

**Haynes**
*shows you how***BMW 3-Series 320i & 320xi (12-14), 325i, 325xi, 330i & 330xi (06) & 328i & 328xi (07-14) Haynes Online Manual**

20 Anti-lock Brake System (ABS) components - removal and installation

Accumulator/modulator/hydraulic unit

1 Although it is possible for the home mechanic to remove the hydraulic unit, the unit's self-diagnosis system must be tested and bled by BMW service test equipment. Removal and installation of the hydraulic unit should be entrusted to a BMW dealer or qualified brake shop.

Electronic control module (ECM)

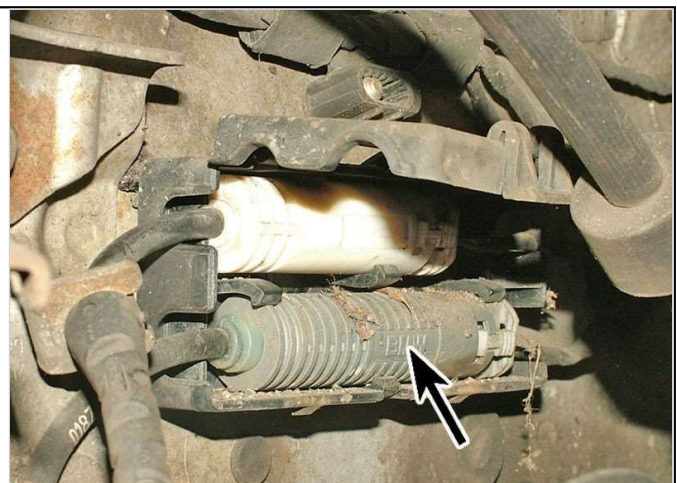
2 In order to remove the ECM, the hydraulic unit must first be removed, as the ECM is screwed to the side of the hydraulic unit. Removal and installation of the ECM should be entrusted to a BMW dealer or qualified brake shop.

Front wheel speed sensor

Removal

3 Block the rear wheels, then firmly apply the parking brake. Raise the front of the vehicle and support it securely on jackstands. Remove the appropriate front wheel. Trace the wiring back from the sensor to the connector, which is situated in a protective plastic box. Unclip the lid, then free the wiring connector and disconnect it from the main harness (see illustration) .

20.3 Open the connector box on the inner fender and disconnect the ABS sensor wiring plug



4 Loosen and remove the bolt securing the sensor to the hub carrier, then remove the sensor and lead assembly from the vehicle (see illustration) .

20.4 Remove ABS sensor retaining bolt and pull the ABS sensor from the hub carrier



Installation

5 Apply a thin coat of multi-purpose grease to the sensor tip.

6 Ensure that the sensor and hub carrier sealing surfaces are clean, then install the sensor to the hub. Install the retaining bolt and tighten it to the specified torque.

7 Ensure that the sensor wiring is correctly routed and retained by all the necessary clips, then reconnect the sensor electrical connector. Install the sensor connector into the box and securely clip the lid in position.

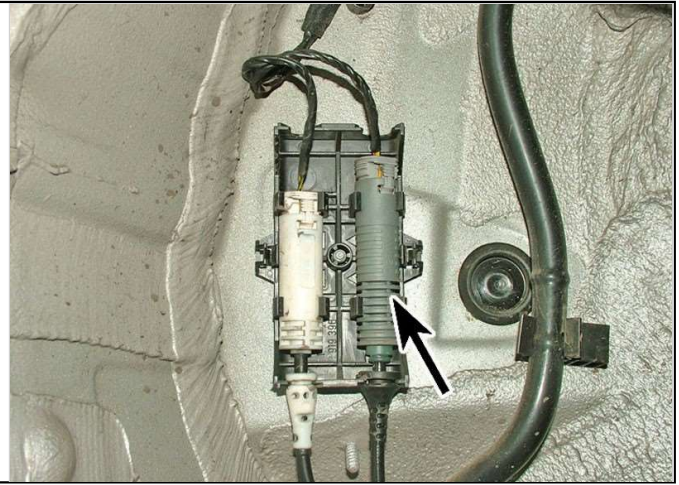
8 Install the wheel, then lower the vehicle to the ground and tighten the wheel bolts to the specified torque.

Rear wheel speed sensor

9 Block the front wheels, then raise the rear of the vehicle and support it securely on jackstands. Remove the appropriate wheel.

10 Remove the sensor (see Steps 3 and 4). Note that the sensor wiring connector is located behind the inner wheel well liner. Remove the liner bolts and pull the rear section of the liner forwards to access the connector (see illustration) .

20.10 Fold back the inner fender liner, open the connector box, and disconnect the ABS sensor wiring plug



11 Install the sensor (see Steps 5 through 8) (see illustration) .

20.11 Remove the mounting bolt and pull the sensor from the hub carrier



Front reluctor rings

12 The front reluctor rings are fixed onto the rear of the wheel hubs. Examine the rings for damage such as chipped or missing teeth. If replacement is necessary, the complete hub assembly must be disassembled and the bearings replaced (see [Chapter 10](#)).

Rear reluctor rings

13 The rear reluctor rings are pressed onto the driveshaft outer joints. Examine the rings for signs of damage such as chipped or missing teeth, and replace if necessary. If replacement is required, the driveaxle assembly must be replaced (see [Chapter 8](#)).