

# Technical News

## Tightening torque for air supply (Mercedes Benz) 4185 N P21 / 4390 N P21 / 4758 N P21 / 4757 N P01 / etc.

### Complaint/failure pattern:

Unlike many other air springs, these Mercedes types are fastened at the top only by the combi-air supply fitting shown in the figure. This connection has been designed to match the loads associated with the fitting.

In the past year, increased numbers of air spring systems have been sent back with the fitting having torn off. The fault occurs at the point marked (a).



Figure (a)

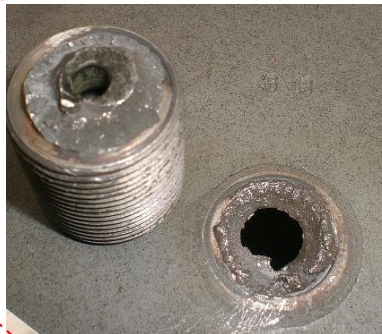


Figure (b)

The failure pattern is similar on nearly all the air spring systems which have been inspected. A detailed view is given in Figure (b).

### Findings:

The conical top plate on the returned air spring systems meets the specifications of the vehicle manufacturer. Load tests regularly performed on the threaded fitting as part of our quality assurance measures significantly exceed the given maximum value.

Identified causes of error:

- (1) Tightening torque too high
- (2) Oil and/or grease applied to thread

The failure pattern described is not caused by a production or material failure!

### Result/recommendation:

Maximum permissible tightening torque for the air supply fitting according to manufacturer specification: **100 Nm\***. \*("Dry state" = Use of lubricants must be avoided, as these reduce friction, thus causing the threaded fitting to be overloaded when the recommended tightening torque is used.)

It is strictly recommended to use suitable torque wrenches in order to ensure controlled assembly.

Please observe the manufacturer's assembly instructions, and also our notes in the latest product catalog. From 2010, the catalog will also include the maximum permissible tightening torques for threads.

Date: March 1, 2010