



## INFORMATION SERVICE BULLETIN

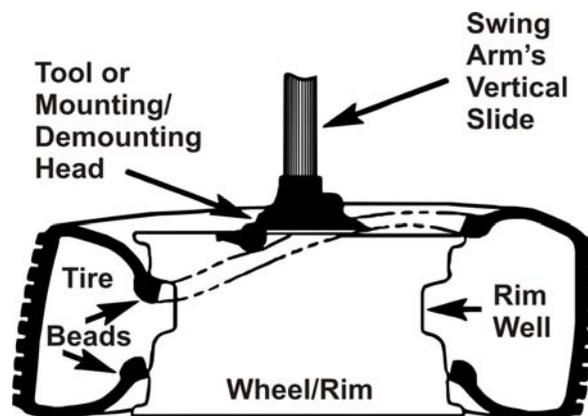
Volume 43, Number 2  
Page 1 of 4

### AVOID TIRE BEAD DAMAGE ON TIRE MOUNTING MACHINES THAT SECURE THE RIM FROM UNDERNEATH

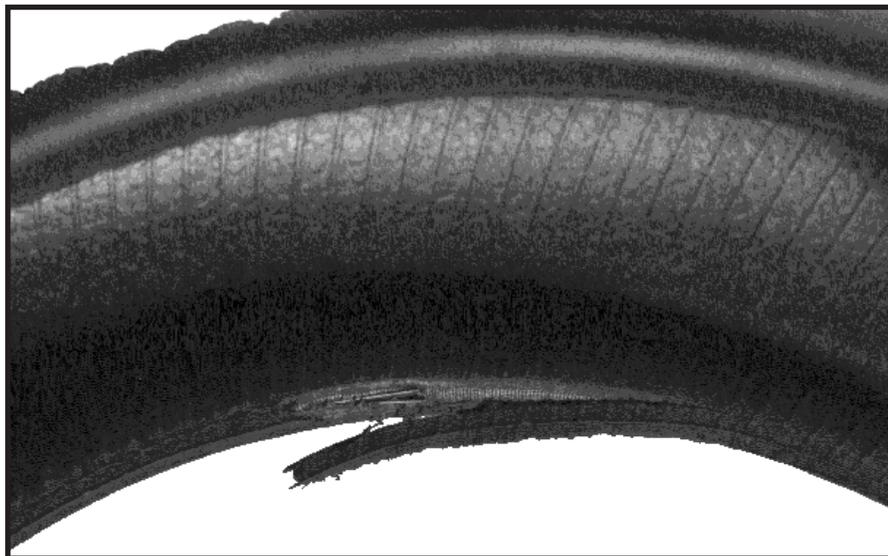
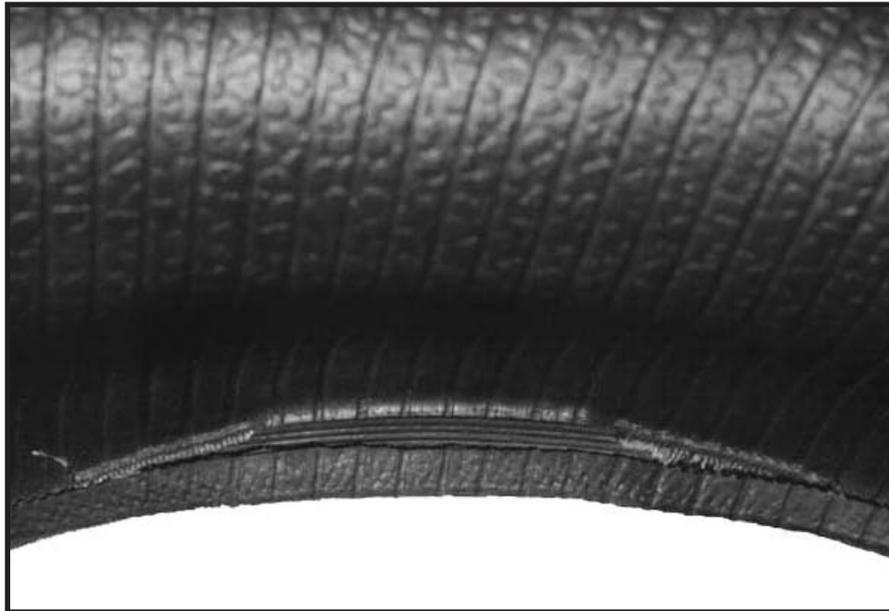
With tire mounting machines that secure the rim from underneath, there is a greater possibility of damaging a tire bead during the mounting process. This bead damage can be the result of one or any combination of the following factors: the increased power of the machine; the potential for the machine to get out of alignment; and/or improper mounting procedures. The most common form of damage is a cut on the inside of the bead located above the toe or on the bead seat (i.e. sole or face). The service person must carefully observe the tire during the mounting process. If the damage remains undetected, it can lead to tire failure.

## **WARNING**

Serious injury or death may result from tire failure due to bead damage. A bead-damaged tire can explode during the mounting process or fail later in use. Follow RMA's "Demounting and Mounting Procedures for Passenger and Light Truck (LT) Tires" chart. Only specially trained persons should mount tires.



The photos illustrate typical damage that can occur.



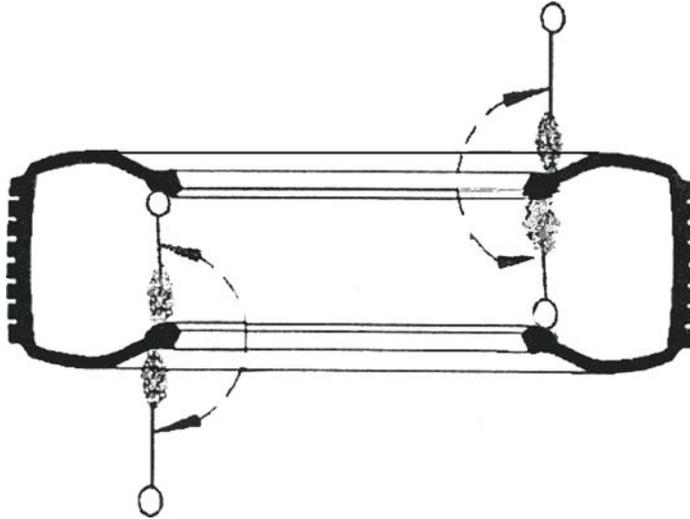
Tire service personnel should follow proper demounting and mounting procedures. Emphasize the following procedures to eliminate damage to the bead:

### **PROPER LUBRICATION**

Use commercially available lubricants made for bead seating to seat tire beads. Also, vegetable oil and animal soap solutions may be used. Follow lubricant manufacturers' recommendations for diluting, if applicable. Over-diluted mixtures will dry too fast, as if no lubricant was used. Under-diluted mixtures will not dry soon enough, which may allow rotation of the tire on the rim, thus contributing to a ride disturbance.

## PROPER PLACEMENT OF LUBRICANT

The rim and both tire beads must be lubricated, to allow for a smooth movement of the tire bead over the rim flange and complete bead seating against the rim flange. Tire bead lubricant must be applied from the mounting guide ring area around the bead toe prior to installing on the rim (see diagram below).



The following diagram shows that rim lubrication must include the safety humps (#1), the bead seating surfaces (#2), and the top flange area (#3).



## KEEP THE TOP BEAD IN THE RIM WELL

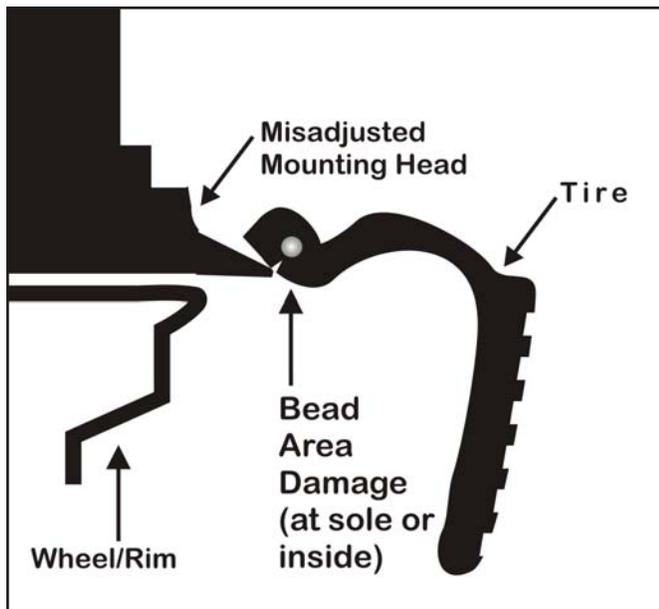
Place the bottom bead over the rim flange and into the rim well. Mount the bottom bead onto the wheel. While the top bead is being placed over the rim, it is necessary to keep continual pressure on the top sidewall of the tire (180° from the machine's mounting/demounting tool head) to ensure that portion of the top bead stays in the rim well. This minimizes the amount of stretching and allows for a smooth movement of the tire bead over the flange. The lower the profile of the tire, the more difficult the top bead is to mount. Thus, this procedure is very important.

### PROPER ALIGNMENT SETTING OF MACHINE'S SWING ARM (AND VERTICAL SLIDE)

The swing arm's vertical slide clearance may change with the machine's use and should be inspected often. Failure to maintain the proper clearance (as stated in owner's manual) may result in damage to the tire and/or rim.

### PROPER POSITIONING OF THE MACHINE'S TOOL (OR MOUNTING/DEMOUNTING) HEAD

If the tool head setting is not proper, the tire bead could be damaged during mounting. The tool head may be adjustable. Consult mounting machine manufacturer (or owner's manual) about this adjustment setting. Also, the use of a plastic rim protector can help reduce tire and rim damage.



## **⚠ WARNING**

Serious injury or death may result from explosion of tire and rim/wheel assembly due to improper mounting.

- Never exceed 40 psi (inflation pressure) when seating beads.
- Always use a safety cage or other restraining device with a clip-on extension hose.
- Only specially trained persons should mount tires.

This Bulletin Replaces Volume 43, Number 1

This is a publication of the Rubber Manufacturers Association.

All rights reserved. The contents of this publication may not be reprinted or otherwise reproduced in any form without the express written permission of RMA.

To order RMA publications, call 202-682-4800 or go online [www.rma.org](http://www.rma.org) and click on Publications.