

# TIRE CHANGING SAFETY

Make sure you follow manufacturer's specific procedures and safety warnings as required. Operation and safety manuals for each [Ranger tire changer](#) model can be found on their respective [Ranger tire changer](#) product pages – simply look for and click on Download the Instruction Manual (as illustrated [here](#)). Additional information about mounting and demounting tires is available on the [Rubber Manufacturers Association](#) (RMA) website by requesting its [Demounting and Mounting Procedures wall chart](#), or by requesting information from the [Tire Industry Association](#) (TIA) for its Automotive Tire Service [Reference Aids and Materials](#).

## **TIRE REMOVAL PROCEDURES INCLUDE:**

- Loosening the beads
- Clamping the tire / wheel assembly
- Demounting the upper bead
- Demounting the bottom bead

## **MOUNTING A NEW TIRE ON A WHEEL INCLUDES:**

- Lubrication of both beads
- Installing the bottom bead
- Installing the upper bead
- Seating the beads with air pressure
- Inflating to the proper PSI

Tire technician should always first identify the type of wheel involved and how a tire should be changed on that particular wheel. A number of things must be first considered and checked due to variances in wheel configurations. There are a number of safety measures that should be observed when changing a tire. Danger warnings and precautions are pointed out completely in a new wall chart issued recently by the RMA.

# ! WARNING

The following instructions help identify how to properly mount wheels on the tire changer turntable. Failure to follow these instructions may lead to tire and/or wheel damage, equipment damage or failure, serious personal injury or death to operator or bystanders or damage to property.

### IMPORTANT WHEEL MOUNTING INSTRUCTIONS

1. It is important to understand that tires and/or tire beads do not stretch. It is nearly impossible to mount or dismount the top bead of the tire unless the top bead of the tire is positioned deep into the drop center area of the wheel.
2. Locate the drop center of the wheel. Clearly identify the Drop Center, Narrow Side and Wide Side flanges.
3. **THE TIRE MUST ALWAYS BE DEMOUNTED OR MOUNTED HAVING THE WHEEL POSITIONED ON THE TURNABLE WITH THE NARROW SIDE AND THE DEEPEST PART OF THE DROP CENTER FACING UPWARD.**

Narrow Side  
Drop Center  
Wide Side

Narrow Side  
Drop Center  
Wide Side

INSIDE CLAMP

Drop Center

A

Narrow Side  
Drop Center  
Wide Side

OUTSIDE CLAMP

**WARNING:** The wheel illustrated above in diagram "A" has little or no prominent drop center. These are not DOT approved wheel configurations. The tire or wheel - or both - can be damaged during mounting procedures causing the tire to explode under pressure, resulting in serious injury or death. If you attempt to mount/demount this type of wheel, use extreme caution.

**IMPORTANT NOTE:** Most aftermarket and many OEM performance wheels are REVERSE DROP-CENTER configurations. These wheels **MUST** be mounted on the turntable with the hub or wheel face **POSITIONED DOWNWARD** on the turntable and the Narrow Side and deep part of the Drop Center facing upward.

Be sure to read and understand all WARNINGS as illustrated on the equipment labels or as shown in the operators manual prior to operation of any tire changing machine. Failure to comply with proper safety instructions may lead to serious harm or even death of operator and/or bystanders.

- Only trained operators should operate tire changing machines. All non-trained personnel should be kept away from work area.
- Never let non-trained personnel come in contact with, or operate machine.
- Keep hands clear of all pinch points.
- Always check tire changer for damaged parts prior to operation. Do not use machine if any part(s) are broken or damaged.
- Never exceed the factory recommended air pressure of tire. Over inflating the tire beyond the manufacturers recommendation can cause tire burst or explosion.
- Operators should inspect all tires and rims for possible defects prior to mounting.
- Do not attempt to mount defective tires.
- Never mount a tire on a defective wheel.
- Always make sure tire size matches rim size prior to mounting. Mismatched tire / rim combinations can explode.
- Tire changers are not intended to be a restraining device for exploding tires, tubes, or rims.
- All operators should take proper precautions to implement safety and to avoid personal injury or harm.
- Do not approach or lean over tires while inflating.
- Keep hands and body clear at all times and as far back as possible during inflation.
- An exploding tire, rim or other wheel component can cause death to operator and/or bystander. Remain clear at all times.
- To inflate tires, use short bursts while carefully monitoring the pressure, tire, rim, and bead.
- While seating beads, never exceed 40 PSI. If bead does not seat at 40 PSI immediately relieve pressure and check for damaged bead and/or other cause.
- Do not aim bead-seating nozzles towards yourself or any person. Bead-seating nozzles must always be aimed toward tire bead area only.
- Hold bead-seating nozzles securely with both hands at all times.
- Always use good quality tire lubricant when servicing tires.
- Consider work area environment. Do not expose equipment to rain. Never operate machine in or around water or damp environments. Keep area well lighted.
- Dress properly. Never wear loose gloves, clothing or jewelry. They can be caught in moving parts. Non-skid steel-toe footwear is recommended when operating tire changer. Wear protective hair covering to contain long hair. Approved back-support braces are recommended when handling heavy loads.
- Always wear safety goggles when operating a tire changer.
- Tire changers must be grounded while in use to protect the operator from electric shock.
- Always unplug tire changing machine before servicing. Never yank cord to disconnect it from the receptacle. Never operate machine in or around water or damp environments.
- Tire changers have internal arcing or sparking parts which should not be exposed to flammable vapors.

**Disclaimer:**

Demounting and mounting tires can be hazardous. This information is NOT meant as a substitute for proper training. The illustrations shown here are consistent with those used by major tire changer manufacturers, but consult their specific equipment use procedures and instructions. This information is meant purely for educational purposes and those who use the methods recommended are solely responsible for any injuries or losses resulting from their application.