

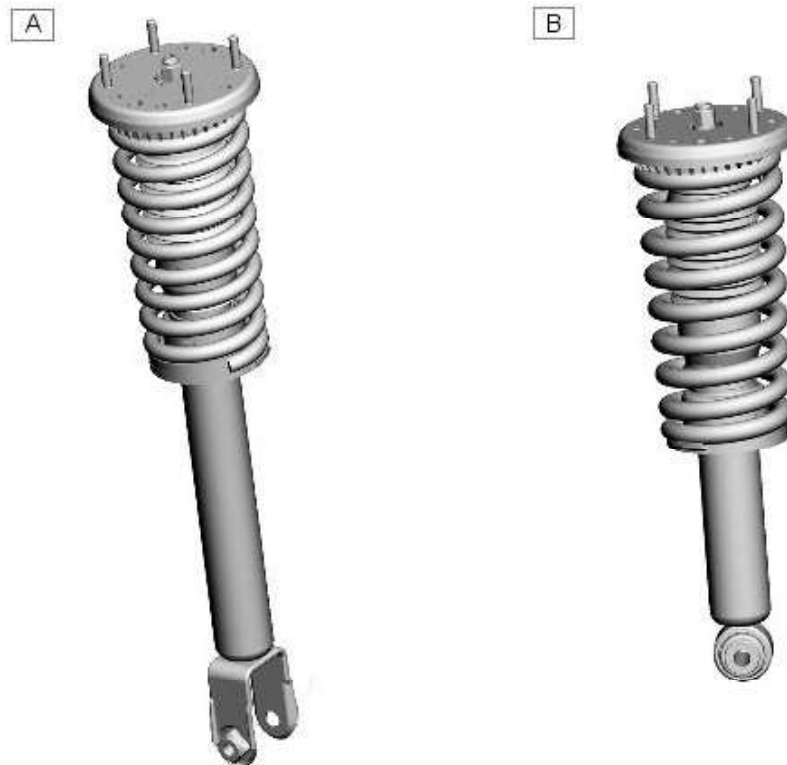
INTRODUCTION

A continuously variable damping system, known as adaptive dynamics, is available on certain models. Adaptive dynamics is an electronically controlled suspension system which continuously adjusts the damping characteristics of the suspension dampers in reaction to the current driving conditions.

The system is controlled by an ADCM (adaptive damping control module). The ADCM receives signals from three accelerometers, four suspension height sensors and from other vehicle systems to determine vehicle state, body and wheel motions, and driver inputs. These signals are used by the ADCM to continuously control the damping characteristics of each damper to the appropriate level, to give the optimum body control and vehicle ride.

The ADCM also contains the controller for the electronic differential, if fitted.

DAMPERS



E105085

Item	Part Number	Description
A	-	Front spring and damper assembly
B	-	Rear spring and damper assembly

CAUTION: The dampers look identical to those on the CATS (computer active technology suspension) system of 4.2L vehicles, but have a different part number. Resistance across the solenoid pins of an adaptive dynamics damper should be 2 to 3.5 ohms; if more than 5 ohms, you should suspect that the damper is from a CATS system.

The adaptive dynamics dampers are monotube, nitrogen gas and oil filled units. The dampers are continuously variable, which allows the damping force to be electrically adjusted when the vehicle is being driven. The dampers provide the optimum compromise between vehicle control and ride comfort.

The dampers have an electrical connector on the end of the piston rod, in the center of the top mount.

In each damper, the damping adjustment is achieved by a solenoid operated variable orifice, which opens up an alternative path for oil flow within the damper. When de-energized the bypass is closed and all the oil flows through the main (firm) piston. When energized the solenoid moves an armature and control blade, which work against a spring. The control blade incorporates an orifice which slides inside a sintered housing to open up the bypass as required. In compression, oil flows