Haynes shows you how

BMW 3-Series and Z4 (99-05) Includes 2006 325ci/330ci Coupe and Convertible models Haynes Online Manual.

3 Oil seals - replacement

Input shaft oil seal

1 With the transmission removed as described in Section 5 , proceed as follows.

2 Remove the clutch release bearing and lever as described in Chapter 8 .

3 Unscrew the securing bolts and withdraw the clutch release bearing guide sleeve from the bellhousing **(see illustration).**

3.3 Remove the four bolts securing the clutch release bearing guide sleeve

4 Note the fitted depth of the now-exposed input shaft oil seal.

5 Drill one small hole in the oil seal (two small pilot holes should be provided at opposite points on the seal. Coat the end of the drill bit with grease to prevent any metal shavings from entering the transmission from the holes **(see illustration).**

3.5 Drill a small hole in the oil seal

6 Using a small drift, tap one side of the seal (opposite to the hole) into the bellhousing as far as the stop.

7 Screw a small self-tapping screw into the opposite side of the seal, and use pliers to pull out the seal **(see illustration).**

3.7 Insert a self-tapping screw into the hole, and pull the seal out with a pair of pliers

8 Clean the oil seal seating surface. Also make sure there are no metal chips present from the drilling operation.

9 Lubricate the lips of the new oil seal with a little clean transmission oil, then carefully slide the seal over the input shaft into position in the bellhousing.

10 Tap the oil seal into the bellhousing to the previously noted depth.

11 Reinstall the guide sleeve to the transmission housing, tighten the retaining bolts securely, using a drop of locking compound on the threads of the bolts.

12 Reinstall the clutch release lever and bearing as described in Chapter 8 .

13 Reinstall the transmission as described in Section 5 , then check the transmission oil level as described in Chapter 1 .

Output flange oil seal

Note:
Thread-locking compound will be required for the transmission flange nut on installation.

14 Raise the vehicle and support it securely on jackstands.

15 Disconnect the driveshaft from the transmission flange, and support it clear of the transmission using wire or string. See Chapter 8 for details.

16 Where applicable, pry the transmission flange nut cover plate from the flange using a screwdriver. Discard the cover plate - it is not required on installation. If necessary, support the transmission, and remove the transmission crossmember to improve access.

17 Hold the transmission flange by bolting a forked or two-legged tool to two of the flange bolt holes, then unscrew the flange securing nut using a deep socket and extension bar **(see illustration).**

3.17 Hold the output flange and remove the nut using a deep socket

18 Using a puller, draw the flange from the end of the transmission output shaft **(see illustration).** Be prepared for oil spillage.

3.18 Use a three-jaw puller to remove the output flange

19 Note the fitted depth of the oil seal then, then using a puller (take care to avoid damage to the transmission output shaft), pull the oil seal from the transmission casing **(see illustration).**

3.19 Carefully pull the seal from place

20 Clean the oil seal seating surface.

21 Lubricate the lips of the new oil seal with a little clean transmission oil, then carefully tap the seal into the transmission casing to the to the previously noted depth **(see illustration).**

3.21 Tap the seal into place using a seal driver or a socket which only contacts the hard outer edge of the seal

22 Reinstall the flange to the output shaft. **Note:** *To ease reinstallation of the flange, immerse it in hot water for a few minutes, then install it on the shaft.*

23 Tighten the flange nut to the Stage one torque setting, then loosen and remove the nut (Stage two). Coat the threads of the flange nut with a non-hardening thread-locking compound, then tighten the nut to the Stage three torque as specified. Hold the flange the same way as removal in step 17.

24 If a flange nut cover plate was originally fitted, discard it. There is no need to fit a cover plate on installation.

25 Reconnect the driveshaft to the transmission flange as described in Chapter 8 , then check the transmission oil level as described in Chapter 1 , and lower the vehicle to the ground.

Gear selector shaft oil seal

Note:
A new selector shaft eye securing roll-pin will be required on installation.

26 Raise the vehicle and support it securely on jackstands.

27 Disconnect the driveshaft from the transmission flange, and support it clear of the transmission using wire or string. See Chapter 8 for details. For improved access, support the transmission, and remove the transmission crossmember.

28 Slide back the locking collar, then slide out the pin securing the gear selector shaft eye to the end of the gear selector shaft.

29 Pull the gear selector shaft eye (complete with gear linkage) off the end of the selector shaft, and move the linkage clear of the selector shaft.

30 Using a small flat-bladed screwdriver, pry the selector shaft oil seal from the transmission casing.

31 Clean the oil seal seating surface, then tap the new seal into position using a seal driver or a small socket of the correct diameter **(see illustration).**

3.31 Tap the new selector shaft oil seal into position

32 Check the condition of the rubber washer in the end of the selector shaft eye and replace if necessary.

33 Push the selector shaft eye back onto the end of the selector shaft, then align the holes in the eye and shaft and secure the eye to the shaft using the pin.

34 Slide the locking collar into position over the roll-pin.

35 Reconnect the driveshaft to the transmission flange as described in Chapter 8 .

36 Check the transmission oil level as described in Chapter 1 , then lower the vehicle to the ground.