cod. 4-144228 - 01/2022

TCX50C Tire Changer

Operations Manual

HUNTER
Engineering Company

Hunter Engineering Company

Dear Purchaser

Thank you for purchasing your Hunter Tire Changer.

Your Tire Changer has been designed to provide years of safe and dependable service, as long as it is used and maintained in accordance with the instructions provided in this manual.

All persons who will use and/or maintain this Tire Changer must read, understand and follow all warnings and instructions provided in this manual, and be properly trained.

This Owner's Manual should be considered an internal part of your Tire Changer and should remain with the Tire Changer. However, nothing in this manual, and none of the devices installed on the Tire Changer, substitute for proper training, careful operation, good judgment and safe work practices.

Always be sure that your Tire Changer is in optimum working order. If you suspect that anything is not working properly, or that a dangerous situation may exist, immediately shut down the Tire Changer and remedy any condition before you proceed.

If you have any questions concerning the proper use or maintenance of your Tire Changer, please call your authorized Hunter Engineering Company representative..

You can also contact Hunter Engineering Company at Tel: 800-448-6848 or 314-731-3020, Fax. 314-731-1776 or use

Sincerely,

Hunter Engineering Company

OWNER INFORMATION

Owner Name _____

Owner Address _____

Model Number _____

Serial Number _____

Date Purchased _____

Date Installed _____

Service and Parts Representative _____

Phone Number _____

Sales Representative _____

Phone Number _____

Training Checklist

Safety Precautions	**Trained**	**Declined**
Warning and Caution Labels	❒	❒
Pinch Points and Other Potential Hazards	❒	❒
Safe Operating Procedures	❒	❒
Maintenance and Performance Checks		
Mounting Head Inspection	❒	❒
Adjustment and Filling of Oilers	❒	❒
Bead Breaking		
Standard Wheels	❒	❒
Low Profile Wheels	❒	❒
Clamping		
Steel Jaw Internal/External Clamping	❒	❒
Demounting		
Standard Wheels with Bead Lever and Plastic Sleeve Protector	❒	❒
Full Seating of Mount/Demount Head to Prevent Head Failure	❒	❒
Bead Lubrication During Removal of Low Profile Tires	❒	❒
Reverse Drop Center Wheels	❒	❒

Mounting	**Trained**	**Declined**
Standard Wheels	❒	❒
Mounting of Stiff, Low Profile Tires	❒	❒
Reverse Drop Center Wheels	❒	❒
Proper Bead Lubrication for Mounting Protection	❒	❒
Inflation	**Trained**	**Declined**
Safety Precautions	❒	❒
Lubrication and Removal of Valve Core	❒	❒
Bead Sealing and Seating	❒	❒

Individuals and Dates Trained

_____ _____

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Contents

1. Getting Started

1.1 Introduction

PURPOSE OF THE MANUAL

The purpose of this manual is to provide the instructions necessary for optimum operation, use and maintenance of your machine. If you sell this machine, please deliver this manual to the new owner. In addition, so we can contact our customers with any necessary safety information, please ask the new owner to complete and return to Hunter the change of ownership form attached to the last page of this manual. Alternately, the new owner can send an email to newuser@hunter.com.

This manual presumes that the technician has a thorough understanding of rim and tire identification and service. He/she must also have a thorough knowledge of the operation and safety features of all associated tools (such as the rack, lift, or floor jack) being utilized, and have the proper hand and power tools necessary to work in a safe manner.

The first section provides the basic information to safely operate the TCX50C tire changer family. The following sections contain detailed information about equipment, procedures, and maintenance. “Italics” are used to refer to specific parts of this manual that provide additional information or explanation. For example, Refer to “*Equipment Components*” page 21. These references should be read for additional information to the instructions being presented.

The owner of the tire changer is solely responsible for enforcing safety procedures and arranging technical training. The tire changer is to be operated only by a qualified and trained technician. Maintaining records of personnel trained is solely the responsibility of the owner or management.

The TCX50C tire changer family is intended for mounting, demounting, and inflating most tires with an approximate dimension of 50 inches in diameter and 15 inches in width.

Copies of this manual and of the documents accompanying the machine may be obtained from Hunter Engineering Company by specifying the type of machine and its serial number.

NOTICE: Design details are subject to change. Some illustrations may vary slightly in appearance from the machine you have.”

An advanced operation section has been provided in *“Advanced Procedures,” page 3*4.

1.2 For Your Safety

Hazard Definitions

These symbols identify situations that could be detrimental to your safety and/or cause equipment damage.

DANGER

DANGER: Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

WARNING: Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

CAUTION: Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

NOTICE

NOTICE: Used without the safety alert symbol indicates potentially hazardous situation, which, if not avoided, may result in property damage.

1.3 General Warnings and Instructions

WARNING

Avoid Personal Injury. Carefully read, understand and follow the warnings and instructions given in this manual. This manual is an essential part of the product. Keep it with the machine in a safe place for future reference.

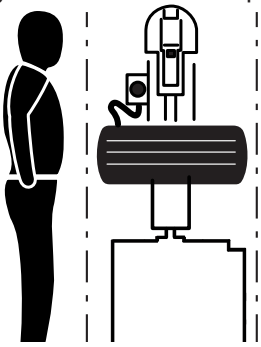
1. If the use and maintenance procedures provided in this manual are not properly performed, or the other instructions in this manual are not followed, an accident could occur. Throughout this manual reference is made that “an accident” could occur. Any accident could cause you or a bystander to sustain severe personal injury or death, or result in property damage.

⚠ WARNING

Avoid Personal Injury. Carefully read, understand and follow the warnings and instructions given in this manual. This manual is an essential part of the product. Keep it with the machine in a safe place for future reference.

2. Overinflated tires can explode, producing hazardous flying debris that may result in an accident.
3. Tires and Rims that are not the same diameter are “mismatched.” Never attempt to mount or inflate any tire and rim that are mismatched. For example, never mount a 16.5” tire on a 16” rim and vice versa. This is very dangerous. A mismatched tire and rim could explode and result in an accident.
4. Never exceed the bead setting pressure (gauge on hose) provided by the tire manufacturer, as stated on the sidewall of the tire.
5. Never place your head or any part of your body over a tyre during inflation process or when attempting to seat beads. This machine is not a safety device against the possible risk of explosion of tyres, tubes or rims.

6. Keep a safe distance from the tyre changer during inflation, in order to remain outside the vertical cylinder area occupied by the wheel. Do not approach it.



⚠ DANGER

A bursting tyre can cause projections of its parts in surrounding areas with a force sufficient to cause serious injury or death.

Never mount any tyre unless its size (moulded into the sidewall) matches the rim size (stamped into the rim) exactly or if the rim or tyre are defective.

Never exceed tyre pressure recommended by tyre manufacturer.

The tyre changer is not a safety device and does not prevent tyres and rims from exploding. Keep all persons not working on the machine out of the working area.

7. Crushing Hazard. Moving Parts Present. Contact with moving parts could result in an accident.

• Only one operator may work with the machine at a time.
• Keep all bystanders clear of tire changer.
• Keep hands and fingers clear of rim edge during demounting and mounting process.
• Keep hands and fingers clear of mount/demount head during operation.

⚠ WARNING

Avoid Personal Injury. Carefully read, understand and follow the warnings and instructions given in this manual. This manual is an essential part of the product. Keep it with the machine in a safe place for future reference.

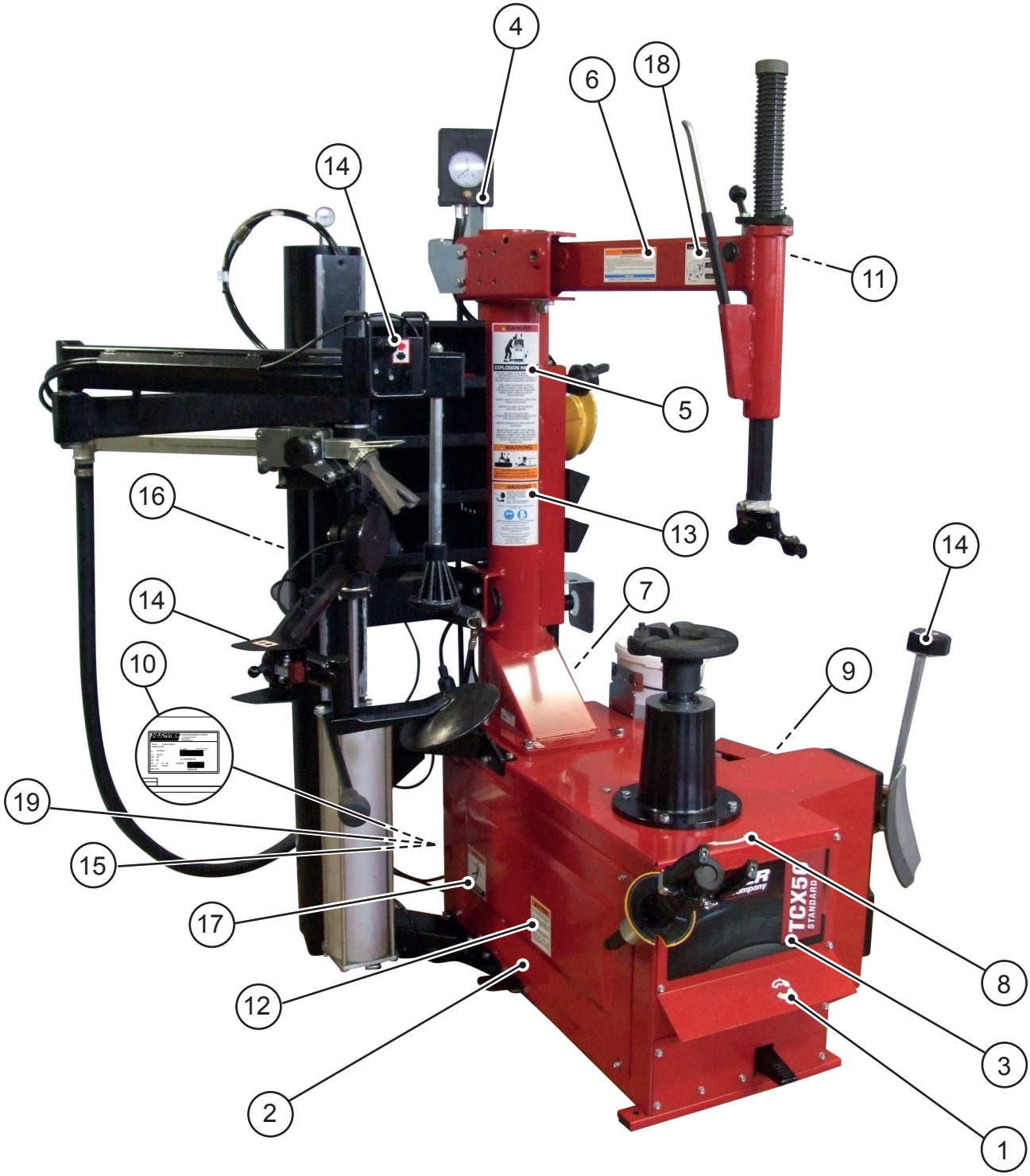
- Keep hands and other body parts away from moving parts.
- Do not use tools other than those supplied with tire changer.
- Use proper tire lubricate to prevent tire binding.

8. Electric Shock Hazard.

- Never hose down or power wash electric tire changers.
- Do not operate machine with a damaged power cord
- If an extension cord is necessary, a cord with a current rating equal to or greater than that of the machine must be used. Cords rated for less current than the machine can overheat, resulting in a fire.
- Care should be taken to arrange the cord so that it will not be tripped over or pulled.

9. Risk of Eye Injury. Flying debris, dirt and fluids may be discharged during bead seating and inflation process. Remove any debris from the tire tread, wheel surfaces. Wear OSHA approved safety glasses during mount and demount procedures.
10. Always inspect the machine carefully before using it. Missing, broken, or worn equipment (including warning stickers) must be repaired or replaced prior to operation.
11. Never leave nuts, bolts, tools or other equipment on the machine. They may become trapped between moving parts and cause a malfunction.
12. NEVER install or inflate tires that are cut, damaged, rotten or worn. NEVER install a tire on a cracked, bent, rusted, worm, deformed or damaged rim.
13. If a tire becomes damaged during the mounting process, do not attempt to finish mounting. Remove from service area and properly mark the tire as damaged.
14. To inflate tires, use short bursts while carefully monitoring the pressure, tire, rim and bead. NEVER exceed tire manufacturer's pressure limits.
15. This equipment has internal arcing or sparking parts which should not be exposed to flammable vapors (gasoline, paint thinners, solvents, etc.). This machine should not be located in a recessed area or below floor level.
16. Never operate the machine if you are under the effects of alcohol, medications and/or drugs. If you are taking prescription or over the counter medication, you must consult a medical professional regarding any side effects of the medication that could hinder your ability to operate the machine safely.
17. Always use OHSA approved and mandated Personal Protective Equipment (PPE) during use of the machine. See your supervisor for more instructions.
18. Remove jewelry, watches, loose clothing, ties and restrain long hair before using machine.
19. Wear non-slip safety footwear when operating the tire changer.
20. Wear proper back support and employ proper lifting technique when placing, moving, lifting or removing wheels from the tire changer.
21. This machine may only be used, maintained or repaired by properly trained employees of your company. Repairs should only be performed by qualified personnel. Your Hunter service representative is the most qualified person. The employer is responsible for determining if an employee is qualified to safely make any repairs to the machine should repair be attempted by users.
23. The user should understand all warnings decals affixed to this equipment before operating.
24. Do not lock the rim on the turntable during inflation.

DECAL PLACEMENT



No.	Part Number	Description
1	RP11-4-123655	DECAL-PEDAL OPERATION
2	RP11-4-144229	DECAL-INFLATRON PEDAL OPERATION
3	128-1484-2	DECAL-HUNTER LOGO TCX50
4	RP11-4-402021	DECAL-MANUAL TIRE BLEED VALVE
5	RP11-4-144226	DECAL-DANGER OPERATION
6	RP11-4-115243	DECAL-WARNING OPERATION
7	RP11-4-402027	DECAL-MAXIMUM INLET PRESSURE
8	RP11-3020842	DECAL-TABLE ROTATION
9	RP11-4-402023	DECAL-RIM, TABLE, BEAD, BREAKER, BEAD AIR PRESSURE
10	RIF. SN	DECAL-MODEL SERIAL NUMBER
11	RP11-4-402031	DECAL-VERTICAL COLUMN LOCK LEVER OPERATION
12	RP11-4-115246	DECAL-ELECTRICAL HAZARD
13	RP11-4-115245	DECAL-WARNING INDICATION
14	RP11-3013640	DECAL-ARROWS LEFT-RIGHT
15	RIF. SN	DECAL-ETL LISTING MARK
16	RP11-4-136333	DECAL-WARNING INDICATION
17	RP11-4-136661	DECAL-ELECTRICAL HAZARD
18	RP11-4-137989	DECAL-TPMS RECOMMENDATIONS
19	RP11-4-136663	DECAL-WARNING SOCKET-OUTLET

Electrical Indications

The TCX50C family is manufactured to operate at a specific voltage and amperage rating.

Make sure that the appropriate electrical supply circuit is of the same voltage and amperage ratings as marked on the TCX50C.

⚠ WARNING

FIRE HAZARD. DO NOT ALTER THE ELECTRICAL PLUG.

NOTICE

Plugging the electrical plug into an unsuitable supply circuit will damage the equipment.

⚠ DANGER

- **HAZARDOUS VOLTAGE**
- **Turn off and lock out system power before servicing.**
- **Contact may cause electric shock or death.**

Make sure that the electrical supply circuit and the appropriate receptacle is installed with proper grounding.

To prevent the possibility of electrical shock injury or damage to the equipment when servicing the TCX50C, power must be disconnected by removing the power cord from the electrical power outlet.

Specific Precautions/Power Source

The TCX50C is equipped with motoinverter, (220VAC/ 1 PH / 50-60Hz), and standard plug 220V L6-20P plug.

This machine must be connected to a 20 amp branch circuit. Please refer all power source issues to a certified electrician. Refer to installation manual.

⚠ WARNING

A protective ground connection, through the grounding conductor in the power cord, is essential for safe operation. Use only a power cord that is in good condition.

Equipment installation and service

A factory-authorized representative should perform installation.

This equipment contains no user serviceable parts. All repairs must be referred to a qualified Hunter Service Representative

Equipment specification

Electrical	
Voltage:	220 VAC, 1 phase, 50-60 Hz, includes NEMA L6-20P
Circuit size:	20 amps
Air	
Air Pressure Requirements:	115-175 PSI (7.9-12.0 bar)
Approximate Air Consumption:	at 8 bar = 6 Lt/s • 0.2118 Ft3/s • 12,70 CFM (ft3/min)
	at 10 bar = 7,76 Lt/s • 0.2471 Ft3/s • 14,82 CFM (ft3/min)
Mechanical	
Clamping System Rotating Speed:	CW – 7 rpm and 17 rpm CCW – 7 rpm
Max. Tire Diameter:	50 in.
Max Bead Roller Opening Width:	15 in.
Diameter Range:	10” – 30”

Explanations of symbols

These symbols may appear on the equipment.

Alternating current.

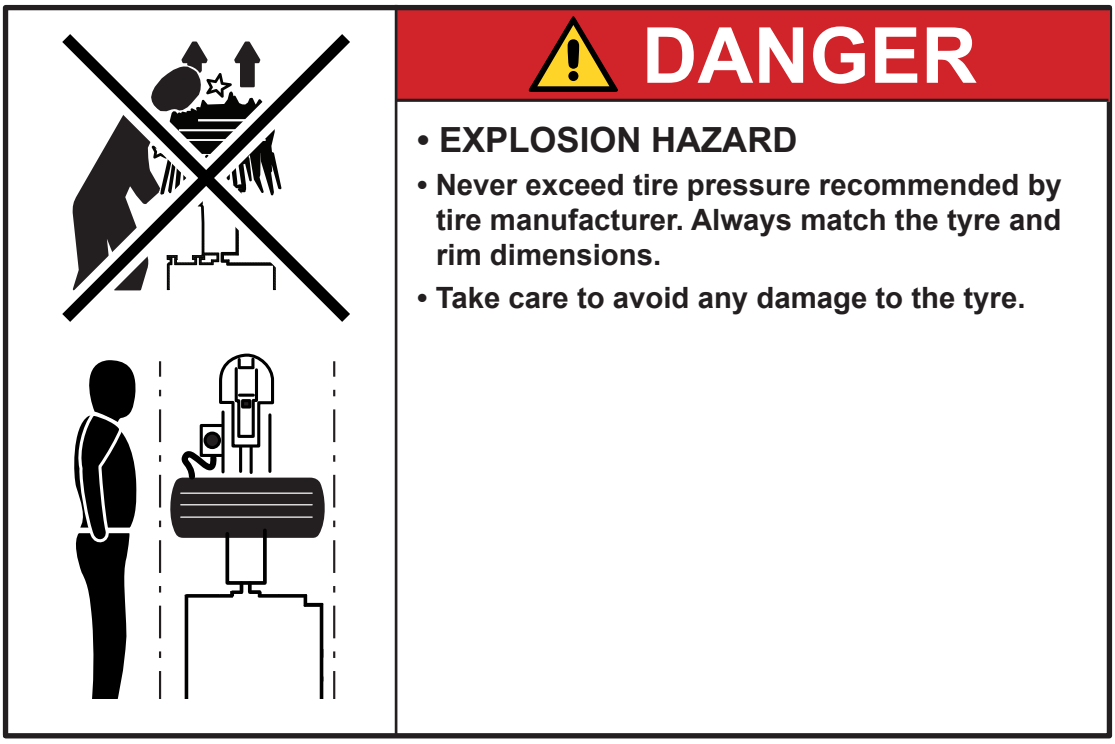

Earth ground terminal.


Protective conductor terminal.


Risk of electrical shock.

Air Pressures

The machine is equipped with an internal pressure limiting valve to minimize the risk of over inflating the tire.



1. Never exceed these pressure limitations:
   - Supply line pressure (from compressor) is 220 psi.
   - Operating pressure (gauge on regulator) is 145 psi.

   Bead setting pressure (gauge on hose) is the tire manufacturer's maximum pressure as stated on the sidewall of the tire.

2. Activate air inflation jets only when sealing bead.

3. Bleed air pressure system before disconnecting supply line or other pneumatic components. Air is stored in a reservoir for operation of inflation jets.

4. Only activate the air inflation jets if the rim securing device is locked in place and the tire is properly clamped (when possible).

5. Only use supplied inflation hose with a properly functioning regulator.

6. Never inflate using "shop air" on the tire changer.

7. Use a safety cage in accordance with tire manufactures recommendations if inflation pressures beyond the tire changer equipped regulated air is required.

1.4 Special Rim/Tire Considerations

NOTICE

Wheels equipped with low tire pressure sensors or special tire and rim designs may require certain procedures. Consult wheels and tire manufacturer's service manuals.

1.5 Intended Use of The Machine

This machine must be used only to remove and replace an automotive tire on an automotive rim, using the tools with which it is equipped. Any other use is improper and can result in an accident.

1.6 Employee Training

1. The employer is obligated to provide a program to train all employees who service rim wheels in the hazards involved in servicing those rim wheels and the safety procedures to be followed. Service or servicing means the mounting and demounting of rim wheels, and related activities such as inflating, deflating, installing, removing and handling.

   • The employer shall insure that no employee services any rim wheel unless the employee has been trained and instructed in correct procedures of servicing the type of wheel being serviced, and in the safe operating procedures.
   • Information to be used in the training program shall include, at a minimum, the applicable information contained in this manual.

2. The employer shall ensure that each employee demonstrates and maintains the ability to service rim wheels safely, including performance of the following tasks:

   • Demounting of tires (including deflation).
   • Inspection and identification of the rim wheel components.
   • Mounting of tires.
   • Use of any restraining device, cage, barrier, or other installation.
   • Handling of rim wheels.
   • Inflation of the tire.
   • Understanding the necessity of standing back from tire changer during inflation of the tire and during inspection of the rim wheel following inflation, never lean over.
   • Installation and removal of rim wheels.

3. The employer shall evaluate each employee's ability to perform these tasks and to service rim wheels safely and shall provide additional training as necessary to assure that each employee maintains his or her proficiency.

1.7 Pre-Use Checks

Before beginning work, carefully check that all components of the machine, especially rubber or plastic parts, are in place, in good condition and working properly. If the inspection reveals any damage or excessive wear, no matter how slight, immediately replace or repair the component.

Walk around the machine to ensure that all components are in good condition and operational and that there are no foreign objects or debris (rags, tools, etc…) in or about the machine which could affect its operation.

These checks must be carried out:

- Before starting the machine.
- At regular time intervals.
- After any modification or repair.

The machine may only be started after this pre-use check is successfully completed.

Do not use the machine if it is placed out of service for a tune up, maintenance, lubrication, etc.

1.8 During Use

In the event you hear any strange noise or feel unusual vibrations, if a component system is not operating properly or if there is anything unusual at all, stop using the machine immediately.

- Identify the cause and take any necessary remedial action.
- Contact your supervisor if necessary.

Never allow any bystander to be within 20 feet of the machine during operation.

To stop the machine in an emergency:

- disconnect the power supply plug;
- cut off the compressed air supply network by disconnecting the shut-off valve (snap coupling).

1.9 Control Pedal Configurations

⚠ WARNING

Avoid unintended machine movement and personal injury.
Pay close attention to the configuration of your machine.

Throughout this manual, control pedals are referred to by the associated symbol.

ROTATION

The PowerOut system provides bead breaking controls on the handle for convenience, particularly with larger diameter assemblies.

1.10 Wheel Rotation Pedal

Step down on the rotation pedal to rotate the wheel clockwise.

Lift up on the pedal to rotate the wheel counterclockwise.

1.11 Tire Bead Breaker Shovel control

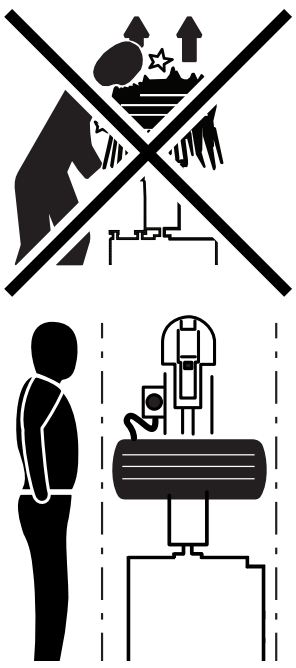
⚠ WARNING

Keep arms and legs from between the bead breaker arm and the side of the housing.

Press the “In” button to close bead breaker arm and loosen bead (red arrow).
Press the “Out” button to allow the bead breaker arm to open (black arrow).

1.12 Air Inflation Pedal

On the left side of the base, the air inflation pedal operates the two-stage air inflation system. Refer to illustrations on page 30. The pedal controls the air going to the inflation hose and the air inflation jets.



⚠ DANGER

- **EXPLOSION HAZARD**
- **Never exceed tire pressure recommended by tire manufacturer. Always match the tyre and rim dimensions.**
- **Take care to avoid any damage to the tyre.**

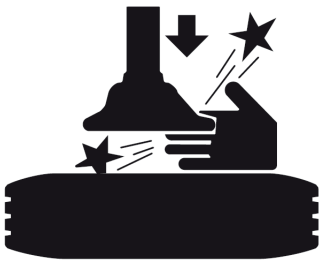
⚠ WARNING

Keep hands clear of wheel during sealing and seating of beads.

⚠ WARNING

Risk of Tire Failure When Driving.
Excessive air pressure can damage the internal structure of a tire, without this damage being visible to you, resulting in an automobile accident, personal injury or death.

1.13 Moving Parts



⚠ WARNING

- **MOVING PARTS PRESENT.**
  MOVING PARTS CAN CUT AND CRUSH.
- **Keep hands away from moving parts.**
- **Crush may cause injury.**

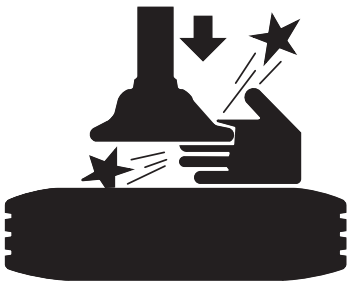
1.14 Inflator and Pressure Limiter

As a safety device, the pressure limiter prevents the operator from using excessive air pressure.

Bead seating pressure should never exceed the tire manufacturer's maximum bead seating pressure as stated on the sidewall of the tire.

If tires being mounted require more than the tire manufacturer's maximum bead seating pressure, the wheel should be removed from the tire changer, placed in an inflation cage, and inflated per manufacturer's instructions.

1.15 Mount / Demount Head

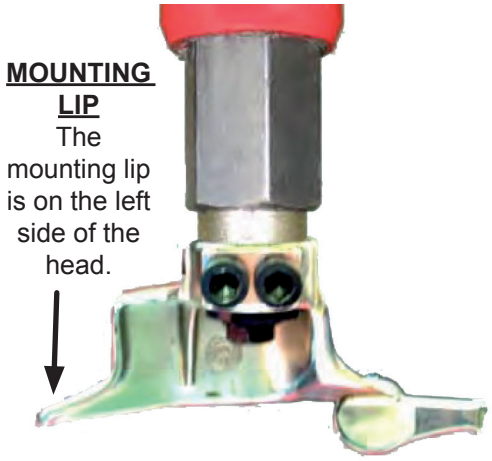


⚠ WARNING

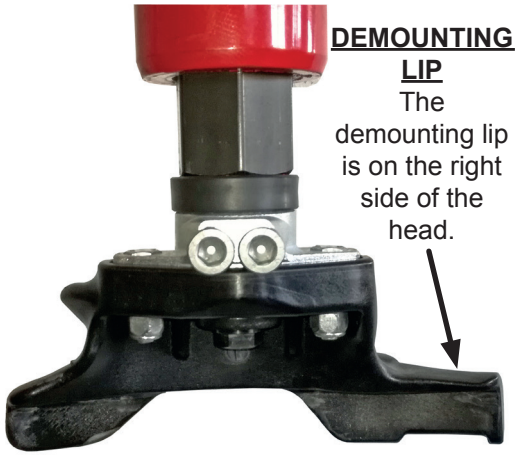
- **MOVING PARTS PRESENT. MOVING PARTS CAN CUT AND CRUSH.**
- **Keep hands away from moving parts.**
- **Crush may cause injury.**

The mount/demount head is suspended from the column above the turntable.

The head has a mounting and demounting lip that is designed to install or remove the bead of tire as the wheel is rotated clockwise.

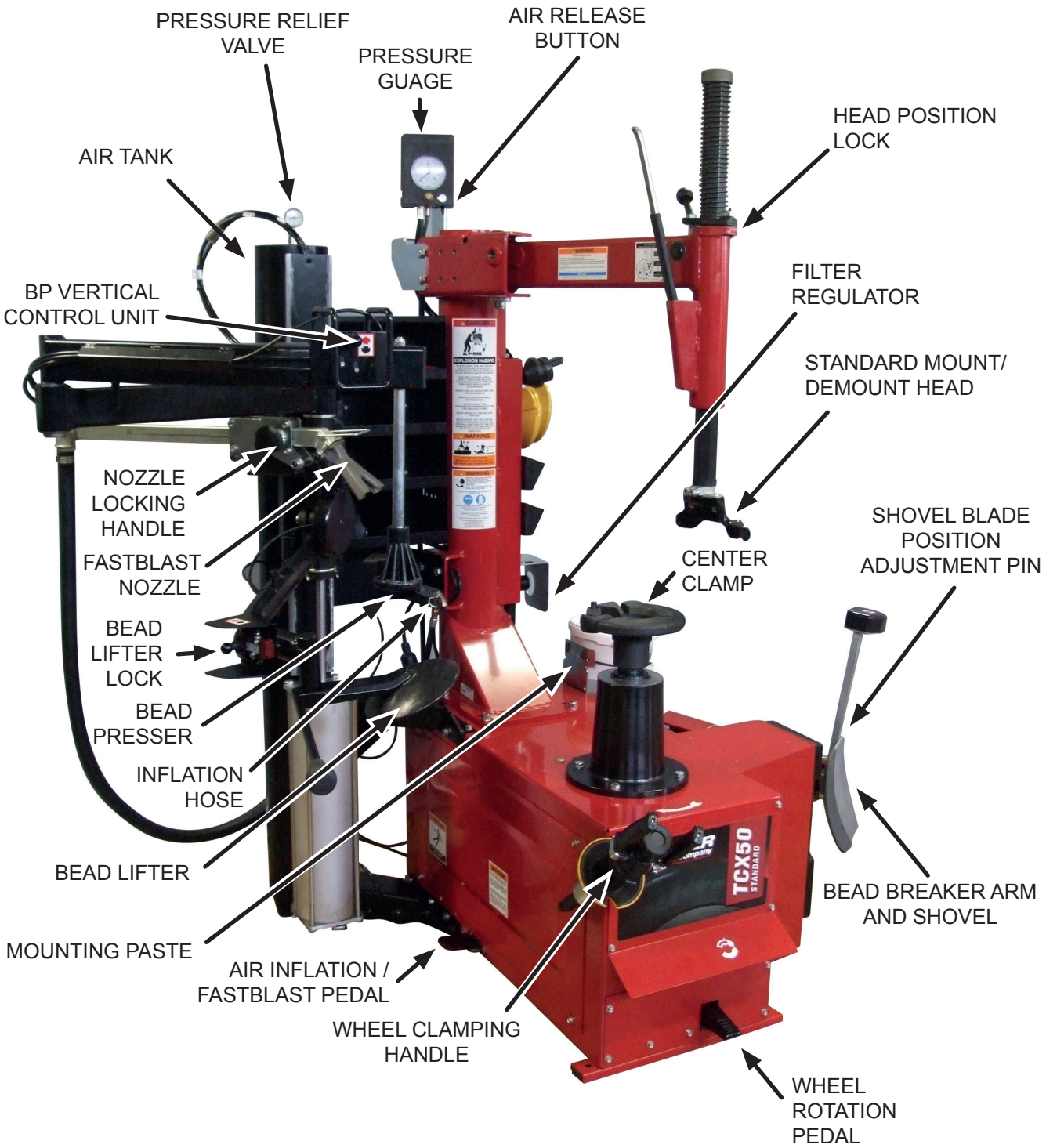


STEEL MOUNT HEAD



PLASTIC MOUNT HEAD

1.16 Equipment Components



2. Basic Procedures

2.1 Bead Breaking

⚠ WARNING

All air pressure inside the tire must be removed before proceeding. Never attempt to break the bead until all air is removed from the tire. Failure to remove all air from tire may result in injury to operator, or damage to equipment, tire, or wheel.

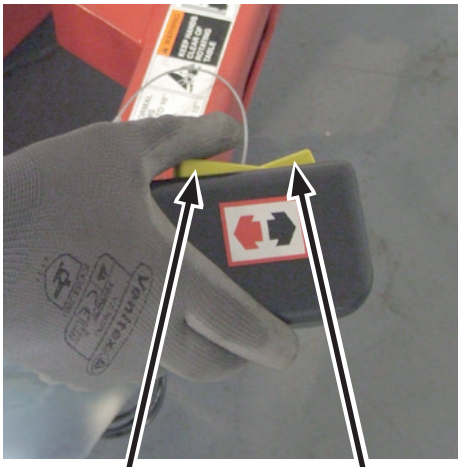
Remove valve stem core to deflate tire completely. Remove all weights from the rim to protect the rim and extend life of the mount/demount head.

The shovel blade has two-position adjustment. The second position is for wheels 10” wide and larger, but also may be used to break the beads of extreme low profile tires.

Press the “Out” button to allow the bead breaker arm to open and position the wheel against the side of the tire changer, between the bead-breaker arm and the housing.

Press the “In” button to bring the bead breaker arm toward the tire and position the shovel blade on the sidewall of the tire. Locate the blade close, but not contacting, the edge of the rim.

Press the “In” button again to close bead breaker arm and loosen bead.



“In” button **“Out” button**

Release the “In” button to disengage the bead-breaker arm and press the “Out” button to allow the bead breaker arm to open. If the bead has not completely loosened, rotate the wheel and repeat the bead breaking procedure at a different area on the tire.

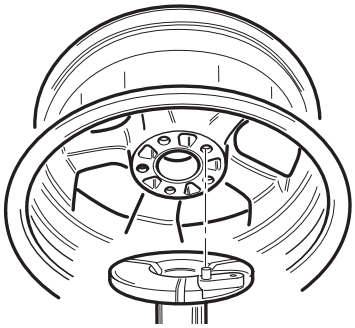
Turn the wheel and break the opposite bead using the same procedure.

2.2 Placing Wheel on Tyre Changer

NOTICE

Identify and recognize special wheel combinations such as tilted channel wheels (they need to be inverted on the tyre changer), AH, “Run-Flat” and standard tyres with pressure sensors. If you are not familiar with these special types of wheels, DO NOT USE the tyre changer. Consult your supervisor.

Lock the wheel on the turntable

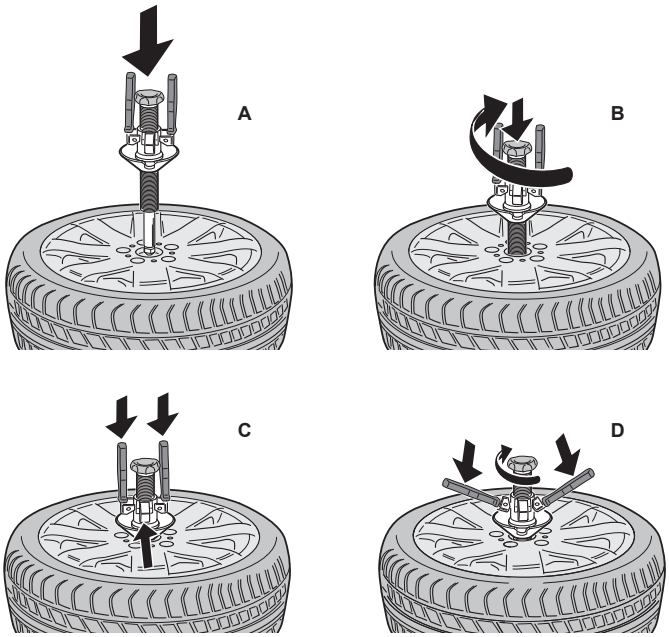


Load the wheel on the turntable. When positioning the wheel on the turntable, also take care to centre the movable centring pin, placed radially on the turntable, in one of the fixing bolt holes.

⚠ CAUTION

If the wheel weighs more than 10 kg, with a lifting frequency of more than 20 wheels/ hour, it is recommended to use a lifting device (optional).

1. Fit the clamping device into the central hole of the wheel (A).
2. Turn the device for correct engagement with the turntable (B).
3. Move the centring cone manually into position on the rim by moving the retainers 1 (C).
4. Tighten the clamping device by turning the handles 2 clockwise (D).



WARNING

If the wheel weighs more than 10 kg, with a lifting frequency of more than 20 wheels/ hour, it is recommended to use a lifting device (optional).

2.3 Demounting Tire from Rim

Standard tires

NOTICE

Clean the mount/demount head to remove dirt and debris before demounting the tire from the rim.

Press the wheel rotation pedal until the valve location is in the one o'clock position.

Position the mount/demount head against the outer edge of the upper rim lip.

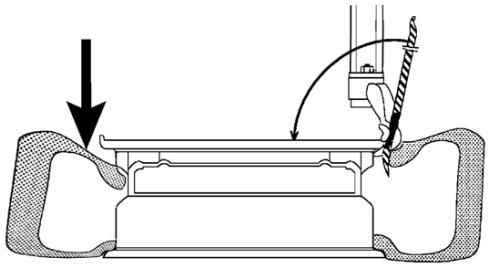
Slide the mount/demount head in or out along the upper rail and lower the head into position. Pull the head position lock handle to lock head into position.

A plastic protector sleeve may be installed on the bead lever tool to aid in rim protection.

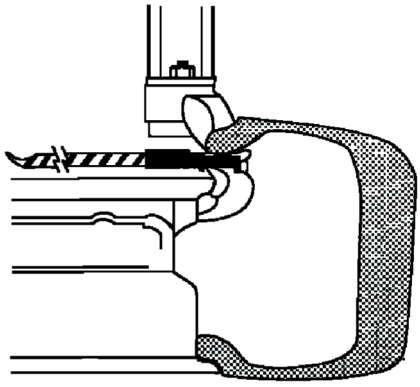
Plastic protectors bead lever

Position the bead lever between the demounting lip of the head and bead of tire. The demounting lip is on the right side of the head.

Push down on the tire sidewall 180 degrees from the mount/demount head to slip the bead into the drop center of rim.



Using the bead lever tool, lift the tire bead over the demounting lip of the head.



The bead lever tool must be pulled down parallel to the rim.

Press the wheel rotation pedal  to rotate the wheel clockwise.

Remove the bead lever tool from the tire when it easily slides out, approximately after a quarter rotation of the wheel.

Continue to press the wheel rotation pedal  to rotate the wheel clockwise until the entire bead is lifted from the rim.

Lift tire and repeat this procedure for lower bead.

Lift the mount/demount arm assembly up and away from the wheel.

Remove tire from rim.

For additional information on demounting special wheels, refer to "Advanced Demounting Procedures," page 35.

Difficult tires

If the outer bead of the tire has "re-seated", or needs additional lubrication, the bead loosening procedure can be repeated with the BP Bead Press Arm rather than the side shovel.
The BP Bead Press Arm can be used when removing the tire from the rim.

1. Position the mount/demount head on the tire and rim.
2. Insert bead lever.

NOTICE

The Bead Press Arm can also be used to create a gap for the bead lever.

3. Position the Bead Press Arm head approximately 180° from the mount/demount head.
4. Lower the Bead Press Arm head so the bead is pressed downward toward the center of the rim.
5. Using the bead lever, pull the bead up and onto the mount/demount head.

6. Raise the Bead Press Arm up and out of the way.
7. Rotate clockwise  to complete the demounting procedure.

Using the Bead Press Head Hook to Lift the Tire
Use the hook on the bead press head to help lift the tire during demount.
With upper bead demounted, use the bead lever and position the bead press head hook under the upper bead on the opposite side of the tire.

Raise the bead press head hook.

Use lever to hook lower bead and pull over rim.
Remove the bead press head hook from the upper bead and complete removal of the lower bead.

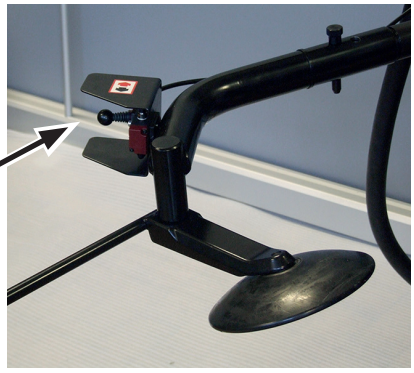
Bottom Bead Demounting with Disc

Demounting the bottom bead on certain wheel assemblies, large and heavy assemblies and some run-flat assemblies for example, may be best performed by using the lower disc.
Return the tool head to the “resting” position.

Lower and align the lower disc to touch the bottom of the rim edge.

Lock the disc in place using the disc lock lever.

DISK LOCK LEVER



While supporting the opposite side of the tire, raise the lower disc until it is just above the rim edge.

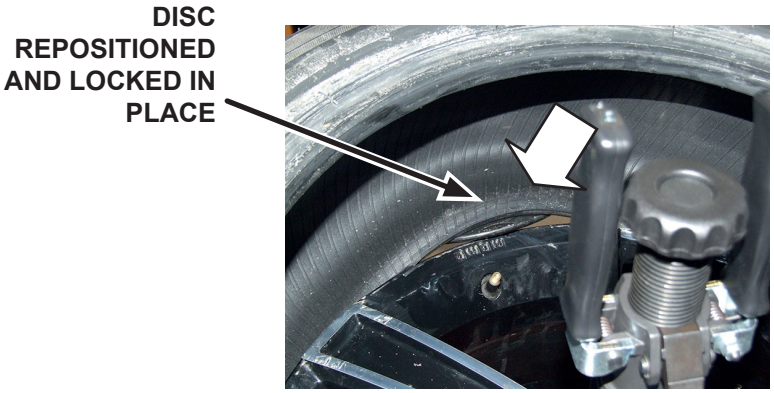
This will create a gap between the rim edge and the tire.

With the tire in position, press the wheel rotation pedal  to rotate the wheel clockwise and demount the bottom bead.

Some of the more difficult tires may have the tendency to “fold” under the lower disc.

THE “FOLDING” UNDER DISC

If this is the case, reposition the lower disc. While supporting the opposite side of the tire, again, raise the lower disc until it is just above the rim edge. Create a gap between the rim edge and the tire.
Temporarily unlock the lower disc lock lever and pull the lower disc in between the rim edge and the tire. Then lock the lower disc in place.



With the tire in position, press the wheel rotation pedal  to rotate the wheel clockwise and demount the bottom bead.

2.4 Mounting Tire to Rim

Always use this “checklist” as a guide when mounting tires to ensure proper service.
There are four basic steps when mounting a tire to a rim:

- Position the bead on top of the mounting lip of the mount/demount head.
- Position the bead under the demounting lip of the mount/demount head.
- Lock the tire to the rim in the mounting position.
- Slip the bead into the drop center.

These four basic steps to mounting do not necessarily follow the same sequence, however all four steps need to be performed to mount a tire to a rim.

Mount a standard tire to rim

NOTICE

The mounting procedure is the same for both: standard and leverless mounting head.

Lubricate inside and outside of both beads of the tire to be mounted with supplied mounting paste.
Position tire on top of the rim and tilt tire forward.
Position mount/demount head through the opening of the tire and on the outer edge of the rim lip.
Position edge of tire bead on top of the mounting lip of the head. The mounting lip is on the left side of the head.
Push edge of tire bead under the demounting lip of the head, while keeping the other edge of tire bead above the mounting lip.

Twist tire clockwise by hand to lock the tire into the mounting position.
Push down on tire at about the 6 o’clock position to slip the bead into drop center.

LOWER BEAD

UPPER BEAD

Press the wheel rotation pedal  to rotate the wheel clockwise until the tire bead drops over the lip of the rim.

Repeat procedure on upper bead of tire. Slip the bead completely into the drop center of the rim, during mounting of the upper bead.
For additional information on special wheels, refer to “Advanced Mounting Procedures,” page 36.

NOTICE

When basic procedures are NOT followed, sharp angled wheel flanges increase potential damage to tires during mounting. Be sure the tire bead is placed on top of the mounting head. If the tire is incorrectly pushed onto the rim by the side of the mounting head, it may become “trapped” and increases mounting stress to the tire bead.

Insufficient lubrication and failure to place tire into drop center during mounting may also cause the polymer mount/demount head to fail prematurely.

MOUNT HEAD CORRECTLY PLACED

MOUNT HEAD INCORRECTLY PLACED

Position the tire such that the back of the tire is over the mount / demount head and the front of the tire under the finger of the mount / demount head.

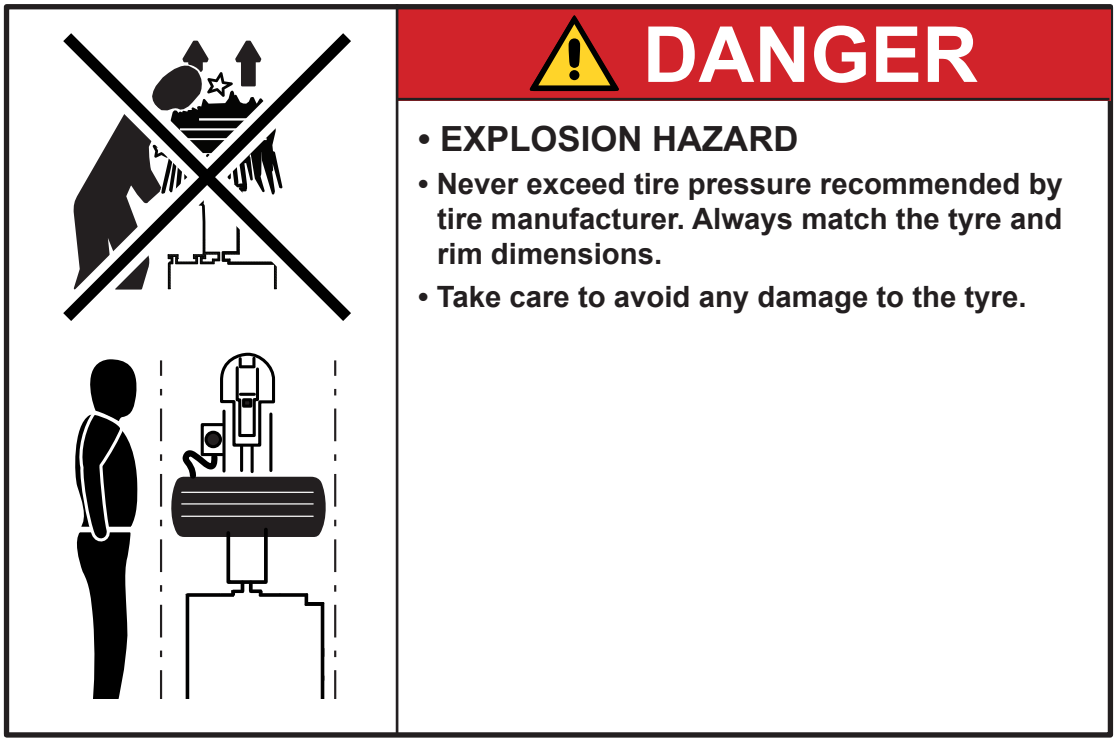
Mount difficult tires

In cases where the sidewall is too strong, this operation could be difficult. In this case use the BPS or BP arm.
If equipped, move the articulated arm of the BPS (or BP arm) to the 3 o'clock position and lower the upper bead press disc down onto the edge of the tire.

With the tire in position, press the wheel rotation pedal to rotate the wheel clockwise and mount the top bead.

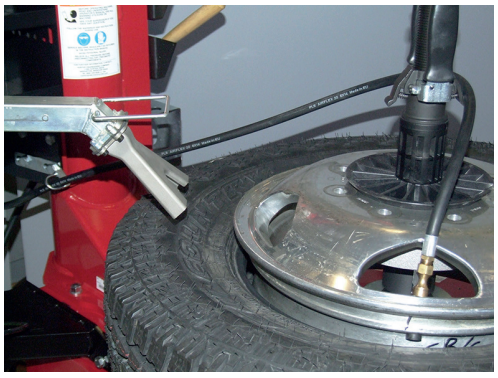
2.5 Tire Inflation

The FastBlast device has been developed to simplify bead insertion and then inflation of the tire.
When operating on very soft tires, or tires which have been stored horizontal for a long period of
time, bead insertion and inflation may be very difficult because the air directed into the tubeless
tire comes straight out again due to the failure to achieve a seal between the rim and the tire.
By emitting a powerful air jet in a very short time, the FastBlast device generates a series of forces inside the tire which help rapid insertion of the bead onto the rim.
The device is activated using the inflation pedal.



• Verify that both upper and lower tire beads and rim bead seat have been properly lubricated with an approved mounting paste.
• Remove valve stem core if not already done.
• Connect inflation hose to valve stem.

• Make sure that the tire is completely sealed on the rim in the lower part of the wheel.
• Adjust the position of the FastBlast nozzle to suit the diameter of the rim. Use the knob to adjust the distance between the nozzle and the rim; use knob to lock nozzle at desired position.



⚠ WARNING

Do not stand over tire during inflation.

Step down completely on the air inflation pedal (pedal on the left side of the base) to release a high-pressure air blast through jet on FastBlast to assist in seating the beads of the tire.
Step down partially on the pedal to inflate tire and seal beads with inflation hose. Frequently stop to check bead seating pressure on gauge.

⚠ WARNING

Do not exceed tire manufacturer's maximum pressure as stated on the sidewall of the tire when seating beads.

Reinstall valve stem core into the valve stem after beads have been seated, and then inflate tire to vehicle manufacturer recommended pressure.

⚠ WARNING

Activate air inflation jets only when sealing bead.

Bleed air pressure from system before disconnecting supply line or other pneumatic components. Air is stored in a reservoir for operation of inflation jets.

⚠ WARNING

• Only activate the air inflation jets if the rim securing device is locked in place and the tire is properly clamped.
• Never mount a tire to a rim that is not the same diameter (e.g., 16 1/2 inch tire mounting on a 16 inch rim).

NOTICE

FastBlast inflation system has been designed to work effectively with the nozzle 3-4 inches (76-101 mm) above the rim. Do not position the nozzle too close to the rim edge and do not position it below the level of the upper rim edge, as this would reduce its effectiveness

If tire is over-inflated, air may be removed from the tire by pressing the brass manual air release button located below the air pressure gauge.
Disconnect inflation hose from valve stem.

3. Advanced Procedures

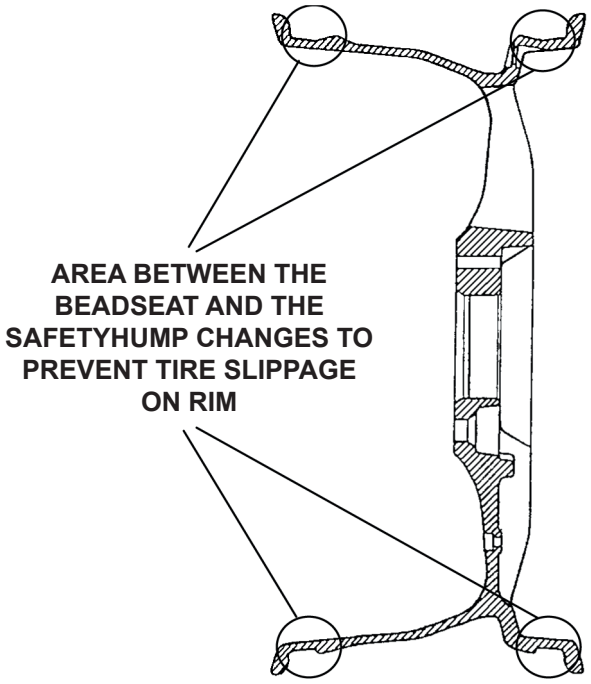
The capabilities of the TCX50C tire changer family allow the user to utilize numerous advanced procedures on a variety of rims and tires. For the operator to take advantage of these features, this section explains in detail what additional steps can be taken.

3.1 Advanced Bead Breaking Procedures

Bead Breaking “AH” Wheels (e.g. BMW M3, M5, Some Porsches, Range Rover, Lancia, etc.)

“AH” (Asymmetrical Humps), “Bead Locking System” wheels may be identified by looking on the back of a rim for “AH” in the rim size designation casting (e.g. 8X17-AH).

“AH” wheels are designed so that the lowest point of the safety hump is located at the valve stem or 180 degrees out. These two points are where it is easiest to break the bead from the bead seat.



Bead Breaking “AH” Wheels as follows:

Swing the bead breaker arm out and away from the housing.

Position the wheel against the side of the tire changer between the bead breaker arm and the housing.

Rotate the wheel so that the valve stem is in line with or 180 degrees from the blade.

Swing the bead breaker arm toward the tire and position the blade one to two inches from the edge of the rim on the sidewall of the tire.

Press the “in” button on the bead-breaker control handle.

The bead breaker arm will be pulled toward the tire changer to break the bead.

Press the “out” button to disengage the bead breaker arm.

If the bead has not been completely broken, rotate the wheel 180 degrees and repeat the bead breaking procedure.

Turn the wheel and break the opposite bead using the same procedure.

3.2 Advanced Demounting Procedures

NOTICE

It is important on large, low profile tires to always lubricate the tire bead, wheel drop center, and bead seat to prevent possible tire damage during demount.

Demounting Tire from Rim Using the Bead Lever Tool without the Plastic Sleeve Protector

Sometimes the sidewall of the tire is so stiff that use of the bead lever tool with the plastic sleeve protector is not possible. The technician needs every bit of clearance to be able to pry the bead of the tire up and over the mount/demount head.

Demounting Upper Bead

Position mount/demount head onto the outer edge of the upper rim lip.

Position bead breaker tool without plastic sleeve protector between demounting lip of the head and the bead of the tire. The demounting lip is on the right side of the head.

Using the bead lever tool, pry the tire bead over the demounting lip of the head.

Position the bead lever tool parallel to the rim.

Lift slightly on the wheel rotation pedal  to rotate the wheel counterclockwise approximately 1/2 inch, to fully unfold the bead onto the mount/demount head.

Slide the bead lever tool out from between the mount/demount head and the tire.

Step down on the wheel rotation pedal  to rotate wheel clockwise until the entire bead is lifted from the rim.

Demounting Lower Bead

Pull the tire up and tilt to place rear of lower bead in drop center behind mount/demount head.

Lubricate tire bead lever tool and then insert it over the demounting lip of the head and under the lower bead of the tire.

Pull the lower bead up and over the demounting lip of the head.

Push the bead lever half-way through tire and rim. Grasp inside of bead lever with one hand and grasp outside of bead lever at the base with the other hand. Firmly pull bead lever straight up.

Step down on the wheel rotation pedal  to rotate wheel clockwise until the entire bead is lifted from the rim.

3.3 Advanced Mounting Procedures

Always use this “checklist” as a guide when mounting tires to ensure proper service.

There are four basic steps when mounting a tire to a rim:

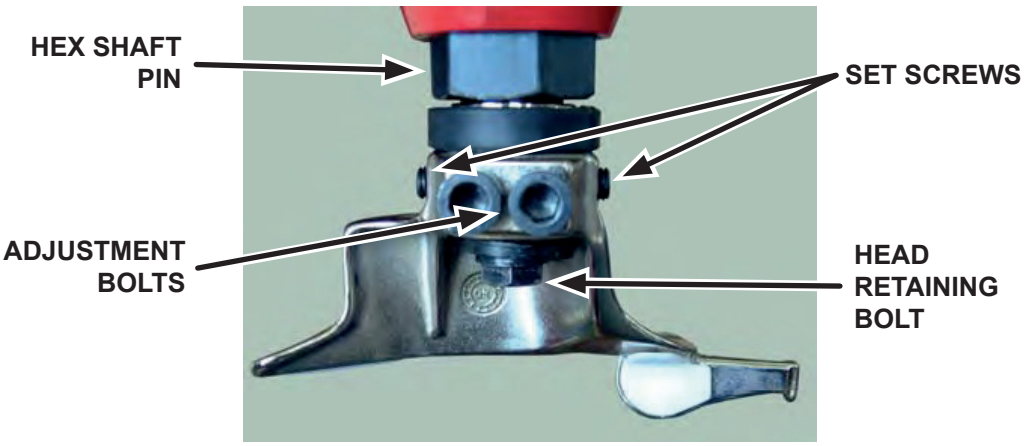
- Position the bead on top of the rear lip of mount/demount head.
- Position the bead under the front lip of the mount/demount head.
- Lock the tire to the rim in the mounting position.
- Slip the bead into the drop center.

These four basic steps to mounting do not necessarily follow the same sequence, however all four steps need to be performed to properly mount a tire to a rim.

3.4 Mount/Demount Head Assembly

There are plastic and steel mount/demount head assemblies available for the TCX50C tire changer family. Both use standard procedures for mounting and demounting.
To change the mount/demount head assembly:

1. Loosen the set screws (steel heads only) and the adjustment bolts.
2. Remove the head retaining bolt.
3. Remove the mount/demount head assembly.



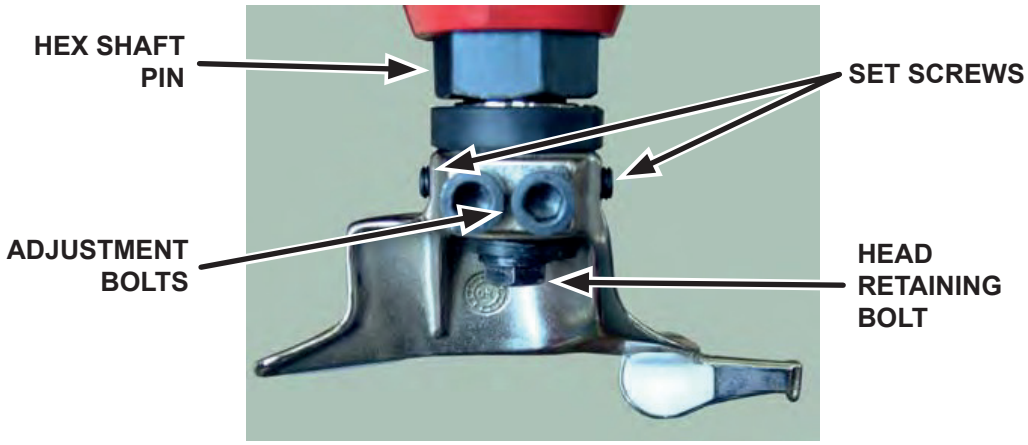
4. Place the mount/demount head assembly that you wish to use over the lower section of the hex shaft and reverse the above procedures to install.

Checking Mount/Demount Head Calibration For Steel Heads

Calibration will require the use of a 17-18 inch bare rim.

Set Position of Steel Mount/Demount Head on Hex Shaft

1. Clamp rim without a tire on the tire changer turntable.
2. Loosen the head retaining bolt slightly so that the head is still attached.
3. Loosen the two adjustment bolts and set screws so that the tool head can swivel on the hex shaft pin.



4. Position the tool head manually against the edge of the rim so that both sides of the tool head are resting on it.
5. Tighten the set screws in alternation to maintain 5/64 in. horizontal gap at leading and trailing edge of the mount head. Double check distance with feeler gauge. See above figure.
6. Keep the roller in contact with the edge of the rim, alternately loosen and tighten the two adjustment bolts until the gap is 1/4-inch.

BACK EDGE OF HEAD

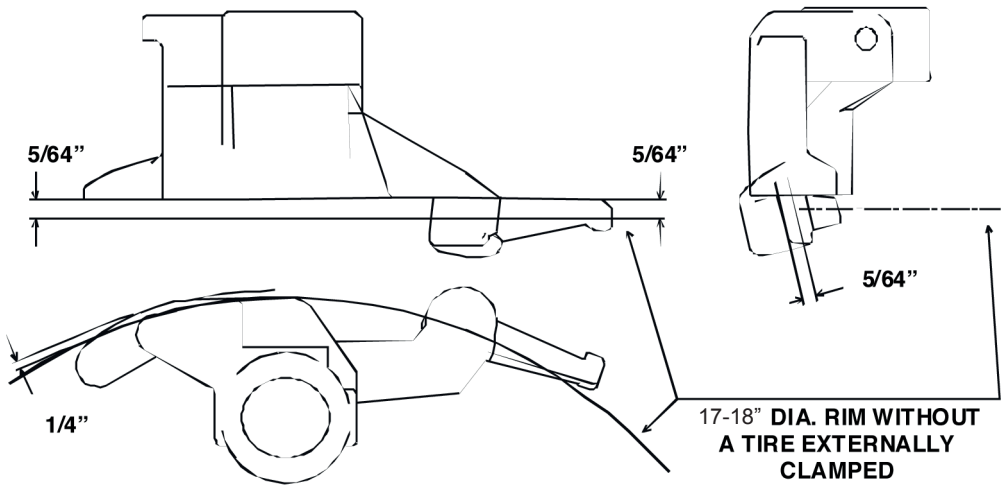
OVER-HANG

Measure with depth gauge

¼-inch specification

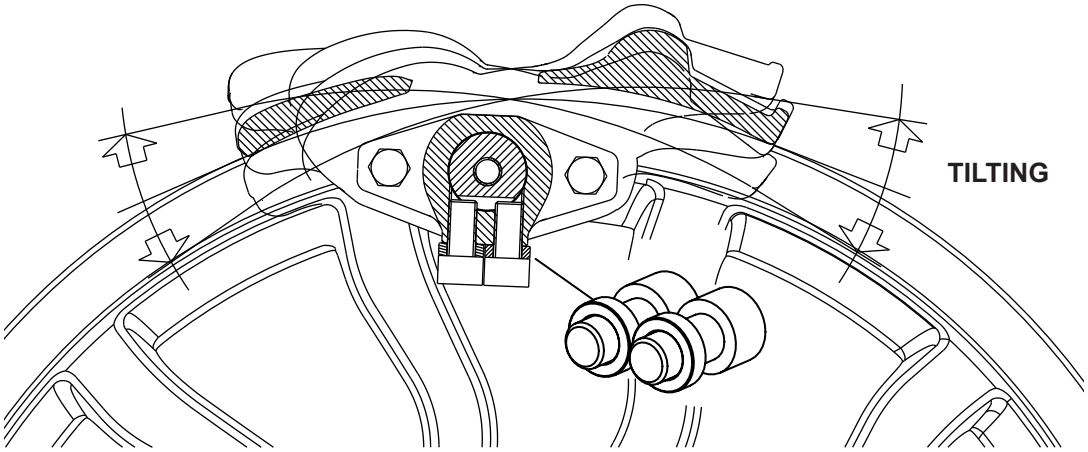
7. Fully tighten the set screws, checking when done that both sides of the tool head are still the same distance from the edge of the rim.
8. When the correct position has been achieved, tighten the adjustment bolts alternately to lock it in position.
9. Tighten the head retaining bolt.

Figure below is a summary of the desired end result.



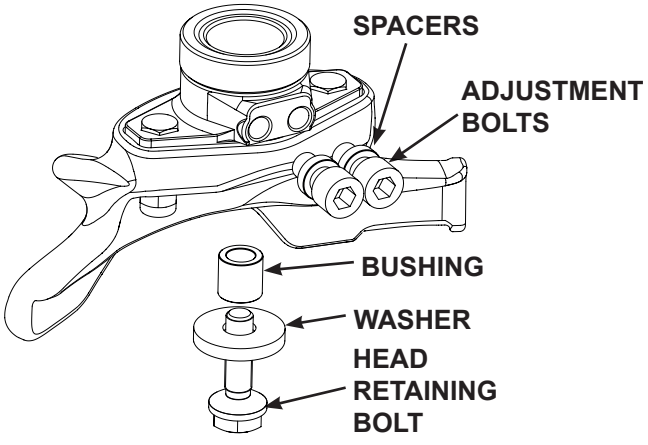
For Tilting Plastic Heads

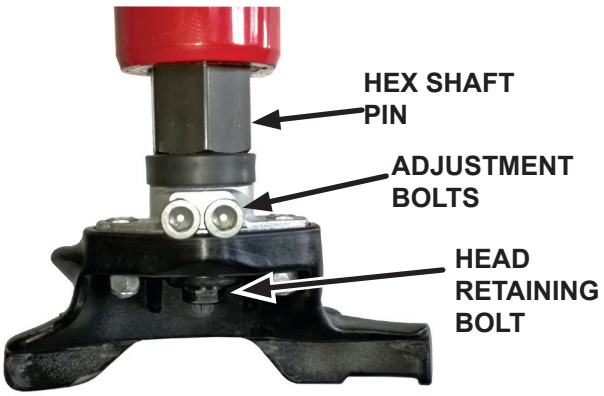
Figure below is a summary of the desired end result.
The head will adjust itself to each rim diameter, due to its tilting feature.



Set Position of Plastic Mount/Demount Head on Hex Shaft

1. Fit the head on the hexagonal shaft.
2. Fully tighten the head retaining bolt being sure to insert the relevant washer and bushing.





3. Fully tighten the adjustment bolts being sure to insert the two relevant spacers.

Adjust the Offset of Lock Mechanism – Steel and Plastic Heads

1. Again, position the mount/demount head on the outer edge of upper rip lip and lock in this position.
2. Use gauges to measure distances between head and the top of the rim. Measure at inserts on steel head.

TIRE MOUNTING LIP

TOP GAP

Measure with feeler gauge

5/64-inch specification

TIRE DEMOUNTING LIP

SIDE GAP

Measure with feeler gauge

5/64-inch specification

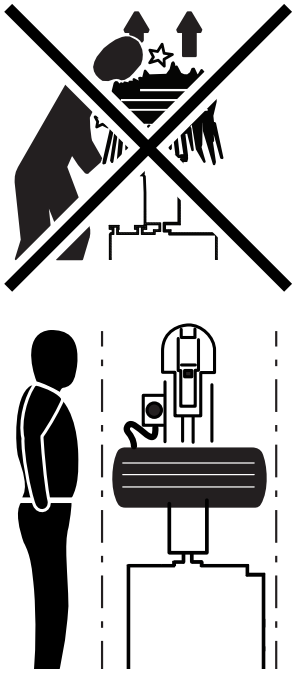
Change the offset by removing the plastic cover and adjusting the nuts located on front of the locking mechanism.

Replace the plastic cover.

Confirm head clearances to the 17 in rim are correct. Position the mount/demount head on the outer edge and lock in this position. Check clearances.

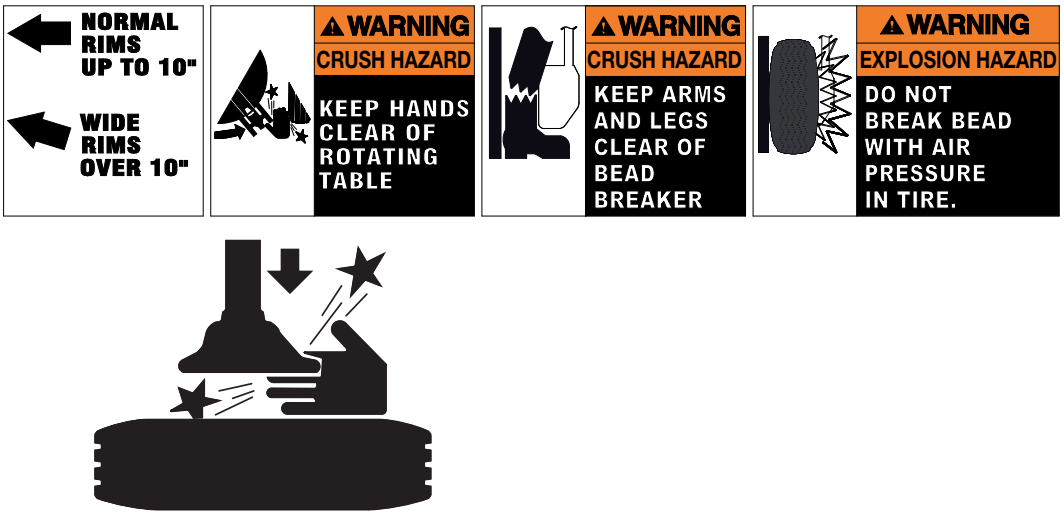
4. Maintenance

4.1 Maintenance Schedule



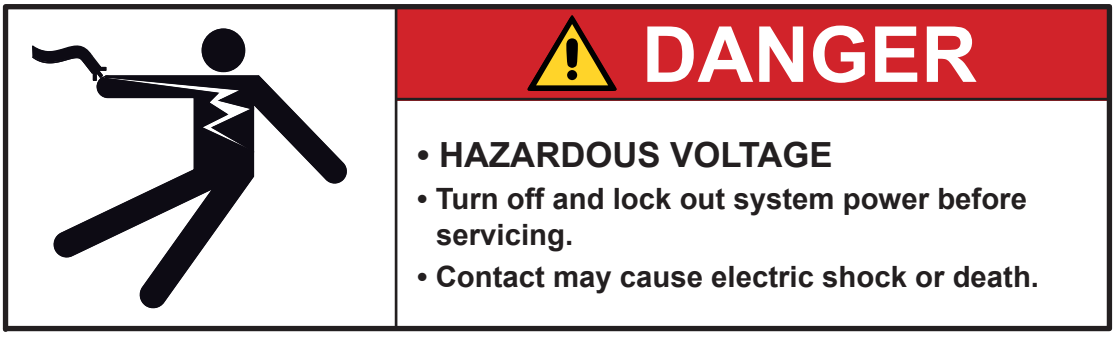
DANGER

- **EXPLOSION HAZARD**
- **Never exceed tire pressure recommended by tire manufacturer. Always match the tyre and rim dimensions.**
- **Take care to avoid any damage to the tyre.**



CRUSH HAZARD.

Before making any adjustments or carrying out maintenance, disconnect the electricrical and compressed air supplies from the equipment and make sure that all moving parts are suitably immobilized.



Before carrying out cleaning or maintenance operations on the machine or when replacing machine parts, disconnect. Follow any “lock out – tag out” procedures in your jurisdiction. See your supervisor for additional information.
Should any maintenance task require the disabling, removal or disassembling of any safety device, that device must be immediately restored or replaced when the maintenance is complete.

Wear personal protective equipment (PPE) and clothes, in compliance with the local rules and regulations, including but not limited to OSHA. See your supervisor for instructions.
If you have any questions concerning the proper use or maintenance of your machine, please contact your nearest Hunter Engineering Company representative.
You can also contact Hunter Engineering Company at
Tel: 800-448-6848 or 314-731-3020.

In case of a written request, please specify the:
- Machine model.
- Serial number.
- Detail of the problems encountered.
- Inspections that have been performed.
- Adjustments made and their outcome.
- Any other useful information.

You may address your written requests to:

HUNTER ENGINEERING COMPANY
11250 Hunter Drive
Bridgeton, Missouri 63044

Fax: 314-731-1776

e-mail: Customerservice@hunter.com

The components of Hunter Engineering Company products are designed as a single integrated system. To avoid compromises in terms of safety, performance, durability and function, and to prevent voiding of the warranty, do not substitute Hunter Engineering Company components with components manufactured by other companies. Use only ORIGINAL replacement PARTS supplied by Hunter Engineering Company.

During maintenance procedures,
- Never modify or alter the machine or any of its components.
- Use proper stairs, ladders or platforms to access areas that cannot be reached from ground level.
- Use appropriate personal protection equipment (PPE), such as eye protection, face shield, respiratory protection, gloves and coveralls, when performing maintenance, repairs or adjustments in compliance with local and OSHA regulations. Check with your supervisor.
- Never attempt any repairs or adjustments to any hydraulic component or auxiliary unit, including pumps, hoses, fittings, if the system is pressurized or operational or if the machine is in operation. Always shut down the machine, relieve all pressure and wait for all motion to come to a complete stop before performing any repairs or adjustments.

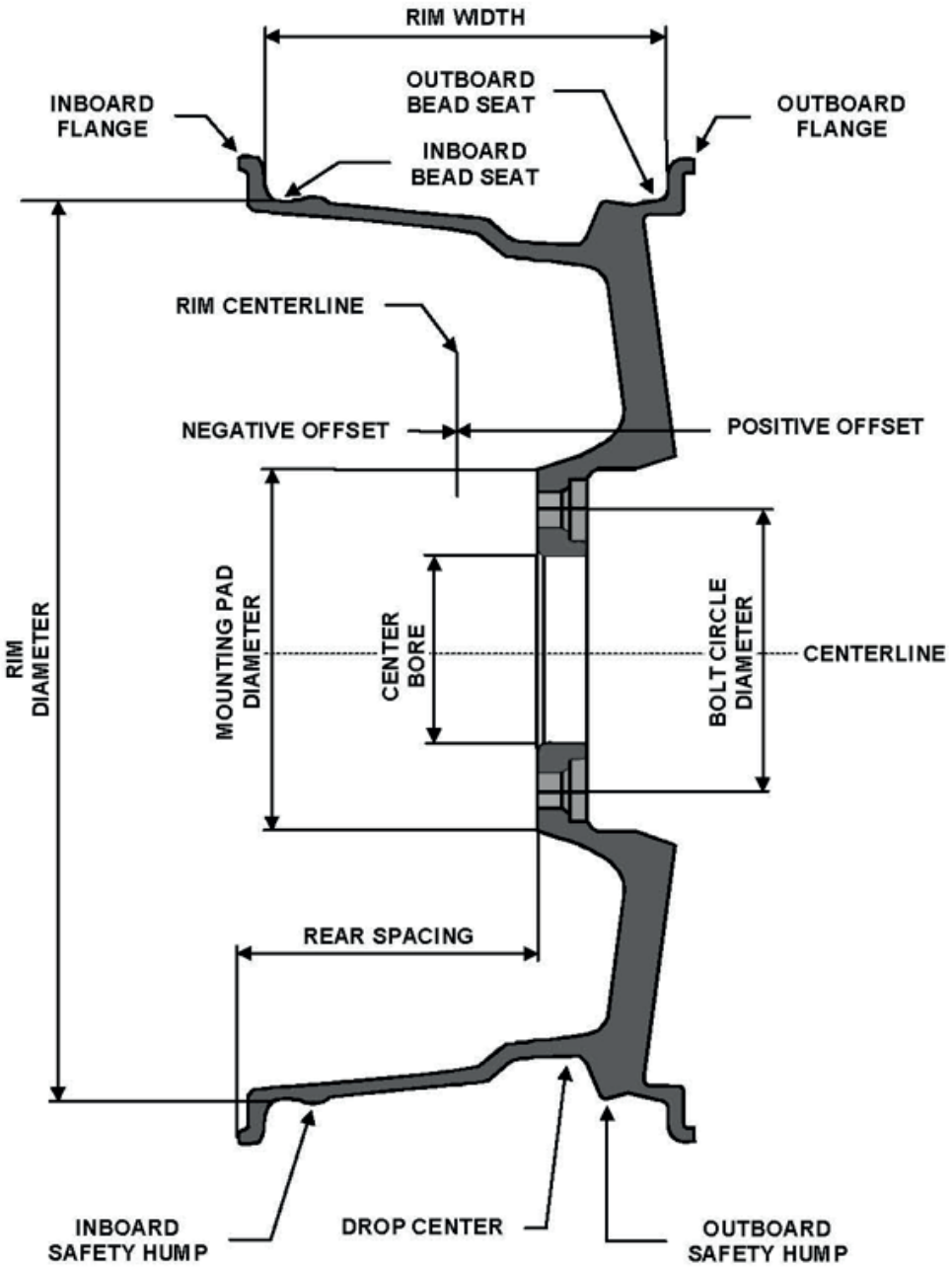
Maintenance Schedule	Perform the Following Maintenance
Daily	Drain condensation from pressure regulator reservoir by pressing in on the fitting located on the bottom of the regulator. Check for worn or damaged rubber and nylon components that should be replaced to prevent damage from occurring. Replace worn parts as needed (tool supports, rubber pads, lever protector sleeve and mount/demount head). Clean all areas that contact rims or tires to prevent possible scratching to rim.
Weekly	Clean tire changer with shop towels or a vacuum cleaner. **Do not clean with or use compressed air, which can blast dirt between moving parts.** Do not use cleaning solvents to clean pressure regulator and oiler (if present).
Periodically	If present, refill oiler using only Hunter Lubri-Oil, 148-133-2, as needed. **Petroleum-based oils should never be used in the oiler and may void all warranties.** Adjust the oiler to release one drop of oil every three rotations of the clamping table by adjusting the screw on top. Check for loose bolts and tighten per specifications.

4.2 Maintenance and Replacement Parts

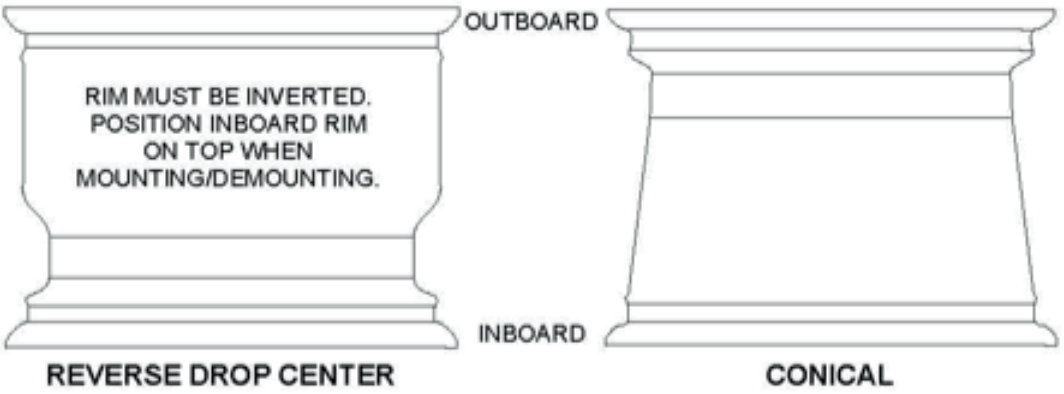
NAME	NUMBER
Safety Goggles	179-15-2
Brush	RP6-1506
Mounting Paste	RP6-3784
Polymer Mount/Demount Head	RP11-3314813
Hand Held Bead Lever - straight	RP11-3009516
Bead Lever Protector Sleeve (HM)	RP6-0326
Bead Lever Protector Sleeve (Std) (4)	RP11-8-11400098
Steel Head Inserts (10 sets - 20 covers)	RP11-8-11400096

5. Glossary

5.1 Rim Diagram

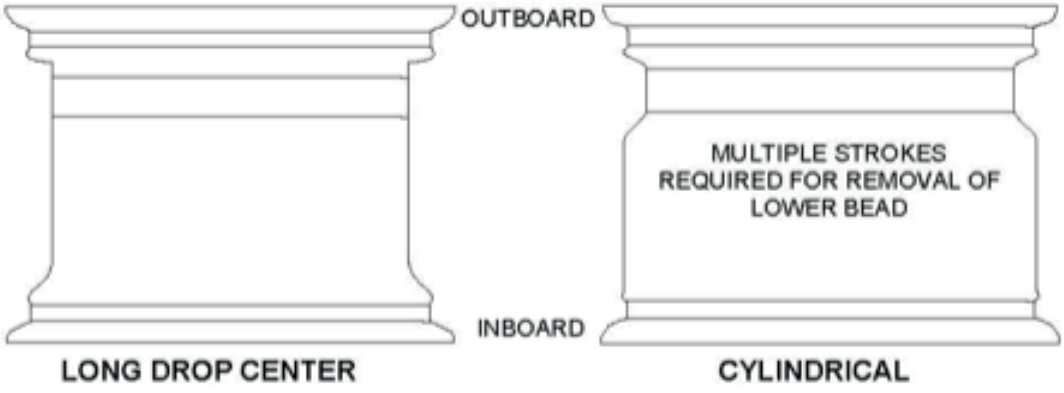


5.2 Illustrations of Various Rim Designs



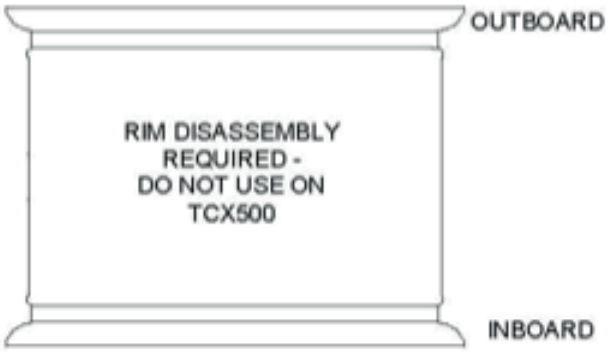
REVERSE DROP CENTER

CONICAL



LONG DROP CENTER

CYLINDRICAL



NO DROP CENTER


HUNTER
Engineering Company

OWNER INFORMATION

New Owner Name _____

New Owner Address _____

Prior Owner Name_____

Prior Owner Address _____

Model Number_____

Serial Number _____

Date Purchased_____

Date Installed_____

Return Completed Form To:

HUNTER ENGINEERING COMPANY
11250 Hunter Drive
Bridgeton, Missouri 63044
Tel: 800-448-6848 or 314-731-3020
Fax: 314-731-1776
e-mail: Customerservice@hunter.com


HUNTER
Engineering Company

6. Warranty

Tire Changers are fully warranted for a period of three (3) years with the exception of consumable parts.
Replacement parts purchased through the Hunter Service Center and no longer covered by machine warranty are warranted for a period of six (6) months.
Field labor is covered under this warranty for a period of six months.

This warranty does not include normal wear items and does not apply to any product which has been subject to abuse, misuse, alterations, accident, exposure to the elements, tampering, unreasonable use, or failure to provide reasonable and necessary maintenance.

In case of any warranty claim it will be necessary to contact your local authorized Hunter Service Representative. To have an item considered for warranty it must be returned to Hunter Engineering Company for inspection and evaluation. This must be done on a freight prepaid basis. If after our inspection the product proves to be defective, and is within the time frame specified, we will repair or replace the item at no additional cost.

This is Hunter Engineering Company's only warranty with respect to new equipment. Hunter Engineering Company disclaims all other warranties to the extent permitted by law. This express warranty and any implied warranties of merchantability and fitness for a particular purpose shall not extend beyond the warranty period. Hunter Engineering is not responsible for any incidental or consequential damages, including, but not limited to, loss of business.

We do not authorize any person to assume for us any other liabilities with our products. Any remaining warranty may be transferred to subsequent purchasers by forwarding the purchaser's name, address, phone number and equipment serial number to:

Hunter Engineering Company
Customer Service Department
11250 Hunter Drive Bridgeton, MO
63044 (800) 448-6848

Hunter Research and Training Center

HUNTER TRAINING

Hunter operates the most advanced, up-to-date Training Center in the industry today.

The courses have been designed to meet the needs of new and experienced technicians who want to increase their mechanical and diagnostic capabilities. The low student-teacher ratio (average 7 to 1) and the emphasis on “hands-on” training (70% time in shop) create an excellent learning environment.

Highlights of the Hunter Training Center include:

✓ An instruction staff with years of shop, field, and teaching experience.
✓ Fully-equipped service bays.
✓ Classrooms equipped with modern teaching aids.
✓ The most up-to-date wheel alignment, balancing service, and brake equipment on the market today.

Classes Available

- ❒ Align 1 (Basic Alignment Theory and Practice) - 3 day / 24 hours
- ❒ Align 2 (Advanced theory / Aftermarket Adjustment) - 2 day / 16 hours
- ❒ Align 3 (Advanced Diagnostics and OEM Procedures) - 2 day / 16 hours
- ❒ Performance Tire (Basic and Advanced Tire Changing) - 1 day 8 hours
- ❒ Road Force® / GSP9700 Certification - 2 day / 16 hours
- ❒ Rolling Smooth (Basic & Advanced vibration theory) - 1 day / 8 hours
- ❒ Heavy-Duty Truck Alignment 1 (Fundamental Alignment) - 3 day / 24 hours
- ❒ Heavy-Duty Truck Alignment 2 (Advanced Alignment) - 2 day / 16 hours

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