

**DIRECTOR GENERAL BORDER ROADS**  
**GENERAL MAINT INSTRUCTION NO. 142**

**ON**

**ROUTINE MAINTENANCE INSTRUCTION ON TYRES AND TUBES**

Introduction

1. In order to prolong the life of the tyres/tubes, it is essential that care is taken to avoid damage to the tyres/tubes.

Item effected

2. Tyres and Tubes.

Action by

3. All user units and field Wksps (GREF) - Take action as per detail given below.

Details

4. Routine moint practices. Having realized the importance of tyre maintenance, it is necessary that certain routine practices be laid out to the drivers to execute regularly with proper inspection systematic and careful regularly inspection schedule can held to rectify immediately tyre troubles and thus avoid real losses in service life of tyres.

Inspection schedule :

5. Inflation Pressures - Display prominently a chart, at the check point, indicating air pressure to be maintained for your various vehicles with wheel position, tyre size and ply rating.

The recommended air pressures must be maintained and checked daily with accurate gauges. These gauges in use, need to be compared periodically against a master air Gauge. The tyre pressure should be checked when the tyres are cool, that is prior to the vehicles leave the unit for duty. Pressures should not be allowed to drop more than 5 lbs. In a day below the recommendations. If it is so, it must be rectified at once.

6. Tubes : Must be checked daily for the following irregularities and rectified :

- a) Missing valve caps
- b) Leaky valves
- c) Defective valve cores
- d) Punctures

7. Tyre Inspection - All tyres must be inspected daily particularly after the vehicles return from the duty. As a matter of fact the drivers should be obtains in this

Respect, who should, by way of a routine, make it a practice to check the tyres of his vehicle as soon as he finishes a trip or even as and when he stops the vehicle during the run. The driver must report any-things unusual or abnormal he observes when on duty, which should be investigated into and corrected immediately.

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The inspection operation involved are:

- a) Serious under inflated tyres can be visually detected or by hammering with an iron rod, If necessary, it can be confirmed by checking with pressure gauge. Correct it even if it involves removal of tyre with a replacement
  - b) Remove trapped stones etc, from the tread design or between the treads.
  - c) Locate cuts and bruises. Remove embedded material if any. Remove the injury – if it is deep and extensive, remove the tyre for repair.
  - d) Look for any tyre bulge (separation), if any remove the tyre for inspection.
  - e) Watch for uneven tread wear. It may be due to mechanical irregularities, improper inflation, mismatched treads etc, and whatever the reason, it should be rectified. Consider the change in wheel position of such tyre to avoid loss in mileage.
  - f) Watch for tyre scoring on the tread or sidewall which may be due to chassis fouling for some projections. This should be rectified to avoid further damage and ruining of the tyre.
  - g) Look for sidewall cracking and if extensive or deep, remove the tyre for repairs.
  - h) Remove oil or grease contamination, which makes the rubber soft and spongy and ultimately ruins the tyre.
8. Rims and wheels inspection for which no period can be fixed, should be replaced.
- a) Loose wheel nuts should be tightened immediately. Broken nuts or studs should be replaced.
  - b) Rim flanges and lock rings broken or cracked should be replaced, and those bent or dented should be straightened.
  - c) For rusty rims, wheels should be removed when the vehicles are off road or docked for overhauling or repairs. Remove the tyre, tube and flap and check for their serviceability. Remove dirt and rust from the rims, check if serviceable, and paint them. Then put them into service.

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9. Duals & Rotation of Tyres : Due to the amount of tread wear being different at various wheel positions, tyres need to be rotated after every 2000 miles or as per recommendation of manufacturer whichever ever mileage is earlier also refer GMI No 4. Rotation will help to match the dual in case of a mismatch whereas channels in the direction of rotation will off balance the uneven tread wear.

10. Thus the maintenance practices recommended above are of great importance from the tyre cost point of view. How far the tyre maintenance efficient and successful can be proved by way of reliable tyre records. These tyre records will give true picture of tyre performance. Similarly it is the proper tyre maintenance that leads to the timely removal of tyres for repair and retread.

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