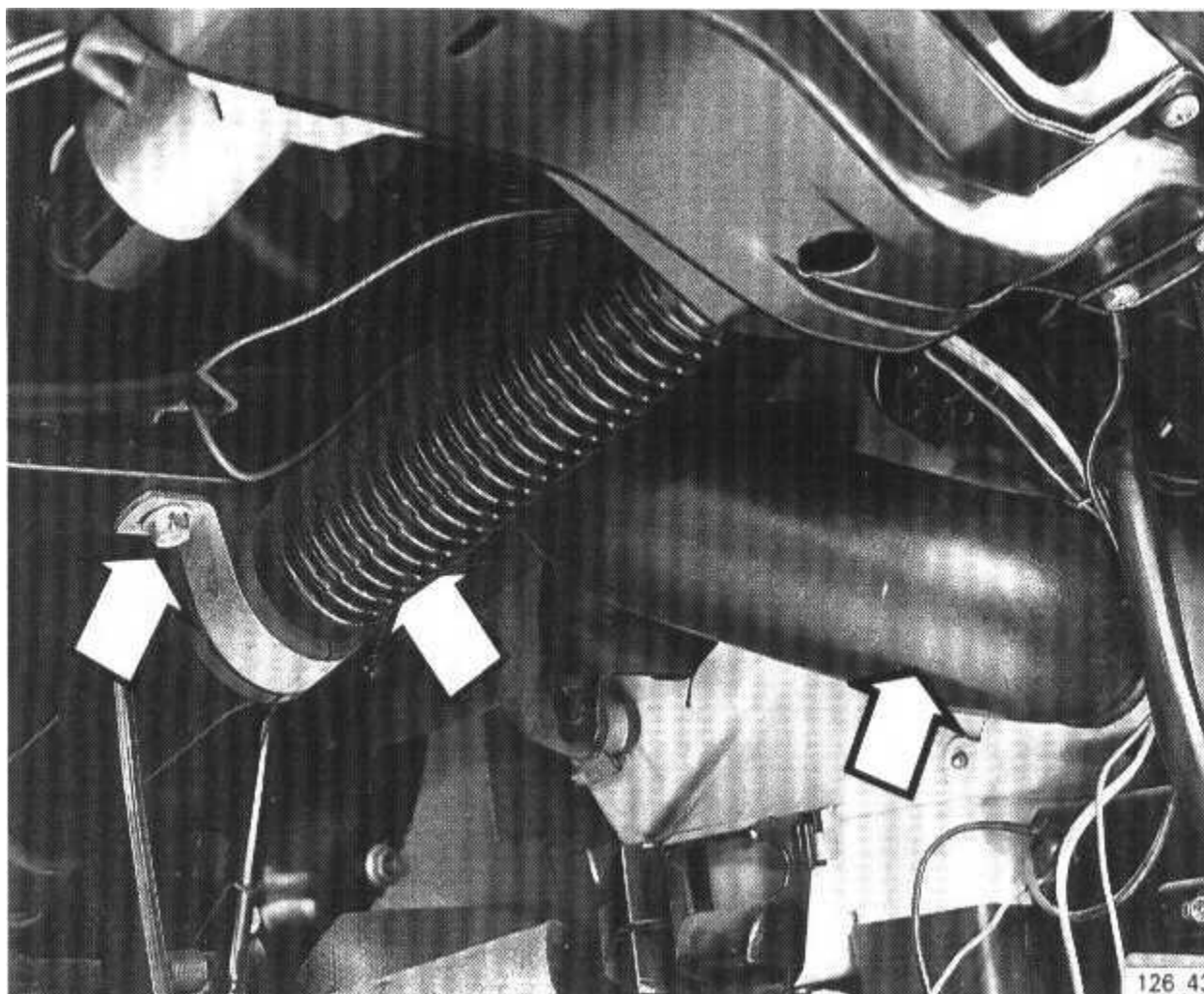
Note position of indicator switch lead and remove

This applies only to cars without anti-theft protection for steering lock starter switch. Others, continue to **J16**.



J15

Remove connector from starter switch

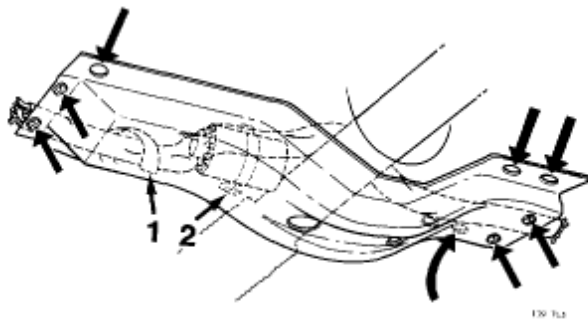


J16

Remove:

- Steering column's lower retaining bracket
- Steering column seal in bulkhead
- Defroster hose from heater unit.

For cars with inertia-limited steering column, go to J22.



The following five steps, J17-J21, apply to models being converted from earlier versions to inertia-limited steering column

J17

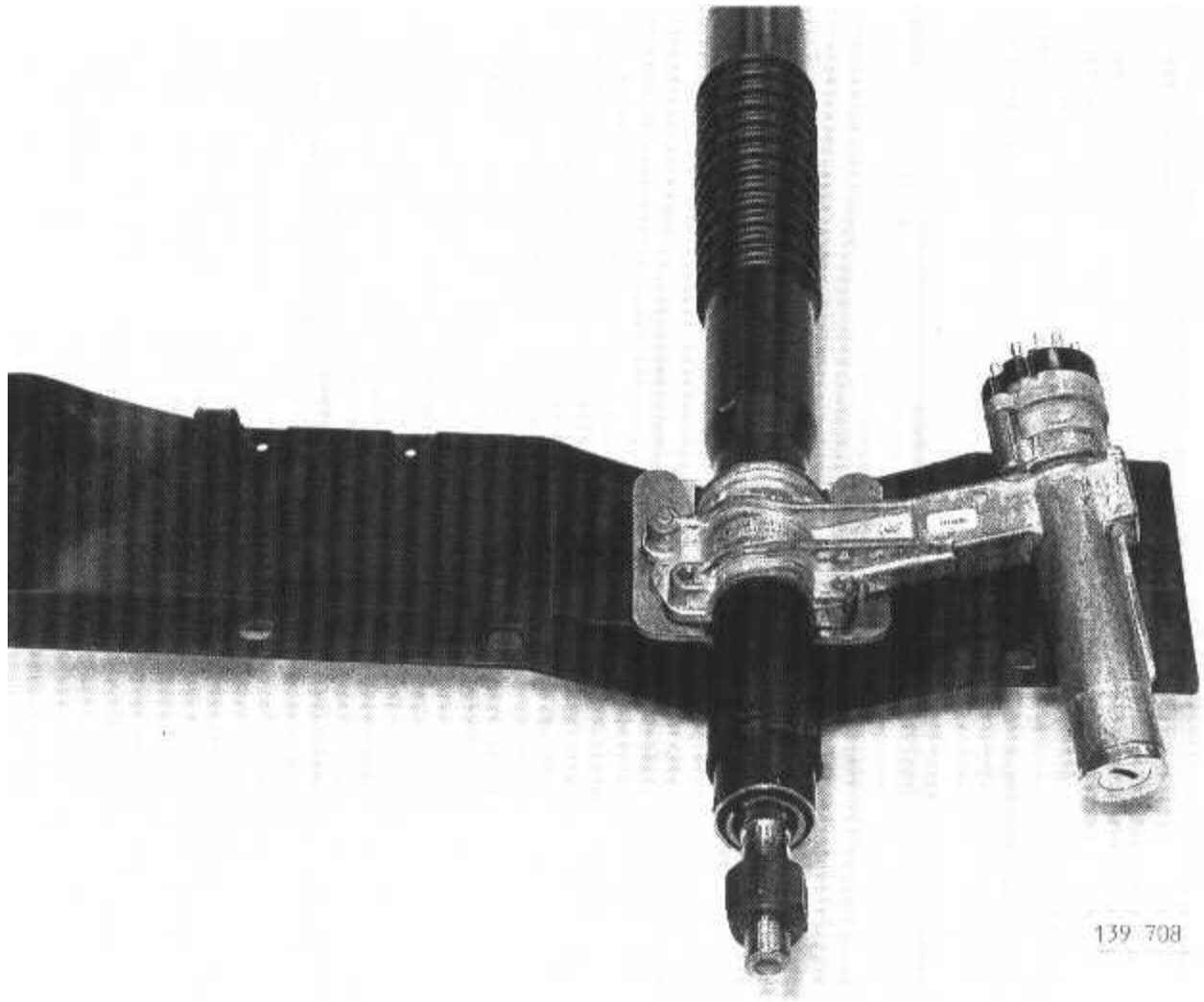
Remove:

- Bolts holding steering column member to fascia.
- Failure sensor and clip (2).
- Loosen tab clip (1) from cable harness on member



J18

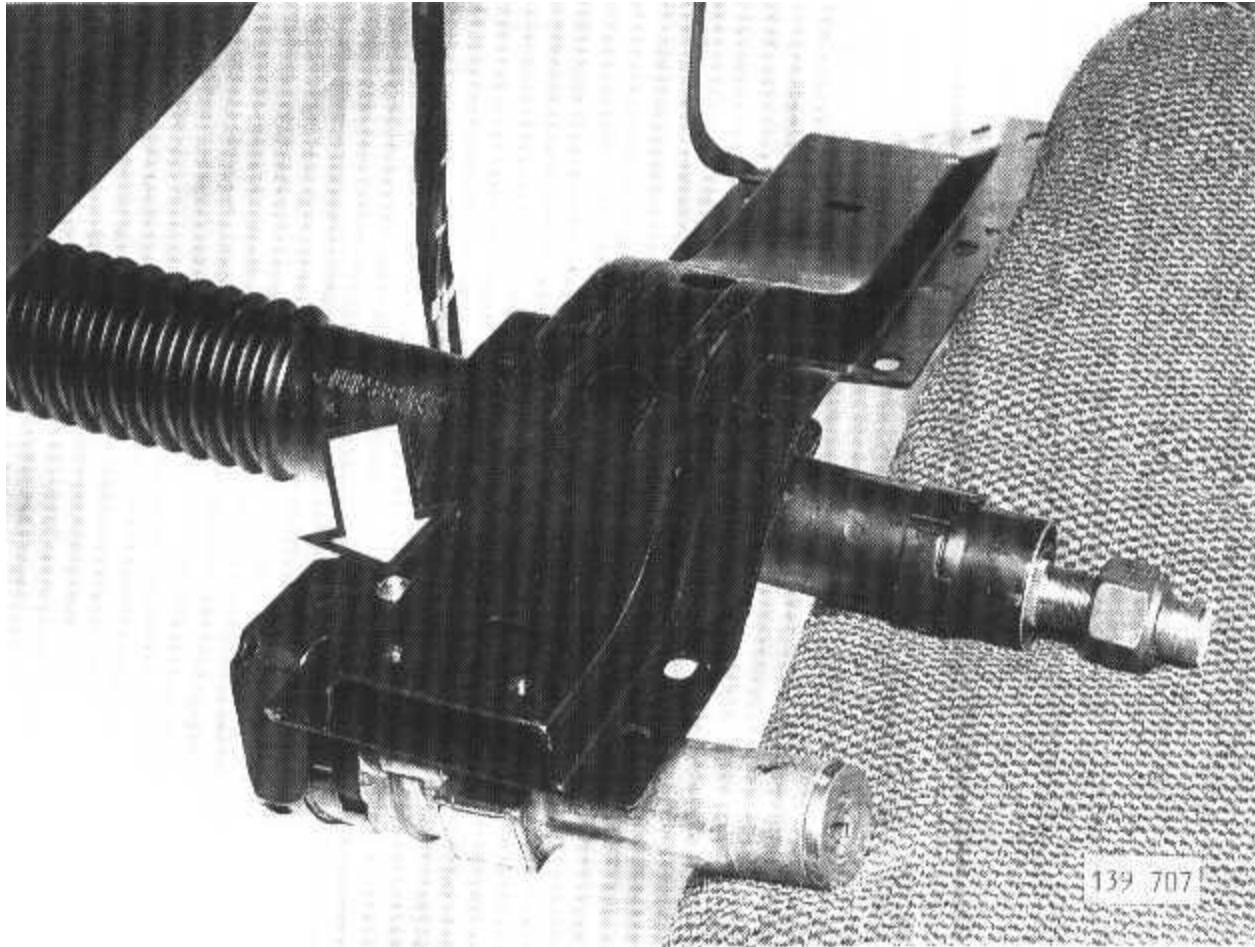
Press steering column forward so that member comes free from fascia



The following section, J19, applies to cars without anti-theft protection for starter switch

J19

Remove steering column with member



The following section, J20, applies to cars with anti-theft protection for starter switch

J20

Drill and remove shearing bolt

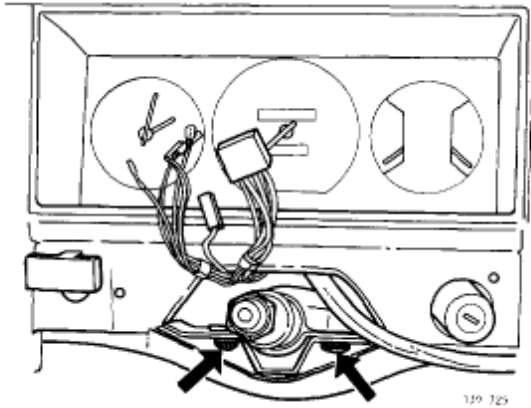
Mark centre of bolt and drill hole of with suitable diameter for bolt extractor.

Remove anti-theft protection and connector from starter switch.

J21

Remove steering column and member

Continue from step **J28**, Installation



Removing inertia-limited steering column

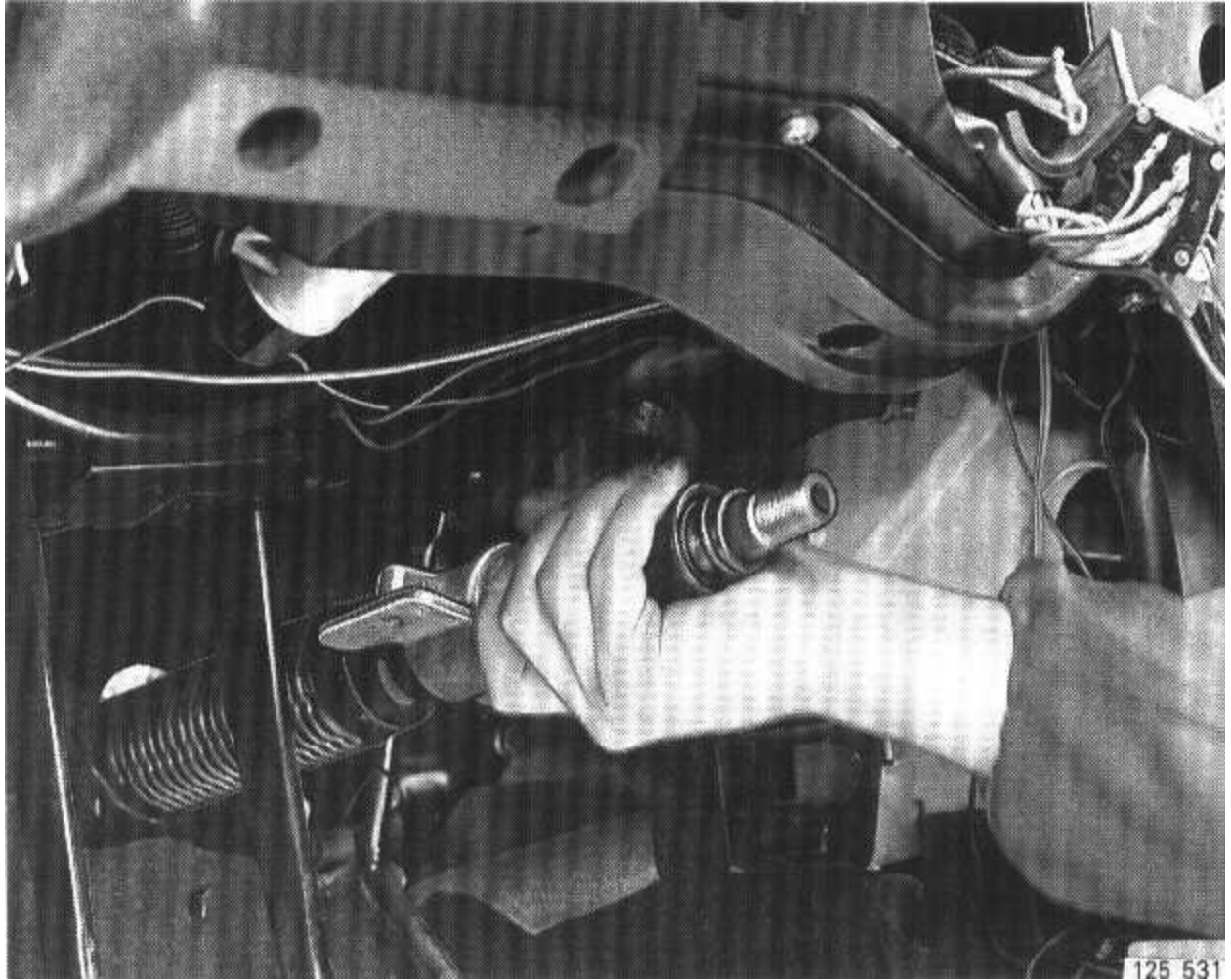
J22

Remove steering column

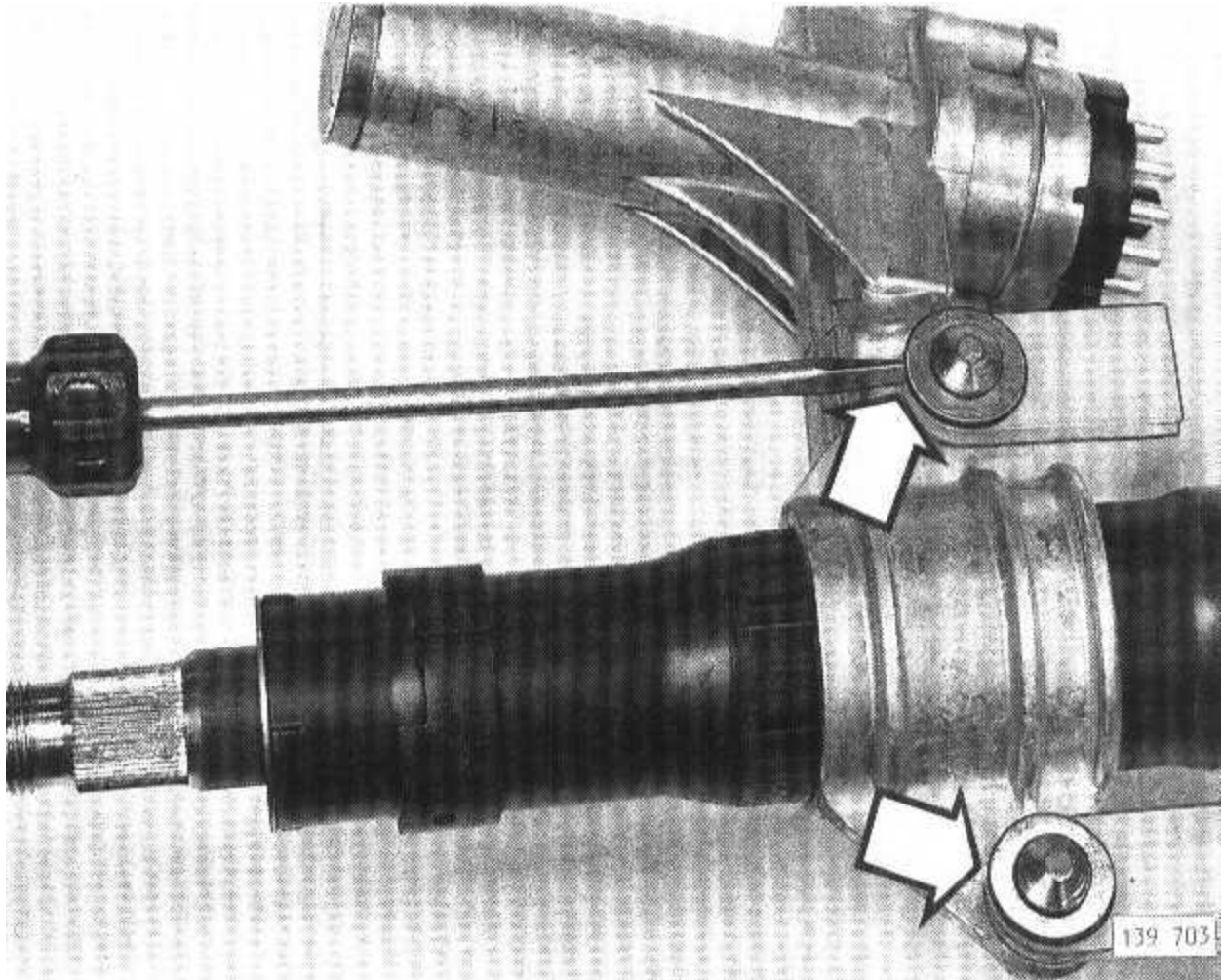
Tap shearing bolts so that bolts and plastic washers slide out of their slots in member.

Note!

Check steering column does not get caught while passing through bulkhead.



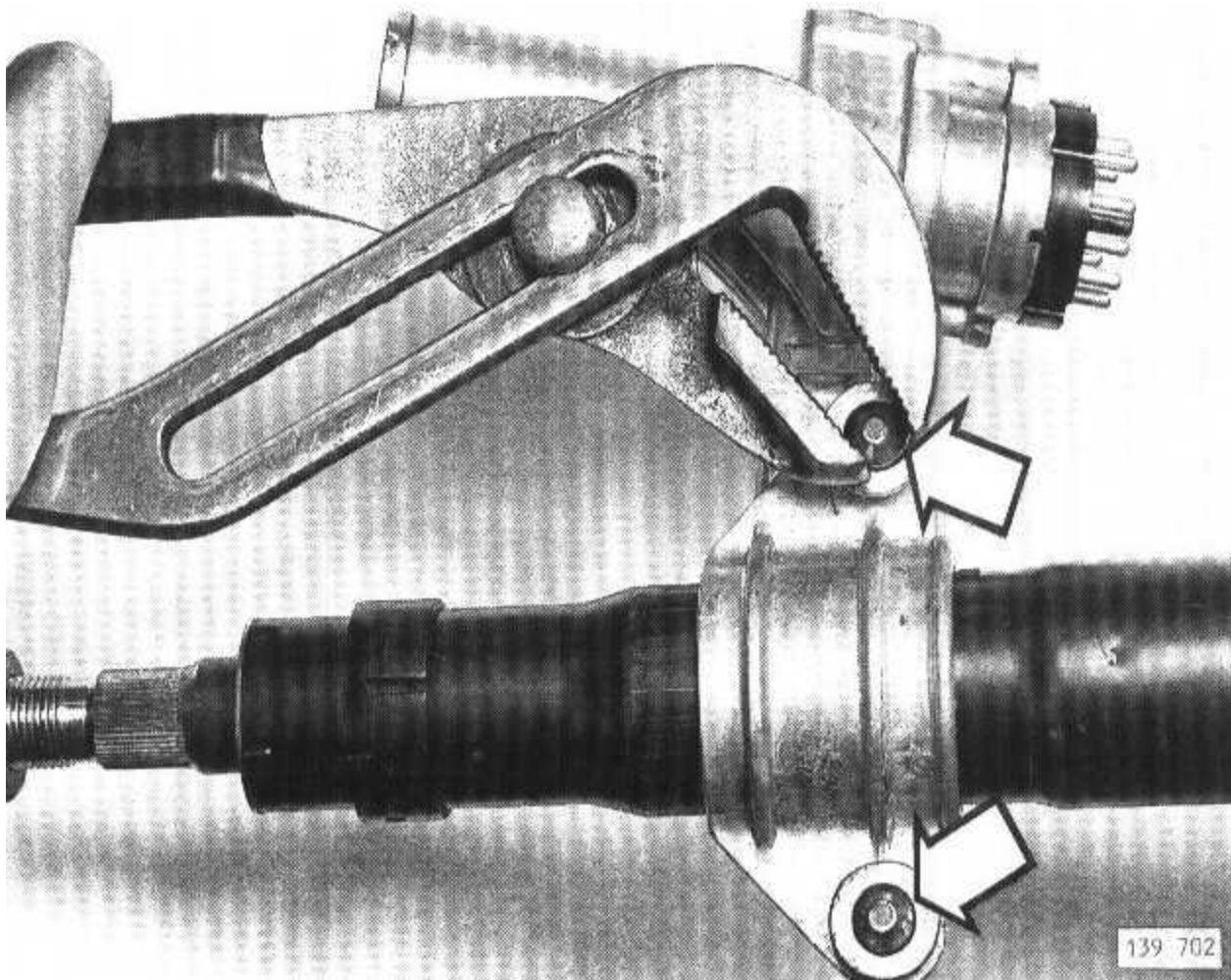
J23
Remove steering column with steering lock



J24
Put steering column in vice

J25
Remove plastic washers

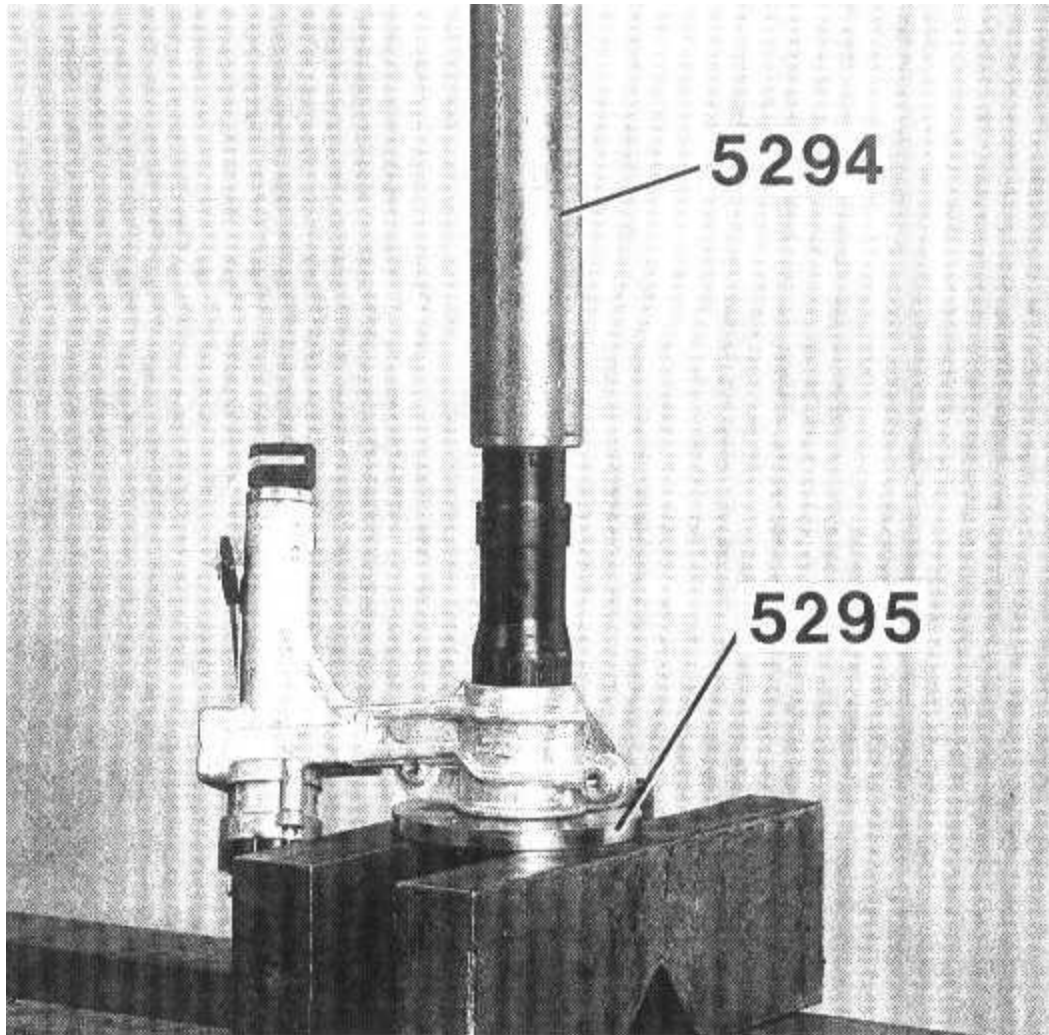
Use screwdriver to break off washers from rear edge.



J26

Remove shearing bolts

Use pipe wrench with teeth in good condition.



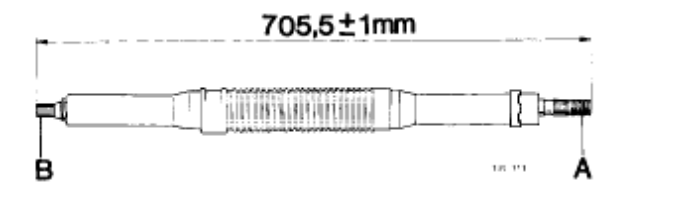
J27

Press steering lock from steering column

Use drift 5294 and counterhold 5295.

Note!

Install keys in lock and turn.



Installation

J28

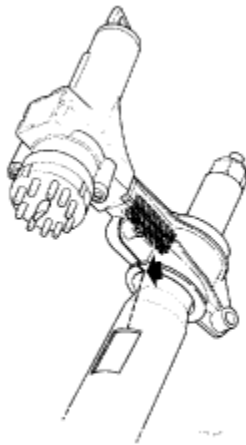
Check steering column

Check upper steering shaft's collapsible coupling is intact. Its upper end (A) should not be able to move axially in relation to its lower end (B).

Check also total length:

Correct length **705.5 ±1 mm (27.78 ±0.4 in.)**.

If measurement is incorrect, replace whole steering column.

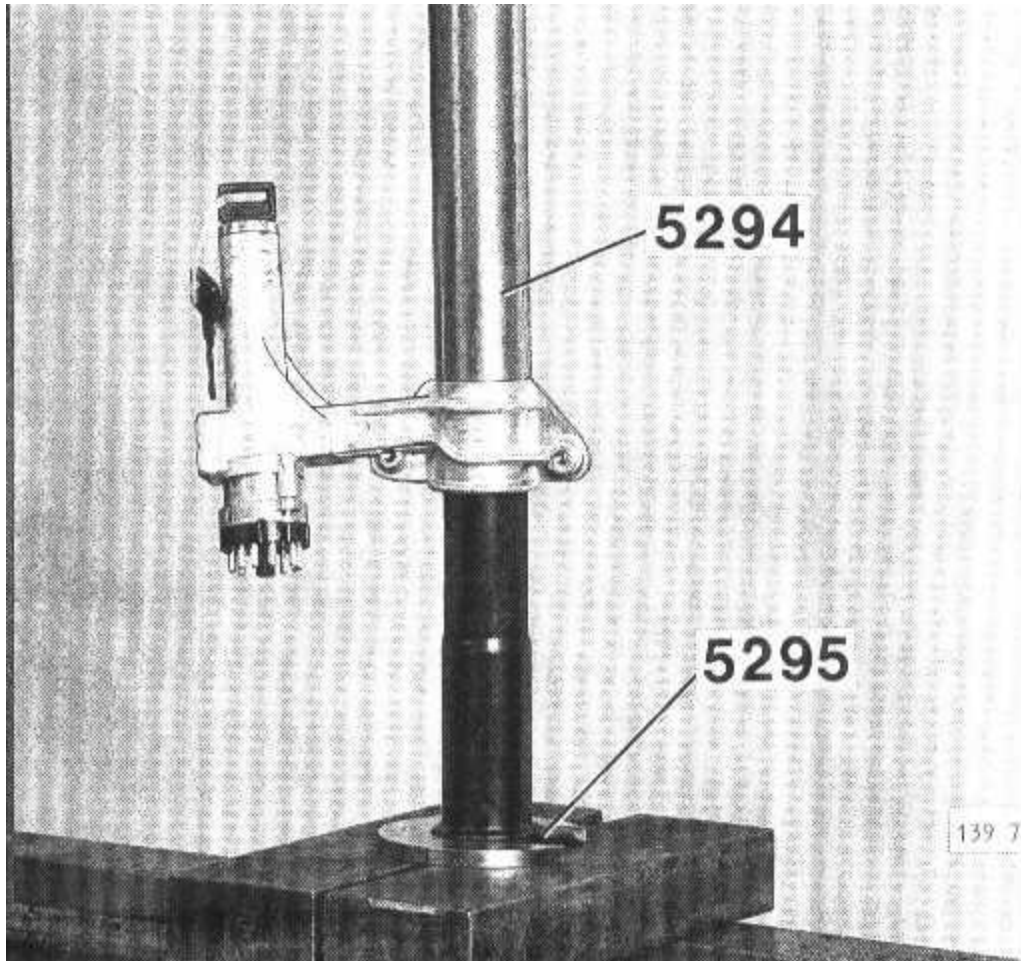


J29

Install new steering lock on new steering column

Install key and turn.

Check carefully that lock barrel is aligned with centre of steering column opening.
(Use marked line to align).



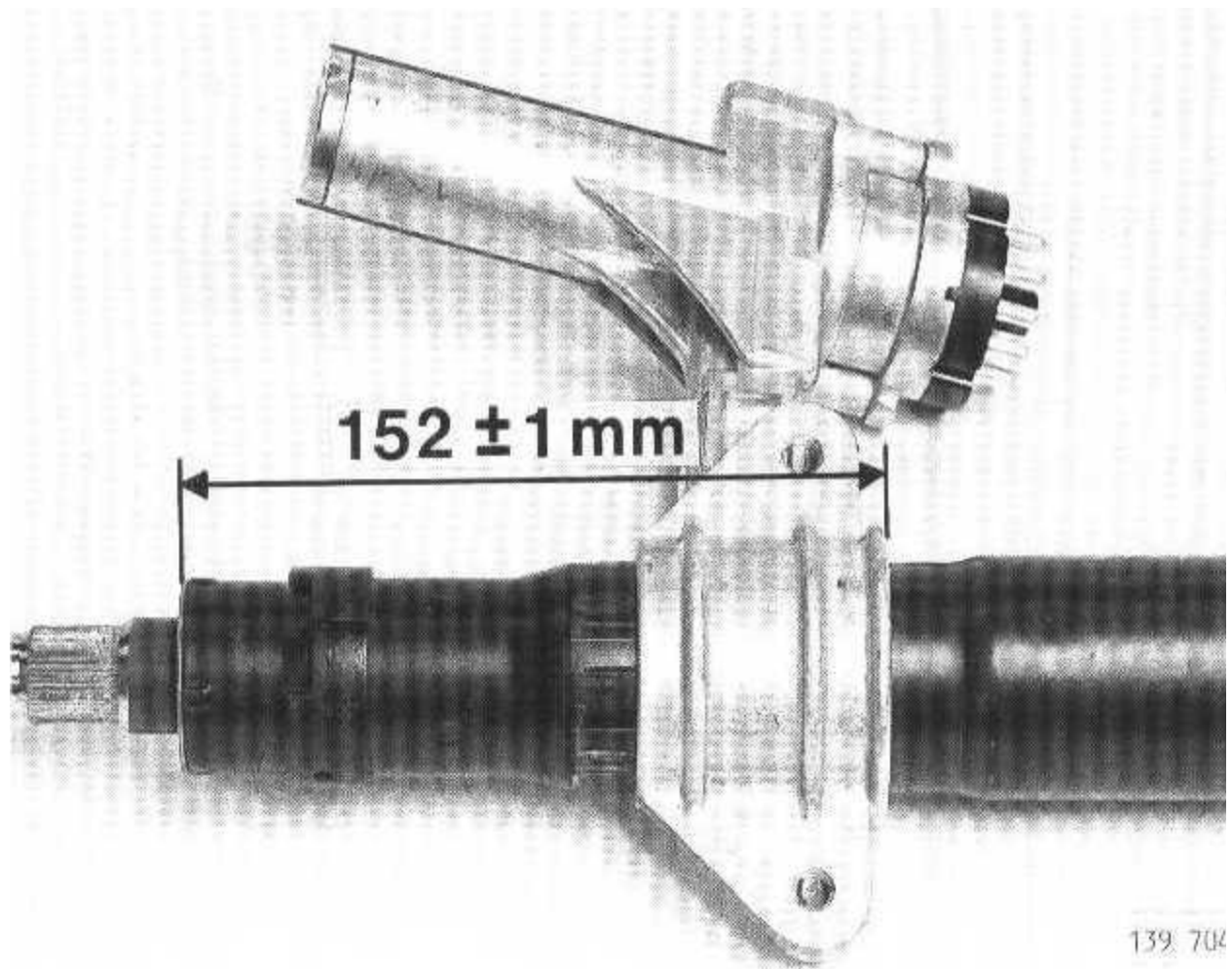
J30

Press on steering lock

Use drift **5294** and counterhold **5295**.
For measurement, see illustration, **J31**.

Note!

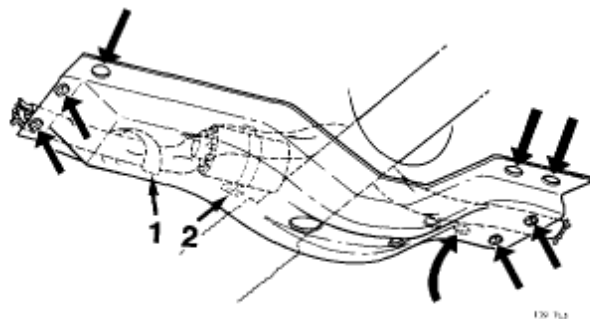
Counterhold **5295** may only be applied to upper groove of steering tube. See illustration.



J31

Check lock operation

Remove key from lock. Turn steering shaft and check lock barrel locks it.



For models being converted from earlier versions to inertia-limited steering column:

J32

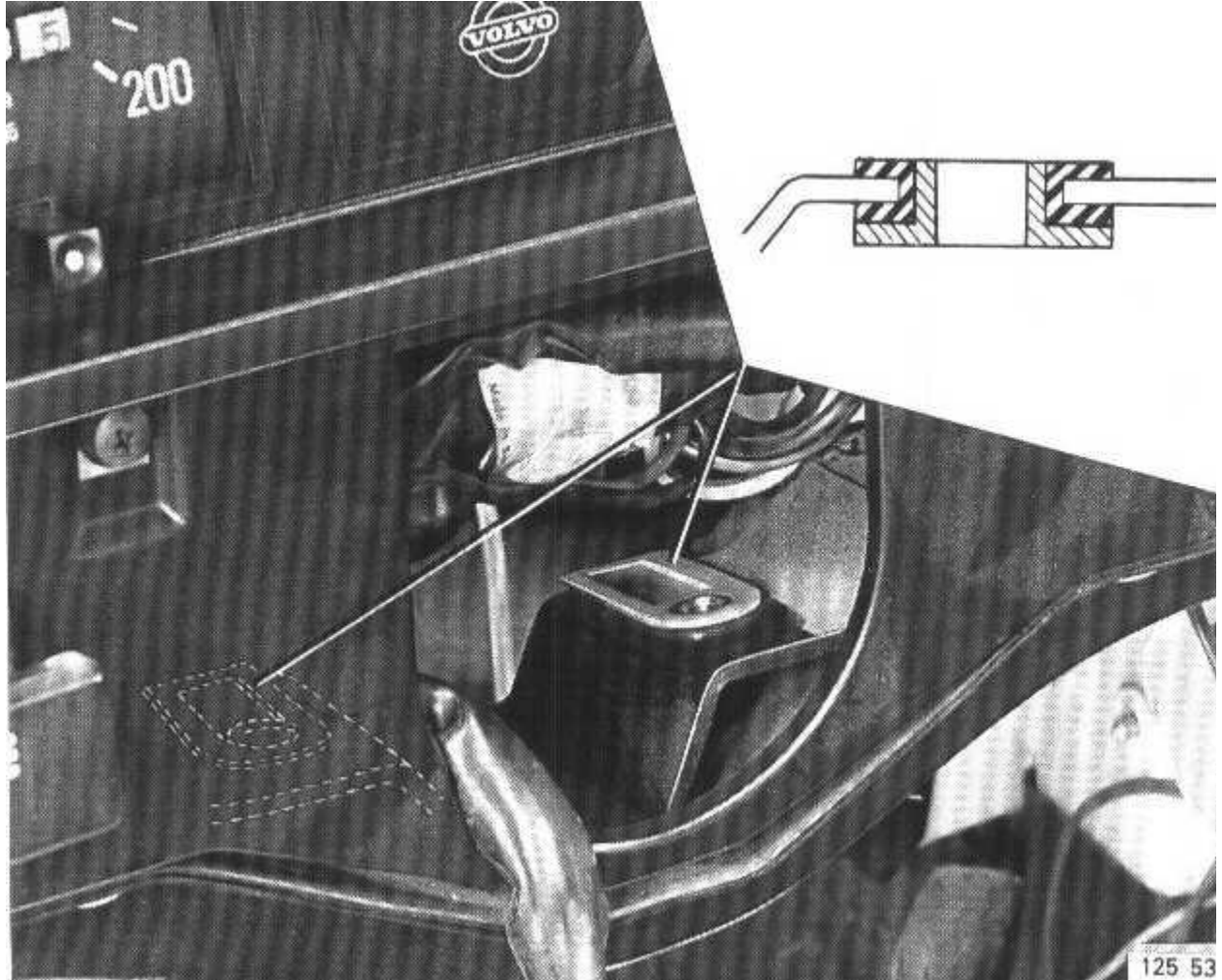
Install new member on fascia

J33

Place cable harness in tab-clip (1) on member and bend clip into place

J34

Attach bulb failure sensor (2) to member



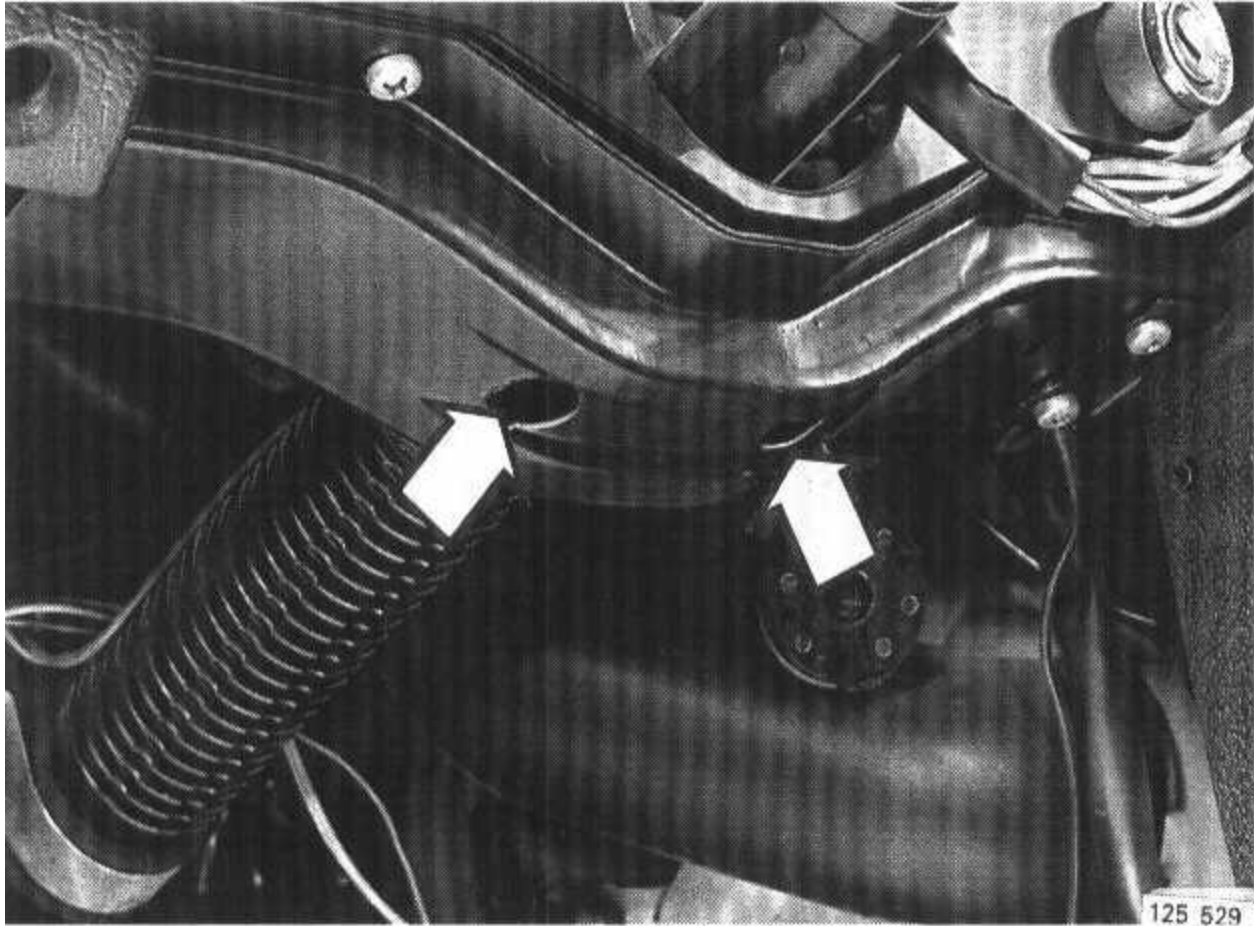
New and converted versions:

J35

Install both plastic guides in member Turn guides so that washers face down

Note!

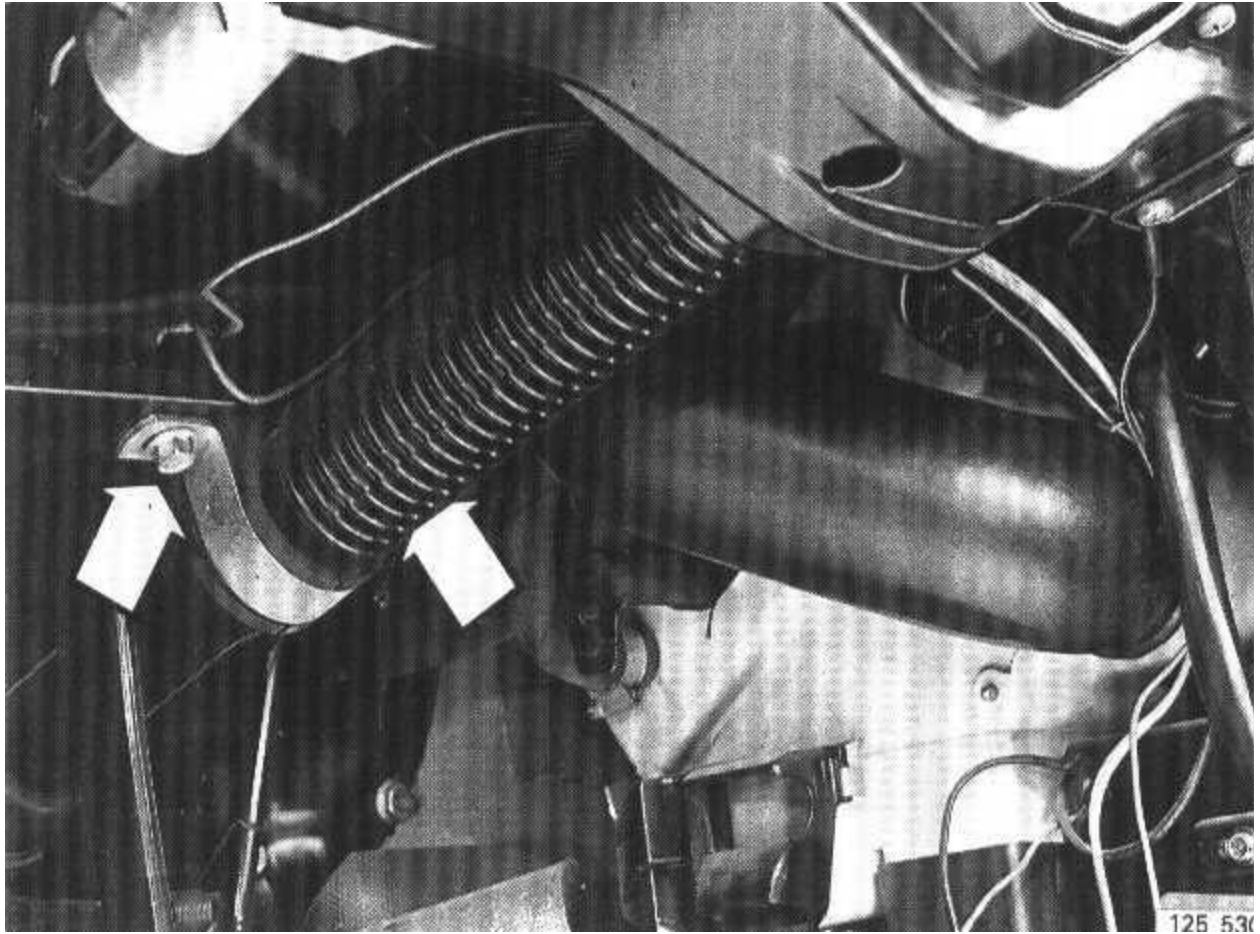
Spacer and washer are now a single unit.



J36

Position steering column and screw in shearing bolts without tightening

Pull steering column towards rear as far as it will go. Tighten shearing bolts more, but do **not** shear them yet.



J37

Install lower retaining bracket and bolts

First install rubber spacer and then bracket. Tighten bolts lightly.

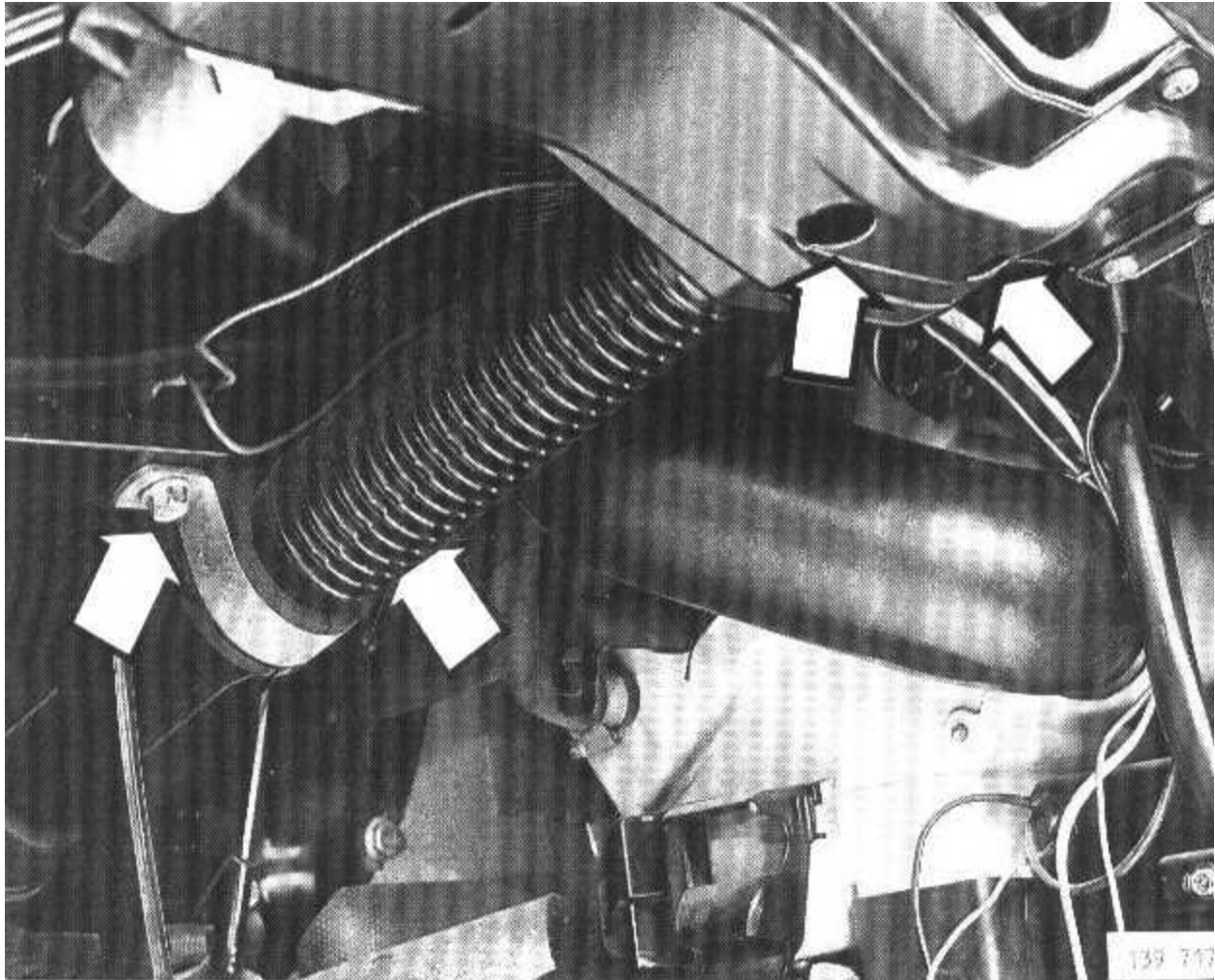
J38

Position rubber seals in bulkhead

Smear seal with vaseline. Turn cone inward.

Install seal on steering column from engine compartment.

Check it is positioned correctly.



J39

Tighten upper attachment bolts, but do not shear them yet

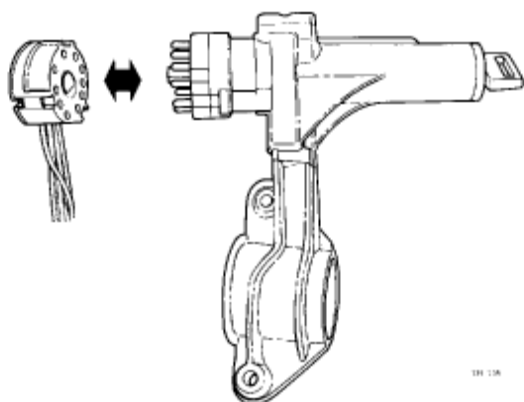
J40

Tighten lower retaining bracket

Torque: 20 ± 5 Nm (14.7 ± 3.6 Ft. lbs.).

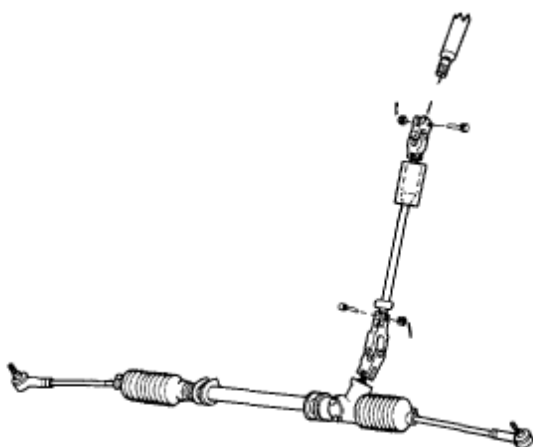
J41

Attach defroster hose



J42

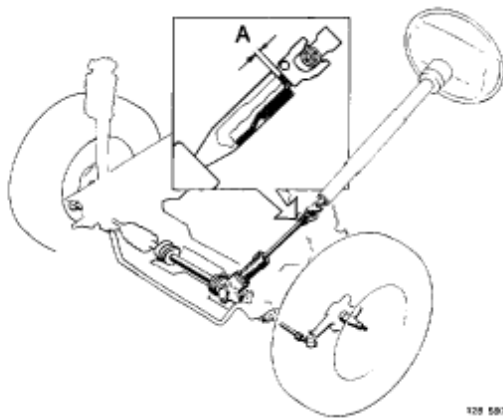
Reconnect connector for ignition lock



J43

Join upper and lower steering shafts

Raise lower steering shaft. Attach universal joint to upper steering shaft. Tighten upper bolt. Install locking pin. Tighten bolt for lower universal joint. Install locking pin.



128 587

J44

Checking and adjusting steering shaft

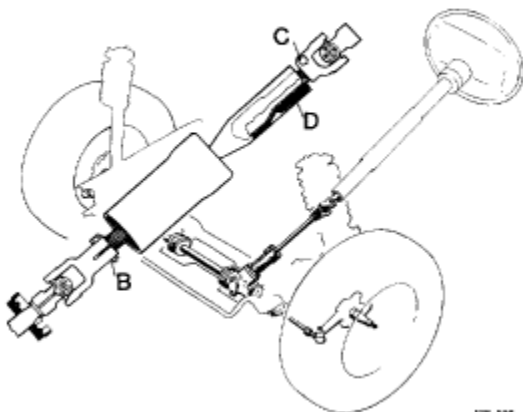
This check should be carried out after any work on steering shaft.

Distance A between upper steering shaft joint and shoulder on lower steering shaft should be

when checking **10 - 19mm (.39 - .75 in.)**

when adjusting **15 mm (.59 in.)**

If check shows that distance is incorrect make following adjustment.



128 596

J45

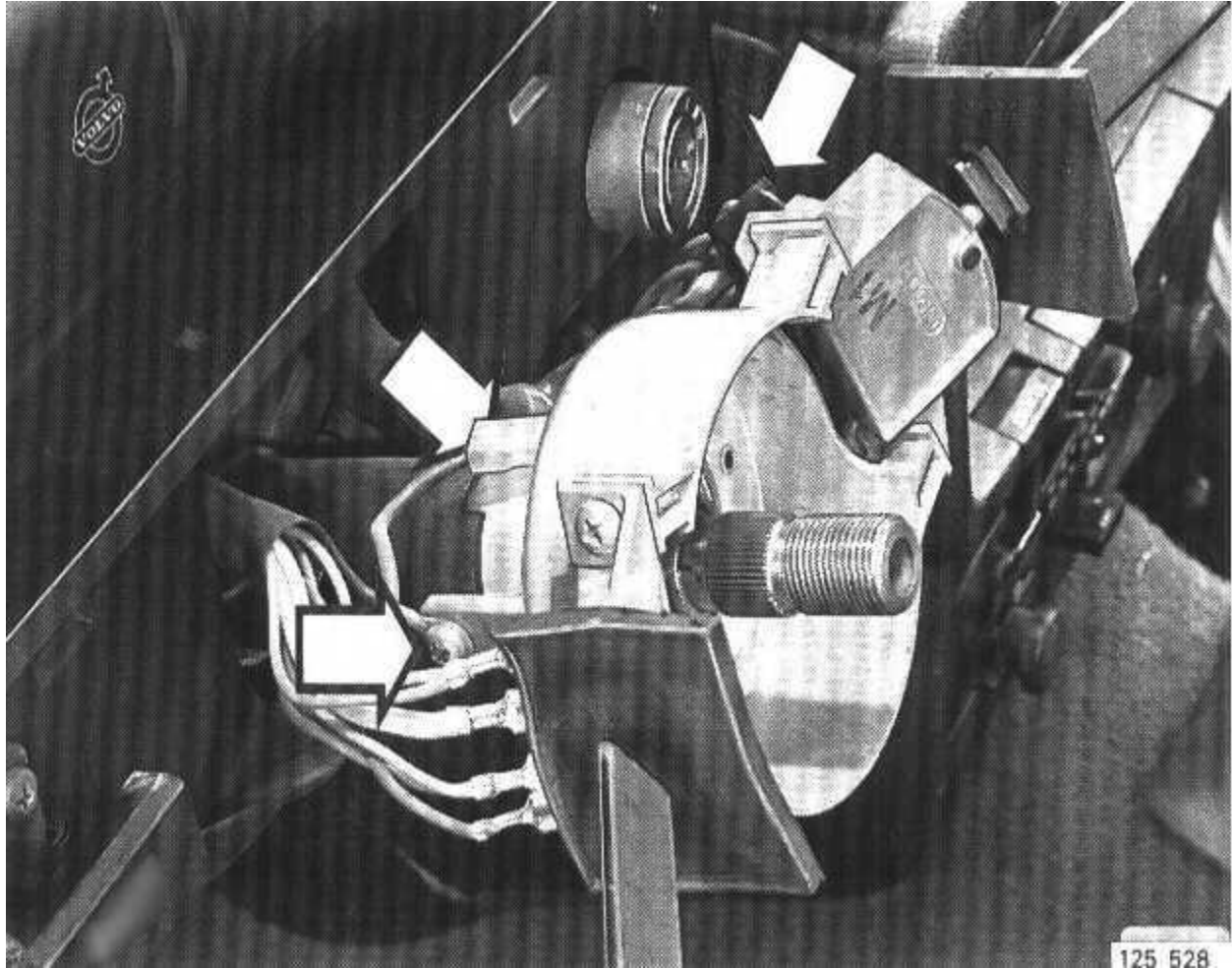
Loosen upper bolted joint B of lower steering shaft universal joint

Loosen lower bolted joint C of upper steering shaft universal joint. Loosen bolts only enough for head to come free from universal joint.

J46

Adjust distance A, see J44, by moving steering shaft up or down

Ensure position of upper steering shaft does not change, as this can affect distance between steering wheel and steering column cover.



J47

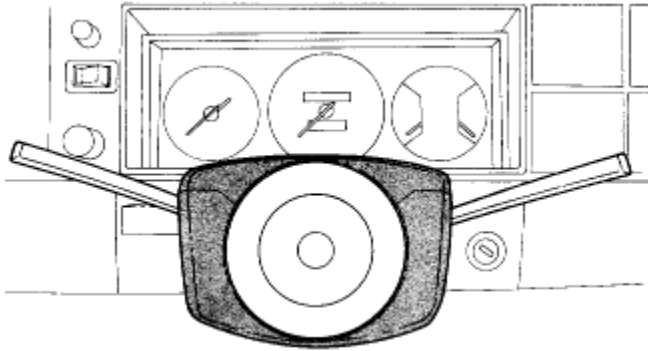
Tighten bolted joints B and C

Torque: 23 ± 5 Nm (16.9 ± 3.6 Ft. lbs.).

J48

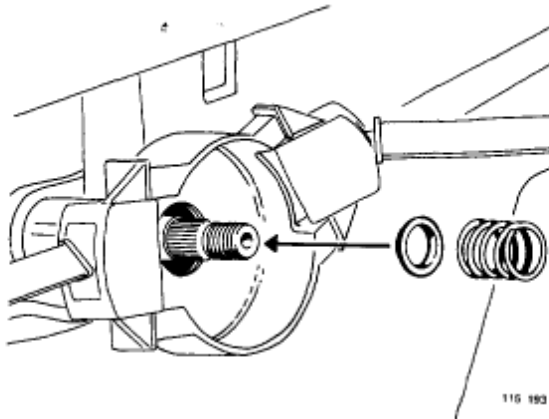
Attach holder for wiper and indicator controls and connect leads

Connect leads to indicator switch according to marks made earlier.
Connect earth lead to one of retaining bolts.



J49

Attach upper and lower steering column covers



With SRS:

Continue from step J60.

Without SRS:

J50

Install:

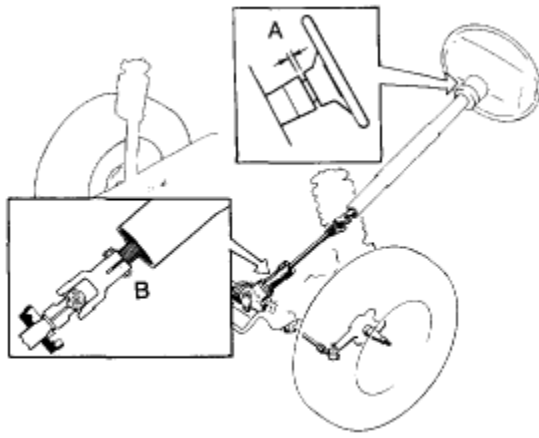
- spring seat
- spring
- steering wheel.

Torque: **60 ±15 Nm (44.2 ±11 Ft. lbs.).**

J51

Check steering wheel does not contact steering column covers when turning

If it does, adjust distance A in illustration, as outlined in **J52-J54.**



128 948

J52

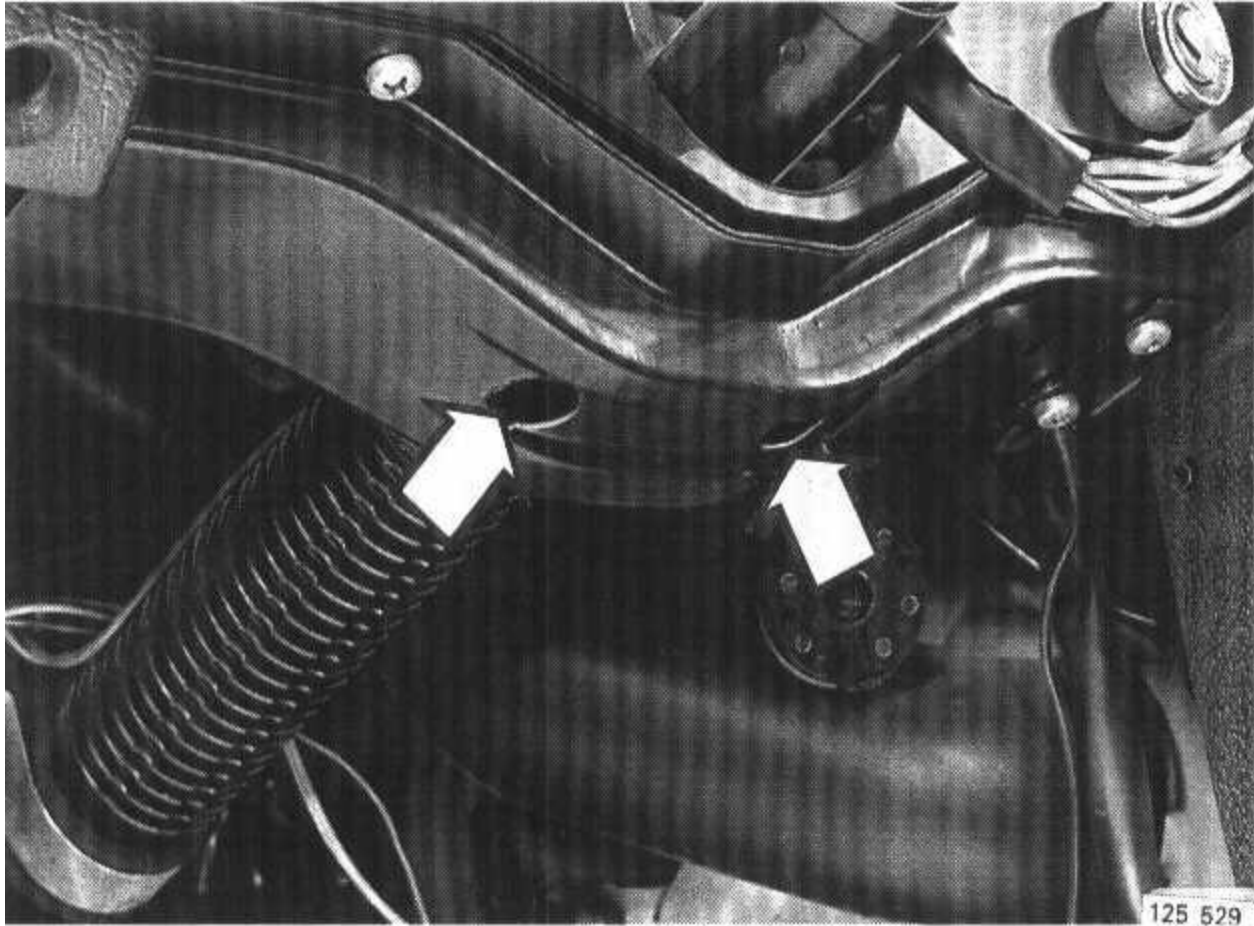
Loosen upper bolted joint B of lower steering shaft universal joint

Loosen bolt just enough for head to come free from joint.

J53

Adjust gap A between steering wheel and steering column cover

Adjust by carefully pushing lower steering shaft upward so that steering wheel is free from steering column cover. Recommended play: **1 - 2 mm (.04 - .08 in.).**



J54

Tighten bolted joint B on steering shaft universal joint

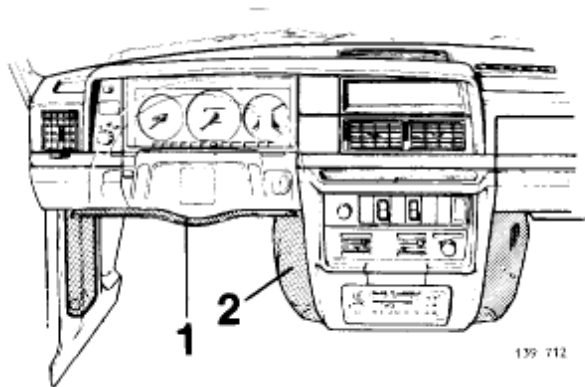
Torque: 23 ± 5 Nm (16.9 ± 3.6 Ft. lbs.).

Install locking pin.

Replace cover for lower steering shaft universal joint.
(Does not apply to cars with power steering).

J55

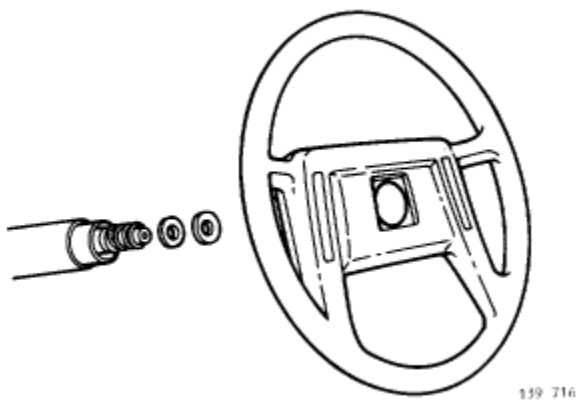
Shear shearing bolts



J56
Install side panel (2) and panel below fascia (1)

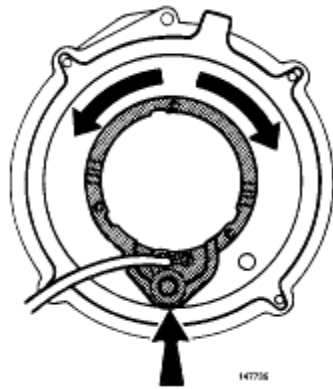
J57
Connect negative battery lead and test operation

J58
Check steering wheel position



J59
Dealing with rattle in steering shaft bearings

Increase pre-tension of bearings by placing one (if necessary two) flat washers between steering wheel and spring.



With SRS

J60

Check front wheels are straight

J61

When replacing contact reel, or if locking screw has been removed

Set contact reel to zero:

Turn contact reel right as far as end position, then turn three (3) revolutions to left.

Lock contact reel with screw in plastic strip.

J62

Install:

- bracket for contact reel
- contact reel
- connector behind fascia. Ensure lead does not get caught.

Important!

Do not turn steering wheel as this will cause contact reel pin to snap, and necessitate replacement of whole contact reel!

J63

Install steering wheel

Check road wheels are straight.

Pull lead from contact reel through hole in steering wheel. Set steering wheel so that contact reel pin is in centre of steering wheel hole.

Install nut to hold steering wheel and tighten with fingers. Remove screw in end of plastic strip and install in its parking hole in steering wheel.



J64

Attach tool 8695 in place of bag assembly

This is done to enable car to be driven without fault code being registered.
Connect negative lead.

J65

Check that steering wheel is straight

Drive car straight ahead on smooth surface to ensure that front wheels are pointing perfectly straight ahead.

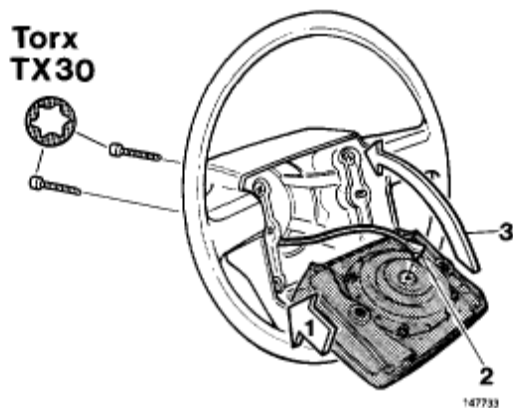
J66

If steering wheel is not straight

- disconnect negative battery lead.
- replace locking screw in pin.
- remove tool 8695.
- remove steering wheel.
- set contact reel to zero, see J61.
- replace steering wheel straight and tighten screw with fingers.
- repeat steps J64 and J65.

When steering wheel is straight:

- Tighten bolt holding steering wheel. Torque: **60 Nm (44.2 Ft. lbs.)**.
- Check SRS-lamp is off (no fault codes registered).
- Disconnect negative battery lead again.
- Remove tool 8695.



J67

Install bag assembly

- Rest bottom of assembly on steering wheel.
- Reconnect connector.
- Place bag assembly in position and tighten torx bolts from rear. Torque **6 Nm (4.4 Ft. lbs.)**. Turn the steering wheel a little in order to reach the bolts.

Note!

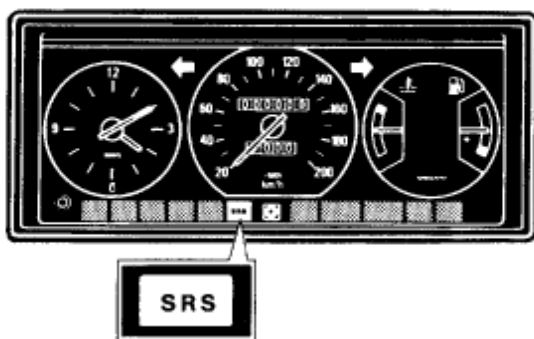
Tighten right bolt first!

Ensure that cable does not get pinched on reassembly.

J68

Check operation

Check steering wheel turns easily and steering lock functions correctly.
Check bag assembly is fitted securely.



J69

Check for fault code

Turn ignition key to 2 position (ignition on).
Connect battery lead and check SRS-lamp.

J70

If fault code is displayed

If a fault code is displayed, it is probable that battery has been connected and ignition switched on while bag assembly was removed, and special tool **8695** was not installed during operation.