







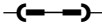
Mechanical Test Program - Frictional Torque Test

Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 1.0 only vehicles up to 04/91	Front axle drivetrain multi-disc clutch (AV) Preload	2  N30/3  ←—→  Torque wrench (15 – 65 Nm)	8  Ignition: <b>OFF</b> Unplug 4MATIC control module.  Selector lever in <b>N</b> position.  Engine: <b>at idle</b> (allow to idle for approx. 30 sec., then shut off)  Place torque wrench on rear wheel and turn 90° in driving direction and read frictional torque. (Figure 1)	20 – 70 Nm  <b>Note:</b> Excessive preload causes roughness while turning curves in shift stage 0. Insufficient preload delays the front axle drivetrain engagement time.	Check that brakes are released if frictional torque is > 70 Nm.  Check for transfer case leakage. Repair or replace transfer case as necessary.  34 ⇒ 4.0

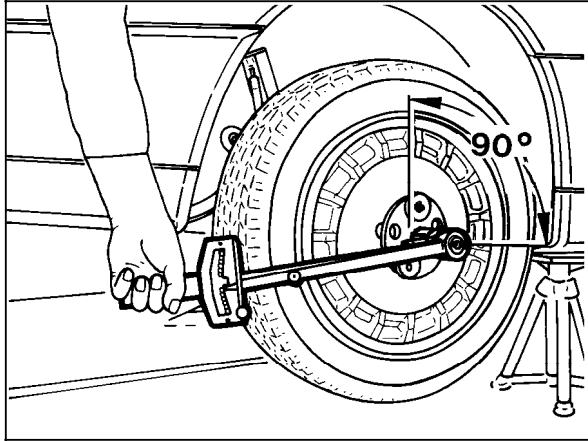
**Mechanical Test Program - Frictional Torque Test**

Test step	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 2.0	<p><b>Central differential lock multi-disc clutch (ZS)</b> Release process</p>	<p>N30/3                        2  4                      2  6                      2  8                      Insert all 3 bridges simultaneously (Fig. 3)                       Torque wrench (15 – 65 Nm)</p>	<p>Ignition: <b>OFF</b>                      Unplug 4MATIC control module (N30/3).                       Selector lever in <b>N</b> position.                       Engine: <b>at idle</b>                       Place torque wrench on rear wheel and turn 90 ° in driving direction and read frictional torque. (Figure 1)</p>	< 20 Nm	<p>Check that brakes are released if frictional torque is &gt; 20 Nm.                       Check for transfer case leakage.                       Repair or replace transfer case as necessary.   <b>Only vehicles up to 04/91:</b>                      34 ⇒ 4.0</p>

**Mechanical Test Program - Frictional Torque Test**

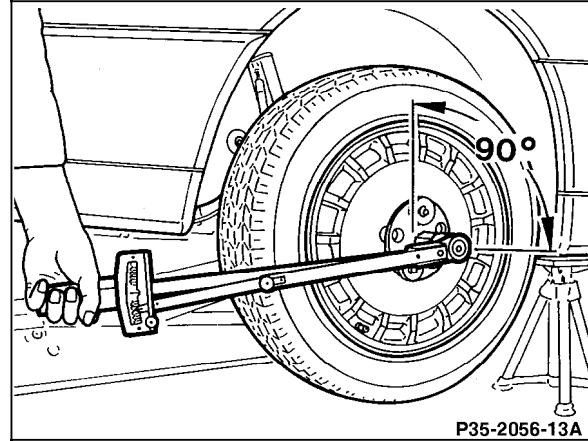
Test step	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 3.0	<b>Rear axle differential lock multi-disc clutch (HS)</b> Measure frictional torque without engagement	Torque wrench (15 – 65 Nm)	Lift rear of vehicle on one side. Place torque wrench on rear wheel and turn 90 ° in driving direction and read and note frictional torque. (Figure 1)	see ⇒ 3.1	⇒ 3.1
⇒ 3.1	Measure frictional torque with engagement	<p>N30/3                        2  8</p> <p>Torque wrench (80 – 260 Nm)</p>	<p>Ignition: <b>OFF</b> Unplug 4MATIC control module (N30/3).</p> <p>Turn wheel back to position started from in step ⇒ 3.0.</p> <p>Engine: <b>at idle</b></p> <p>measure frictional torque through 90 ° and note value obtained (Figure 2)</p>	<p>measured frictional torque from ⇒ 3.1 <b>minus</b> measured frictional torque from ⇒ 3.0 &gt; 100 Nm.</p>	<p>Difference &lt; 100 Nm: Rear axle center piece.</p>

Mechanical Test Program - Frictional Torque Test



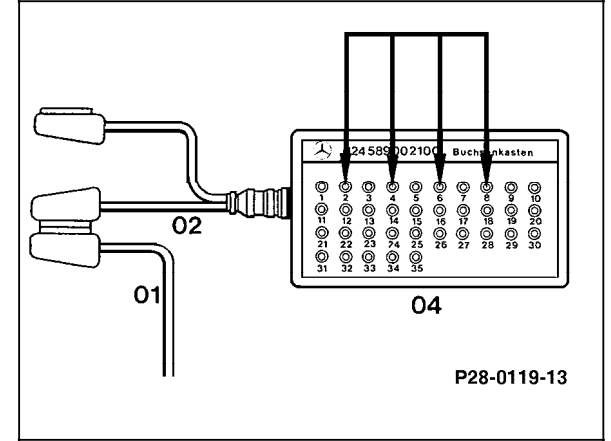
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Figure 1  
Measuring frictional torque (disengaged)



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Figure 2  
Measuring frictional torque (engaged)



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Figure 3

- 01 Connector from 4MATIC control module (N30/3)
- 02 Test harness
- 04 Socket box