Wiper linkages

suitable for: DAF, Ford, Iveco, MAN, Mercedes-Benz, Scania, Volvo etc.

Maximum visibility. High-precision wiper technology.

When the timing isn't right, the wiper pattern quickly becomes a problem. The wiper linkage converts the motor's rotational movement into a precisely coordinated back-and-forth motion. The synchronisation of the wiper arms is essential, as even the slightest deviation can lead to collisions or inadequate windscreen clearance.

In the latest PS Tips video, Parts Specialist Niklas demonstrates how to remove and install the parts correctly, working directly on the vehicle. Further product variants and technical details are available on the Diesel Technic Partner Portal. The range includes wiper linkages with and without motors, as well as matching wiper blades, and covers applications including DAF, Ford, Iveco, MAN, Mercedes-Benz, Scania and Volvo.

Before removing the wiper arms, their positions should be marked to make it easier to reinstall them correctly. "This ensures that the exact original position can be restored during installation, explains Niklas. Persistent connections can be gently loosened using penetrant oil. After removal, the zero position of the linkage must be checked: the position and angle between the motor arm and the linkage's push rod are particularly important here. Often, both components are aligned when in the zero position. But this is not always the case and should therefore be checked carefully before removal.

To ensure correct commissioning, the wiper motor must first be moved to the neutral position without the wiper arms fitted. Only then can assembly begin (important: ensure the engine is switched off!). "If the motor and linkage are not at the correct angle to each other, the wipers will later operate at the wrong ratio," warns Niklas. This can result in incorrect movement radii, incomplete windscreen coverage or mechanical damage.

The lubrication of the moving parts is essential for the proper functioning and service life of the wiper linkage. Bearings and joints should be checked regularly and relubricated as required, particularly on older vehicles. "Open bearings can be lubricated precisely with spray grease without having to remove the linkage," explains Niklas. If a wiper linkage is replaced and the existing motor is reused, there are two typical sources of error to be aware of: Firstly, the motor may not be in the neutral position, which means that the wiper arms swing out during start-up despite correct marking. Secondly, certain motor variants feature rubber bushings or bearings that must be fitted precisely into their specified seats. "If the bushing is not correctly positioned or is missing altogether, this creates play in the system or leads to misalignment of the entire assembly," says Niklas. The consequences are increased wear, an incorrect angle of contact with the windscreen and erratic movement of the wiper blades.

As part of the Diesel Technic Quality System, the wiper linkages are tested thoroughly. A sensor attached to the shaft measures the angles of movement of the wiper arms and compares these with defined reference values. Furthermore, specified torques are applied and the bearings, materials and sealing elements are inspected to ensure consistently precise operation.

When using the windscreen wipers, ensure that the wiper arms and blades are in the correct default position – ideally at an angle of around 90 degrees to the windscreen, with the rubber being pulled slightly taut as it moves across the windscreen. Please note: the wiper system is not designed to remove ice or snow. "If the wipers are frozen, the rubber blades, bearings and the gearing in the drive mechanism can all be damaged," warns Niklas. Mechanical overload in such situations has a direct impact on the service life of all the components involved.

If you have any technical questions about Diesel Technic products and services, our Parts Specialists are happy to help via their HelpDesk and offer the right support: helpdesk.parts-specialists.com.

The Parts Specialists are now also available in the "PS App". There you can send enquiries directly to our team of experts – quickly and easily with your smartphone in your pocket.

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