

Steering and suspension basics

Many Irish roads present a serious challenge for cars. For many drivers, wear and tear on steering and suspension components is greater than what the car was built for. Meyle's Heavy Duty (HD) range offers a longer life that will keep your customer's cars going strong, as they are keeping their cars longer.

The trend of holding on to cars for longer has resulted in more attention being given to suspension and steering parts. Combined with poorly maintained roads, these components generally wear out and need to be replaced more frequently. When they are replaced, it is critical to replace them with quality components, as anything less will not last and will reflect badly on your reputation as a mechanic. Add to this that these parts are critical to safety and any savings made in using dubious quality parts makes the choice clear: don't scrimp when it comes to steering and suspension parts.

Recognising worn steering and suspension parts is generally straight forward. An inspection of the steering and suspension components should start with a test drive. If the car is pulling to one side, wandering when it should be going straight, making unusual noises, or is rough then there is a problem that needs to be repaired. The test drive will lead you to look for the particular type of repair that needs to be done.

Next, put the vehicle up on the lift and rigorously examine all of the steering and suspension parts. Is the suspension level from side to side? Grab the wheels and check for any play. Grab the top and bottom to see if you can move the wheel, then grab the wheel at the left and right to check for play in the steering. Any movement, other than a slight in/out movement on some axles that are designed to allow this motion, is a clear sign of a worn part. Check the tyres for unusual wear patterns. While incorrect pressure will cause abnormal wear, it can also be caused by worn shocks, springs or worn/mis-adjusted suspension parts. Thoroughly examine all of the steering and suspension parts. Any play in a joint or bushing means that part is worn and should be replaced.

Look for any signs of wear or physical damage. Carefully examine the rubber at all bushings and mounts. Any cracked or deformed rubber bushings or components should be replaced as they are only going to get worse, and most likely very quickly. A worn or deformed bushing, can allow the metal parts it separates to come into contact, resulting in tapping or banging noises. Some components are made with rubber bonded to metal. Any signs that the rubber is separating from the metal, however small, should be seen as a failure of that part. A minor separation will extend and then the part will fail completely.

Once you have identified all of the parts that need to be replaced, you can start the repairs. Unless there is a very strong reason to believe that the part failed as a result of an unusual event, such as impact damage, it is best to replace the parts in pairs. Wear and tear that damaged a part on one side also damaged the other side, it just isn't noticeable yet. Do you want your customer to return in a year's time with the same complaints, because the parts on the other side are now worn enough to cause problems? Maybe they won't take the car back to you, but try another garage because they think you didn't do a proper job the first time.

Also, consider installing parts that have been made to be stronger or better than those that came off the car, such as Meyle HD. Meyle identify O.E. parts that fail early in service. They use recall statistics and info from German technical inspection organization, TÜV, as well as workshops, to find wear-prone OE components. Then their engineers analyse the weak points and develop technically sophisticated solutions that are designed to be longer lasting, and back it up with a 4 year warranty. An example of this is Meyle's zinc-nickel

alloy replacement bolt, for a 1995 or newer VAG upper control arm. The bolt also has a corrosion resistant film and cathodic coating. The original bolt is usually difficult to remove due to extensive corrosion. One reason for the corrosion, is that the original bolt was made with a steel that reacts to the aluminium of the control arm. Meyle's replacement bolt reduces this corrosion by using a different metal, and by providing a corrosion resistant coating on the bolt. As these parts are all critical to safety and require a high level of reliability, this is not the time to look for savings.

Always follow the vehicle manufacturers instructions, and always use all of the new replacement parts provided. Some bolts, lock nuts and other parts are designed to be installed only once. Re-using them will only result in premature failure.

The final step in any repairs on steering and suspension, should be to check the tracking and adjust according to the manufacturer's specifications. Even if you think that the tracking was correctly set before any part was replaced, you have no guarantee that it will be correct after new parts are installed. This check will also guarantee that the car is back in good working order, driven by a satisfied customer who will appreciate your work.



Meyle's zinc-nickel coated VAG replacement suspension bolt, at left, after a 480 hour salt spray edurance test. The other bolt is an OE suspension bolt, after the same test.



Some things are best replaced in pairs, steering and suspension parts are one of them.

