In the event of vibration or drumming:

Requirements:

Propeller shaft in perfect optical condition.

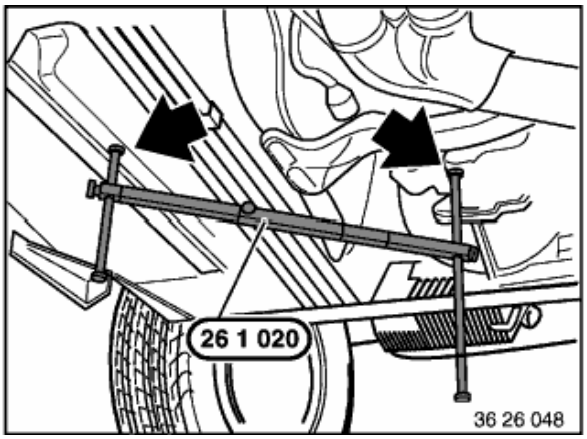
Balance propeller shaft if balance plates are missing or propeller shaft is suspected to have imbalance (refer to instructions supplied with balancing equipment).

Caution!

A jacked-up vehicle must only be test operated when suspension of driven wheels is supported (deflection angle of output shafts).

Maximum speed specified for a jacked-up vehicle or vehicle on a dynamometer must never be exceeded.

Conform with safety regulations.



Centre propeller shaft:

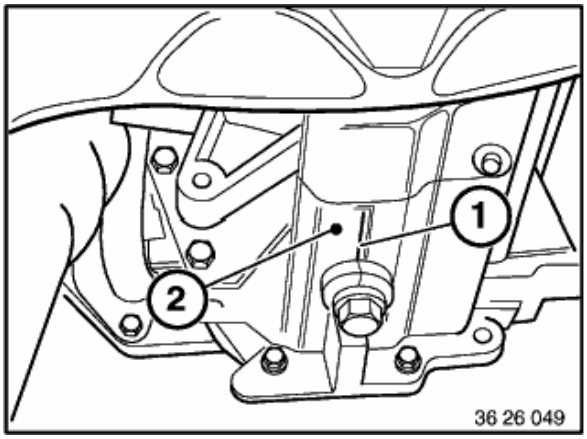
Loosen exhaust assembly, rubber engine mounts and transmission cross member.

Position Special Tool 26 1 020 at rear engine-carrier bore and at centre of transmission.

Note:

Transmission is offset by 10 mm to right when viewed in forwards direction of travel.

As a result of this, centre point must be taken 10 mm to left of centre of transmission.

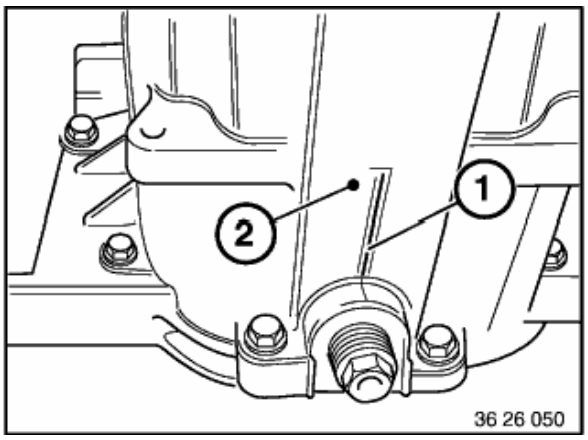


Determine measuring point on transmission.

Transmission S 5 D 200/250 G:

Measure 10 mm to left from cast rib (1) on transmission housing.

Mark measuring point (2) and apply Special Tool 26 1 020.



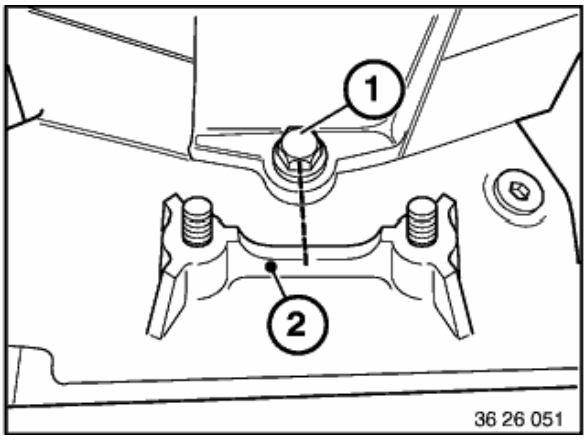
Transmission S 5 D 310 Z:

Note:

Cast rib (1) on transmission housing is offset 7 mm from centre.

Measure 3 mm to left of cast rib (1) on transmission housing.

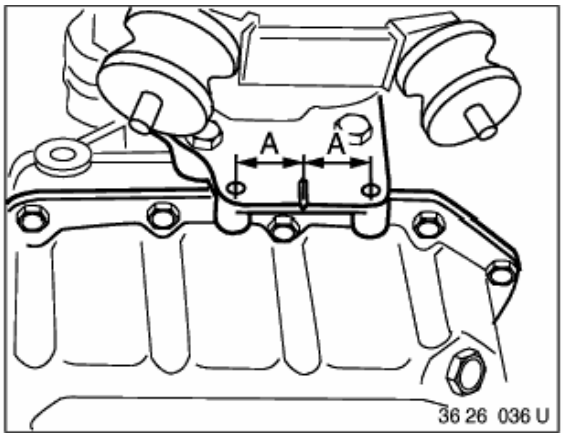
Mark measuring point (2) and apply Special Tool 26 1 020.



Automatic transmission A 5 S 310 Z:

Measure 10 mm to left of centre transmission-extension mounting bolt (1).

Mark measuring point (2) and apply Special Tool 26 1 020.



Automatic transmission A 4 S 310/270 R:

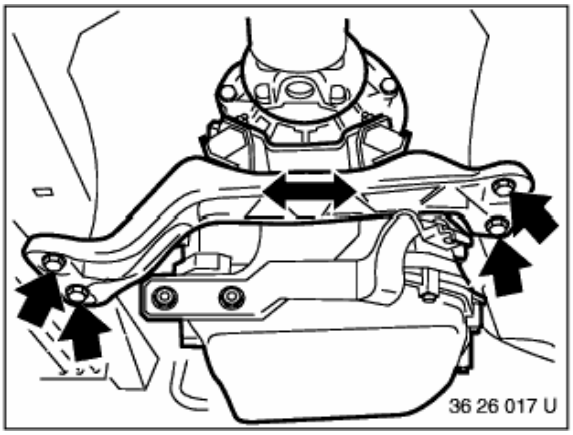
Determine measuring point.

Measure from centre of bore towards inside.

A = 31 mm

Mark measuring point.

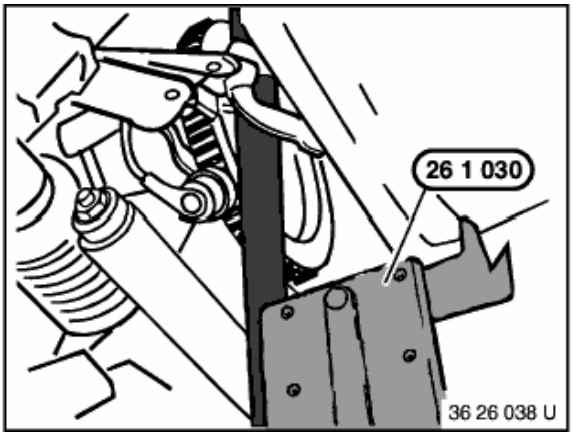
Starting from centre of transmission, measure 10 mm to left, mark and attach Special Tool 26 1 020.



Move transmission sidewards until special-tool gauge has equal distances on left and right sides.

Secure crossmember.

Tightening torque, refer to Technical Data 24 71 1AZ



Checking/adjusting propeller shaft-deflection angle:

Remove exhaust assembly,

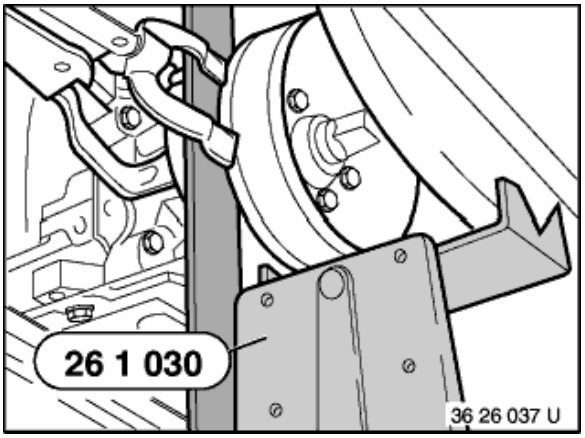
refer to Group 18.

Unscrew heat-protection plate at centre and right front.

M40 engine:

Secure rail (steel ruler) on belt pulley in vertical position (use a clamp).

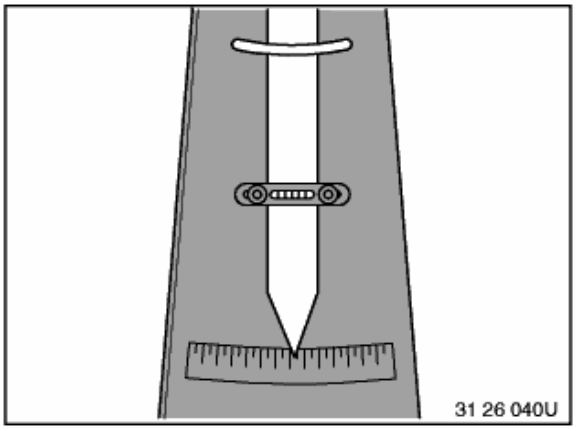
Place gauge 26 1 030 on rail.



M50/M51 engine:

Secure rail (steel ruler) on vibration damper in vertical position (use a clamp).

Place gauge 26 1 030 on rail.



Set needle perpendicular with help of bubble level.

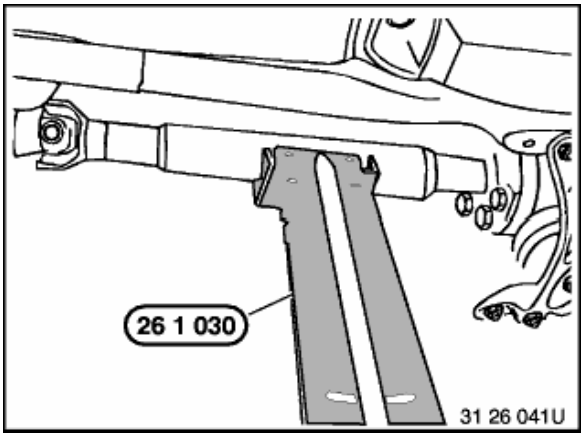
Read degrees.

Note:

Always fit measuring gauge with scale pointing in same direction (e.g. scale on right).

One graduation = 5'.

Position of vehicle is not important as only individual angle is compared.



Hold gauge 26 1 030 against front section of propeller shaft and measure angle.

Determine deflection angle of joint disk,

(refer to Technical Data)

and, if necessary, correct on transmission suspension or centre mount by installing shims (up to max. 3 mm).

This requires supporting transmission and unscrewing crossmember from body.

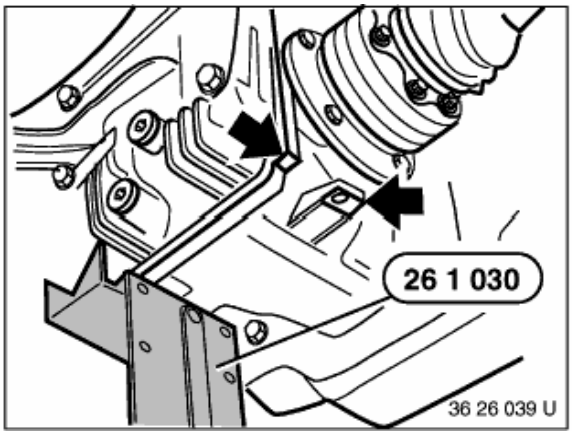
Example:

Engine angle	2° 16'
Propeller-shaft angle	2° 06'
Joint-disk deflection angle	0° 10'

Note:

When correcting a deflection angle by installing shims, remember that deflection angles of adjacent joints will also change.

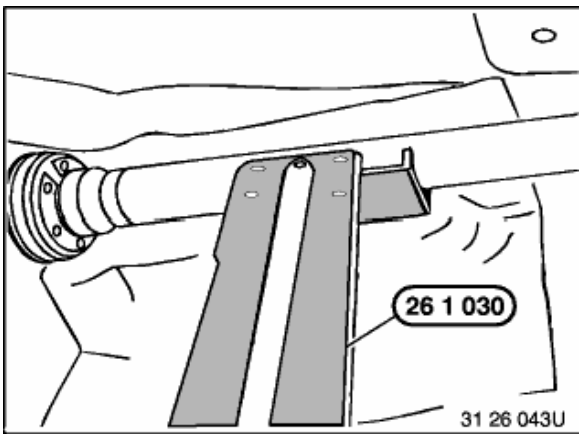
In general, deflection angles of joints should be as small as possible.



Place Special Tool 26 1 030 on machined surface of final drive at bottom.

Determine deflection angle,

refer to Technical Data.



Apply Special Tool 26 1 030 on rear section of propeller shaft and measure angle.

Determine deflection angle of centre mount,

(refer to Technical Data)

and, if necessary, correct on transmission suspension or centre mount by installing shims (up to max. 3 mm).