TRUCK, MEDIUM, MC2 - UNIMOG - ALL TYPES

IDENTIFICATION OF RIMS AND APPROVED RIM AND TYRE CONFIGURATIONS FOR UNIMOG 1700

MISCELLANEOUS INSTRUCTION

This instruction is authorised for use by command of the Chief of Army. It provides direction, mandatory controls and procedures for the operation, maintenance and support of equipment. Personnel are to carry out any action required by this instruction in accordance with EMEI General A 001.

GENERAL

Introduction

1. This instruction documents the methods of identifying the rim types, the fitting of rims and the fitting of tyres to the Unimog 1700 series, Family of Vehicles (FOV). All previous instructions, messages or Maintenance News articles describing the method of identifying rims and fitting of rims or tyres to a Unimog are superseded by this EMEI. Reference should be made to this EMEI when guidance is required for the identification of rims and the fitting of rims or tyres to a Unimog 1700 series.

Associated Publications

2. Reference may be necessary to the latest issue of the following documents:

a. Electronic Supply Chain Manual (ESCM); and

b. EMEI Vehicle A 291-5 – Tyres and Tubes – General Service B Vehicles Tyre Guide.

IDENTIFICATION OF RIMS - GENERAL

CAUTION

The colour of a rim shall not be used to determine the manufacturer of the rim. Relying on colour alone could cause mix-matching of components and lead to explosive separation of the rim resulting in failure of the rim and or tyre.

3. Previously, units had been instructed to use the colour that the rims have been painted as an identifying feature. Jamak rims where originally supplied black and units were previously directed to retain this colour to differentiate from other manufacturers. Due to lack of adherence to this earlier advice the colour of a rim shall no longer be used to determine the manufacturer.

NOTE

Rims may be painted in the colour or combinations of colours of the vehicle.

4. If, at any stage there is doubt as to the serviceability of a rim assembly the rim must be inspected by an authorised, qualified and competent tradesman. In the absence of such a person, suspect rims should be classified with a Suspected Fault Tag (AD 197) and not re-used until it has been inspected and deemed safe to use.

5. Table 1 lists the details of the two types of wheel rims that are approved for use on the Unimog FOV.

Table 1 Rim Types

Rim Type	NSN	OEM Part Number
Mckay (Mk) / Sankey Benson (GKN)	2530-66-136-3156	425 401 18 01
Jamak	2530-66-144-3223	YA4354010101

6. History of The Early Rim. The first listed rim types were produced by the same company which experienced many name changes over its long history. With each company name change the markings were also changed to align to the new company name. Unimogs were originally supplied to Defence with Mk rims and later GKN marked rims. Both company markings are permitted on a single rim assembly. This is due to the side ring, locking ring and wheel rim having been routinely replaced over the years as loose items. These rims were made to the same drawings with their markings being the only difference.

Rim Component Markings

7. The following paragraphs provide the markings which may be present on each rim type including the Mk/ GKN and Jamak versions.

NOTE

The Mk/GKN rim is no longer available as a new item from Mercedes-Benz Australia Pty Ltd. When part number 425 401 18 01 is ordered, Mercedes-Benz Australia Pty Ltd will supply part number YA4354010001 which is a Jamak wheel. Mk/GKN rims may continue to circulate through the Defence Supply Chain as rims are salvaged and put back into stock holdings on MILIS.

Mk/GKN Rims

8. The Mk/GKN rims have the manufacturer's details stamped on the interior of the inner rim surface and on the side and locking rings.

9. Rim Profile. The Mk/GKN rims can be identified by its profile which is 215 mm wide measured from the fixed bead (wall) to the locking ring bead. The profile includes a rounded edge (see Figure 1) which differs from the Jamak edge which is flat and shown later.

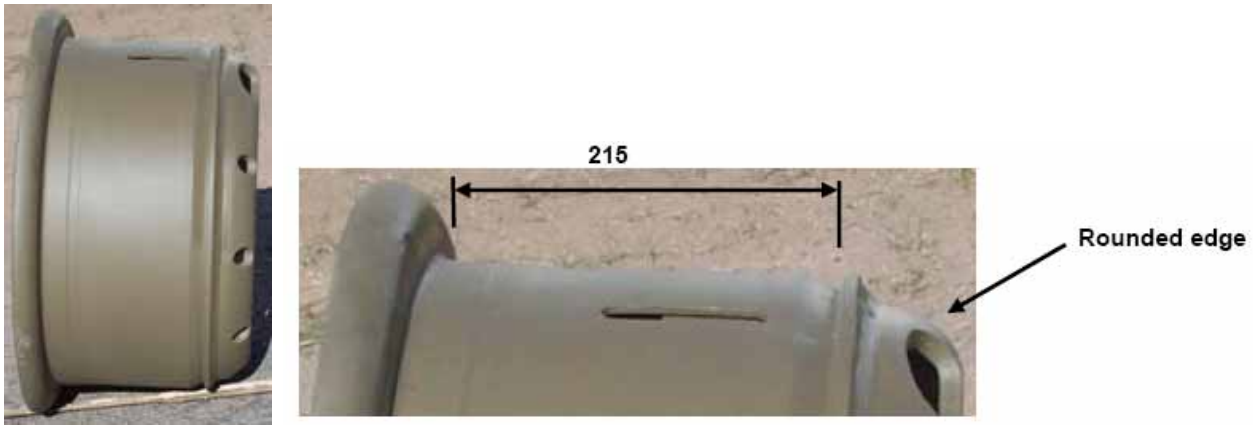

Figure 1 Mk/GKN – Rim Profile

10. Rim Identification. Along with the profile of the rims, Mk/GKN rims can also be identified by the stamped text on the inside of each rim in the vicinity of the outer edge. The examples shown in Figure 2 indicate the build dates for each rim as **16089** (160th day of 1989) for the Mk rim and **0283** (2nd week of 1983) for the GKN rim respectively. Build date information may differ from rim to rim across the fleet. The remaining characters indicate the rim size and OEM details.

Figure 2 Mk/GKN - Rim Markings

11. Side Ring Identification. The Mk/GKN side rings can be identified by various embossed text. Two such examples as depicted at Figure 3. Various additional markings such as; B8.0 - ▶ and 8.0V 7.50V are also authorised for use.

Figure 3 Mk/GKN - Side Ring Text

12. Locking Ring Identification. The Mk/GKN locking rings are 30 mm in depth when viewed from the side and 16 mm across the top (see Figure 4). Both locking ring types can be identified by various embossed text written around the circumference of the locking ring (see Figure 5). Various additional markings such as; GKN SR R6.00 R6.50R are also authorised for use.

NOTE

Mk/GKN locking rings may also be void of embossed text and be without markings. These locking rings must be confirmed as being suitable by taking the measurements shown at Figure 4. Unmarked locking rings are also to be visually compared to an embossed or marked ring to confirm both end profiles match.

Figure 4 Mk/GKN Locking Ring – Depth (30 mm), Top (16 mm) and End Profile

Figure 5 Mk/GKN Locking Ring – Embossed Text

Jamak Rims

13. The Jamak rims, as shown at Figure 6, have the manufacturer's details stamped on the outside of the rim (adjacent to the stud holes) and on the side and locking rings. The rim can be identified by a triangle welded onto the inside of the rim as well as the rim having a stepped profile near its outer edge.

Figure 6 Jamak Rim

14. Rim Profile. The Jamak rim is 230 mm wide measured from the fixed bead (wall) to the locking ring bead with a stepped profile and a raised bead 50 mm in from the locking ring bead (see Figure 7).

Figure 7 Jamak - Rim Profile

15. Rim Identification. The Jamak rim can be identified by the manufacturer's stamping on the outside of the rim between the stud holes. The word '**JAMAK'** and the letter '**X'** are stamped on the outside of the rim (see Figure 8).

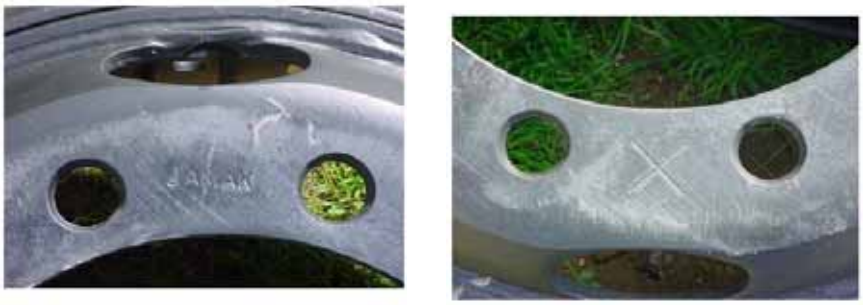

Figure 8 Jamak - Rim Markings

16. Triangle. The Jamak rim is further identifiable by a triangular piece of metal welded on the inside of the rim (see Figure 9).

Figure 9 Jamak - Triangle

17. Side Ring Identification. The Jamak side ring can be identified by the 7 mm flat surface running around the outer face of the ring (see Figure 10)

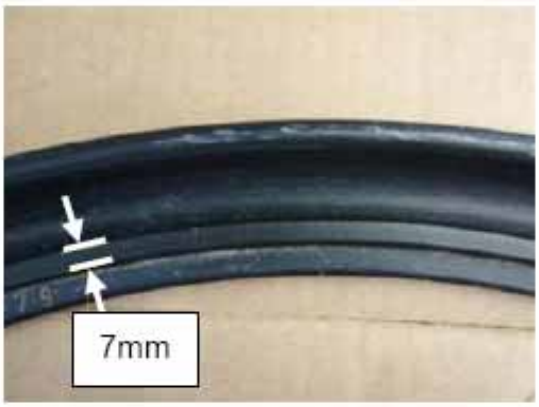

Figure 10 Jamak - Side Ring

18. Locking Ring Identification. The Jamak locking ring is 45 mm in depth (when viewed from the side) and can be identified by the letters '**X X'** stamped on the inside (see Figure 11).

Figure 11 Jamak - Locking Ring

FITTING OF RIMS

19. There are no restrictions on the fitting of Mk/GKN or Jamak rims to any position on the Unimog 1700 series FOV including across a single axle.

WARNING

The mixing of rim components from different manufacturers on a single wheel rim assembly is not to occur. As previously explained, Mk/GKN identified components are effectively from the same manufacture and pose no concern if mixed. Most importantly, Mk/GKN components must never be fitted with Jamak components or vice versa. Mixing of such components could lead to an explosive separation of the split rim assembly as the tyre is inflated, causing serious injury or death.

CAUTION

Any components that cannot be positively identified are to be disposed of in accordance with the ESCM.

When repainting wheel components, care must be taken not to conceal the manufacturer's markings with excessive paint build up.

FITTING OF TYRES

20. During tyre replacement or puncture repair the rim assembly must be completely cleaned and inspected to ensure continued safe use of the rim.

WARNING

Any rim component that has rust that cannot be wire brushed off or where pitting is so severe that the integrity of the component is in question the component is to be classified 'Do Not Use - XX' and disposed of In Accordance With the ESCM. Failure to condemn damaged rim components could lead to explosive separation of the assembly causing serious injury or death.

21. Currently, there are two approved tyre types permitted on the Unimog 1700 Series FOV. The Goodyear OMNITRAC MSD, and the later version, the Goodyear OMNITRAC MSD II. These tyres can be fitted in the following configurations:

a. front axle including the spare – either; all Goodyear OMNITRAC MSD or OMNITRAC MSD II: and

b. rear axle – either type including mixing across the rear axle is permitted.

22. Ideally, when a vehicle is fitted with the newer type Goodyear OMNITRAC MSD II all tyres are replaced at this time. This however, is not the authority to dispose of Goodyear MSD OMNITRAC tyres which are otherwise serviceable with thread depth remaining. The eventual roll-out to the newer model tyre is to be managed by owner unit equipment managers.

23. In the future, tyre make and model for the Unimog 1700 series FOV may change. Therefore, reference should be made to EMEI Vehicle A 291-5 for the approved tyre type for use on the Unimog 1700 series FOV.

END

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