

 <p>AUTOMOTIVE PARTS</p>	<h1>Test report</h1>	APS Testlab APG-AB-0005 Page: 1 of 6
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Screw to plastic material

12 345 67 S02
Project SCR1508

Report No.: SCR1508-00-0001

Initial Creator: Korolkov R. / CZ-APS-LQ

Date: 26.05.2017

X

Team Leader Testing

X

Test laboratory Manager

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1 Details of the test order and it's provider

Tests were carried out for SCR1508.

Test order by Žadatel Josef/ CZ-Quality_Departmet/ AP 19.05.2017.

2 Tasks

Tests on the samples screws to plastic

A-Sample
 B-Sample
 C-Sample
 Series

Screws to plastic type AP35 to plastic material PA6,6GF35 were carried out acc. to the requirements of the customer's specification (Žadatel, 19.05.2017) and in accordance customer standards ABCD1234.

3 Summary

3.1 Conclusion:

Specification fulfilled: Yes
 No
 Restricted

All samples fulfilled customer's requirement for screwing test (Torque to fail).

Sample	Screwing speed [rpm]	Torque to fail [Nm]	Result
SCR1508-00-0001-S01	10	22,77	OK
	20	22,99	OK
	30	25,68	OK
SCR1508-00-0001-S02	10	22,52	OK
	20	22,99	OK
	30	25,52	OK
SCR1508-00-0001-S03	10	21,93	OK
	20	22,87	OK
	30	24,83	OK
SCR1508-00-0001-S04	10	22,82	OK
	20	23,74	OK
	30	24,87	OK

Table 1: Test results

Creator	Department	Date
Korolkov Radek	CZ-APS-LQ	15.05.2017

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4 Test sample documentation

The following test samples were used for testing


Sample	AUTOMOTIVE PARTS part number	Index Level. of drawing	Photo
Screw	12 345 67 S02	01	

Table 2: Parts overview

5 Evaluation of the test results

Section	Test Description from Section	Test norm	Evaluation
6.1	Screwing test	ABCD1234	

	The requirement is completely fulfilled
	The requirement is fulfilled partially and this is seen as not critical for the functionality/functional release
	The requirement is not fulfilled
	Results w/o limits/requirements – White color can be used when the evaluation of the results are to be carried out by the supplier/customer when there are no limits/requirements mentioned in the specification

Table 3: Evaluation of the test results

Creator	Department	Date
Korolkov Radek	CZ-APS-LQ	15.05.2017

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6 Test description in details

6.1 Screwing Test

Test performed according to the customer standards ABCD1234.

Done by: Zkušební technik

Test conditions:

Temperature: AT
 Screwing speed: 10rpm, 20rpm, 30 rpm
 Sample rate: 1°
 Target: ≥ 15 Nm

Note: Samples were stored in standard conditions ($\pm 23^{\circ}\text{C}$).

Test configuration:

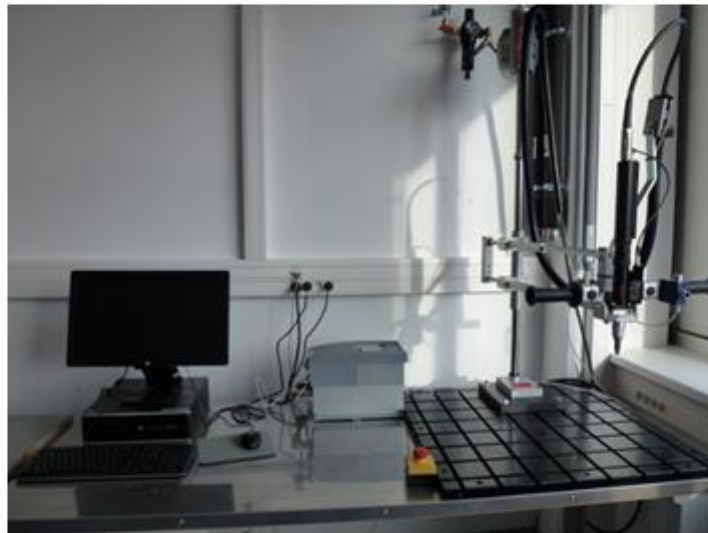


Figure 1: Screwing test bench

Test result:

All samples in research fulfilled customer's specification after temperature cycling test (Loosening torque ≤ 40 Nm).

Creator	Department	Date
Korolkov Radek	CZ-APS-LQ	15.05.2017

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Figure 2: Sample SCR1508-00-0001-S01 before test (in the left picture) and after test (in the right picture)

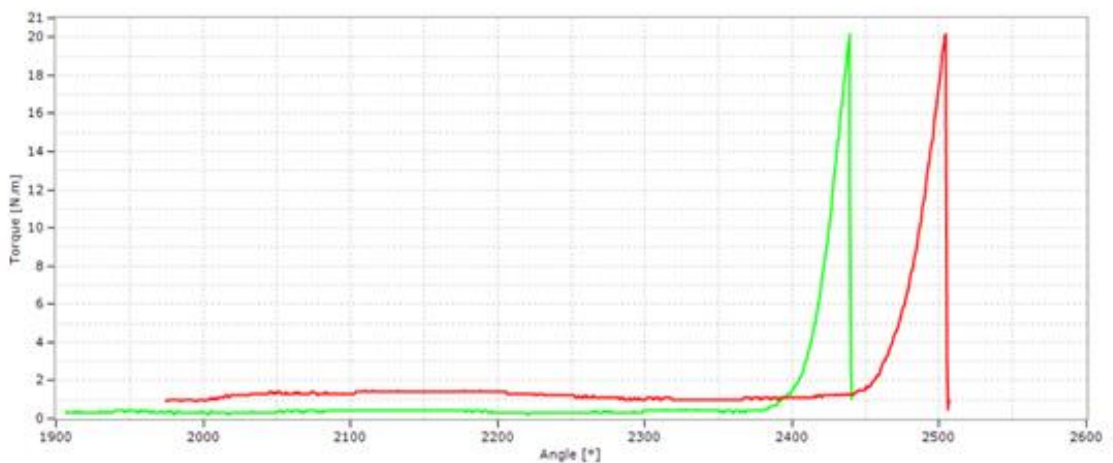


Figure 3: Torque characteristic for sample SCR1508-00-0001-S01

Creator	Department	Date
Korolkov Radek	CZ-APS-LQ	15.05.2017