Odometer Gears Ltd.
757-593-3478
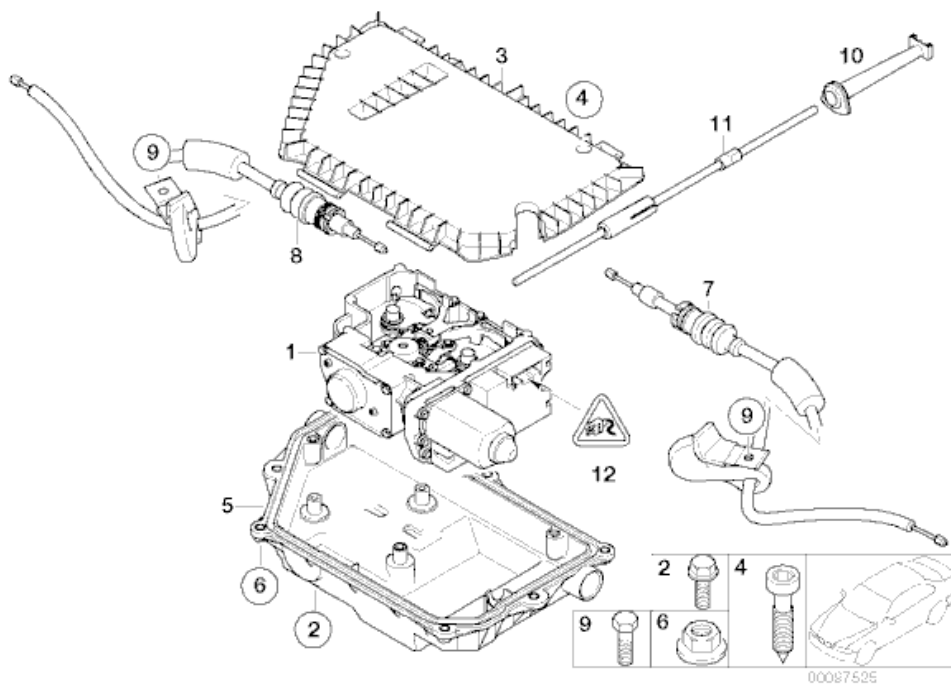
www.odometergears.com

Parking Brake Fix

BMW E65/66 2002 - 08
Rolls Royce Phantom 2003 - present

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Also see video instructions: http://www.odometergears.com/how_to.php

The parking brake actuator (#1) is located in the trunk in front of the spare tire location on the trunk floor

http://www.realoem.com/bmw/showparts.do?model=GN63&mospid=47785&btnr=34_1240&hg=34&fg=30

Tools Needed:

Hydraulic Press
Bench Vise
Drill Press
1/8" Drill Bit for Metal (for roll pin)
#20 and #25 Torx
7/8" deep socket
Hammer
Compatible BMW diagnostic computer

Remove plastic cover over parking brake actuator. This allows access to the internal retainer for the metal shaft screw to be removed later.
Remove the four side cover screws using a T25 Torx driver.

Once you remove the four screws you can remove the cover. Inside you will see the damaged gears.

Next remove the T20 Torx screw for the retainer that secures the metal shaft.

And then remove the retainer.

Next unscrew the main shaft that the large gear was on. Also remove the smaller gear, this just pulls straight out.

Use the supplied press tool (1 inch ID.), a narrow/short press tool or 2 or 3 6mm nuts stacked on top of one another and a hydraulic press to press apart the main shaft.

You want to center the narrow/short press tool or 2 or 3 6mm nuts stacked on top of one another on the center of the shaft. The edge of the shaft metal will curl upwards during the pressing operation. The press tool needs to allow this curl to happen in order to help prevent the metal components from shattering. If you happen to shatter any metal parts we do not have access to supply these and you will need to either source a used unit or purchase one new through BMW. If you have to purchase a new unit you can return our complete kit for a refund minus shipping.

Take the old tapered metal parts, using a hammer gently tap into the new plastic gear until fully seated.

Using a 7/8" socket and a bench vise press the metal gear out of the plastic gear.
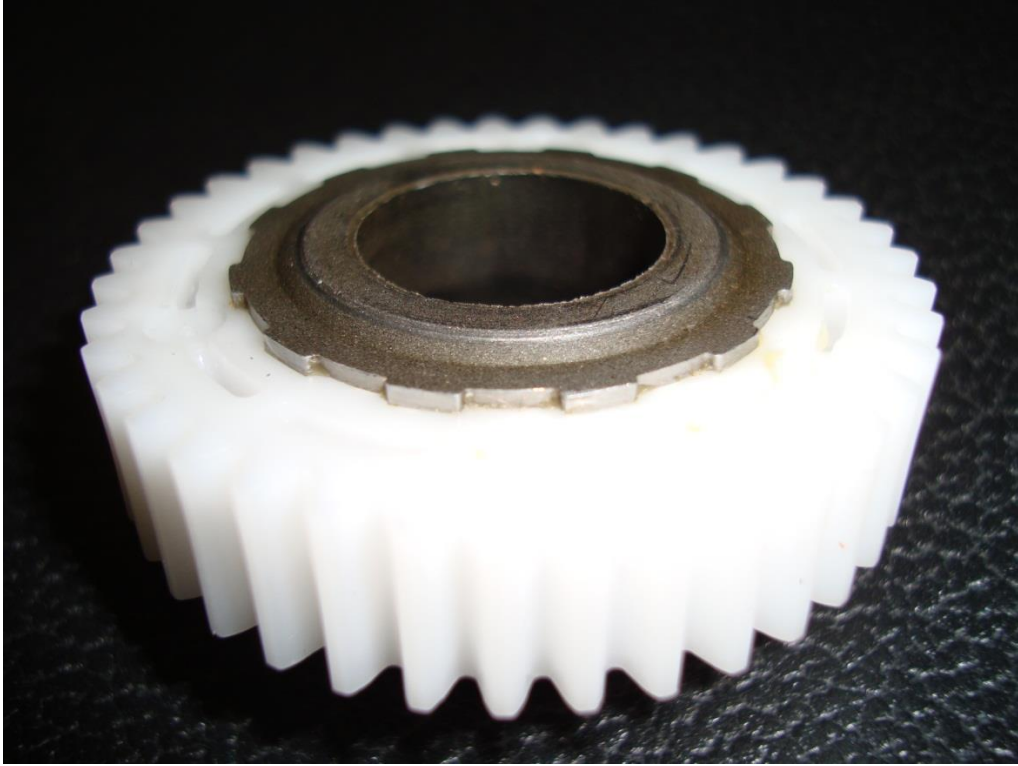
Using a hammer gently tap the metal gear into the new plastic gear until fully seated.

Reinstall the smaller gear just by sliding into place.

Now press together the parts on the larger shaft in the reverse order removed. Make sure to fully seat each part.

This is what the gear should look like when fully seated! Notice the 1/8" lip of metal sticking out.

Before installing the new gear apply a small amount of grease to the bushing/bearing section. Press on the upper collar, being careful not to install too tightly as to not bind the movement.

Place the assembly into a bench vise and using a drill press with a 1/8" drill bit. Drill a hole through the upper collar and into the center shaft. Be sure to drill in at least ½" (12.71mm) so that the split pin does not bottom out before being installed flush.
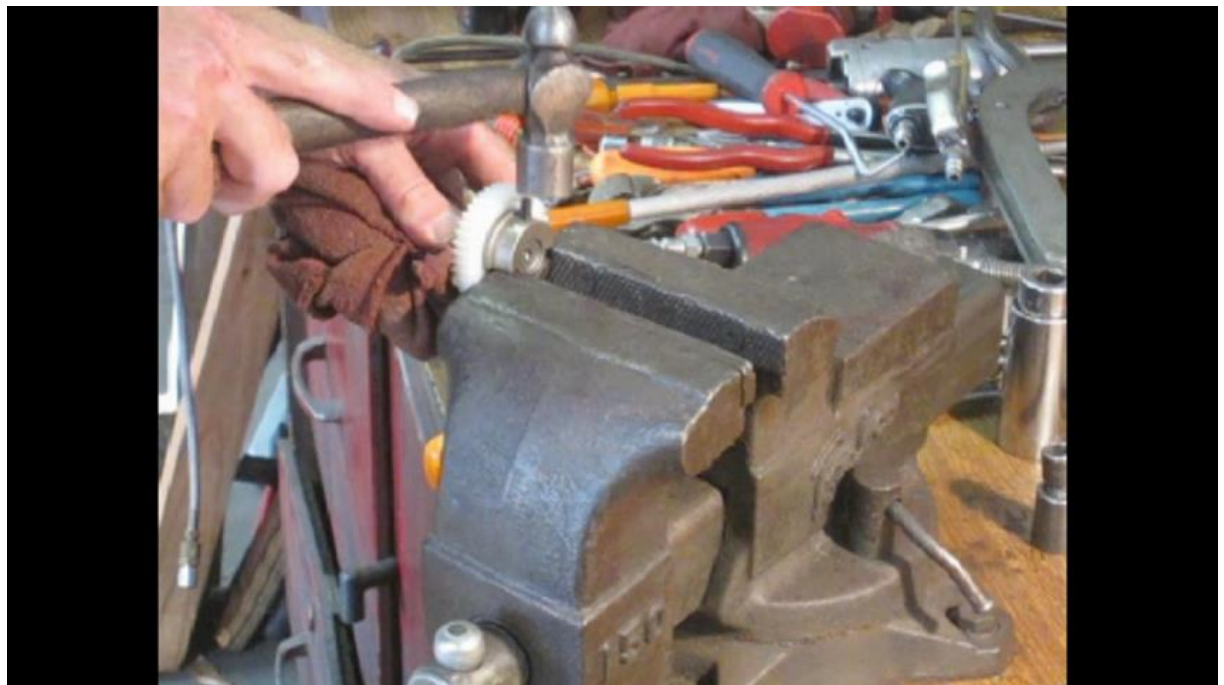
Reinstall the main shaft with the new gear: pull up on the internal mechanism and screw the shaft in until it stops, gently press straight down until the gears mesh together and are fully installed.

Reinstall the retainer for the shaft with T20 Torx screw.

Reinstall unit in vehicle and reinstall covers.

Adjust the parking brake cables and parking brakes according to BMW procedures. Failure to do so will cause the new gears to strip or break.

Final Steps

~Clear codes for parking brake system using an appropriate scan tool

~Ignition on and press parking brake button 4 times after clearing codes

*Failure to clear codes will render the parking brake system inoperative

To reset brake system using instrument cluster:

- ➢ **Place key in ignition**
- ➢ **<u>DO NOT</u> depress brake pedal**
- ➢ **Press start/stop button, all dash warning lights will illuminate**
- ➢ **Press and hold odometer reset button for 5 to 10 seconds, a menu will illuminate in the middle of the speedometer.**
- ➢ **Press the odometer reset button and release in 1 second intervals until "Front Brakes" is selected**
- ➢ **Press and hold the odometer reset button, a message will illuminate in the middle of the tachometer "Okay to reset".**
- ➢ **Press and hold the odometer reset button to accept**
- ➢ **Press the odometer reset button and release in 1 second intervals until "Rear Brakes" is selected**
- ➢ **Press and hold the odometer reset button, a message will illuminate in the middle of the tachometer "Okay to reset".**
- ➢ **Press and hold the odometer reset button to accept**

BMW Description of the functionality of the Electromechanical Parking Brake.
Starting off on a slope, in stop-and-go traffic or whenever the engine is turned off: the Electromechanical Parking Brake ensures your BMW stays comfortably and reliably at a standstill whenever required.

Working together with Dynamic Stability Control (DSC), the Electromechanical Parking Brake controls all braking processes whenever the vehicle is not moving. If the engine is running, it operates hydraulically via the DSC brake system. If the engine is switched off, electromechanical brake cables support the function of the conventional handbrake.
The Electromechanical Parking Brake can be activated by pressing a button on the instrument panel or, depending on your BMW model, on the centre console. It also offers an auto stop and hill hold function.
Auto stop automatically activates the parking brake whenever the vehicle comes to a halt; it disengages the moment you touch the accelerator. In vehicles with automatic transmission, it is no longer necessary to keep the brake pedal applied to prevent vehicle creep when stopping in gear, such as in stop-and-go traffic or at traffic lights. This makes city driving significantly more comfortable.
Hill hold automatically applies the parking brake whenever your BMW stops on a slope, preventing unwanted rolling, and disengages it when you start off again.
http://www.bmw.com/com/en/insights/technology/technology_guide/articles/electromechanical_parking_brake.html