

26 Propeller Shaft

	Page
Specifications	26- 0/3
26 11 000 Removing and Installing Propeller Shaft	11/1
051 Replacing Universal Coupling	11/2
501 Replacing Center	11/3
26 12 500 Removing and Installing Center Bearing	12/1
511 Replacing Grooved Ball Bearing in Center Bearing	12/1
Troubleshooting Propeller Shaft	12/3

Propeller Shaft

SPECIFICATIONS

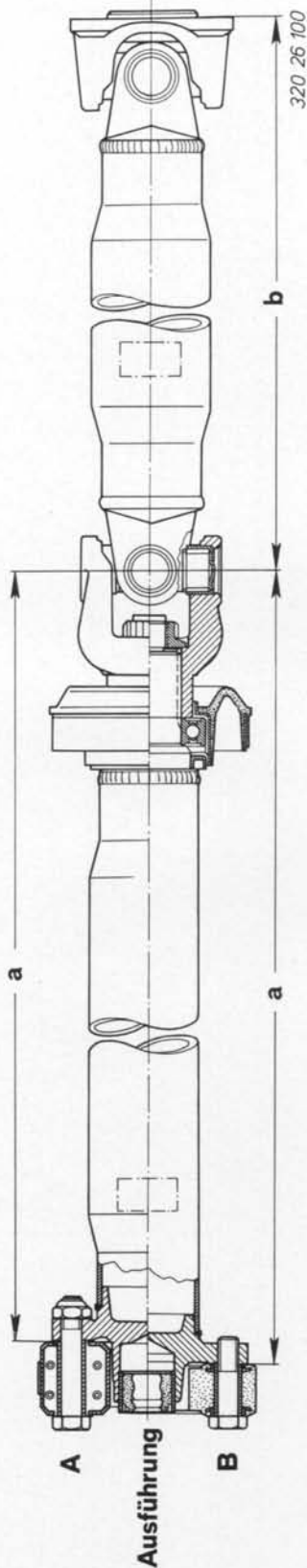
Model 320 i 320 i A

Propeller Shaft

Front propeller shaft distance "a" mm (in.) 711.3 (28.004) 582.9 (22.949)
 Rear propeller shaft distance "b" mm (in.) 916.5 ± 1 (36.083 ± 0.040)

Version "A" = Propeller shaft with "Guibo" coupling

Version "B" = Propeller shaft with universal coupling (for cars with automatic transmission)



Max. unbalance on each side (running on ends) at test speed of 3250 rpm gcm 15

Max. unbalance at center (running on center) at test speed of 3250 rpm gcm 10

Max. universal joint bending moment Nm/kpcm(in. lbs.) 30 ... 70 / 3 ... 7 (3 - 6)

Grooved ball bearings

FAG/Kugelfischer 6006.2 RS: 795 008 or 6006.2 RSR. 795 008, SKF 6006-2 RS 1 TN/C 4 PLT 41, INA/Fafnir 6006.2 RS. AH 01

Center bearing preload in forward direction mm (in.) 2 (0.079)

Torque Specifications in Nm / kpm (ft. lbs.)

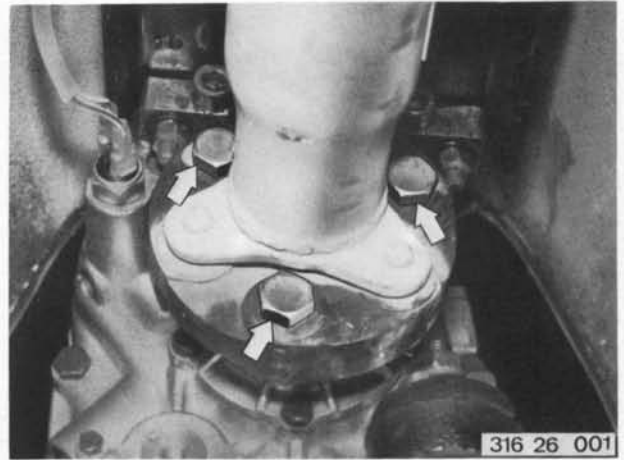
Prop. shaft to automatic transmission 43 ... 48 / 4.3 ... 4.8 (31 ... 35)
 Prop. shaft to manual transmission 68 ... 76 / 6.8 ... 7.6 (49 ... 55)
 Prop. shaft to rear axle final drive 68 ... 76 / 6.8 ... 7.6 (49 ... 55)
 Guibo coupling to propeller shaft 68 ... 76 / 6.8 ... 7.6 (49 ... 55)

Coupling to propeller shaft
 Center bearing to body
 Heat guard to center bearing "S"
 12-sided nut (use Loctite AVV)

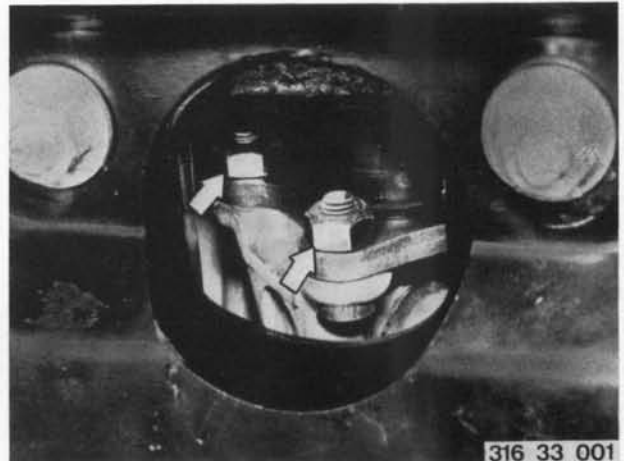
43 ... 48 / 4.3 ... 4.8 (31 ... 35)
 22 ... 24 / 2.2 ... 2.4 (16 ... 17)
 12 ... 14 / 1.2 ... 1.4 (9 ... 10)
 180 ... 200 / 18 ... 20 (130 ... 144)

26 11 000 REMOVING AND INSTALLING PROPELLER SHAFT

Detach outer pipe at exhaust manifold and support at transmission.
Detach propeller shaft at transmission flange.

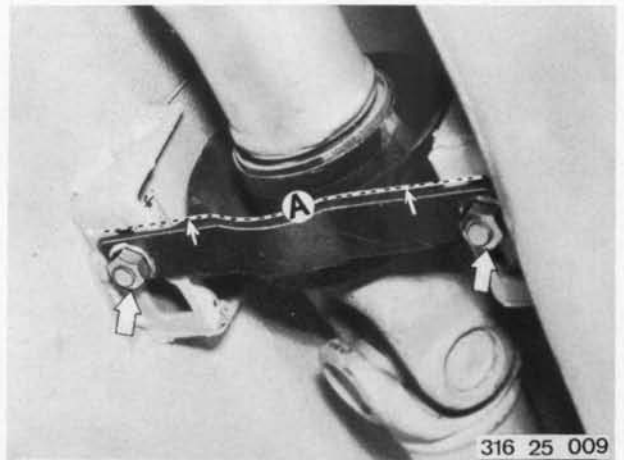


Detach propeller shaft at rear axle final drive.



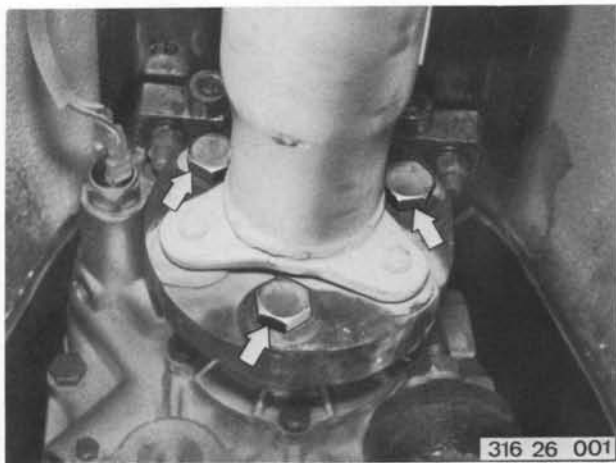
Remove heat guard.
Detach center bearing.

Installation Note! Preload center bearing in forward direction with 2 mm (0.079") (A).



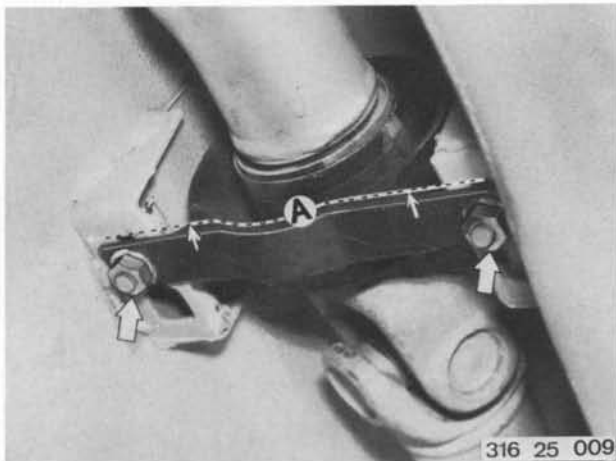
Bend down propeller shaft and pull it off of centering journal on transmission.





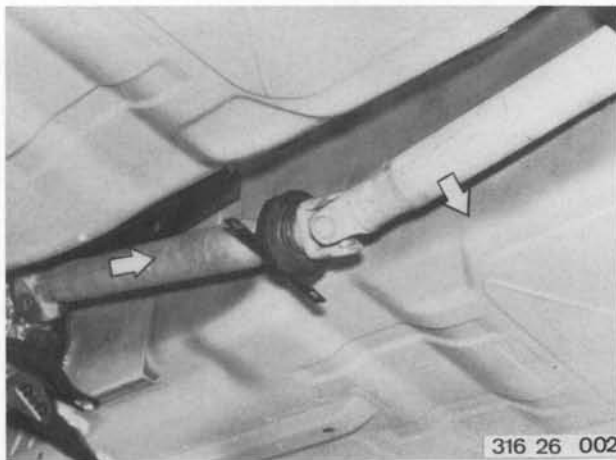
26 11 051 REPLACING UNIVERSAL COUPLING

Detach outer pipe at exhaust manifold and support at transmission.
Detach propeller shaft with universal coupling at transmission flange.

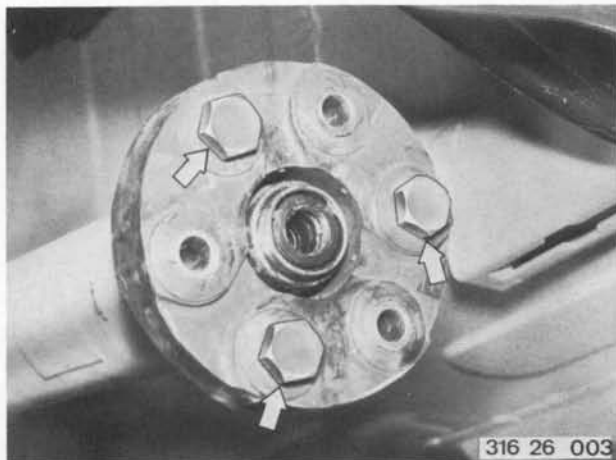


Remove heat guard.
Detach center bearing.

Installation Note! Preload center bearing in forward direction with 2 mm (0.079") (A).



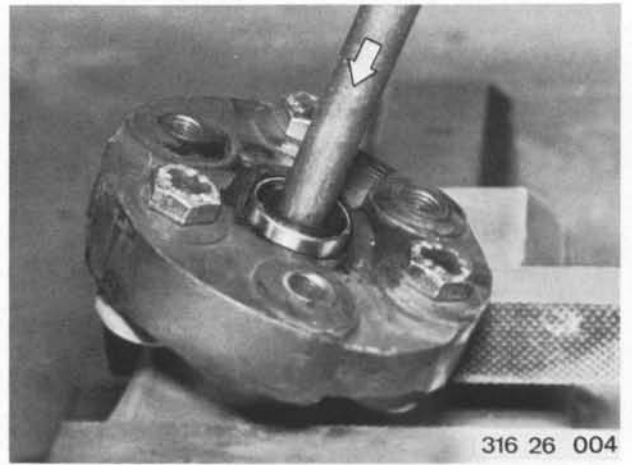
Bend down propeller shaft and pull it off of centering journal on transmission.



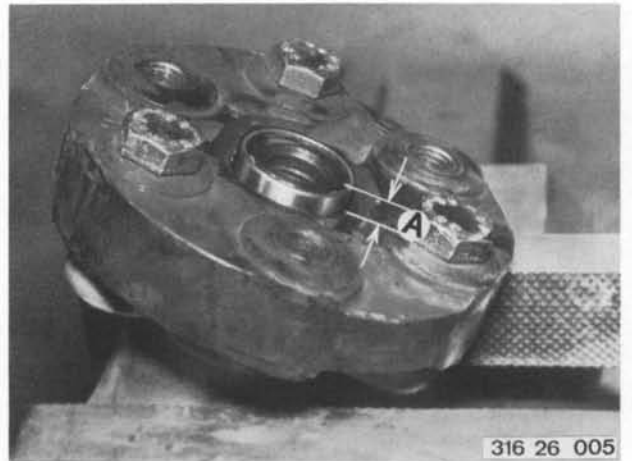
Detach universal coupling.

26 11 501 REPLACING CENTER

Fill center with a viscous grease and drive it out with a 14 mm (0.551") diameter mandrel.

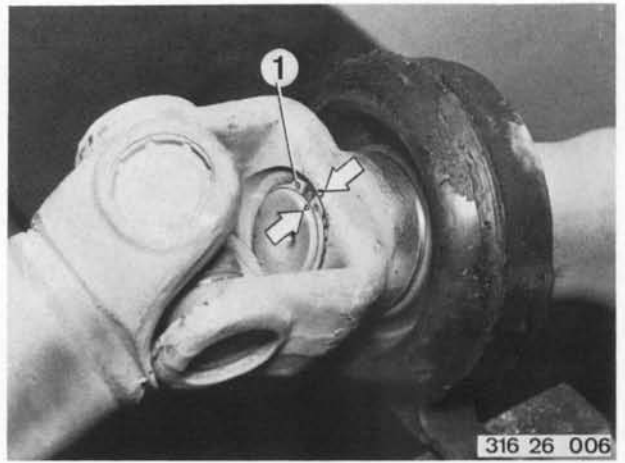


Installation Note! Lubricate center with about 6 grams of Molykote Longterm 2 and drive it in. Protrusion A = 5 mm (0.197"). Oil seal end faces out.

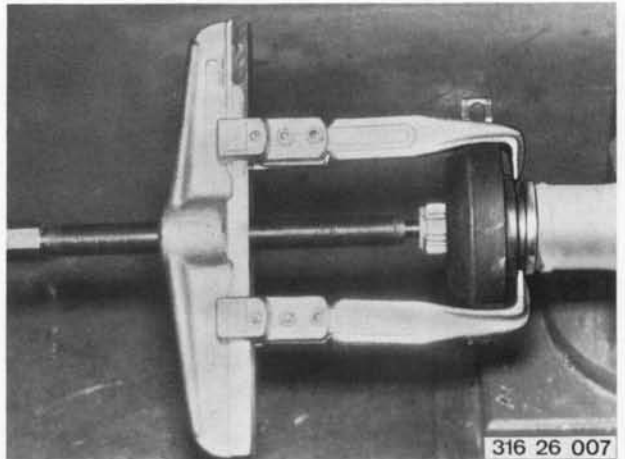


26 12 500 REMOVING AND INSTALLING CENTER BEARING
- Propeller Shaft Removed -

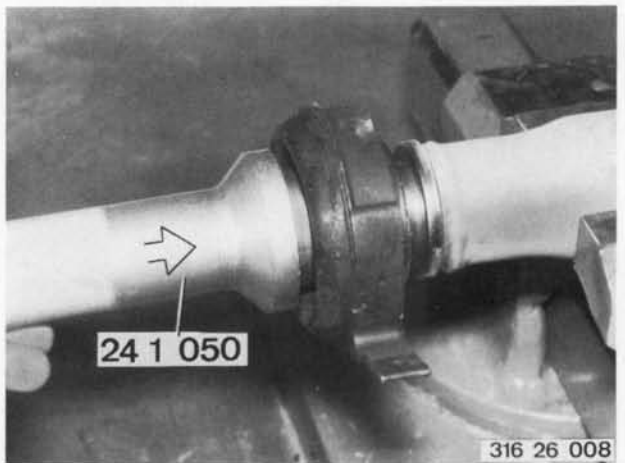
Mark propeller shafts location to coupling.
Remove circlip (1).
Pull out propeller shaft.



Pull out center bearing without its dust cover by applying Kukko B 150 extractor (standard tool).



Installation Note! Drive center bearing onto propeller shaft with Special Tool 24 1 050.



26 12 511 REPLACING GROOVED BALL BEARING IN CENTER BEARING
- Center Bearing Removed -

Drive grooved ball bearing out of center bearing.

Installation Note! Coat ball bearing contact surface with water.



TROUBLESHOOTING PROPELLER SHAFT

Condition	Cause	Correction
Vibration or drumming	a) Propeller shaft misaligned	a) Align propeller shaft at center bearing with fixture by moving center bearing laterally and in height by adding or removing shims at center bearing
	b) Center bearing defective	b) Replace center bearing and lubricate with Molykote Longterm 2
	c) Runout at centering journal or flange	c) Check runout of centering journal and flange with dial gage. Offset flange, replace if necessary.
	d) Center bearing defective, rubber damaged	d) Replace center bearing
	e) Balance plate broken (car had scraped ground while driven off-road or similar)	e) Replace propeller shaft
	f) Universal joints worn or too tight	f) Check bending moment; replace propeller shaft when play or bending moment is excessive (flattened needles)
	g) Guibo or universal coupling defective, rubber damaged	g) Replace Guibo or universal coupling
	h) Propeller shaft under axial tension	h) Bolt rear axle final drive to propeller shaft without tension. If necessary, detach final drive suspension, align final drive and tighten again.
Whistling noise	Ball bearing of center bearing defective (runs too tight)	Replace bearing with a C 4 grooved ball bearing