

## Standardization of wheel studs

### Introduction

BPW believes in making life easier for all its clients. One such improvement that BPW is implementing is the standardizing of wheel studs. Time delays are frequently incurred due to errors in ordering wheel studs based on either steel or aluminium rims. As such BPW is standardizing on the use of only 2 wheel studs.

### Recommended change

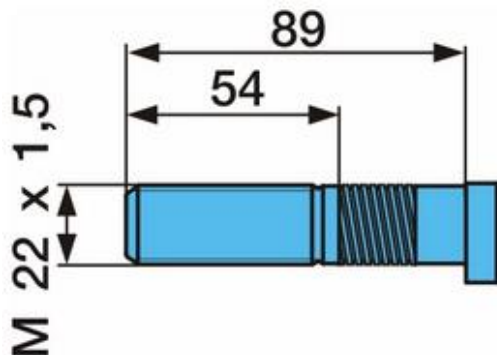
#### Current Wheel Stud Options

The **wheel studs are press in studs** with an M22x1.5 fine thread. Rims will be spigot mounted. Application is for 6.4 – 12 tonnes. The current wheel studs that are used are shown below.

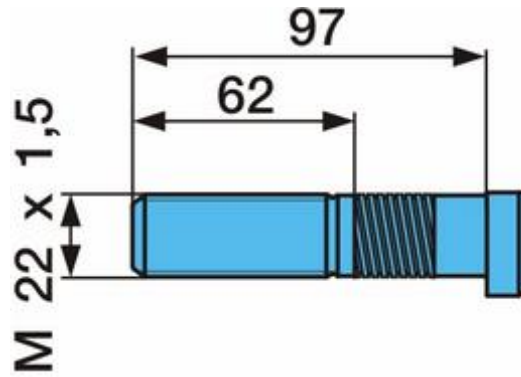
No	Part Number	Length [mm]	Application
1	03.296.33.14.1	89	Used for single steel rims on drum or disk braked axles
2	03.296.33.12.1	97	Used for single aluminium rim on drum and disc brake axles. Used for dual steel rims on drum and disc braked axles. Used for dual aluminium rims on disk braked axles - sleeve nut needs to be used. Rim hole diameter changes to 32mm.
3	03.296.33.17.1	117	Used for dual aluminium rims on drum braked axles.

Wheel nut Part No: 05.260.54.10.0

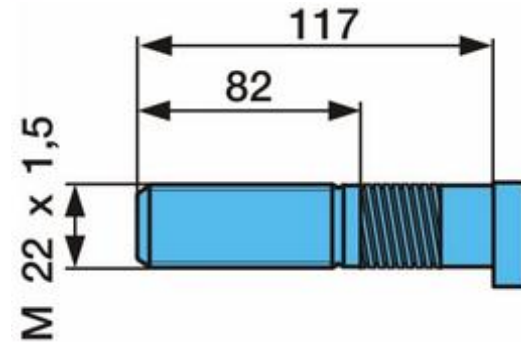
1



2



3



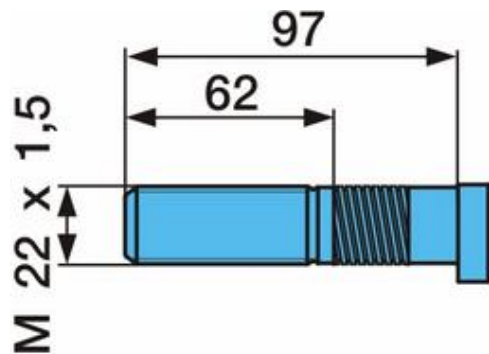
### New Wheel Stud Options

The proposed wheel studs on BPW axles going forward is specified below. Essentially the 03.296.33.14.1 stud will no longer be available.

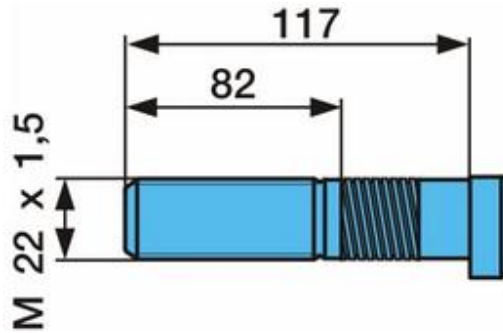
No	Part Number	Length [mm]	Application
1	03.296.33.12.1	97	Used for single aluminium and steel rims on drum and disc braked axles. Used for dual steel rim on drum and disc braked axles. Used for dual aluminium rims on disk braked axles - sleeve nut needs to be used. Rim hole diameter changes to 32mm.
2	03.296.33.17.1	117	Used for dual aluminium rims on drum braked axles.

Wheel nut Part No: 05.260.54.10.0

1



2



### Future Proposed Wheel Stud Options

An additional change being considered by BPW Axles, is to use the 03.296.33.17.1 stud (117 mm length) on both dual wheel aluminum or steel rim drum braked axles to further simplify the range.

This worst-case scenario would see the 117 mm length studs being fitted on a dual wheel steel rim. In this case the clearance from the edge of the bolt to the front face of the nut would increase from 10 mm to 30 mm (20 mm additional distance to cover). The total distance from the front of the bolt to the rear face of the nut is 50 mm and to the rim is 60 mm. This info is summarized in images below. This means that any long length 33 mm socket which has a depth of 70 mm will comfortably fit onto the stud and nut.

The time penalty is also insignificant if power tools are used. In the case that the wheel nuts are loosened or tightened by hand (after loosening with wheel spanner or other tool), the time to remove all the wheel nuts increases from approximately 100 seconds to 140 seconds per tyre. It requires 13 more revolutions to remove the nut.

Should your company have any concerns in this regard, please contact BPW Axles to discuss your objections or concerns in this regard. Anton Steenkamp- [technical@bpw.co.za](mailto:technical@bpw.co.za) 073 231 7234.



