



**Haynes**  
shows you how

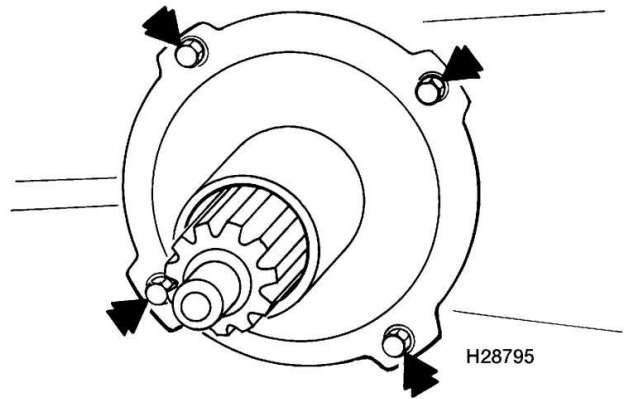
**BMW 3-Series (92-98) & Z3 (96-98) Haynes Online Manual**

## 4 Oil seals - replacement

### Input shaft oil seal

- 1 With the transmission removed (see [Section 6](#)), proceed as follows.
- 2 Remove the clutch release bearing and lever (see [Chapter 8](#)).
- 3 Unscrew the securing bolts and withdraw the clutch release bearing guide sleeve from the transmission bellhousing (see illustration) .

#### 4.3 Clutch release bearing guide sleeve securing bolts (arrows)



- 4 Note the fitted depth of the now-exposed input shaft oil seal.
- 5 Drill two small holes in the oil seal (two small pilot holes should be provided at opposite points on the seal - a sharp instrument can be used to extend these holes all the way through the seal).
- 6 Using a small drift, tap one side of the seal (adjacent to one of the holes) 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.
- 8 Clean the oil seal seating surface.

9 Wind a length of tape over the splines on the input shaft to prevent damage to the new seal as it is slid over the shaft.

10 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.

11 Remove the tape from the input shaft then, using a tube of the correct diameter, tap the oil seal into the bellhousing to the previously noted depth.

12 Install the clutch release lever and bearing (see [Chapter 8](#) ).

13 Install the transmission (see [Section 6](#) ), then check the transmission oil level (see [Section 2](#) ).

## Output flange oil seal

### Note:

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

14 Jack up the vehicle and support securely on axle stands.

15 Disconnect the driveshaft from the transmission flange, and support it clear of the transmission using wire or string. Refer to [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.

17 Counterhold 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 socket and extension bar. **Warning:** *The nut is very tight.*

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

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

20 Clean the oil seal seating surface.

21 Lubricate the lips of the new oil seal with a little clean transmission oil, then tap the seal into the transmission casing to the to the previously noted depth.

22 Install the flange to the output shaft. **Caution:** *When working on S5D 260Z or S5D 310Z-type transmissions, the flange must be heated to a temperature of 175-degrees F before fitting. The transmission type can be identified from the shape of the output flange - on S5D 260Z and S5D 310Z units the flange has three arms with a bolt hole in each - on other transmissions the flange has a triangular plate with a bolt hole at each corner of the*

*triangle. Consult a BMW dealer if there is any doubt about the type of transmission fitted . **Warning:** If the transmission flange is heated, take precautions against burns - the metal will stay hot for some time.*

23 Coat the threads of the flange nut with thread-locking compound, then tighten the nut to the specified torque in the three stages given in the Specifications. Counterhold the flange as during removal.

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 (see [Chapter 8](#) ), then check the transmission oil level (see [Section 2](#) ), 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 Jack up the vehicle and support securely on axle stands.

27 Disconnect the driveshaft from the transmission flange, and support it clear of the transmission using wire or string. Refer to [Chapter 8](#) for details.

28 Slide back the locking sleeve, then drive out the roll-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 small socket or tube of the correct diameter.

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 a new roll-pin.

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

35 Reconnect the driveshaft to the transmission flange (see [Chapter 8](#) ).

36 Check the transmission oil level (see [Section 2](#) ), then lower the vehicle to the ground.