

This Service Bulletin is a supplement to Service Manual, Group 59, "Anti-lock Brake System (ABS), Bendix, VNL, VNM" publication number PV776-29984/1.

Date Group Page

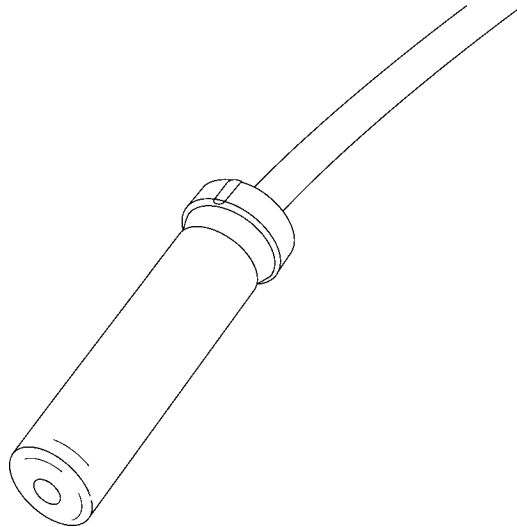
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Anti-Lock Brake System (ABS)

Bendix

VNL, VNM

## Replacing Wheel Speed Sensors



W5000579

**(Effective from November 1999)**

This information contains the corrected procedures for removing and installing wheel speed sensors on the front and rear axles. In particular, please note the following:



### CAUTION

Possible sensor damage. **DO NOT** pull on the sensor cable to remove it, as this may permanently damage the sensor. **DO NOT** use any device to pry the sensor from its mounting block, as this may damage the steel casing on the sensor and can void any existing warranty.

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- ["Wheel Speed Sensor, Replacement \(Rear\)" page 4](#)

## 5939-03-02-01 Wheel Speed Sensor, Replacement (Front)

See also:

- “Replacing Wheel Speed Sensors” page 1



### DANGER

Before working on a vehicle, set the parking brakes, place the transmission in neutral, and block the wheels. Failure to do so can result in unexpected vehicle movement and can cause serious personal injury or death.



### DANGER

Do not work under a vehicle supported only by jacks. Jacks can slip out from under the truck or fall over, causing personal injury or death. Always use jack stands under the truck.

## Removal

**1**  
Park the vehicle on a level surface. Apply the parking brake, place the transmission in neutral, and block the rear wheels. Make sure vehicle ignition is in the OFF position.

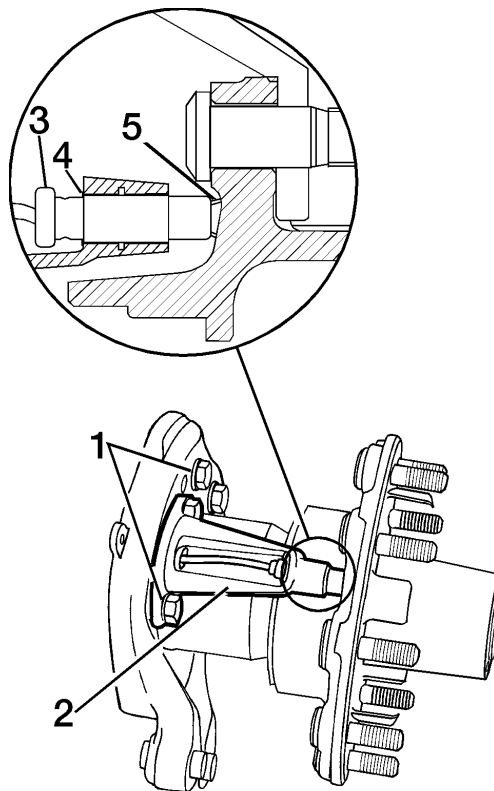
**2**  
Raise the wheel with the faulty sensor. Place jack stands under the axle.

**3**  
Using wheel lift 9999676, remove the wheel from the axle.

**4**  
If equipped with spring brakes, release the brakes. Back off the slack adjuster.

**5**  
Remove the brake drum, cam rollers, return spring, and brake shoes.

6



W5000635

- 1 Spider mounting bolts
- 2 Sensor bracket
- 3 Sensor
- 4 Spring clip
- 5 Tooth wheel



### CAUTION

Possible sensor damage. **DO NOT** pull on the sensor cable to remove it, as this may permanently damage the sensor. **DO NOT** use any device to pry the sensor from its mounting block, as this may damage the steel casing on the sensor and can void any existing warranty.

Remove the mounting bolts for the sensor bracket. Cut the tie straps along the sensor cable. Remove the P-clips at the S-cam tube, bracket, and frame rail. Using a slight twisting motion, remove the sensor from its mounting block. Use extreme care not to damage the tooth wheel or the sensor.

7

Remove the sensor spring clip from the mounting block.

8

Disconnect any fasteners that hold the sensor cable and the hose clamp to other components.

9

Disconnect the sensor from the vehicle wiring at the connector closest to the sensor.

10

Pull the sensor cable through the hole in the frame rail.

## Installation

1

Push the sensor spring clip all the way into the mounting block.

**Note:** Spring clip must be installed with the flange stops facing the in-board side of the vehicle.

2

Insert the sensor cable through the brake spider housing, around the S-cam tube and bracket, up the brake chamber airline, and route the cable along the frame rail.

3

Connect the sensor cable connector.

4

Install the sensor into the bracket and spring clip. Install the bracket and sensor onto the spider assembly. Tighten the bracket to  $175 \pm 15$  Nm ( $129 \pm 11$  ft-lb).

5

Install the P-clip on the S-cam tube and bracket. Fasten the sensor cable to the brake air line using a tie strap. Install P-clip inside the frame rail.

6



### CAUTION

Potential sensor damage. **DO NOT** use a screwdriver or sharp instrument to insert or adjust the sensor. **DO NOT** use a hammer to drive the sensor into position. Use of a sharp instrument or hammer can permanently damage the sensor.

7

Using a ABS sensor adjustment tool J-42942, adjust the sensor against the tooth wheel, and install the rubber grommet.

8

Install the brake lining onto the spider housing. Install the return spring, S-cam rollers, and brake drum.

9

Install the wheel and tighten wheel nuts to  $645 \pm 35$  Nm ( $475 \pm 25$  ft-lb).

10

Adjust the front axle brakes.

11

Remove the jack stand(s) from under the vehicle.

12

Lower the vehicle and remove the wheel blocks.

13

Readjust brakes.

**14**

Verify proper sensor adjustment; refer to:

**Service Manual** PV776–TSP25433/1  
*Anti-Lock Brake System (ABS), Bendix, VNL, VNM*

**IMPACT**

Function Group 593  
Information Type: Description  
"Sensor Adjustment Check"

## 5939-03-02-02

# Wheel Speed Sensor, Replacement (Rear)

See also:

- "Replacing Wheel Speed Sensors" page 1



### DANGER

Before working on a vehicle, set the parking brakes, place the transmission in neutral, and block the wheels. Failure to do so can result in unexpected vehicle movement and can cause serious personal injury or death.



### DANGER

Do not work under a vehicle supported only by jacks. Jacks can slip out from under the truck or fall over, causing personal injury or death. Always use jack stands under the truck.

## Removal

**1**

Park the vehicle on a level surface. Apply the parking brake, place the transmission in neutral, and block the rear wheels. Make sure vehicle ignition is in the OFF position.

**2**

Raise the wheel with the faulty sensor. Place jack stands under the axle.

**3**

Using wheel lift 9999676, remove the wheel from the axle.

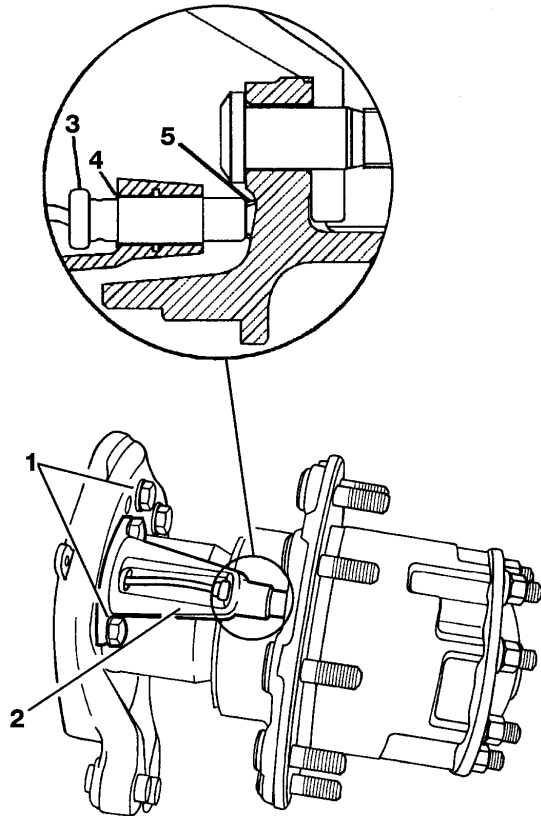
**4**

If equipped with spring brakes, release the brakes. Back off the slack adjuster.

**5**

Remove the brake drum, cam rollers, return spring, and brake shoes.

6



W5000702

- 1 Spider mounting bolts
- 2 Sensor bracket
- 3 Sensor
- 4 Spring clip
- 5 Tooth wheel

**! CAUTION**

Possible sensor damage. **DO NOT** pull on the sensor cable to remove it, as this may permanently damage the sensor. **DO NOT** use any device to pry the sensor from its mounting block, as this may damage the steel casing on the sensor and can void any existing warranty.

Remove the mounting bolts for the sensor bracket. Cut the tie straps along the sensor cable. Remove the P-clips at the S-cam tube, bracket, and frame rail. Using a slight twisting motion, remove the sensor from its mounting block. Use extreme care not to damage the tooth wheel or the sensor.

7

Remove the sensor spring clip from the mounting block.

8

Disconnect any fasteners that hold the sensor cable and the hose clamp to other components.

9

Disconnect the sensor from the vehicle wiring at the connector closest to the sensor.

10

Pull the sensor cable through the hole in the frame rail.

## Installation

1

Push the sensor spring clip all the way into the mounting block.

**Note:** Spring clip must be installed with the flange stops facing the in-board side of the vehicle.

2

Insert the sensor cable through the brake spider housing, around the S-cam tube, bracket, up the brake chamber airline, and route the cable along the frame rail.

3

Connect the sensor cable connector.

4

Install the sensor into the bracket and spring clip. Install the bracket and sensor onto the spider assembly. Tighten the bracket to 225 ± 25 Nm (166 ± 18 ft-lb).

225 ± 25 Nm  
(166 ± 18 ft-lb)

5

Install the P-clip on the S-cam tube and bracket. Fasten the sensor cable to the brake air line using a tie strap. Install P-clip inside the frame rail.

6



**CAUTION**

Potential sensor damage. **DO NOT** use a screwdriver or sharp instrument to insert or adjust the sensor. **DO NOT** use a hammer to drive the sensor into position. Use of a sharp instrument or hammer can permanently damage the sensor.

7

Using ABS sensor adjustment tool J-42942, adjust the sensor against the tooth wheel, and install the rubber grommet. J-42942

8

Install the brake lining onto the spider housing. Install the return spring, S-cam rollers, and brake drum.

9

Install the wheel and tighten wheel nuts to 645 ± 35 Nm (475 ± 25 ft-lb). 645 ± 35 Nm (475 ± 25 ft-lb)

10

Adjust the rear axle brakes.

11

Remove the jack stand(s) from under the vehicle.

12

Lower the vehicle and remove the wheel blocks.

13

Readjust brakes.

14

Verify proper sensor adjustment; refer to:

**Service Manual**

PV776–TSP25433/1  
*Anti-Lock Brake System (ABS), Bendix, VNL, VNM*

**IMPACT**

Function Group 593  
Information Type: Description  
"Sensor Adjustment Check"