CAR, CARAVAN AND CAR TRAILER WHEEL + NUT / BOLT ASSEMBLY TEST

E S 3.19

ESSAI D'ASSEMBLAGE ROUE + VIS/ECROU POUR VOITURE, CARAVANE ET REMORQUE

PKW-, WOHNWAGEN- UND PKW-ANHÄNGER-RÄDER + MUTTER/BOLZEN MONTAGE PRÜFUNG

1 - SCOPE AND FIELD OF APPLICATION

This specification defines a simple test procedure for checking the compatibility of car, caravan and car trailer wheel bolt holes, with the associated nuts or bolts being used for steel and fabricated aluminium wheels.
This specification does not replace any future ISO standard currently being studied (ISO WD 15172) which relates to bolt hole strength performance using a punch and a compression force instead of the wheel fastener and a torque.

2 - DEFINITION

For this test the resistance of the wheel bolt hole is defined by its capacity to resist nut torque without unreasonable permanent deformation.

3 - DYNAMIC CORNERING FATIGUE TEST

Using a ball bearing which either:

1 - Has a diameter which assures that it is seated either in the cone of the bolt hole or:
2 - Which corresponds to the diameter if the spherical bolt seating

Place the ball bearing on the bolt hole as shown in the figure on the result sheet, then measure and record the dimension "A" (which is proportional to the bolt hole height) for each bolt hole.

Using the manufacturer's recommended bolts (or nuts as the case may be), and with the wheel fitted to a hub, tighten the bolts to the manufacturer's recommended torque plus 20% using a torque wrench.

Dismount the wheel and using the ball bearing, measure and record the dimension "A" again for each bolt hole.

4 - TEST REQUIREMENTS

The difference between the measurement "A" (residual deformation) before and after the nut tightening should not exceed **0.5 mm**.

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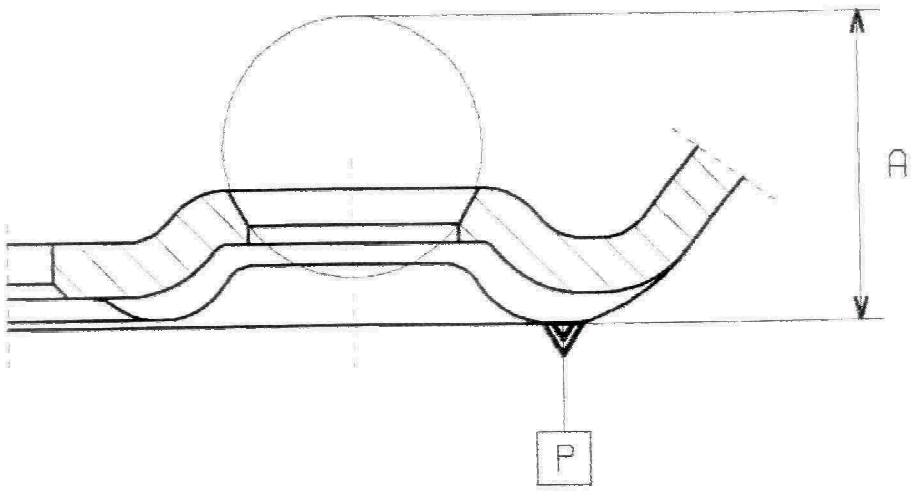
Main changes compared to the last issue:

EXAMPLE OF THE RESULTS SHEET



BOLT HOLE	DIMENSION “A” BEFORE TEST	DIMENSION “A” AFTER TEST	DIMENSION “A” RESIDUAL DEFORMATION
1			
2			
3			
4			
5			