

2000-06 TRANSFER CASES

Overhaul - X5 (E53)

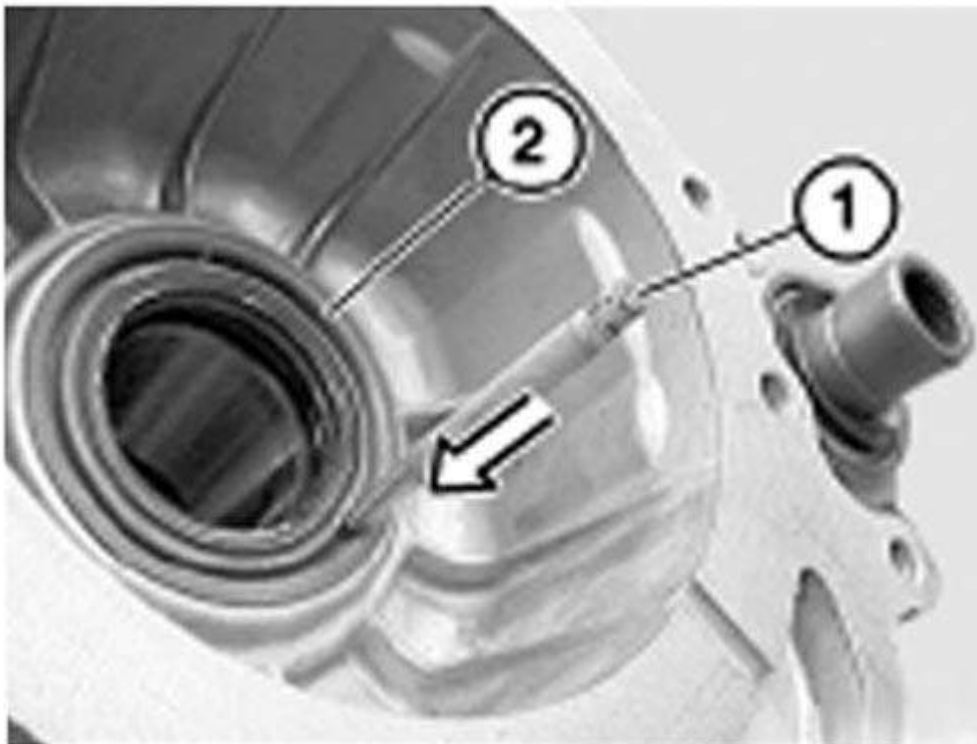
OVERHAUL

RADIAL SHAFT SEAL FOR DRIVE FLANGE (500 X-DRIVE)

NOTE: Numbers in text refer to numbers in figures.

Remove transfer case. See TRANSFER CASE - REMOVAL & INSTALLATION article.

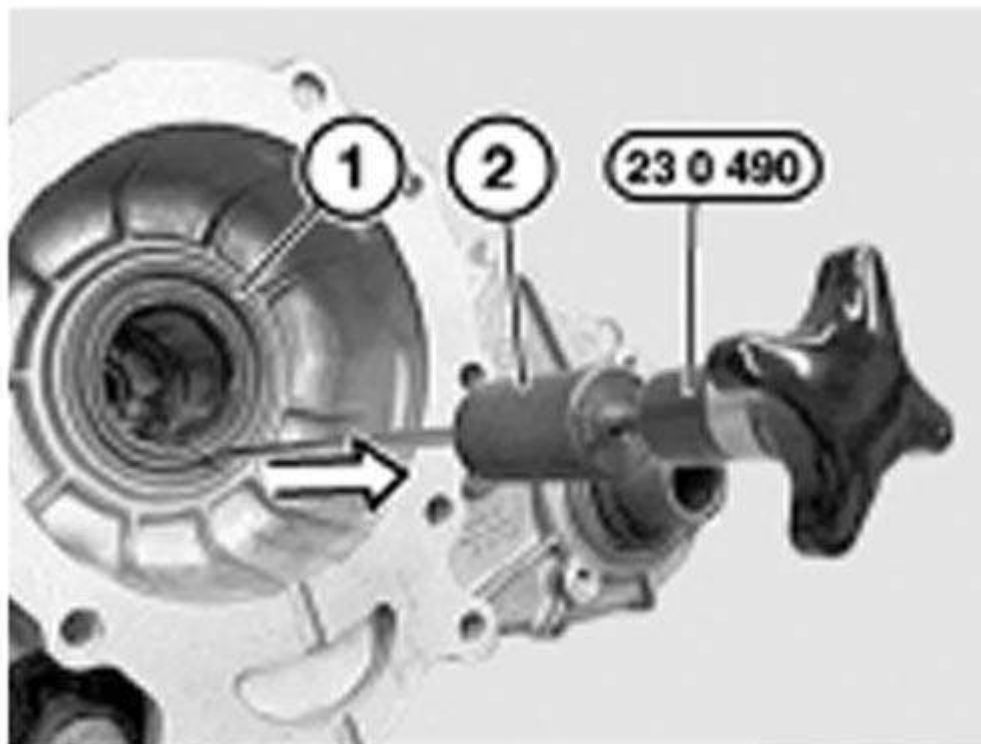
Drive a hole into radial shaft seal (2) using a center punch (1). See Fig. 1. Do not use a drill as drillings may result in transmission malfunction.



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Fig. 1: Driving Hole Into Radial Shaft Seal Using A Center Punch (NV125 Transmission Shown)
Courtesy of BMW OF NORTH AMERICA, INC.

Screw in special tool (23 0 490). Drive out radial shaft seal (1) with impact weight (2). See Fig. 2.



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Fig. 2: Driving Out Radial Shaft Seal With Impact Weight (NV125 Transmission Shown)
Courtesy of BMW OF NORTH AMERICA, INC.

Drive in radial shaft seal with special tool (27 1 390). See **Fig. 3**.



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Fig. 3: Driving In Radial Shaft Seal (NV125 Transmission Shown)
Courtesy of BMW OF NORTH AMERICA, INC.

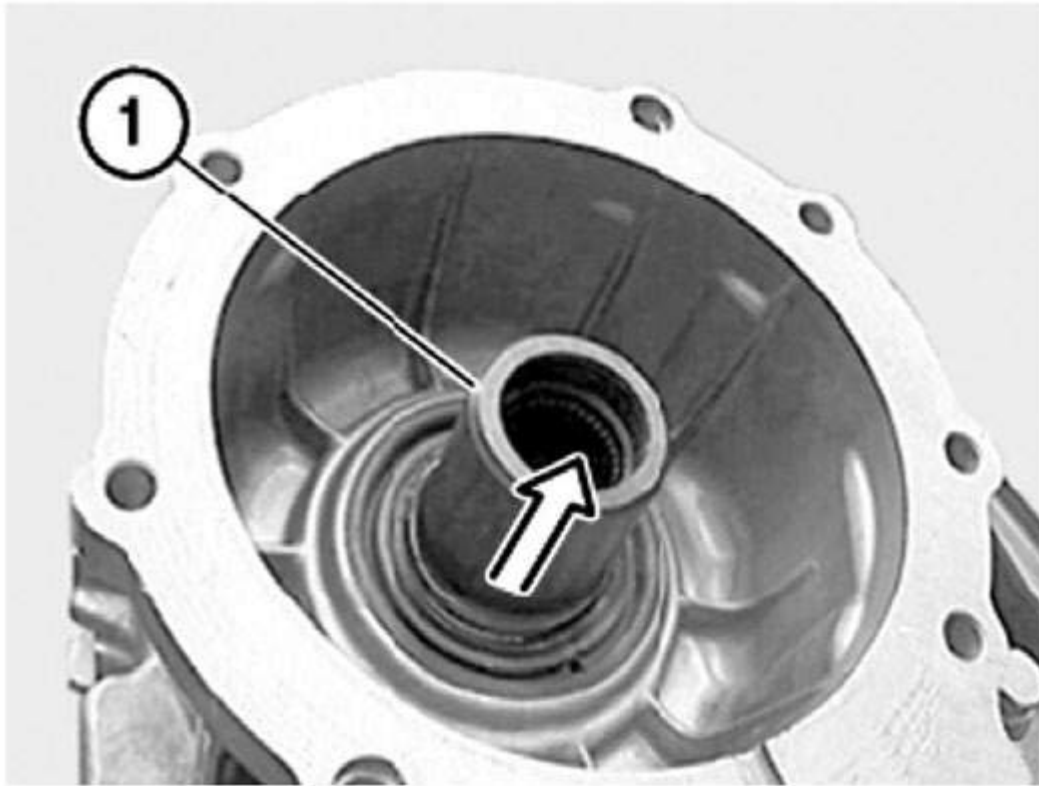
Add final details to vehicle. Check oil level. Check transmission for leaks.

RADIAL SHAFT SEAL FOR DRIVE FLANGE (NV125/LWX-500)

NOTE: Numbers in text refer to numbers in figures.

Remove transfer case. See **TRANSFER CASE - REMOVAL & INSTALLATION** article.

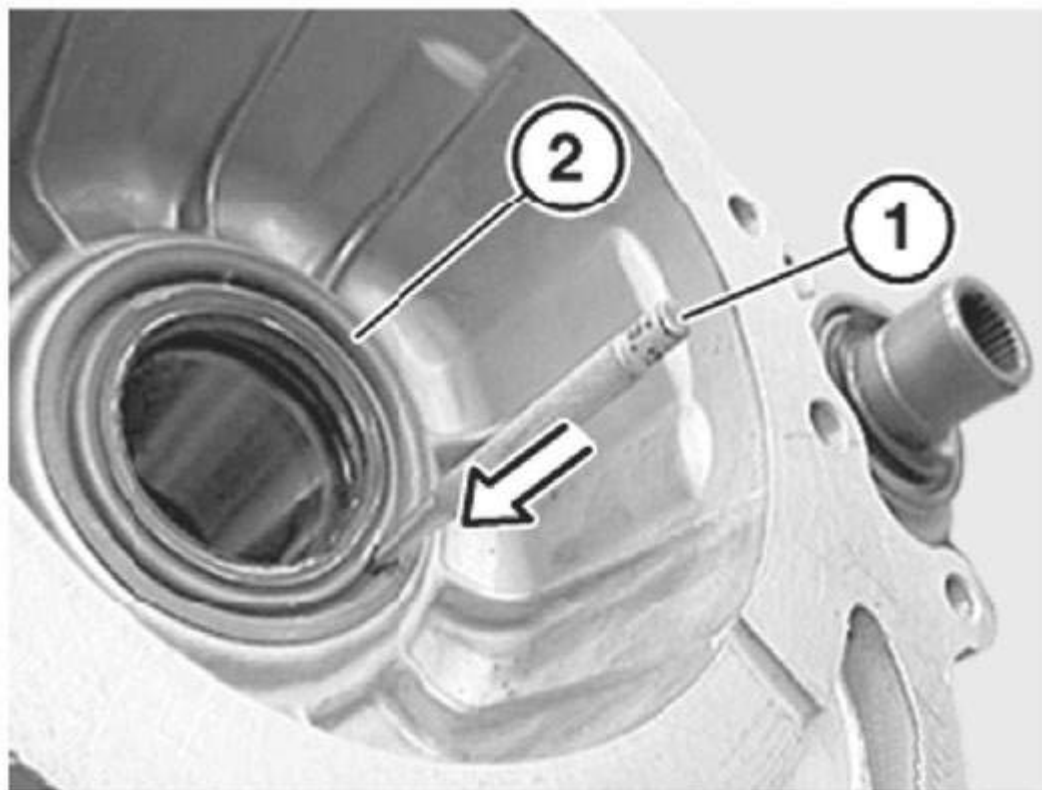
On NV125 transmission, remove shaft (1) (adapter) in direction of arrow. See **Fig. 4**.



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Fig. 4: Removing Shaft Adapter In Direction Of Arrow
Courtesy of BMW OF NORTH AMERICA, INC.

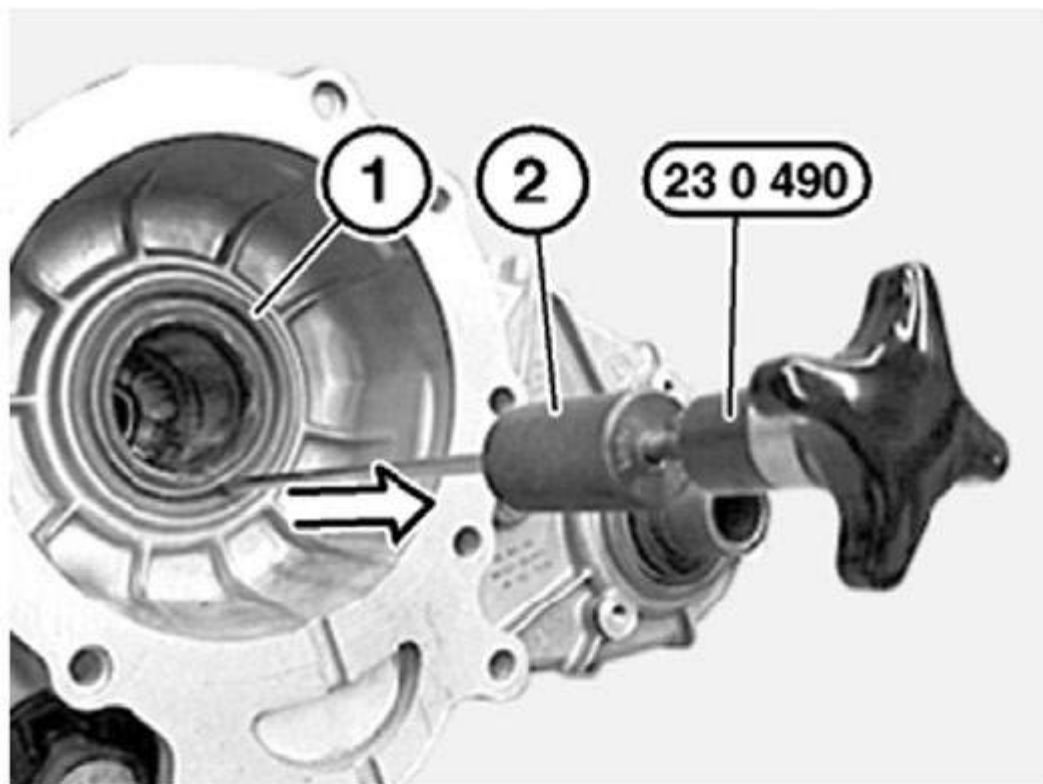
Drive a hole into radial shaft seal (2) using a center punch (1). See **Fig. 5**. Do not use a drill as drillings may result in transmission malfunction.



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Fig. 5: Driving Hole Into Radial Shaft Seal Using Center Punch
Courtesy of BMW OF NORTH AMERICA, INC.

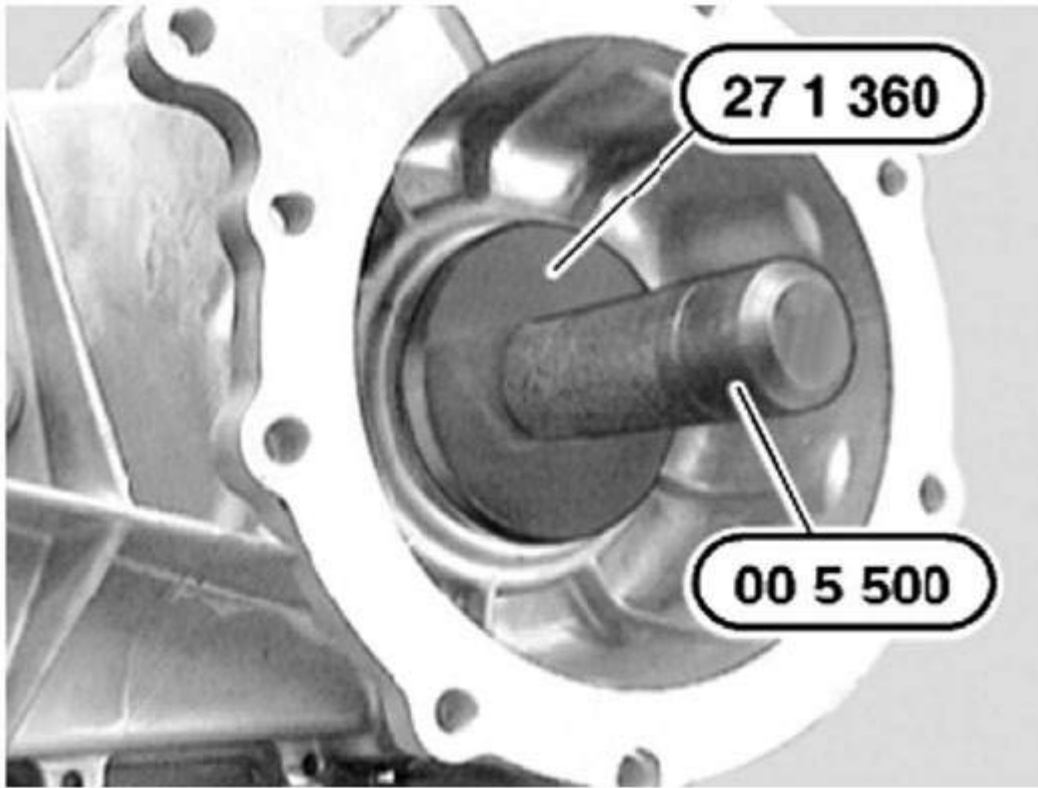
Install special tool (23 0 490). Drive out radial shaft seal (1) with impact weight (2). See **Fig. 6**.



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Fig. 6: Driving Out Radial Shaft Seal With Impact Weight
Courtesy of BMW OF NORTH AMERICA, INC.

On NV25 transmission, drive in radial shaft seal with special tools (27 1 360) and (00 5 500). See **Fig. 7**.



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Fig. 7: Driving In Radial Shaft Seal (NV25)

Courtesy of BMW OF NORTH AMERICA, INC.

On LWX-500 transmission, drive in radial shaft seal with special tool (27 1 370). See **Fig. 8**. Add final details to vehicle. Check oil level. Check transmission for leaks.



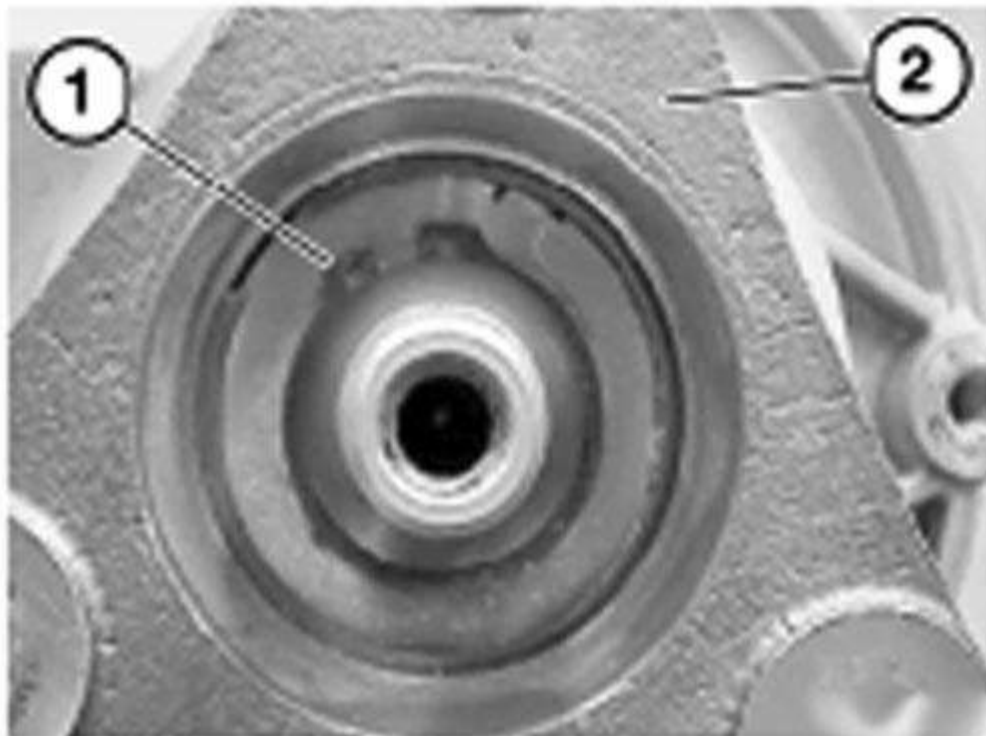
Fig. 8: Driving In Radial Shaft Seal (LWX-500)
Courtesy of BMW OF NORTH AMERICA, INC.

RADIAL SHAFT SEAL FOR OUTPUT FLANGE (500 X-DRIVE)

NOTE: Numbers in text refer to numbers in figures.

Remove transfer case. See **TRANSFER CASE - REMOVAL & INSTALLATION** article.

Release retaining ring (1). See **Fig. 9**.

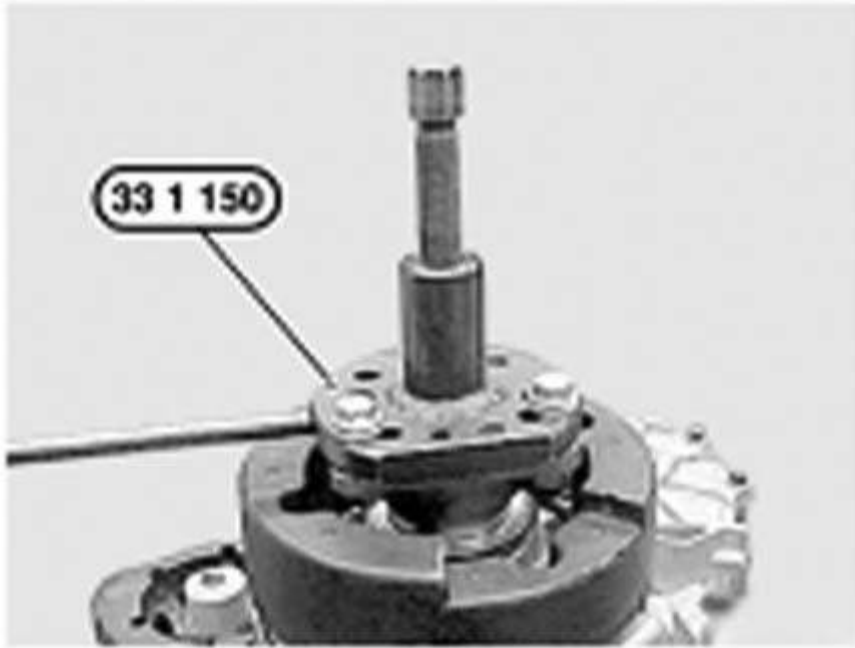


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Fig. 9: Releasing Retaining Ring

Courtesy of BMW OF NORTH AMERICA, INC.

Remove drive flange with special tool (33 1 150). See **Fig. 10**.

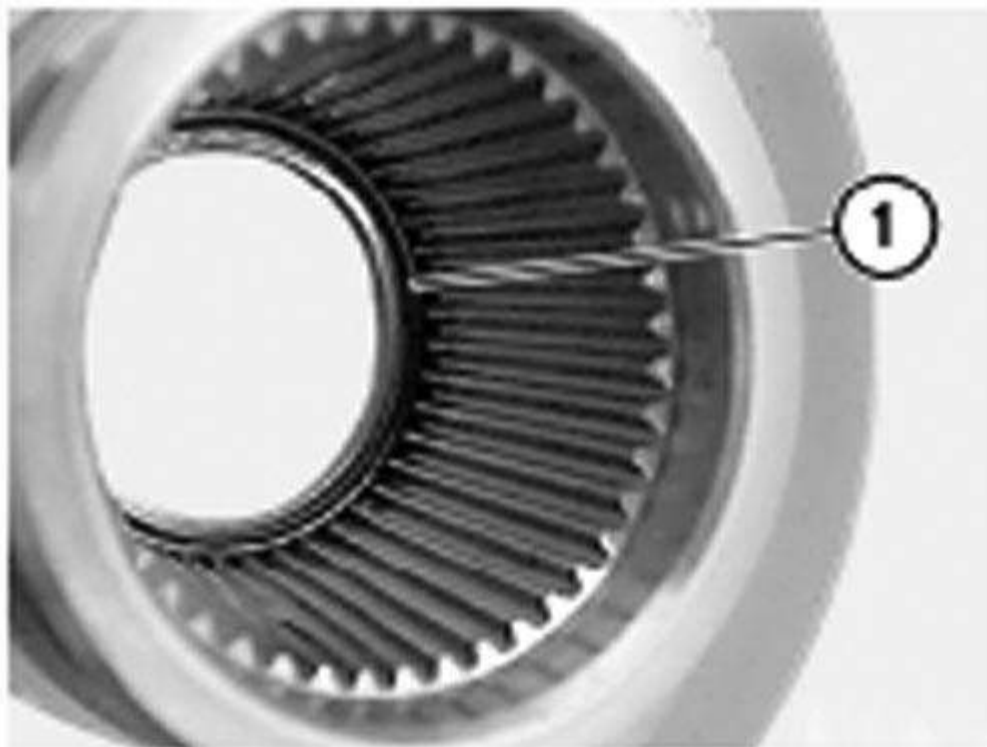


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Fig. 10: Removing Drive Flange

Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: During installation, replace "O" ring (1) in output flange. Check that "O" ring (1) is in correct position. See **Fig. 11**. Note that propeller shaft may move when the output flange is pushed on. The retaining ring can therefore no longer be fitted.

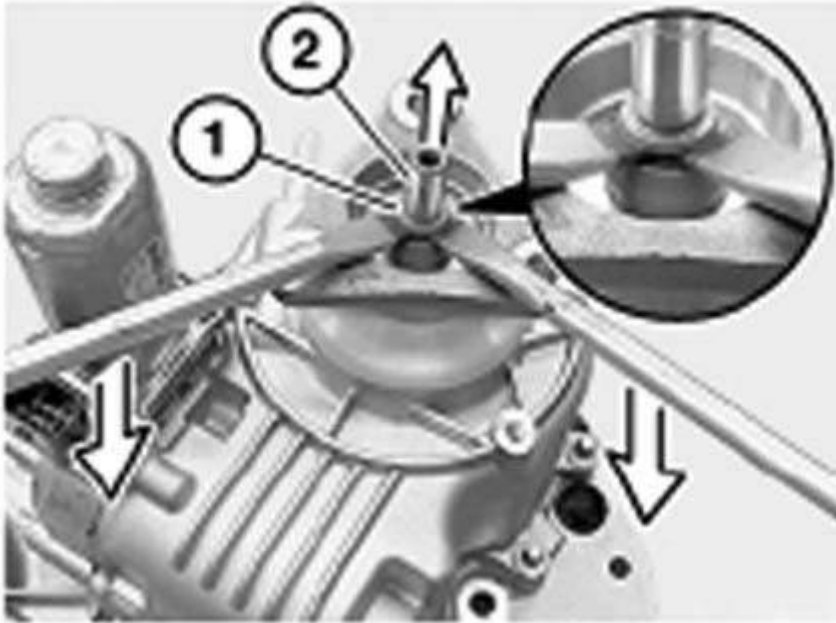


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Fig. 11: Checking "O" Ring

Courtesy of BMW OF NORTH AMERICA, INC.

To install version with mounting groove on output shaft (1), push on output flange. See **Fig. 12**.



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Fig. 12: Identifying Output Shaft With Mounting Groove
Courtesy of BMW OF NORTH AMERICA, INC.

Using 2 screwdrivers, press output flange downward or output shaft (2) upwards until groove for retaining is completely visible. Fit retaining ring.

To install version without mounting groove on output shaft, support transfer box with a suitable sleeve (1) on transmission input shaft (2). See **Fig. 13**.

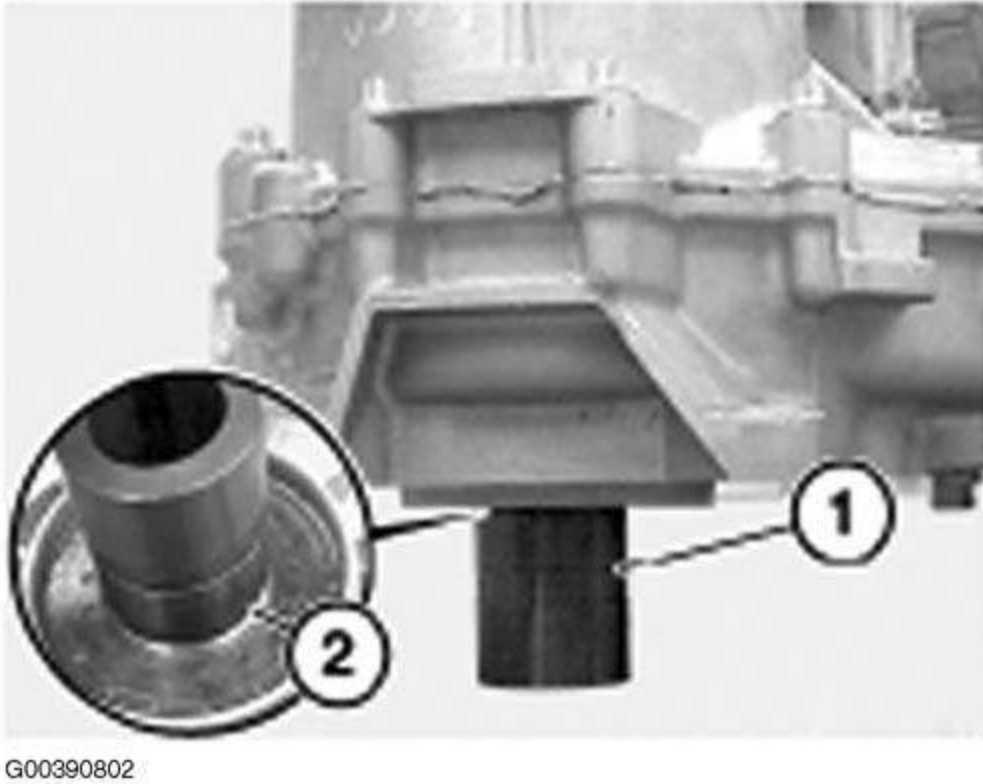
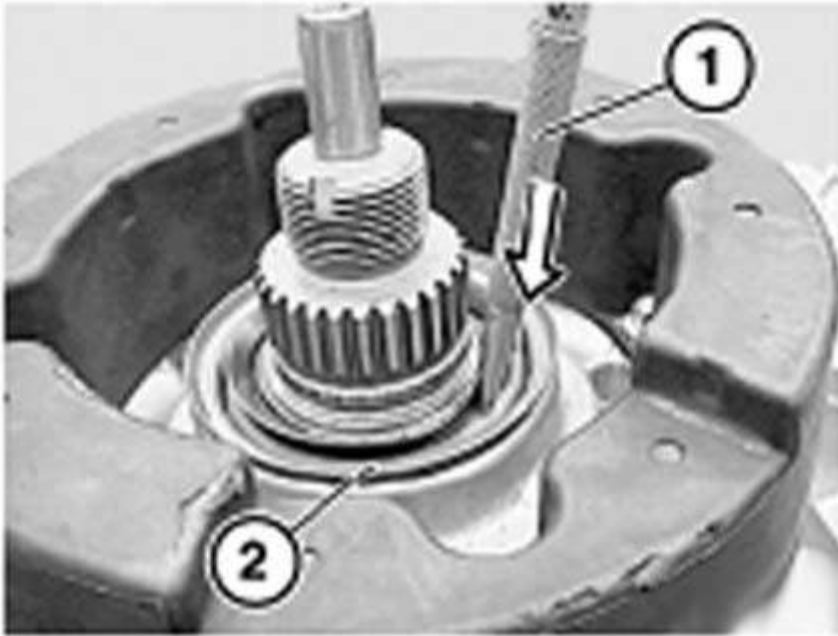


Fig. 13: Identifying Output Shaft Without Mounting Groove
Courtesy of BMW OF NORTH AMERICA, INC.

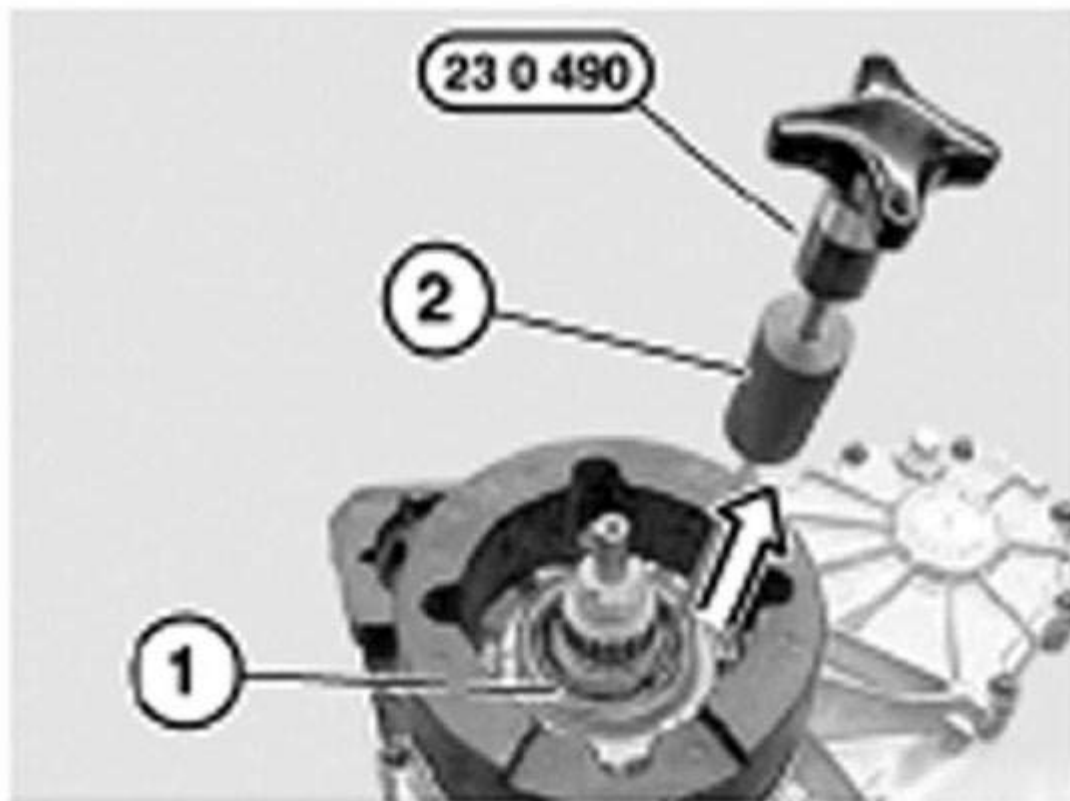
Push on output flange. Fit retaining ring. Drive a hole into radial shaft seal (2) using a center punch (1). See **Fig. 14**. Do not use a drill as drillings may result in transmission malfunction.



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Fig. 14: Driving Hole Into Radial Shaft Seal Using A Center Punch
Courtesy of BMW OF NORTH AMERICA, INC.

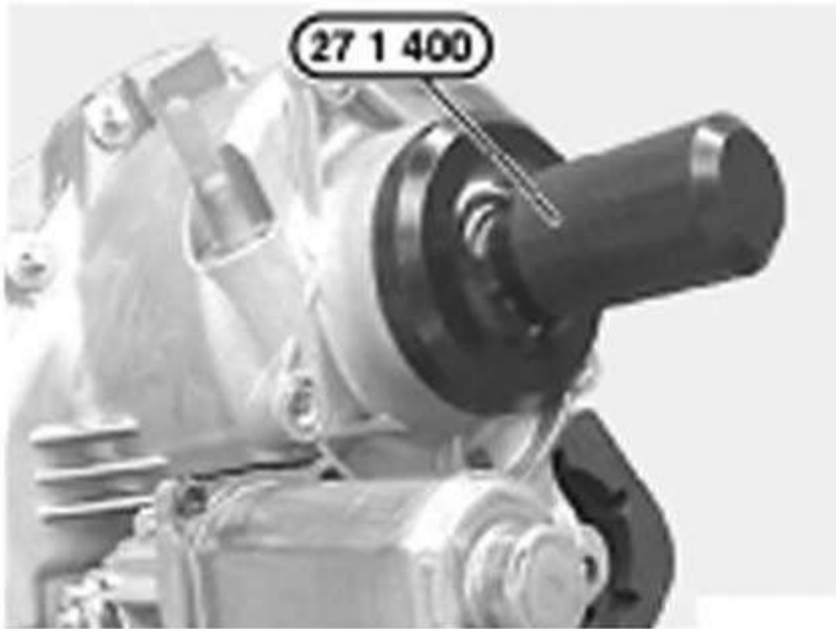
Screw in special tool (23 0 490). Drive out radial shaft seal (1) with impact weight (2). See **Fig. 15**.



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Fig. 15: Driving Out Radial Shaft Seal With Impact Weight
Courtesy of BMW OF NORTH AMERICA, INC.

Drive in radial shaft seal with special tool (27 1 400). See **Fig. 16**.



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Fig. 16: Driving In Radial Shaft Seal

Courtesy of BMW OF NORTH AMERICA, INC.

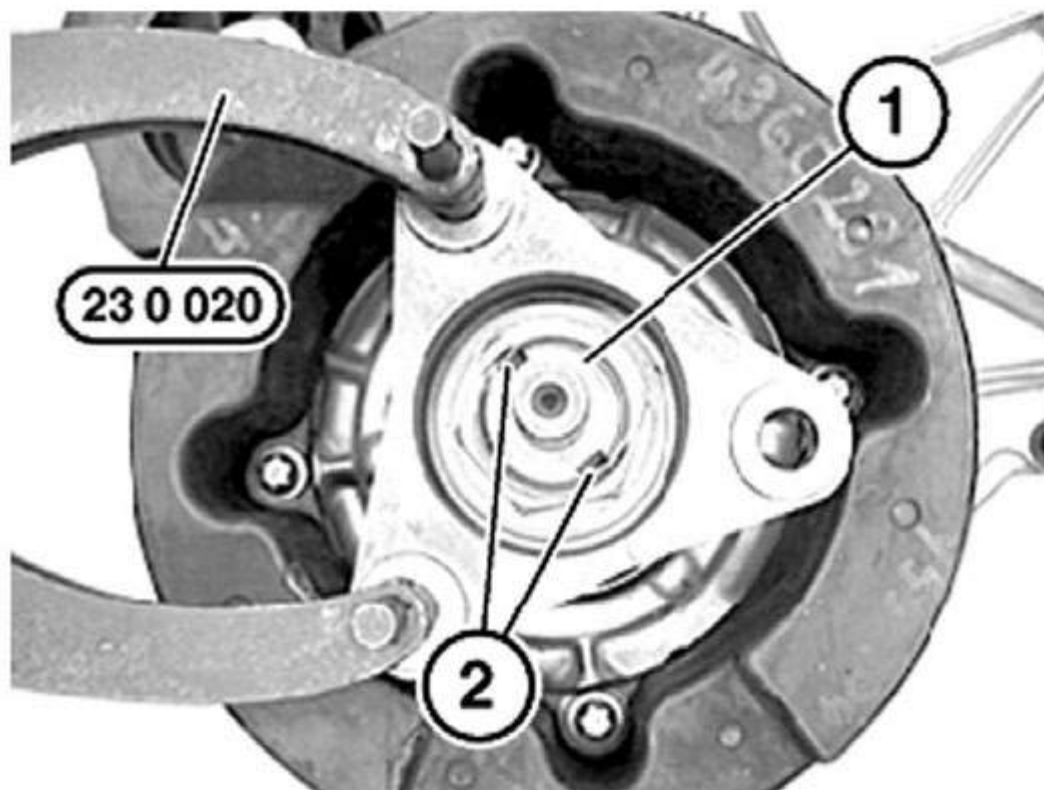
Add final details to vehicle. Check oil level. Check transmission for leaks.

RADIAL SHAFT SEAL FOR OUTPUT FLANGE (NV125/LWX-500)

NOTE: Numbers in text refer to numbers in figures.

Remove exhaust system. See EXHAUST SYSTEM . Detach propeller shaft at transfer case. SeeDRIVE SHAFTS & UNIVERSAL JOINTS article.

Secure output flange with special tool (23 0 020). Release nut (1) with special tool (23 2 320). During installation, replace nut (1). See **Fig. 17**.

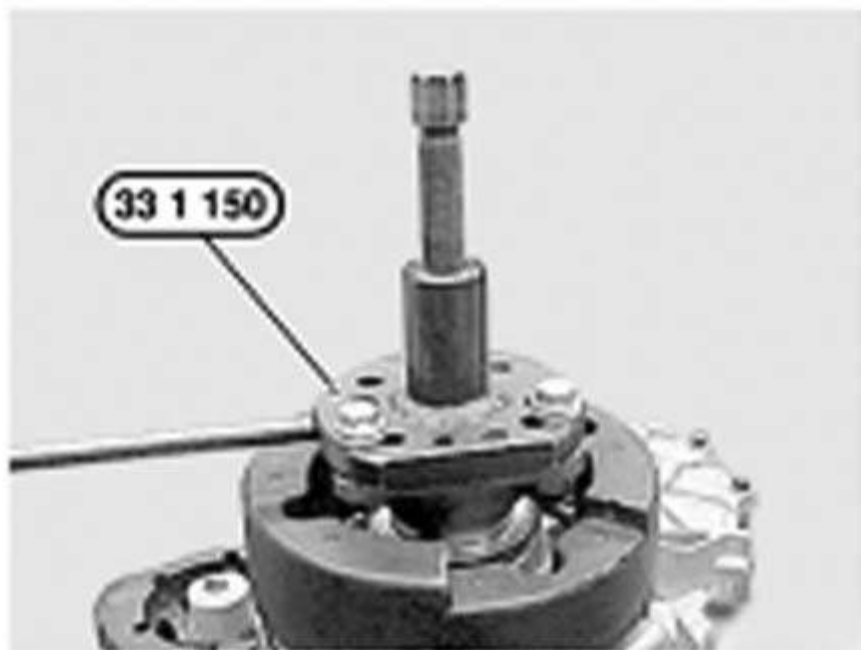


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Fig. 17: Identifying Nut

Courtesy of BMW OF NORTH AMERICA, INC.

Secure nut (1) at points (2). Remove drive flange with special tool (33 1 150). See **Fig. 18**.

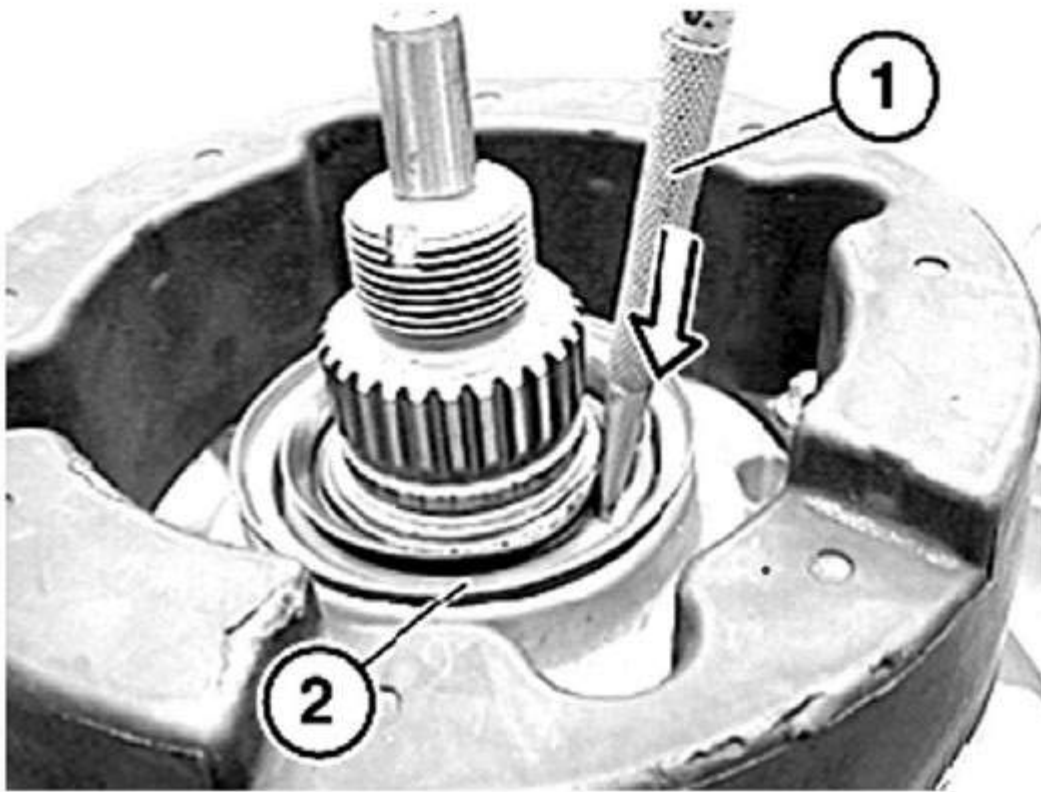


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Fig. 18: Removing Drive Flange

Courtesy of BMW OF NORTH AMERICA, INC.

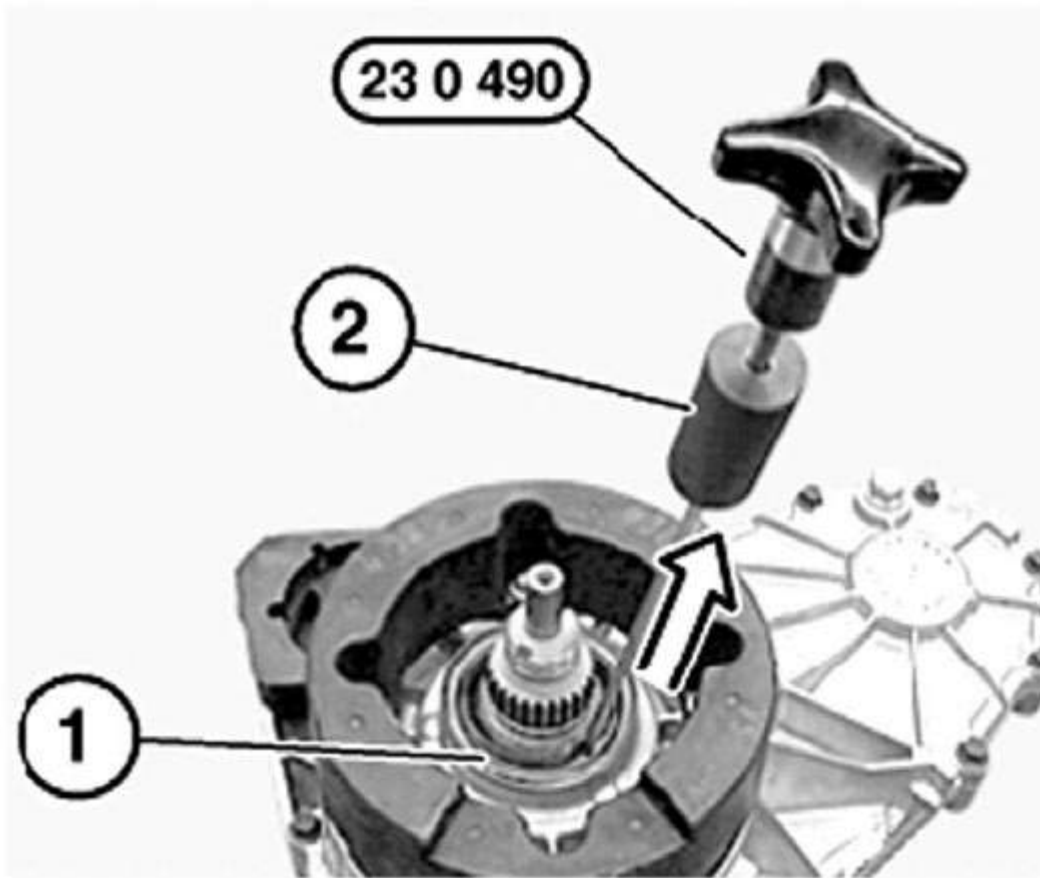
Drive a hole into radial shaft seal (2) using a center punch (1). See **Fig. 19**.



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Fig. 19: Driving Hole Into Radial Shaft Seal Using Center Punch
Courtesy of BMW OF NORTH AMERICA, INC.

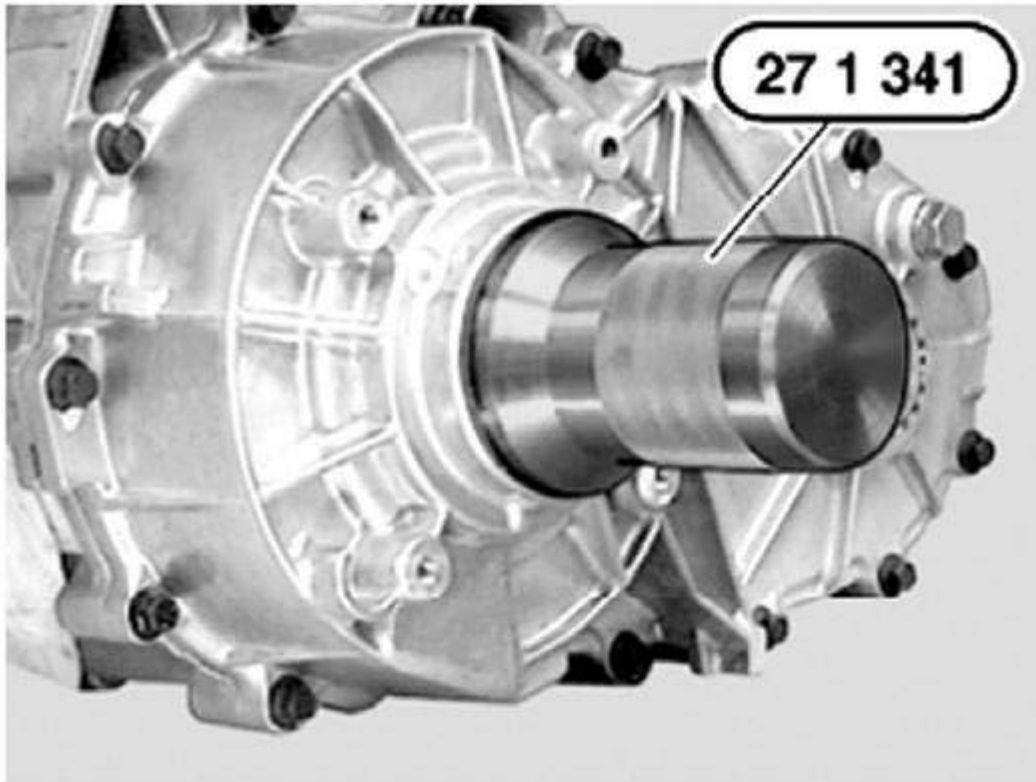
Do not use a drill as drillings may result in transmission malfunction. Install special tool (23 0 490). Drive out radial shaft seal (1) with impact weight (2). See **Fig. 20**.



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Fig. 20: Driving Out Radial Shaft Seal With Impact Weight
Courtesy of BMW OF NORTH AMERICA, INC.

Drive in radial shaft seal with special tool (27 1 380). See **Fig. 21**. During installation, radial shaft seal must rest flush on housing. Add final details to vehicle. Check oil level. Check transmission for leaks.



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Fig. 21: Driving In Radial Shaft Seal

Courtesy of BMW OF NORTH AMERICA, INC.

TORQUE SPECIFICATIONS

TORQUE SPECIFICATIONS

Application	Ft. Lbs. (N.m)
Drain Plug	24 (33)
Servomotor To Transfer Box	16 (22)
Transfer Box To Transmission	32 (43)
Transmission Crossmember To Rubber Mounts	55 (74)
Transmission Crossmember To Body	30 (41)
Vibration Damper To Transfer Box	17 (23)
INCH Lbs. (N.m)	
Resistor To Transfer Case	17-44 (2-5)