

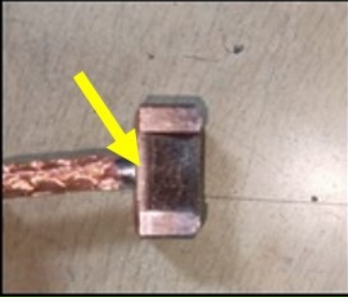
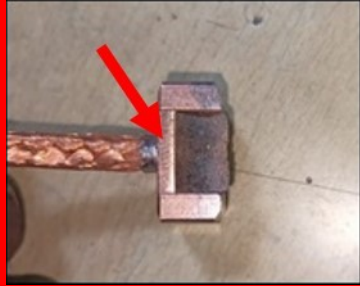
# AVOCarbon Group - LESSON LEARNED CARD

## Grooving land dimension over size

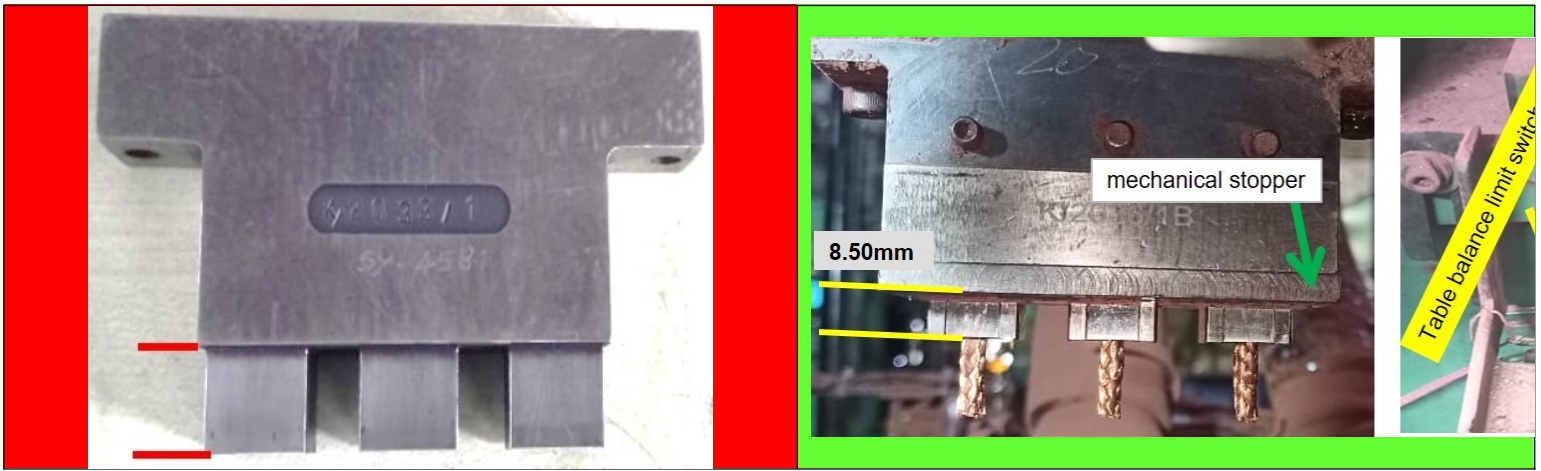
Created on	30 Jan 2024	By	GAYATHRI NARAYANAN
Validated on	28 Mar 2024	By	B SRIDHAR
Lesson #	5958476091	Severity	Enter severity
Product Line	Brushes	Application	Starter motor
Customer:	COMSTAR AUTOMOTIVE TECHNOLOGIES	Product Family	Carbon brush
Plant	Chennai	Part number	3S7U 11056 BA1(3933-0)
Detection	Line inspection	Product type	Brush Starter dual layer

### Problem description:

Brush width side slot grooving land is measured with 2.82 mm. it is over size against Specification : 1.00/2.00mm

Good Part		Bad Part	
			

Name	Detailed Root Cause description	Solution description	Conclusion	Process	Origin	File (PDCA/8D analysis)
Die chamber setting adjustment to achieve density correspondingly to the land also varied. The dimension of the grooving land & and brush thickness measurement also varies with each cycle. When this land dimension decreases, it does not come below 1.00mm	Land and groove formed in the process of pilling, while pilling die chamfer setting to achieve density, during the die chamber setting top tool is adjusted to achieve brush thickness and density, top tool and bottom punch merge according to the adjustment, this setting adjustment can also reflect in the groove land. grooving land also varied. according to the brush design, the grooving angle is a straight line, this land variation also occurs according to the thickness variation.	The top tool design is modified, the top tool holder is fitted with a rectangular mechanical stopper, and the tool travel distance is commonly fixed and ensured. Setting adjustment can be done to achieve density and thickness by bottom table balancing, this was controlled by a limit sensor, which monitors the bottom punch table motion.	Grooving Land over size defect was not detected when 5K were produced and subjected to 100% sorting after taking action. So the implemented action was effective	Pressing	Process	3933 - 0.xlsx 8D Report_Part 3933-0 Land OS.XLSX
Situation Before			Situation After			



**LLC Conclusion :**

**Grooving Land over size defect was not detected when 5K were produced and subjected to 100% sorting after taking action. So the implemented action was effective**

**Distribution to:**

BRUSH : GERMANY - POITIERS - TIANJIN - CHENNAI