



**GRANIT**  
QUALITY PARTS

# SELF-LOADING WAGON BLADES PRODUCT BENCHMARK

## CUSTOMER INFORMATION

### THE FOLLOWING WERE COMPARED: SELF-LOADING WAGON BLADES

The GRANIT self-loading wagon blade with part number 525333786.0F was compared with a comparable product from the original manufacturer.

#### COMPARISON OF FEATURES

- » Analysis of the material composition and hardness of the materials used
- » Checking the functional dimensions

TEST REPORT NO. 2021-0003-04

This product comparison was carried out by the GRANIT PARTS in-house laboratory.

#### TEST RESULTS

##### MATERIAL COMPOSITION AND HARDNESS:

This test provides information about the material composition and hardness of the self-loading wagon blades. Selecting the right material and the hardness achieved by heat treatment are crucial to the functionality, service life and load capacity of the blades.

##### RESULTS:

Both manufacturers use an alloyed, fine-grain, high-grade structural steel for their self-loading wagon blades. The blades from both the original manufacturer and GRANIT have high levels of manganese and chromium in the alloy. These elements have a positive effect on toughness and maximum load capacity.

The self-loading wagon blade from GRANIT boasts slightly better hardening than the blade from the original manufacturer.

Manufacturer	Material designation	Material number	Hardness
GRANIT	17MnCr5-3	1.8715	580 HV1
Original manufacturer	26MnCr6-3	1.8721	552 HV1

Table 1: Materials and hardness values

#### CONCLUSION:

The product from the original manufacturer has a slightly higher chromium content. On the other hand, the GRANIT product has a slightly higher manganese content. Since both chromium and manganese have a direct positive effect on blade resistance, these differences balance each other out.

The slightly higher hardness value achieved by the self-loading wagon blade from GRANIT is a sign of excellent quality. However, the blade from the original manufacturer has measurement differences that are within the tolerance range, which indicates that there is no significant difference in quality.

## FUNCTIONAL DIMENSIONS AND PROCESSING:

This test compares the geometry of the self-loading wagon blades and checks the processing quality. Deviations in the functional dimensions can lead to technical problems during assembly or to negative effects during use.

## RESULTS:

The GRANIT self-loading wagon blade has exactly the same functional dimensions as the product from the original manufacturer. Even if the blades differ slightly from the outside, both products demonstrate all relevant qualities when it comes to usability and function. The processing is also comparable; both products boast excellent manufacturing quality.

## CONCLUSION:

Although the test revealed slight differences in the blades' geometric design, these differences are negligible in terms of function and durability. The high-quality processing of both blades does not result in one blade having any advantages or disadvantages over the other.



## CONCLUSION:

- GRANIT self-loading wagon blades boast a level of quality equivalent to that of the products from the original manufacturer.
- GRANIT's loading wagon blades are available at a lower price than the original manufacturer's blades in the comparative investigation.