

PLEASE READ THE ENTIRE CONTENTS OF THIS MANUAL PRIOR TO INSTALLATION AND OPERATION. BY PROCEEDING YOU AGREE THAT YOU FULLY UNDERSTAND AND COMPREHEND THE FULL CONTENTS OF THIS MANUAL. FORWARD THIS MANUAL TO ALL OPERATORS. FAILURE TO OPERATE THIS EQUIPMENT AS DIRECTED CAN MAY CAUSE INJURY OR DEATH.

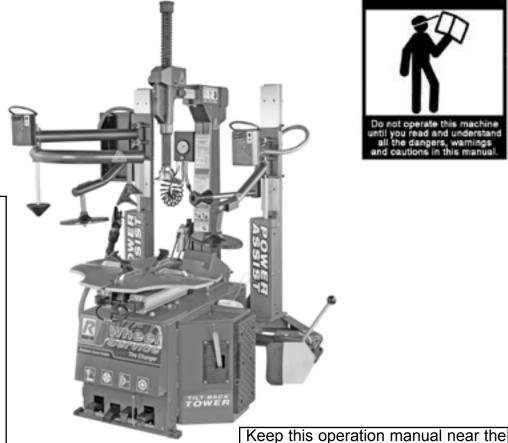
REV C 07-21-11

p/n# 5900217

## **INSTALLATION AND OPERATION MANUAL**

## TIRE CHANGER Model R26AT / R26DT

FOR SERVICING AUTOMOBILE AND LIGHT TRUCK SINGLE PIECE TIRES/WHEELS







#### SHIPPING DAMAGE CLAIMS

When this equipment is shipped, title passes to the purchaser upon receipt from the carrier. Consequently, claims for the material damaged in shipment must be made by the purchaser against the transportation company at the time shipment is received.

#### **BE SAFE**

Your new Ranger tire changer was designed and built with safety in mind. However, your overall safety can be increased by proper training and thoughtful operation on the part of the operator. DO NOT operate or repair this equipment without reading this manual and the important safety instructions shown inside.

machine at all times. Make sure that

ALL USERS read this manual.



1645 Lemonwood Dr. Santa Paula, CA. 93060, USA Toll Free: 1-800-253-2363

Tel: 1-805-933-9970 Fax: 1-805-933-9160 www.rangerproducts.com

## R26AT / 26DT TIRE CHANGER

This instruction manual has been prepared especially for you.

Your new tire changer is the result of over 25 years of continuous research, testing and development and is the most technically advanced tire changer on the market today.

The manner in which you care for and maintain your tire changer will have a direct effect on it's overall performance and longevity.

# READ THIS ENTIRE MANUAL BEFORE OPERATION BEGINS.

RECORD HERE THE FOLLOWING INFORMATION WHICH IS LOCATED ON THE SERIAL NUMBER DATA PLATE.

Serial No	
Model No	
Manufacturing date	

#### PRODUCT WARRANTY

Your new tire changer is covered under warranty for one year on equipment structure; one year on all operating components and tooling/accessories, to the original purchaser, to be free of defects in material and workmanship. The manufacturer shall repair or replace at their option for this period those parts returned to the factory freight prepaid which prove upon inspection to be defective. The manufacturer will pay labor costs for the first 12 months only on parts returned as previously described.

The warranty does not extend to...

- defects caused by ordinary wear, abuse, misuse, shipping damage, improper installation, voltage or lack of required maintenance;
- damages resulting from purchaser's neglect or failure to operate products in accordance with instructions provided in the owner's manual(s) and/or other accompanying instructions supplied;
- normal wear items or service normally required to maintain the product in a safe operating condition;
- any component damaged in shipment;
- other items not listed but may be considered general wear parts;
- ♦ damage caused by rain, excessive humidity, corrosive environments or other contaminants.

THESE WARRANTIES DO NOT EXTEND TO ANY COSMETIC DEFECT NOT INTERFERING WITH EQUIPMENT FUNCTIONALITY OR ANY INCIDENTAL, INDIRECT, OR CONSEQUENTIAL LOSS, DAMAGE, OR EXPENSE THAT MAY RESULT FROM ANY DEFECT, FAILURE, OR MALFUNCTION OF A BENDPAK INC./ RANGER PRODUCT OR THE BREACH OR DELAY IN PERFORMANCE OF THE WARRANTY.

WARRANTY IS NOT VALID UNLESS WARRANTY CARD IS RETURNED.

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Failure to follow danger, warning, and caution instructions may lead to serious personal injury or death to operator or bystander or damage to property.

Do not operate this machine until you read and understand all the dangers, warnings and cautions in this manual.

For additional copies or further information, contact:
BendPak Inc. / Ranger Products
1645 Lemonwood Dr.,
Santa Paula, CA. 93060
1-805-933-9970
www.bendpak.com
www.rangerproducts.com

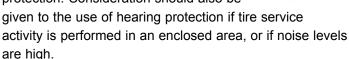


### OPERATOR PROTECTIVE EQUIPMENT

Personal protective equipment helps make tire changing safer. However, equipment does not take the place of safe operating practices. Always wear durable work clothing during tire service activity. Shop aprons or shop coats may also be worn, however loose fitting clothing should be avoided. Tight fitting leather gloves are recommended to protect operators hands when handling worn tires and wheels. Sturdy leather work shoes with steel toes and oil resistant soles should be used by tire service personnel to help prevent injury in typical shop activities.

Eye protection is essential during tire service activity.

Safety glasses with side shields, goggles, or face shields are acceptable. Back belts provide support during lifting activities and are also helpful in providing operator protection. Consideration should also be





THIS SYMBOL POINTS OUT IMPORTANT SAFETY INSTRUCTIONS WHICH IF NOT FOLLOWED COULD ENDANGER THE PERSONAL SAFETY AND/OR PROPERTY OF YOURSELF AND OTHERS AND CAN CAUSE PERSONAL INJURY OR DEATH. READ AND FOLLOW ALL INSTRUCTIONS IN THIS MANUAL BEFORE ATTEMPTING TO OPERATE THIS MACHINE.

# SECTION 1 DEFINITIONS OF HAZARD LEVELS

Identify the hazard levels used in this manual with the following definitions and signal words:



#### **DANGER**

Watch for this symbol: It Means: Immediate hazards which will result in severe personal injury or death.



#### WARNING

Watch for this symbol: It Means: Hazards or unsafe practices which could result in severe personal injury or death.



#### **CAUTION**

Watch for this symbol: It Means: Hazards or unsafe practices which may result in minor personal injury or product or property damage.



Watch for this symbol! It means BE ALERT! Your safety, or the safety of others, is involved!

#### OWNER'S RESPONSIBILITY

To maintain machine and user safety, the responsibility of the owner is to read and follow these instructions:

- ♦ Follow all installation instructions.
- ♦ Make sure installation conforms to all applicable Local, State, and Federal Codes, Rules, and Regulations; such as State and Federal OSHA Regulations and Electrical Codes.
- Carefully check the unit for correct initial function.
- ♦ Read and follow the safety instructions. Keep them readily available for machine operators.
- ♦ Make certain all operators are properly trained, know how to safely and correctly operate the unit, and are properly supervised.
- ♦ Allow unit operation only with all parts in place and operating safely.
- ♦ Carefully inspect the unit on a regular basis and perform all maintenance as required.
- ♦ Service and maintain the unit only with authorized or approved replacement parts.
- ♦ Keep all instructions permanently with the unit and all decal's on the unit clean and visible.



Do not attempt to operate this equipment if you have never been trained on basic tire service and mounting / dismounting procedures.







### **IMPORTANT SAFETY INSTRUCTIONS!**



Read these safety instructions entirely!

- 1. **READ AND UNDERSTAND** all safety warning procedures before operating equipment.
- 2. **KEEP HAND AND FEET CLEAR** Remove hands and feet from any moving parts.
- 3. **KEEP WORK AREA CLEAN**. Cluttered work areas invite injuries.
- 4. Consider work area environment. Do not expose equipment to rain. **DO NOT** use in damp or wet locations. Keep area well lighted.
- 5. **ONLY TRAINED OPERATORS** should operate this equipment. All non-trained personnel should be kept away from work area. Never let non-trained personnel come in contact with, or operate machine.
- 6. **USE MACHINE CORRECTLY**. Use machine in the proper manner. Never use adapters other than what is approved by the manufacturer.
- 7. **DO NOT** override or disable safety valves and/or devices.
- 8. **ALWAYS INSURE** that the safety protocol is followed before any attempt is made to work on or near vehicle.
- 9. **DRESS PROPERLY**. Non-skid steel-toe footwear is recommended when operating machine.
- 10. **GUARD AGAINST ELECTRIC SHOCK**. This equipment must be grounded while in use to protect the operator from electric shock. Never connect the green power cord wire to a live terminal. This is for ground only.

- 11. **DANGER!** The motor on this machine contains high voltage. Disconnect power at the receptacle before performing any electrical repairs. Secure plug so that it cannot be accidentally plugged in during service.
- 12. WARNING! RISK OF EXPLOSION. This equipment has internal arcing or sparking parts which should not be exposed to flammable vapors. This machine should not be located in a recessed area or below floor level.
- 13. **MAINTAIN WITH CARE**. Keep unit clean for better and safe performance. Follow manual for proper lubrication and maintenance instructions. Keep control pedals and/or buttons dry, clean and free from grease and oil.
- 14. **STAY ALERT**. Watch what you are doing. Use common sense. Be aware.
- 15. **CHECK FOR DAMAGED PARTS**. Check for condition of all moving parts, breakage of parts or any condition that may affect the machines operation. Do not use if any component is broken or damaged.
- 16. **NEVER** remove safety related components or device from the machine. Do not use if safety related components are damaged or missing.
- 17. To reduce fire hazard, keep engine/ motor exterior free of oil, solvent, or excessive grease.



18. Unreadable and missing warning labels must be replaced immediately. Do not use the tire changer if one or more labels are missing. Do not add any object that could prevent the operator from seeing the labels.

# TIRE AND WHEEL SERVICE SAFETY INSTRUCTIONS



Only properly trained personnel should service tires and wheels on the R26AT/ 26DT. Read all safety and operating instructions thoroughly before use. The following safety instructions are for one piece wheels only. Always refer to the manufacturer's procedures for multi-piece wheels.

**ALWAYS** wear durable personal protective work clothing and safety gear during tire service activity. Refer to page three for Operator Protective Equipment.

**ALWAYS** remove all wheel weights and the valve core to deflate the tire before servicing.

**ALWAYS** keep all working surfaces clean and free of debris.

**ALWAYS** be aware of what each person is doing and what they will do before attempting any two-person operation.

**ALWAYS** cover the electric motor and switch box before cleaning the tire changer. Be sure water does not enter the motor or switch box.

**ALWAYS** disconnect the electric power and air supply before attempting any maintenance.

#### **Bead Loosening**

**NEVER** place anything between the bead loosener disc and the tire/wheel.

**NEVER** allow the bead loosener disc to contact the wheel or wheel damage may occur.

**NEVER** place any part of your body between the bead loosener disc and the tire/wheel, severe bodily injury may result.

#### **Demounting & Mounting**

**ALWAYS** clean and inspect the wheel prior to any service.

**NEVER** stand on the sliding carriage, frame or work table while demounting or mounting a tire.

**ALWAYS** keep hands, feet, and other objects away from moving parts while the machine is turned on.

**ALWAYS** place the narrow bead seat to the outside when clamping. Failure to demount the tire from the narrow bead seat side may cause damage to the tire beads.

**ALWAYS** apply an approved rubber lubricant to rim flanges and both tire beads before demounting or mounting and seating the beads.

**NEVER** mount a tire on a damaged or rusty wheel as tire or wheel failure may result during inflation. Explosion from failure may result in severe injury or death of the operator and bystanders.

**ALWAYS** be sure the bead opposite the tool is in the drop center before rotating the tire when demounting or mounting to avoid damage to the tire beads.

#### Inflation

**ALWAYS** follow all applicable Local, State, and Federal Codes, Rules, and Regulations; such as the Federal OSHA Standard Number 1910.177.

**ALWAYS** use an approved inflation chamber or inflation cage equipped with a self-gripping chuck and remote inflation gauge and valve.

**ALWAYS** inflate the tire to manufacturer's recommended cold operating pressure.

**DO NOT OVER INFLATE!** Tire or wheel failure during and after inflation may result in an explosion capable of causing severe injury or death.

**NEVER** reinflate a tire that has been run under inflated or flat without first demounting the tire and checking for wheel and tire damage.

**ALWAYS** inspect the tire interior for loose or broken cords, cuts, penetrating objects, and other damage. Discard tires that cannot be properly repaired.

**NEVER** rework, weld, heat or braze wheels.

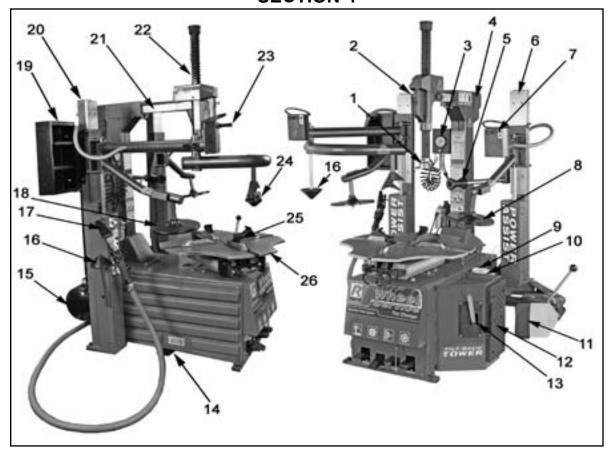
**NEVER** strike the tire or wheel with a hammer.

**ALWAYS** be sure the tire diameter exactly matches the wheel diameter.

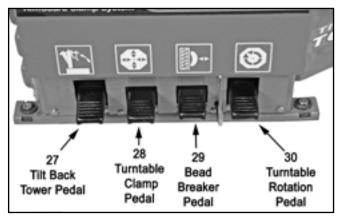


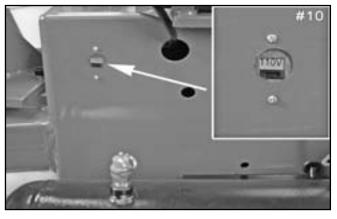
#### DANGER!

Tire failure under pressure can be hazardous. When possible, always place wheels inside an approved inflation chamber or cage before inflating. Use an approved remote inflation valve, hose, and gauge. ALWAYS wear safety goggles for eye protection. Do not stand beside the wheel or cage during inflation. Keep hands and other parts of the body out of the cage during inflation. Observe the tire pressure frequently. Do not exceed the manufacturer's recommended maximum inflation pressure. Failure to follow these instructions may cause the tire and rim to separate with tremendous force, resulting in serious personal injury or death.



- 1 Combination Mount Demount Head
- 2 Vertical / Horizontal Slide Lock
- 3 Air Inflation Gauge
- 4 Tilt Back Tower
- 5 Bead Roller Arm
- 6 Right Assist Tower
- 7 Right Helper Disc / Bead Roller Control
- 8 Right Helper Disc
- 9 Lubrication Bucket / Brush
- 10 Power Selection Switch
- 11 Bead Breaker Blade
- 12 Rim Protection Pad
- 13 Tool Bar / Storage
- 14 Inflation Pedal
- 15 Air Tank
- 16 Left Helper Restraint Head
- 17 Turbo Blast Nozzle / Hose
- 18 Left Helper Disc
- 19 Tool / Storage Tray
- 20 Left Assist Tower
- 21 Horizontal Slide
- 22 Vertical Slide
- 23 Left Helper / Disc / Bead Tool Control
- 24 Left Helper / Restraint Head
- 25 Turntable Clamps
- 26 Turntable





NOTE: The parts and procedures shown in this manual include optional equipment that may not be included on the model of Tire Changer you are using.

## SECTION 5 FEATURES / SPECIFICATIONS: MODEL R26AT / R26DT

FEATURES / SPECIFICATIONS	MODEL R26AT / R26DT	
Type of Drive System	Air / Electric	
Motor	Dual Voltage 110/220V 50/60HZ 1 Ph.	
Air Requirement	140-165 PSI (10-11 BAR)	
Wheel Clamping Method	4 Rim-Guard Clamps - Internal / External	
Table Clamping System	Dual Pneumatic Cylinders	
Bead Breaking System	Pneumatic Blade / Dual Settings	
Turntable Speed -360-Degree Rotation	6.9 Seconds	
Tool Holder	Pneumatic Lock	
Adjustable Turntable Clamps	Standard	
Inflation System	Standard	
Inflation Pressure Regulator/Limiter	Standard	
Water Filter	Standard	
Oiler / Lubricator	Standard	
Air Regulators (Inflator, Assist Tower)	Standard	
Bead Lifting Tool	Standard	
Large Soap / Lubricator Bucket	Standard	
Brush	Standard	
Tower Design	Tilt Back	
Powerful "Turbo -Blast" Bead Seating System	Standard	
Tire Inflation	Standard	
Tool Tray / Bin Storage	Standard	
Internal Wheel clamping Capacity x	14.5" – 29.75" (368 mm – 755 mm)	
External Wheel clamping Capacity x	13.5" – 28.8" (343 mm – 731 mm)	
Turntable Tire Width Capacity (Mounting)	4.5" – 19" (114 mm – 482 mm)	
Bead Breaker Tire Width Capacity (Demounting)	1.5" – 15.5" (38 mm – 393 mm)	
Maximum Tire Diameter	48" (1219 mm)	
Shipping Weight	R26AT: 690 lbs. (313 Kg) / R26DT: 1,050 lbs. (477Kg)	
Specifications are subject to change without notice.		

x NOTE: Internal and External Wheel clamping dimensions do not translate directly to rim or tire sizes as Wheel clamping points may vary by manufacturer.

#### Tools required.

- 1. Pallet jack or forklift for moving crate.
- 2. Shop crane.
- 3 Utility knife.
- 4. Crow bar or pry bar.
- 5. Tin Snips or Sheet Metal Snips
- 6. Hammer.
- 7. Open end metric wrenches and/or socket set.
- 8. Phillips and Slot head screw drivers.
- 9. Metric Allen Key set.

### Parts required but not supplied.

- 1. Teflon tape
- 2. Air fitting to match shop Air Supply line.
- 3. Tool Oil.
- 4. Anchor Bolts and Shims (if anchoring).

# SECTION 6 LIFTING/ UNCRATING

1. The R26AT/ R26DT are shipped on a pallets. (See Fig 6.1)



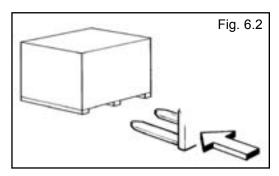
Approximate shipping dimensions:

R26AT/ R26DT 46" x 54" x 72" (1169mm x 1372mm x 1829mm)



#### **CAUTION!**

Handling of the machine must be performed only with an appropriate lifting device such as a forklift or pallet jack. Only personnel who are experienced and qualified on material handling procedures should handle any transportation or moving of machine.





#### **CAUTION!**

Be careful when cutting steel banding material as items may become loose and fall causing personal harm or injury. Always wear gloves when uncrating the machine to prevent scratches, abrasions, or cuts due to the contact with packing materials. Eye protection is essential during uncrating service activity. Safety glasses with side shields, goggles, or face shields are acceptable.

Remember to report any shipping damage to the carrier and make a notation on the delivery receipt.

#### **Uncrating Instructions**

- . Carefully cut the metal strapping and remove.
- 2. Using a crow bar or pry bar, locate the staple/nail/tab locations and pry off the bottom part the box. Note: the entire box can be lifted off after prying the staples/nails/tabs at the base of the carton. (See Fig 6.3)





#### **CAUTION!**

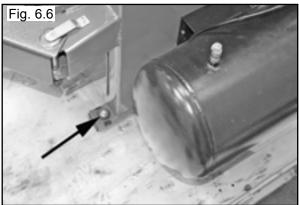
Secure the Bead Breaker Arm prior to removing all the plastic wrapping/strapping as the Bead Breaker Arm may have shifted during shipping.

3. Cut and remove the plastic wrapping. (See Fig 6.4)



4. Remove the front and rear Bolts and Nuts holding the tire changer from the pallet. (See Figs. 6.5 - 6.6)







#### **CAUTION!**

Handling of the machine must be performed only with an appropriate lifting device such as a forklift or shop crane. Only personnel who are experienced and qualified on material handling procedures should handle any transportation or moving of machine.

8. Using a shop crane or fork lift with lifting straps, remove the Tire Changer from the wooden pallet. Use only properly rated lifting straps under the Tire Changer base. (See Fig. 6.7)



9. Locate the tire changer using the guidelines in Section 7, page 11.

# SECTION 7 INSTALLATION LOCATION



**Disconnect tag and lock out** power source before attempting to install, service, relocate or perform any maintenance.

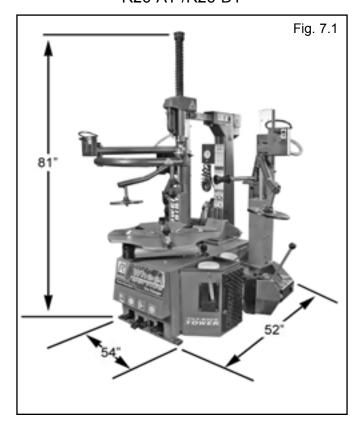
**Do not** lift or move unit without appropriately rated equipment. Be sure the unit is securely attached to any lifting device used.

Proper unit installation is necessary for safe use and efficient operation. Proper installation also helps protect the unit from damage and makes service easier. Always keep this manual with unit.

**Never** use the wood shipping skid for mounting the unit.

Select a location using Figures 7.1 and 7.2. The area should provide the operator with enough space to use the equipment in a safe manner. The area selected should be well lit, easy to clean and should be away from oil, grease, brake lathe chips, etc. Avoid areas where bystanders and customers may be present.

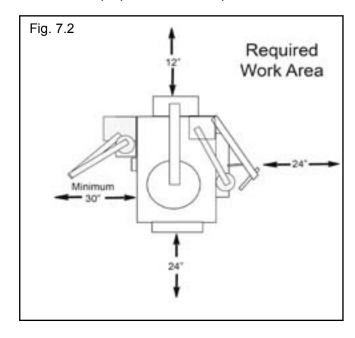
Machine size is approximately: 54" W x 52" D X 81"H R26-AT /R26-DT





#### DANGER!

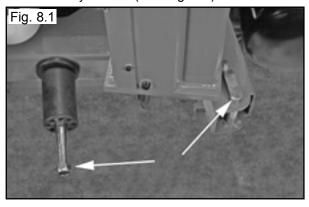
These measurements are the tire changer's working range.
Persons other than specially trained and authorized operators are expressly forbidden to enter this area.
Choose a safe location that is in compliance with current work place safety regulations.
Failure to properly install the machine can lead to improper and unsafe operation.



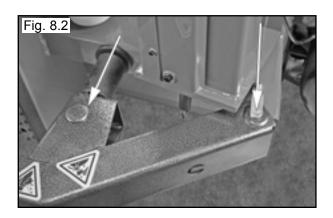
#### R26LT / R26DT ASSEMBLY

#### **Bead Breaker Arm**

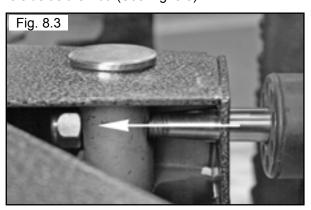
1. Remove the Bead Breaker Arm Pin and the Bead Breaker Shaft Nyloc Nut. (See Fig. 8.1)



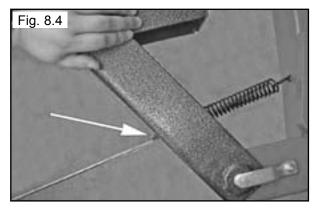
2. Align the Hole in the Beak Breaker Arm and insert the Bead Breaker Pivot Pin. (See Fig. 8.2)



3. Align the Bead Breaker Cylinder Shaft with the Cylinder Shaft Pin. Rotate Pin so the flat side is on the same side as the Nut. (See Fig. 8.3)

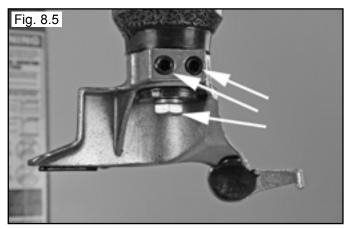


4. Using a long stiff wire hook or pliers. Stretch the Return Spring and clip to the Bead Breaker arm. (See Fig. 8.4)



**Demount Head Assembly** 

1. Check that the Demount Head Bolt and Allen Screws are tightened. (See Fig. 8.5)



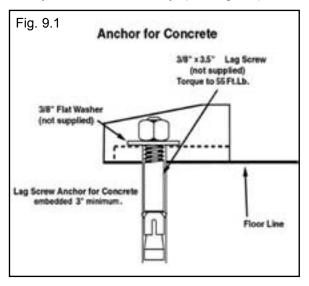
**Tool Tray** 

1. Bolt the Tool Tray to the Assist Tower as shown. (See Fig. 8.6)



#### **ANCHORING**

It is not essential to anchor the machine to the floor, however, the floor must be smooth and level. When anchoring to a concrete floor use the mounting holes that are provided in the frame. Make sure the machine is solid and level and supported evenly on all anchor points. Solid shims may be used if necessary. (See Fig. 9.1)

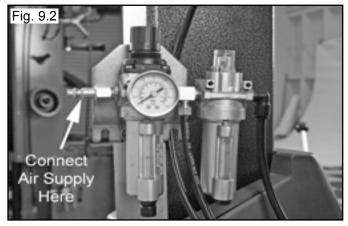


#### **AIR SOURCE**

This model requires a 14 to 15 CFM air source at 165 PSI maximum pressure. The safe operating pressure range for this model is between 140 PSI and 165 PSI at the machine. A 1/4" ID hose (or pipe) for connection to the machine is satisfactory. Sufficient air pressure assures good performance.

1. Connect the Air Supply to the Air Drier / Oiler. A proper fitting (not supplied) to match the supply line of the air supply connection is required. Use teflon tape (not supplied) on the NPT thread of the fitting.

This connection is located at the rear of the machine. (See Fig. 9.2)



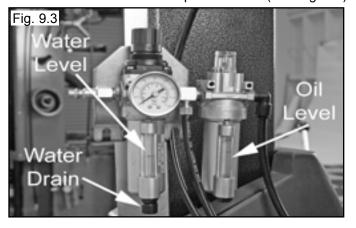
#### **OILER ADJUSTMENT**



#### **WARNING!**

Failure to properly maintain proper Oil level and adjust the Oil flow may void the warranty and damage the bead breaker cylinder and other air components.

1. Check Oil Level on Oil Cup Site Glass. (See Fig. 9.3)

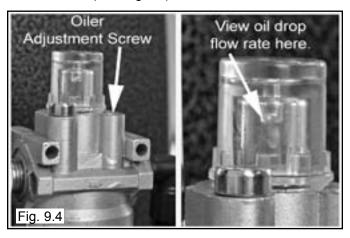


If Oil level is low refer to Section 17, Page 32 for filling instructions.

#### NOTE:

#### This adjustment will require two persons to perform.

- 2. With the Air source connected, depress the Bead Breaker Pedal to operate the Bead Breaker.
- 3. Observe the site glass and adjust the oil flow of the oiler by turning the Oiler Adjustment Knob so that 2-3 drops of oil drip through the site glass for each operation of the Bead Breaker Pedal. (See Fig 9.4)



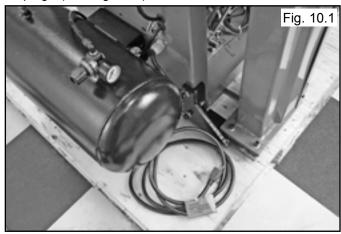
#### NOTE:

More detailed Maintenance procedures are described in Section 17 on page 32.

#### **SECTION 10**

#### **ELECTRICAL SOURCE**

This unit requires power from a 15 amp electrical circuit. The unit is supplied standard with a 110 Volt power cord and plug. (See Fig. 10.1)



Refer to the serial tag of the machine for specific electrical requirements. Have a licensed electrical technician perform any necessary changes to the power source and power cord before plugging in the unit. The electrical source must have a solid connection between ground and building ground.



## WARNING! GUARD AGAINST ELECTRICAL SHOCK!

This equipment must be grounded while in use to protect the operator from electric shock. Never connect the green power cord wire to a live terminal. This is for ground only.



#### DANGER!

The motor on this machine contains high voltage. Disconnect power at the receptacle before performing any electrical repairs. Secure plug so that it cannot be accidentally plugged in during service.



#### WARNING! RISK OF EXPLOSION

This equipment has internal arcing or sparking parts which should not be exposed to flammable vapors.

This machine should not be located in a recessed area or below floor level.

## WIRING INSTRUCTIONS



- 1. Overheating, short circuits and fire damage will result from inadequate wiring. Wiring must be installed in accordance with National Electric Code and local codes and standards covering electrical apparatus and wiring.
- 2. Be certain that adequate wire sizes are used, and that:
  - ♦ Service is of adequate amp rating.
  - ♦ The supply line has the same electrical characteristics (voltage, cycles and phase) as the motor.
  - ♦ The line wire is the proper size and that no other equipment is operated from the same line.

#### **Electrical Source**

This unit requires power from a 15 amp electrical circuit. Refer to the serial tag of the machine for specific electrical requirements. Have a licensed electrical technician perform any necessary changes to the power source before plugging in the unit. The electrical source must have a solid connection between ground and building ground.

#### **GUARD AGAINST ELECTRIC SHOCK!**

This equipment must be grounded while in use to protect the operator from electric shock. Never connect the green power cord wire to a live terminal. This is for ground only.

#### DANGER!

The motor on this machine contains high voltage. Disconnect power at the receptacle before performing any electrical repairs. Secure plug so that it cannot be accidentally plugged in during service.

#### **WARNING! RISK OF EXPLOSION!**

This equipment has internal arcing or sparking parts which should not be exposed to flammable vapors.

This machine should not be located in a recessed area or below floor level.



Check the voltage, phase and proper amperage requirements for the motor shown on the motor plate.

Wiring should be performed by a certified electrician only.

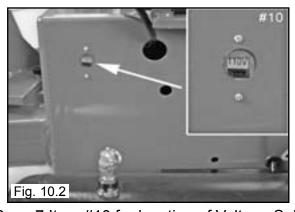
#### **IMPORTANT NOTE:**

YOUR MACHINE HAS A DUAL VOLTAGE MOTOR and can be run on either 110 or 220 volts.

STANDARD WIRING IS 110 VOLTS.

See below before connecting 220 volts to your machine or serious damage to the motor/electronics will result.

Confirm voltage selector switch is positioned correctly before connecting power to your machine or serious damage to the motor/electronics will result. (See Fig. 10.2)



Refer to Page 7 Item #10 for location of Voltage Selector Switch.

#### OPERATING INSTRUCTIONS

The unit must be properly operated and maintained to help avoid accidents that could damage the unit and injure the operator or bystanders. This section of the Operating Instructions manual review basic operations and use of controls. These instructions should be reviewed with all employees before they are allowed to work with the machine.

Keep these instructions near the machine for easy reference.



#### **CAUTION!**

This machine may operate differently from machines you have previously operated. Practice with a regular steel wheel and tire combination to familiarize yourself with the machine's operation and function.

#### BEAD LOOSENING AND DEMOUNTING

- ♦ Remember to remove all weights from both sides of the wheel. Weights left on the back side of the wheel may cause the wheel to be clamped un-level. This may result in the combination mount/demount head contacting the rim causing scratches. On alloy wheels, always rotate the wheel one turn after setting the head to insure proper wheel chucking.
- ◆ Always review nicks and scratches with owners of expensive wheel and tire combinations prior to servicing.
- ◆ Review the performance wheel section of this manual prior to servicing performance tire/wheel combinations.
- 1. Deflate tire completely by removing the valve core from the valve stem. (See Fig. 11.1)

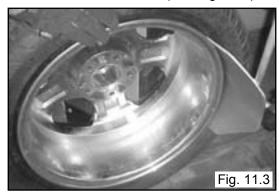


- 2. The clamps on the table top may extend beyond the table top itself. To avoid damaging the clamps and/or wheel, move the clamps to their full inward position before positioning a tire for bead loosening.
- 3. Always loosen the bead on the narrow side of the wheels drop center first. (See Fig. 11.4 and Page 17 for better description of the drop center.)

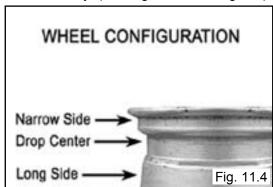
- 4. Use extra care in positioning the bead breaker shoe on larger wheels/tires, and on alloy wheels. Make sure the shoe rests next to but not on the rim, and not on the tire sidewall.
- 5. Pull the bead breaker shoe away from the machine and roll the wheel into position. The valve stem should be in the 2 o'clock position.
- 6. Position the bead breaker shoe against the tire next to, but not on, the rim. Press the breaker pedal to actuate the shoe and loosen the bead. It may be necessary to loosen the bead in multiple locations around the tire. (See Fig. 11.2)



7. Turn wheel around and repeat procedure on the other side of the wheel. This should be the long side of the drop center. It will be easier to clamp the wheel to the table top if the lower bead is loosened last. (See Fig. 11.3)



8. Determine the mounting side of the wheel. The mounting side is the narrow side of the drop center. The tire is removed for clarity. (See Fig. 11.4 and Page 17)

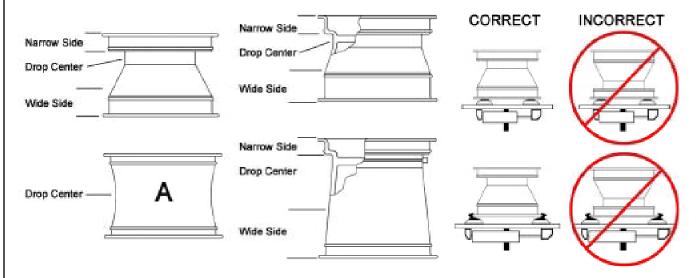




The following instructions help identify how to properly mount wheels on the tire changer turntable. Failure to follow these instructions may lead to tire and/or wheel damage, equipment damage or failure, serious personal injury or death to operator or bystanders or damage to property.

### 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. Find the position of the drop center on the wheel. Clearly identify the <u>Drop Center</u>, <u>Narrow Side</u> and <u>Wide Side</u> flanges.
- 3. The tire must ALWAYS be demounted or mounted with the wheel positioned on the turntable with the <u>Narrow Side</u> facing upward and the deepest part of the <u>Drop Center</u> facing upward.



**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.



#### NOTE:

Procedures shown below may or may not include options or tools not a part or your particular model of tire changer.

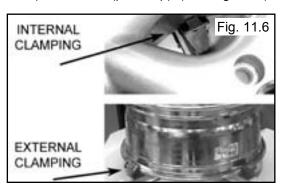
9. Place tire/wheel assembly on table top with mounting side up. (See Fig. 11.5)



#### NOTE:

Clamp steel wheels from the inside (clamps push outward against wheel). Clamp mag and custom wheels from the outside (Clamps push inward against the outside rim edge). Refer to the Performance Tires and Wheels section.

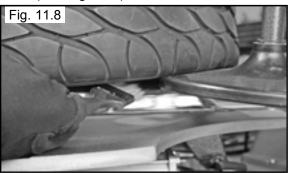
10. Use the clamp control pedal to move the clamps inward (pedal down) or outward (pedal up). (See Fig. 11.6)



11. Apply tire manufacturer's approved rubber lubricant liberally to entire circumference of both beads after loosening bead and placing on table top. Using the mount/ demount roller to hold down the top bead while rotating the turntable will make lubrication easier. (See Fig. 11.7)



12. Use the lower bead helpers to assist in the bottom bead lubrication. (See Fig. 11.8)

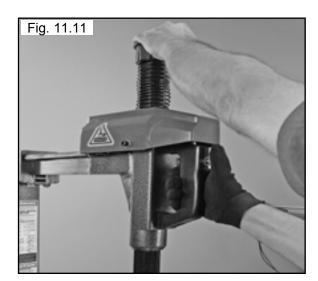


13. Move the tower forward by depressing the Tower Tilt Pedal then press the control button to unlock the horizontal slide. Pull the mount/demount Head forward. (See Fig. 11.9-10)



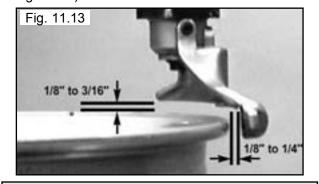


14. Push the vertical slide down and position the demount head into contact with the rim edge. (See Fig. 11.11-12)





15. Push the locking valve button to lock the slides into place. As the slides are locked, the mount/demount head will move upward approximately 1/8 inch and backward 1/8 inch from the rim edge. The mount/demount head roller should not be in contact with the rim edge. (See Fig. 11.13)



#### NOTE:

This clearance will be maintained as long as the slide locking valve remains locked. The operator may tilt the tower back out of the way and back into place again without needing to reposition the head when changing a like set of wheels. The tool clearance may change with machine use and should be inspected often. Failure to maintain proper clearance may result in damage to the wheel rim or tire.

16. Move the left hand top helper into position opposite the mount/demount head positioning the edge of the helper just outside the rim edge. (See Fig. 11.14-15)





17. Press down on the left hand control valve. (See Fig. 11.16)

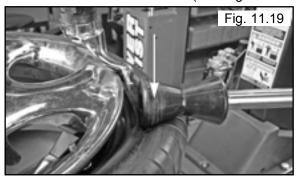


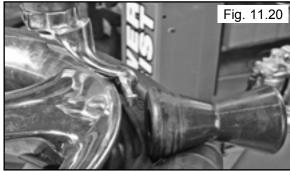
18. Power the left top helper down to force the tire bead into the drop the center of the wheel. (See Fig. 11.17-18)





19. Move the right hand top helper roller into position over the tire just outside the rim edge. Press down on the right hand control valve and force the tire bead down. This will make it easier to insert the tool bar. (See Fig. 11.19 - 20)





19. Insert the smooth curved end of tool bar over the right end knob of the mount/demount head and below the top bead of the tire. (See Fig. 11.21)

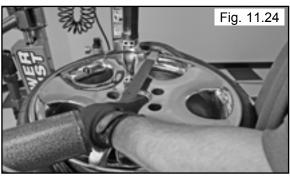


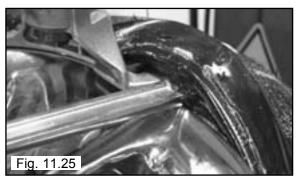
22. With the tool bar in position, move the right hand helper roller out of the way. (See Fig. 11.22)



20. Push the tool bar down toward the wheel to lift the tire bead up and over the knob portion of the demount head. Hold the tool bar in this position. (See Fig. 11.23-25)









#### **DANGER!**

The tool bar and demount head may encounter resistance or come under load at times during the mount and demount procedures. Keep one hand firmly on the tool to avoid possible tool kick back. Use the reversing feature (lift table top pedal upwards) to back out of jam ups.

21. Depress the table top pedal to rotate the wheel clockwise. Leave the left hand helper in position opposite the demount head and allow it to follow the wheel rotation to assist the bead into drop center while demounting. Hold the tool bar down until demounting nears completion. (See Fig. 11-26 - 28)





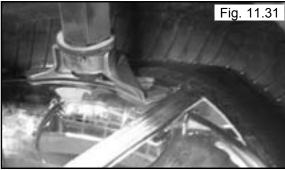


22. Lift and hold the tire so it is positioned with the lower bead in the drop-center portion of the wheel. If the tire is large/wide or has become stuck on the lower part of the rim, the lower bead helper disks may be used to un-stick and raise the tire. (See Fig. 11.29)

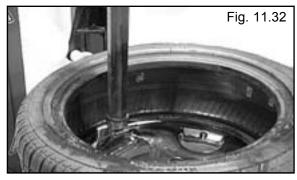


23. Insert the smooth curved end of the tool bar over the right end of demount head and below the lower bead of the tire. Push the tool bar down toward the wheel to lift the tire bead up and over the right -side knob portion of the demount head. Hold the tool bar in this position. (See Fig. 11.30-31)





4. Depress the table top pedal to rotate the wheel. The demount head will guide the bead up and over the edge of the wheel. Continue rotation until the lower bead is de-mounted. The helper disks should be removed during rotation. Swing them out of the way to complete de-mounting. (See Fig. 11.32)



25. After the tire has been removed from the wheel, depress the tower tilt pedal to move the tower away from the wheel. (See Fig. 11.33)



2

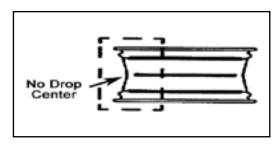
### **CUSTOM AND SPECIAL WHEELS**



If a custom wheel is damaged in dismounting, STOP, and avoid damaging the other wheels. Continue only when the cause is identified and corrected.

#### **Alloy Wheels**

Some manufacturers offer wheels with little or no drop center. These are not DOT approved. The tire or wheel - or both - can be damaged and the tire could explode under pressure, resulting in serious injury or death. If you attempt to mount/demount this type of wheel, use extreme caution.

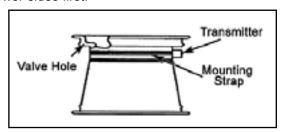


#### **European Performance Wheels (Asymmetrical Hump)**

Some European wheels have very large humps except near the valve hole. On these wheels, the beads should be loosened at the valve hole on both the upper and lower sides first.

#### Wheels with Low Pressure Warning Sensors

Performance wheels on some vehicles (including Corvette, BMW, Lamborghini Diablo) have a pressure sensor strapped to the rim opposite the valve hole. On these wheels, the beads should be loosened at the valve hole on both upper and lower sides first.



#### **DEMOUNTING TUBE TYPE TIRES**

- 1. After both tire beads are loosened, lubricate the beads and rim liberally.
- 2. Position the demount head and bead lifting tool as described earlier paying careful attention not to pinch the tube. Depress the table top pedal and rotate only a short distance at a time. This allows you to stop the process should you suspect the tube is getting pinched.
- 3. After upper bead is demounted, remove tube and demount lower bead.

#### NOTE:

Table top rotation can be stopped at any time by removing your foot from the rotation pedal. Normal table top rotation for demounting is clockwise. Depress the table top pedal to rotate this direction. To rotate the table top counterclockwise, lift the pedal up with your toe.

FOR TUBE-TYPE TIRES
With tube-type tires, demount the upper bead
and remove the tube before de-mounting the
lower bead.

#### MOUNTING



#### **WARNING!**

Check tire and wheel carefully before mounting. Make sure the tire bead diameter and wheel diameter match exactly. Consult the Rubber Manufacturer's Association for approved rim widths for tire sizes.



#### DANGER!

Attempts to force a bead seat on mis-matched tires and wheels can cause the tire to violently explode, causing serious personal injury or death to operator and/or bystanders.



#### WARNING!

Never mount a tire and wheel handed to you by anyone without checking both tire and wheel for damage and compatibility. Be extra cautious of persons without knowledge of tire service.

Keep bystanders out of service area.



#### **WARNING!**

Never mount a damaged tire. Never mount a tire on a rusty or damaged wheel. Damaged tires and/or wheels may explode.



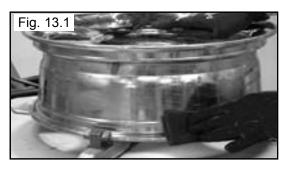
#### **WARNING!**

If you damage the tire bead during mounting, STOP! Remove the tire and mark it as damaged.

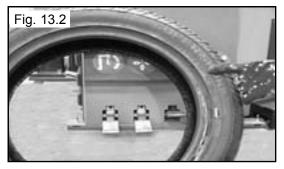
Do not mount a damaged tire.

This information must be read and followed carefully to prevent accidents and injuries during mounting.

1. Inspect the wheel closely for damage. Clean the wheel and remove any light corrosion or rubber residue. Do not attempt to service heavily corroded wheels. (See Fig. 13.1)



2. Inspect tire for damage, paying close attention to the beads. Verify size match between tire and wheel. (See Fig. 13.2)



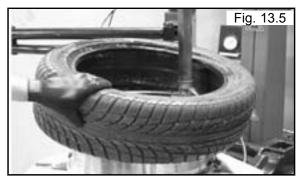
3. Lubricate both tire beads liberally with tire manufacturer approved lubricant. (See Fig. 13.3)



4. Place tire over wheel and move tower and mount/demount head into position as described earlier. Position tire so that the lower bead is above the left side of the mount/demount head and below the right front knob. (See Fig. 13.4)

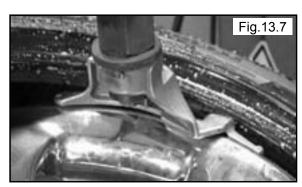


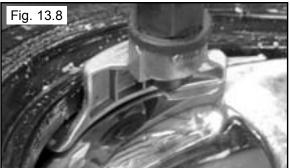
5. Manually push the tire down into the drop center of the wheel directly across from the mount head to reduce the tensional force on the bead. Depress the table top pedal and rotate the wheel to mount the lower bead. Rotate the table top until the lower bead is fully mounted. (See Fig. 13.5-6)



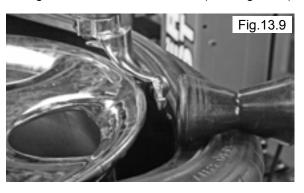


6. For the top bead, rotate the table top until the valve stem is directly across from the mount head. Lift the upper bead above the left side of the mount/demount head and below the right front knob. (See Fig. 13.7-8)





7. With the right side assist roller, press down on the tire near the right side of the mount head. (See Fig. 13.9)



8. With the left side helper, press down on the tire near the right side assist roller to hold the tire in the drop center. (See Fig. 13.10)





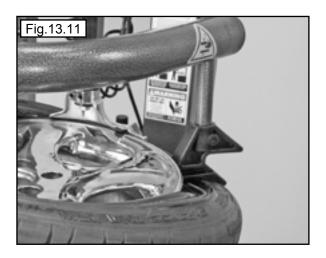
#### **WARNING!**

Do not force the tire onto the rim. Bead damage could result making the tire unsafe and/or creating the risk of injury.

#### NOTE

If table top rotation stalls, reverse the table top momentarily until the tire bead is again loose on the wheel. Lubricate tire beads liberally with tire manufacturer approved lubricant. Reposition the tire on the mount head, make sure the bead is correctly positioned in the drop center of the wheel, then attempt mounting again.

9. Depress the table top pedal and rotate the tire until the bead is mounted. The left side helper shoe will follow the tire during rotation. (See Fig. 13.11-14)









# SECTION 14 MOUNTING TUBE TYPE TIRES

- 1. Lubricate the beads and rim liberally.
- 2. Position the demount head and bead lifting tool as described earlier. Mount the bottom bead first.
- 3. Round out the tube with a small amount of air. Avoid pinching or forcing the tube. Apply rubber lubricant to the tube.
- 4. Insert the tube into the tire paying careful attention not to pinch the tube.
- 5. Depress the table top pedal and rotate only a short distance at a time. This allows you to stop the process should you suspect the tube is getting pinched.
- 6. Mount the top bead.

# SECTION 15 INFLATION INSTRUCTIONS

Tire inflation is performed in four steps: Restraint, Bead Seal, Bead Seat, and Inflation. Read the explanation of each step and understand them thoroughly before proceeding.



#### **DANGER!**

CHECK INFLATION GAUGE FOR PROPER OPERATION. ACCURATE PRESSURE READINGS ARE IMPORTANT TO SAFE TIRE INFLATION. REFER TO THE OPERATING MAINTENANCE SECTION OF THIS MANUAL FOR INSTRUCTIONS.



#### WARNING!

TIRE FAILURE UNDER PRESSURE IS HAZARDOUS. THIS TIRE CHANGER IS NOT INTENDED TO BE A SAFETY DEVICE TO CONTAIN EXPLODING TIRES, TUBES, WHEELS OR BEAD SEALING EQUIPMENT. INSPECT TIRE AND WHEEL CAREFULLY FOR MATCH, WEAR, OR DEFECTS BEFORE MOUNTING. ALWAYS USE APPROVED TIRE BEAD LUBRICANT DURING MOUNTING AND INFLATION. THE INFLATION PEDAL, LOCATED AT THE CENTER OF THE FRONT SIDE OF THE MACHINE, CONTROLS THE FLOW OF AIR THROUGH THE INFLATION HOSE.



#### DANGER!

THE CLIP-ON AIR CHUCK ON THE END OF THE INFLATION HOSE AND ALL INFLATION RELATED COMPONENTS SHOULD BE CHECK WEEKLY FOR PROPER OPERATION. DO NOT USE THIS MACHINE FOR TIRE INFLATION IN ANY PARTS ARE DAMAGED OR APPEAR NO TO BE IN PROPER WORKING ORDER.

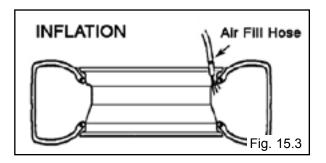
#### **INFLATION PEDAL OPERATION**

The inflation pedal located at the front of the checks air pressure in the tire; controls the flow of air through the inflation hose. (See Fig. 15.1)



Tire Inflation – This is the activated position. With the inflation hose attached to the tire valve and the pedal depressed, line pressure is allowed to flow through the valve and into the tire for inflation. Tire pressure is indicated on the gauge in this position. (See Fig. 15.2)





#### STAGES OF INFLATION

Review the following descriptions and diagrams carefully. Refer to them as necessary during wheel restraint, bead sealing, bead seating, and inflation to verify that you are proceeding properly and safely.

#### STAGE ONE / WHEEL RESTRAINT

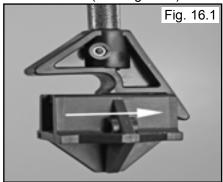


#### **WARNING!**

THIS DEVICE ACTS AS A RESTRAINT DEVICE ONLY. IT WILL NOT PROTECT OPERATORS IN THE EVENT OF CATASTROPHIC TIRE/ WHEEL RUPTURE OR FAILURE. ALWAYS US EXTREME CAUTION DURING THE INFLATION PROCEDURE. AS AN ADDED SAFETY PRECAUTION, SAFETY CAGES THAT CONFORM TO OSHA STANDARD 1910.177 ARE RECOMMENDED.

The tire rim needs to be securely mounted to the turntable during all stages of inflation. As an added safety precaution, a wheel restraint devise has been added to protect operators during tire inflation.

- 1. Check that rim is properly mounted and secure. Refer to Mounting section in Section 11 for review.
- 2. Raise the left helper and support assembly and insert the restraint devise as shown. (See Fig. 16.1)



3. Make sure the restraint tool is centered in the center hub of the wheel then press down on the left hand control valve. (See Fig.16.2 - 3)





#### STAGE TWO / BEAD SEALING

1. Remove the Valve Stem Core and position Valve Stem and connect the Inflation Hose. (See Fig. 16.4)



2. Hold tire up against upper edge of the wheel. Be sure tires top bead is over the bottom of the valve stem. (See Fig. 16.5)





#### **CAUTION!**

NEVER POINT NOZZLE TOWARDS YOURSELF OR OTHER PERSONS. INSPECT NOZZLE, TIRE AND WHEEL FOR DEBRIS. NOZZLE MUST BE POINTED TOWARD TIRE BEAD AREA. HOLD NOZZLE SECURELY WITH BOTH HANDS AT ALL TIMES. NEVER OPERATE THE NOZZLE WITHOUT A TIRE AND WHEEL POSITIONED ON THE TABLE. DIRT AND DEBRIS COULD BE BLOWN INTO THE AIR WITH ENOUGH FORCE TO INJURE THE OPERATOR OR BYSTANDERS.



3. Position the Turbo-Blast Nozzle to direct air towards the Rim Center just under the Rim lip. (See Fig. 16.6)



4. Depress inflation pedal and open the Turbo-Blast Valve The blast of air from the valve will expand tire and seal the beads. (See Fig. 16.7)



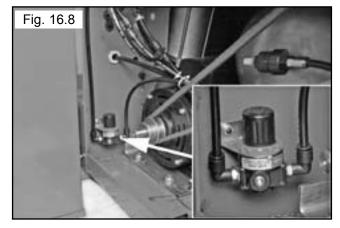
5. Release the inflation pedal. Verify that both beads are completely sealed to the wheel. Repeat these steps if beads have not sealed. It may be necessary to wait a few seconds for the air storage tank to recover before attempting again. If tire and wheel are properly lubricated and operator cannot achieve bead seal after a few attempts, the valve core should be removed from the valve stem to allow more air flow into the tire to assist with bead seal. After bead seal is achieved, remove the chuck and reinstall the valve core.



#### **WARNING!**

CHECK THE FUNCTION OF THE PRESSURE
LIMITER REGULARLY AND MAINTAIN IT
ACCORDING THE INSTRUCTIONS PROVIDED
IN THIS MANUAL FOR SAFE AND PROPER
OPERATION. DO NOT TAMPER WITH OR
ATTEMPT TO ADJUST THE PRESSURE LIMITER.
TIRES REQUIRING INFLATION BEYOND 60 PSI
SHOULD ONLY BE INFLATED IN A SAFETY CAGE.

The unit is equipped with a pressure limiter/regulator to assist the operator with proper tire inflation. The pressure limiter will keep most car and light truck tires from inflating beyond 60 PSI (smaller tires may reach higher pressures). It is the operators responsibility to follow all instructions and to control inflation pressure as specified in these instructions. (See Fig. 16.8)



#### STAGE THREE / BEAD SEATING

Bead seating usually occurs on the long tapered side of the wheel first and the shorter side last. Bead seating will usually require at least 7 PSI in the tire. 40 PSI is the maximum safe pressure at this stage regardless of tire operating pressure. Most European import cars and many aftermarket alloy wheels are very tight and can be difficult to bead seat. Also note that asymmetrical hump and run-flat tires are extremely difficult to bead seat. Follow tire manufacturer's recommended procedure for bead seating.



#### WARNING!

OPERATOR SHOULD KEEP HANDS, ARMS AND ENTIRE BODY AWAY FROM THE TIRE DURING THE REMAINING BEAD SEAT AND INFLATION PROCEDURES. DO NOT STAND OVER TIRE, AS PERSONAL INJURY COULD RESULT FROM INFLATING TIRE. AVOID DISTRACTION DURING INFLATION. CHECK TIRE PRESSURE FREQUENTLY TO AVOID OVER INFLATION. EXCESSIVE PRESSURE CAN CAUSE TIRES TO EXPLODE, CAUSING SERIOUS INJURY OR DEATH TO OPERATOR OR BYSTANDER.



1. Once tire pressure is indicated on the air gauge (inflation pedal depressed, continue to inject air into the tire in short intervals. Check the pressure frequently. Stand back during bead seat. Keep hands, arms, and entire body away from tire during this procedure. Tire beads should move outward and "pop" into their bead seat position as pressure inside the tire increases. If this does not happen, a problem exists. Investigate carefully. (See Fig. 16.9)



#### **WARNING!**

KEEP HAND AND FINGERS CLEAR!
KEEP ENTIRE BODY AWAY FROM THE TIRE.



2. Release air pressure from the tire by pressing the manual release valve button. NOTE: The inflation hose must be attached to the valve stem during this procedure. (See Fig. 16.10)





#### WARNING!

CHECK TIRE PRESSURE FREQUENTLY. NEVER EXCEED 40 PSI WHILE SEATING BEADS. ONCE SEATED, NEVER EXCEED TIRE MANUFACTURER'S RECOMMENDED AIR PRESSURE. TIRES CAN EXPLODE, ESPECIALLY IF THEY ARE INFLATED BEYOND THEIR LIMITS. AT ALL PRESSURE LEVELS, WHEN INFLATING THROUGH THE VALVE STEM; KEEP HANDS, ARMS, AND ENTIRE BODY AWAY FROM INFLATING TIRE.

AN EXPLODING TIRE, WHEEL OR BEAD SEATING EQUIPMENT MAY PROPEL UPWARD AND OUTWARD WITH SUFFICIENT FORCE TO CAUSE SERIOUS INJURY OR DEATH TO OPERATOR OR BYSTANDER.

#### MIS-MATCHED TIRES AND WHEELS

NEVER ATTEMPT TO MOUNT MIS-MATCHED TIRES AND WHEELS. MIS-MATCHED TIRE AND WHEEL COMBINATIONS CAN EXPLODE, CAUSING PERSONAL INJURY OR DEATH TO OPERATOR AND BYSTANDERS. FOR SAFETY, DO NOT ATTEMPT TO MOUNT AND INFLATE MIS-MATCHED TIRES AND WHEELS.



#### DANGER!

NEVER INCREASE AIR PRESSURE TO EXCEED 40 PSI WHEN ATTEMPTING TO SEAT BEAD. IF OPERATOR IS UNABLE TO OBTAIN BEAD SEAT, SOMETHING IS WRONG. DEFLATE TIRE COMPLETELY, INSPECT TIRE AND WHEEL; CORRECT ANY PROBLEMS FOUND, RE-LUBRICATE BOTH BEADS AND REATTEMPT BEAD SEAL AND SEAT PROCEDURES. FOLLOW ALL SAFETY INSTRUCTIONS IN THIS MANUAL.

#### STAGE FOUR / TIRE INFLATION

- 1. Make sure both beads are seated. When both beads are seated, the tire is ready for inflation.
- 2. Replace the valve core if it was removed.
- 3. Depress the inflation pedal to position two to inflate the tire. **DO NOT STAND OVER TIRE DURING INFLATION.**
- 4. Do not inflate the tire above the manufacturer's recommended pressure as stamped on the tire sidewall. The typical inflation pressure for automobile tires is between 24 and 45 PSI. Light truck inflation pressure typically covers a wider range. Release air pressure from the tire by pressing the manual release valve button.



THE INFLATION PRESSURE LIMITER IS
PRE-SET AT THE FACTORY AND SHOULD NEED
NO ADJUSTMENT. ADJUST ONLY IF PRESSURE
EXCEEDS 60 PSI.

Operating a tire changer with a defective, improperly adjusted, or by-passed pressure limiter could result in a tire explosion with severe injury or death to the operator or bystanders. Always be sure that the pressure limiter is operating properly on the machine at all times. Pressure limiter is set at 60 PSI. Any required inflation above 60 PSI should be performed in an inflation chamber/safety cage. A tire explosion may cause personal injury or death to operator or bystanders.



#### DANGER!

When inflating tires that require more than 60 PSI, always use a safety cage and air hose with a clip-on air chuck and in-line valve. The hose must have enough length between the chuck and the operation/in-line valve to allow the operator to stand outside the trajectory.



#### MAINTENANCE INSTRUCTIONS

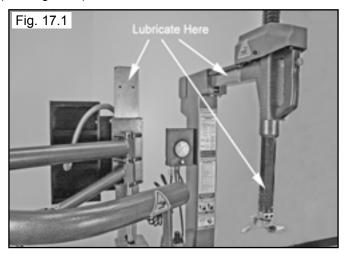
Read and follow all the maintenance instructions provided in this manual to keep the machine in good operating condition. Regular inspections and proper maintenance are essential to preventing accidents and injuries. These instructions will help you service the unit. Instructions are for a person with some mechanical ability and training. No attempt has been made to describe all basic steps like how to loosen or tighten fasteners. Basic procedures such as cycling systems and checking operation of the equipment are not fully described since they are described in this manual. Do not attempt to perform work beyond your ability or at which you have no experience. If you need assistance, call an authorized service center or contact the factory.

#### **DAILY**

- ♦ Check the tire pressure gauge function daily, and check the accuracy monthly. Use a pressurized tire and a high quality pressure gauge. If necessary, adjust the dial of the machine gauge. If the gauge is defective, replace it immediately.
- ♦ Make sure all fasteners are securely tightened and all guards and covers are in place.
- ♦ Check for worn, damaged or missing parts including grips and protective covers. Replace them before allowing the unit to be used.

#### **MONTHLY**

♦ The vertical and horizontal slides and the helper slides should be cleaned with a vaporizing solvent and then lubricated with chassis grease once a month. (See Fig. 17.1)

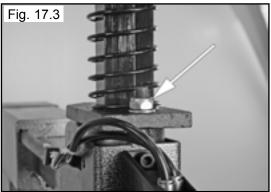


- ♦ Check adjustment of the mount/demount head monthly.
- ♦ Check function of the inflation hose pressure limiter/regulator monthly. Always secure/stow the cover if adjustments are made. The pressure regulator should never be adjusted to exceed 60 PSI.
- ♦ The table top, clamps, steel mount/demount head, and other working surfaces should be cleaned with a vaporizing solvent every month.
- ♦ On a daily basis, inspect the unit and check to be certain that all systems are operating normally. Follow detailed inspection and testing procedures as specified for various components at regular intervals.
- ♦ Replace any damaged or missing safety decal's. They are available from the factory.

#### **Mount/Demount Tool Head Adjustment**

To adjust tool head lift, adjust locking nut up or down until lift clearance is 1/8" to 3/16". Recheck clearance before replacing cover. (See Fig. 17.2 - 3)





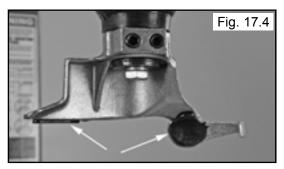


#### WARNING!

DO NOT operate the Tilt Tower unless the tool head is in the LOCKED position. Damage to the machine and /or property or persons can result if warning is not followed.

#### **Mount/Demount Head Cleaning**

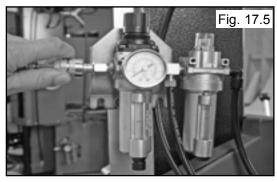
Clean dirt and debris from the mount/demount tool roller with small screw driver or pick. (See Fig. 17.4)



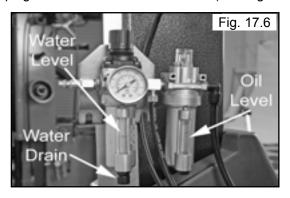
#### Water Separator/Lubricator Maintenance

Check oil and water levels regularly, and perform these maintenance items weekly:

♦ Disconnect air supply to machine. (See Fig. 17.5)



♦ Observe the sight glass on the water separator/filter unit. If water is observed, drain by pressing upwards on the drain plug at the bottom of the reservoir. (See Fig. 17.6)



- ♦ Add oil to the lubricator if the fluid level is below the middle of the sight glass. Remove the reservoir by turning counter-clockwise and pulling down. Add SAE 10W non-detergent oil or an air tool oil if necessary.
- ♦ Reconnect the air when service/adjustments are complete.

#### **Oiler Adjustment**

#### NOTE:

This adjustment will require two persons to perform.

- 1. With the Air source connected, depress the Bead Breaker Pedal to operate the Bead Breaker.
- 2. Observe the site glass and adjust the oil flow of the oiler by turning the Oiler Adjustment Knob so that 2-3 drops of oil drip through the site glass for each operation of the Bead Breaker Pedal. (See Fig 17.7)





(Either reservoir may be removed for cleaning by turning the reservoir counter-clockwise and pulling down.)

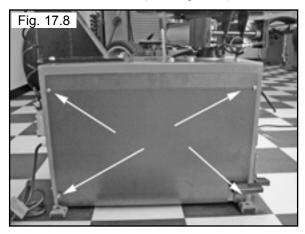
3. Reconnect the air supply when service/adjustments are complete.

**Turntable Drive Belt Inspection / Adjustment.** 

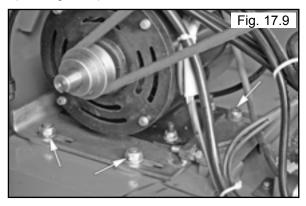
# ▲ DANGER

**DANGER!** The motor on this machine contains high voltage. Disconnect power at the receptacle before performing any electrical repairs. Secure plug so that it cannot be accidentally plugged in during service.

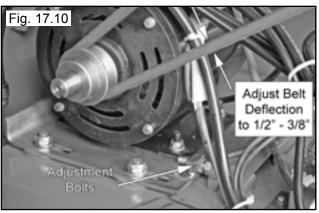
1. Remove the Side Panel. (See Fig. 17.8)



2. Loosen the four Motor mounting / adjusting bolts and nuts. (See Fig. 17.9)



3. Inspect the Drive Belt for cracking and wear and replace as necessary. Adjust the Belt deflection to 3/8" - 1/2" using the Adjustment Bolt. Tighten all bolts when adjustment complete. (See Fig. 17.10)



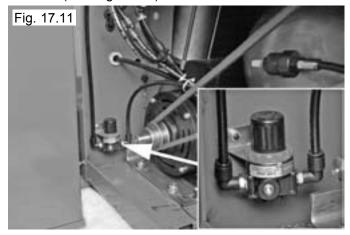
#### **Inflation Pedal Pressure Limiter Maintenance**



THE PRESSURE LIMITER IS PRE-SET AT THE FACTORY AND SHOULD NEED NO ADJUSTMENT.
ADJUST ONLY IF PRESSURE EXCEEDS 60

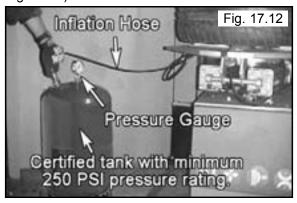
PSI. Operating a tire changer with a defective, improperly adjusted, or by-passed pressure limiter could result in a tire explosion with severe injury or death to the operator or bystanders. Always be sure that the pressure limiter is operating properly on the machine at all times. Pressure limiter is set at 60 PSI. Any required inflation above 60 PSI should be performed in an inflation chamber/safety cage. A tire explosion may cause personal injury or death to operator or bystanders.

The inflation pedal pressure limiter helps prevent inflation of standard size or larger tires or tubes beyond 60 PSI to minimize risk of explosion. This device is for the safety of the operator and bystanders. Proper operation of the pressure limiter is essential to safe operation of the machine. (See Fig. 17.11)



Check operation of the pressure limiter as follows at least once a month:

- 1. Remove tires and/or wheels from the machine.
- 2. Connect the inflation hose to an empty service tank with a pressure gauge (gauge should read 0). Use a certified tank with at least 250 PSI pressure rating. (See Fig. 17.12)



- 3. Depress inflation pedal to position one to start air flow through the hose and into the tank. Maintain a steady pressure for constant flow.
- 4. Watch the rising pressure on the tank gauge and the gauge on the machine. Machine gauge should cycle between check and inflation pressures while tank gauge climbs steadily. As tank pressure reaches 60 PSI, the pressure limiter should stop the air flow automatically. Both gauges should read 60 PSI  $\pm$  5 PSI.
- 5. If the pressure exceeds 60 PSI, adjust the knob on the regulator by lifting the locking cover and turning COUNTERCLOCKWISE. After adjustment is made, secure cover in the locked position.
- 6. Repeat steps 1-6. Re-adjust if necessary.
- 7. After pressure limit has been set, check the manual release valve function by pressing the button and releasing pressure from the tank until it reaches 50 PSI. Disconnect inflation hose, and release air inside tank. (See Fig. 17.13)



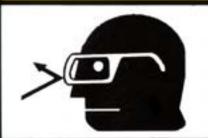
For additional copies or further information, contact: BendPak Inc. / Ranger Products 1645 Lemonwood Dr., Santa Paula, CA. 93060 1-805-933-9970 www.bendpak.com



**KEEP HANDS CLEAR OF BEAD AREA** WHEN INFLATING.



BE SURE TO READ ALL WARNING **LABELS AND INSTRUCTION MANUAL** PRIOR TO OPERATION OF THIS MACHINE



**ALWAYS WEAR SAFETY GLASSES WHEN** OPERATING THIS MACHINE.



**KEEP HANDS CLEAR OF ALL** PINCH POINTS



STAND CLEAR WHILE INFLATING TIRE. TIRE OR WHEEL FAILURE UNDER PRESSURE MAY CAUSE SERIOUS INJURY OR DEATH.



DO NOT WEAR LOOSE CLOTHING, LONG HAIR OR JEWELRY. MOVING PARTS CAN SNAG AND PULL

## CAUTION

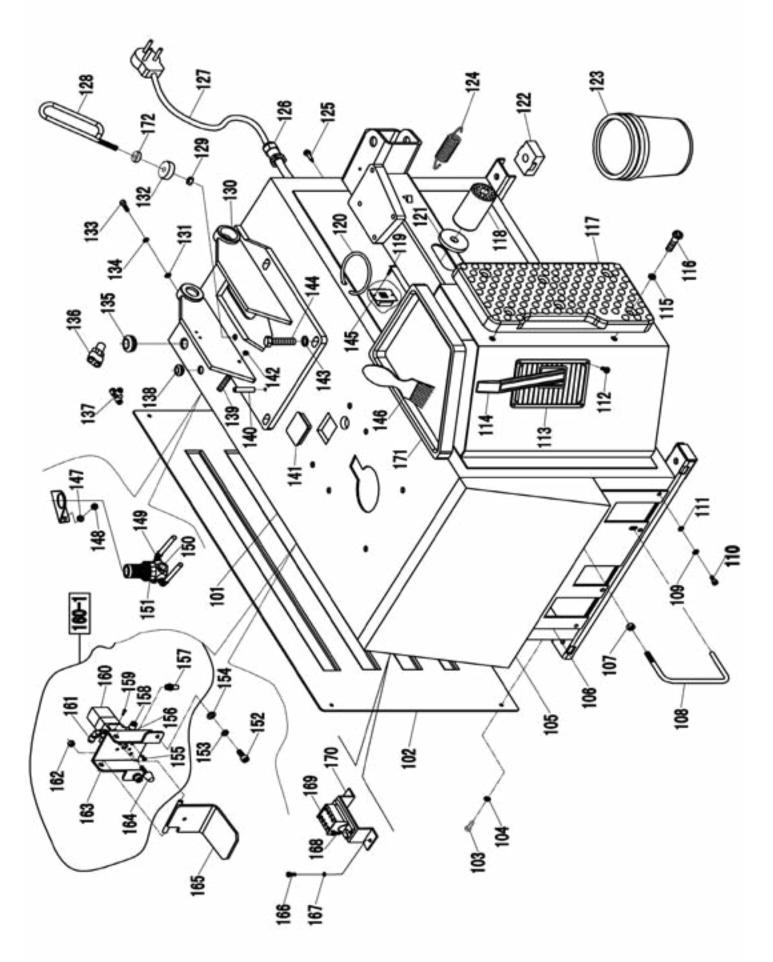
- Be sure to READ ALL WARNING LABELS and instruction manual prior to operation of this machine. Failure to comply with proper safety instructions may lead to serious harm or even death of operator and/or bystanders.
- Improper operation of this machine may cause damage to machine or cause personal harm or injury.
- ALWAYS wear safety goggles when operating this machine.
- KEEP HANDS CLEAR of all pinch points.
- Check machine for damaged parts prior to operation. DO NOT USE MACHINE if any component is broken or damaged.
- NEVER EXCEED the factory recommended air pressure of tire. Over inflating the tire beyond the manufacturer's recommendation can cause tire burst or explosion.
- Operators should inspect all tires and rims for
- possible detects prior to mounting.

  ALWAYS INSPECT TIRES BEFORE MOUNTING. Defective or damaged tires may burst or explode when inflating and may lead to serious harm or injur-
- ALWAYS MAKE SURE TIRE SIZE MATCHES RIM SIZE prior to mounting. Mounting tires on defective or improper rims can cause tire burst or explosion and may lead to serious harm or injury.
- This machine is not intended to be a restraining devise for exploding tires, tubes, or rims. All operators should take proper precaution to implement
- safety and to avoid personal injury or harm.

  DO NOT lean over the tire while inflating.

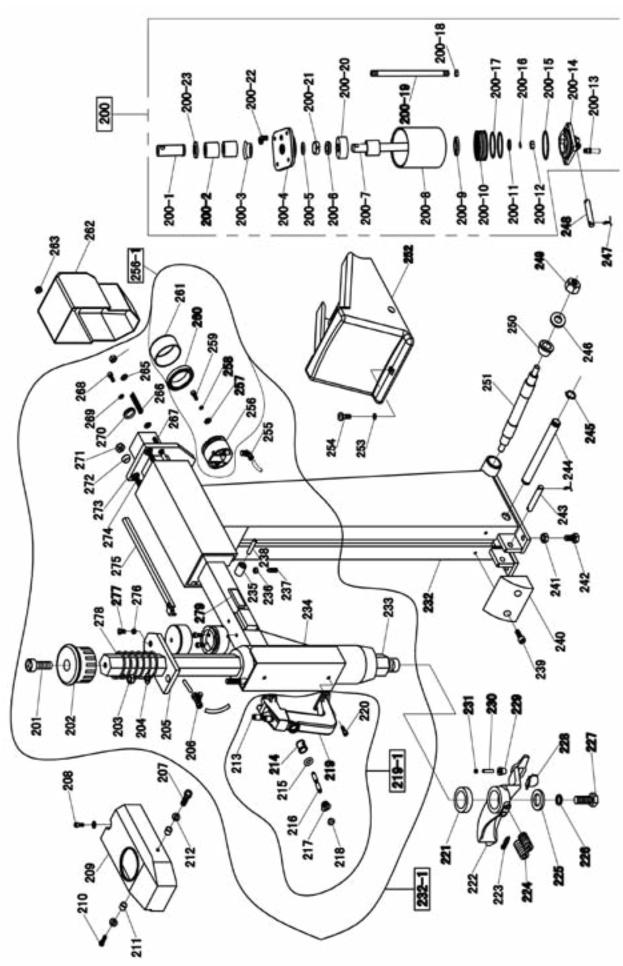
  KEEP HANDS AND BODY CLEAR at all times and as far back as possible during inflation. An exploding tire, rim, or component thereof can cause injury or death to operator and/or bystanders. REMAIN CLEAR AT ALL TIMES.
- To inflate tires, use short bursts while carefully monitoring the pressure, tire, rim, and bead.
- While seating beads NEVER EXCEED 40 p.s.i. If bead does not seat at 40 p.s.i., immediately relieve pressure and check for mismatch of tire, damaged bead and/or other cause.
- ALWAYS USE good quality tire lubricant when servicing tires.

Always Think Safetyl

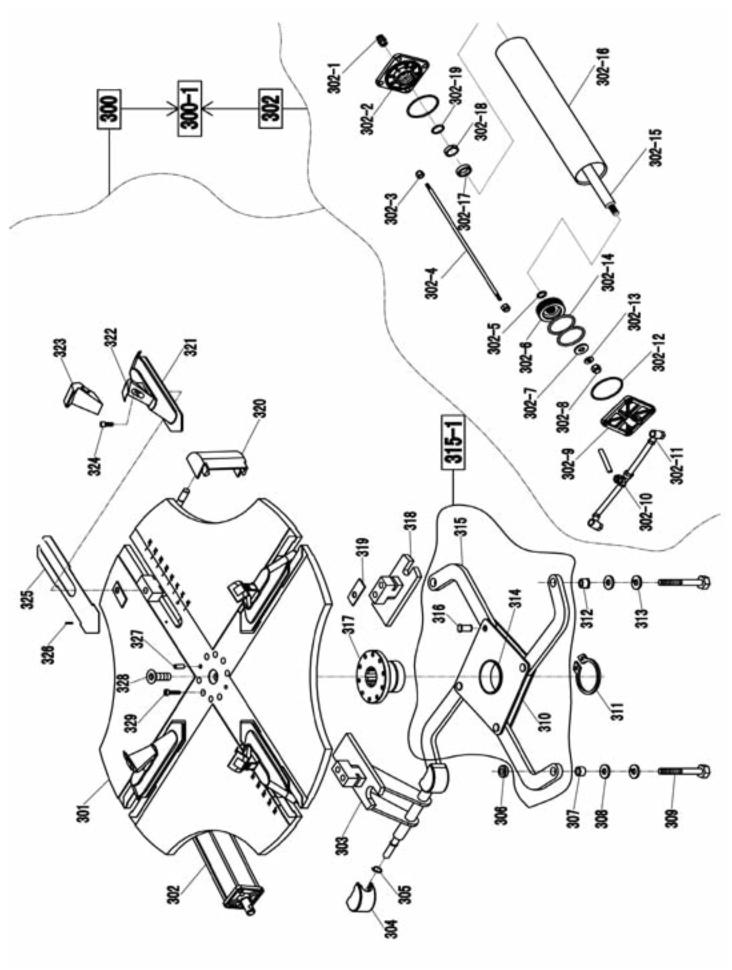


D/N	DESCRIPTION
<u>P/N</u>	DESCRIPTION Chaosia hadi
101	Chassis body
102	Side cover
103	BHPS M6 X 1 X 12 ZPL
104	Washer; M6 flat
105	Front panel
106	Metal front cover
107	Nut M8
108	Pedal divider
109	Washer; M6 X12mm flat
110	Screw M6×16
111	Washer Ø6
112	Screw
113	Plastic pad for bead lifting lever
114	Pry bar
115	Spacer Ø6
116	Screw M6×20
117	Wheel support pad
118	BB arm shock
119	Screw M3×10
120	Soap bucket retaining ring
121	BB rubber disc
122	Plastic foot pad
123	Soap bucket retaining ring
124	BB return spring
125	ScrewM5.5X25
126	Rubber coard grip
127	Power cord
128	Limit stop on tilt-back tower
129	Nut M8
130	Vertical arm base
131	Washer Ø5
132	Tilt tower bushing
133	Screw M5X20
134	WasherØ5
135	Wire ringØ16
136	Y-union

137	T-union
138	Wire ringØ12
139	Flat point set screw M10X40
140	Straight pin Ø6X40
141	Tire changer body plug
142	Screw M10
143	Washer Ø12
144	Hexagon cap boltM12X70
145	Voltage selector switch & wires
146	Soap brush
147	Washer Ø5
148	Screw M5
149	Fitting; 8mm X 1/4" 90°
150	Pipe plug
151	Air regulator; 28mm mount
152	Screw M8X16
153	Washer Ø8
154	WasherØ8
155	Screw
156	Pipe plug
157	Silencer
158	Fitting; 8mm 1/8" 90°
159	Screw
160	Inflation air valve
160-1	Tire inflation valve assy
161	Fitting; 8mm 1/4" 90°
162	Nut M6
163	Inflation pedal bracket
164	Inflating pedal plug
165	Inflation pedal
166	Screw M6
167	Washer Ø6
168	Screw
169	Terminal block
170	Terminal support
171	Tool tray
172	Washer

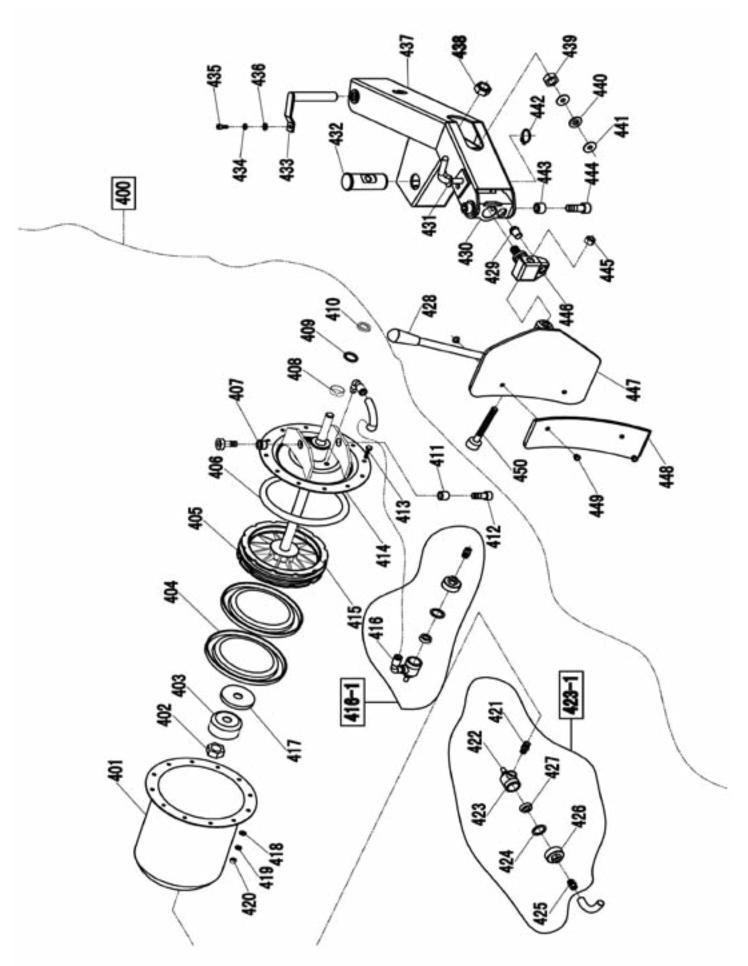


P/N	DESCRIPTION	213	Fitting; 6mm X 1/8" straight	244	Tilt tower cylinder limit pin
200	Tilt back cylinder	214	Locking valve O-ring spacer	245	Snap ring #20
200-1	Tilt cylinder conector	215	O-ring 8 X 2.65	246	Spacer Ø12
200-2	Tilt tower rubber spacer	216	Control valve bolt	247	Fork pin Ø3X25
200-3	Tilt back cylinder sleeve	217	Locking valve metal spacer	248	Tilt tower cylinder lower pin
200-4	Tilt tower cylinder front plate	218	Locking valve button	249	Locking nut M12
200-5	O-ring 25 X 3.1	219	Locking valve handel	250	Tapered metal bushing
200-6	Y-ring 32 X 20 X 6	219-1	Handle W/ locking valve	251	Tilt tower pivot pin
200-7	Tilt tower cylinder rod	220	Screw M5x12	252	Outer tilt tower cover
200-8	Tilt tower cylinder	221	mount / demount head bushing	253	Washer
200-9	Washer; M20 X 54		not used	254	Screw
200-10	Small cylinder piston	222	Metal Mount / Demount Head	255	Elbow unionG1/8"Ø6
200-11	O-ring 16 X 2.4	223	Mount / Demount Head insert	256	Arm lock cylinder base
200-12	Nut M12	224	M10 X 20 Mount / Demount	256-1	Arm lock cylinder
200-13	Fitting 8mm 1/8" 90°	205	Head set screw	257	Washer; M6 X 12mm flat
200-14	Tilt tower cylinder rear plate	225	Mount / Demount Head retain- ing washer	258	O-Ring 7 X 1.9
200-15	O-ring 75 X 2.65	226	WasherØ10	259	SHCSt M6 X 40 BOC
200-16	Washer Ø12	227	Screw M10x20	260	Arm lock cylinder seal
200-17	O-ring 75 X 5.7	228	Roller insert	261	Arm lock cylinder piston
200-18	Nut M8	229	Duckdead roller	262	Rear cylinder cover
200-19	Tilt back cylinder bolt	230	Straight pin Ø5X22	263	Locking nut M8
200-20	Tilt cylinder front flange	231	Flat point set screw M6x6	264	Nut M8
200-21	Tilt tower cylinder wear strip	232	Tilt-back tower unit	265	Washer Ø8
200-22	Fitting; 8mm 1/8" 90°	232-1	Horizontal Slide Arm Assy	266	Rear lock plate spring
200-23	Washer	233	Hex shaft	267	Threaded rod M8 X 1.24 X 85
201	Screw M10x25	234	Horizontal arm bracket	268	Screw bolt M6x16
202	Hex shaft cap	234-1	Horizonal slide assy	269	Washer; M6 X 12mm flat
203	Nut; M10 X 1.5 NL	235	Horizontal arm roller	270	Horizonal slide stop;
204	Washer Ø10	236	Nut M8	271	Nut; M10 X 1.5 NL
205	Vert shaft locking plate	237	Inner hexgon set screw M8x40	272	Rear locking plate bushing
206	T-unionG1/8"Ø6	238	Horizontal arm roller pin	273	Squre shaft locking plate
207	Screw M6x20	239	Screw M6x20	274	Threaded rod M10 X1.5 X 55
208	Screw M6x20	240	inner tilt tower cover	275	Air line guard
209	Hex shaft lock cover	241	Thin nut M10	276	Nut M12
210	Screw M6x30	242	Hexgon screw bolt M10x30	277	Bolt M12x25
211	Hex shaft lock cover bushing	243	Tilt tower cylinder upper pin	278	Hex shaft spring
212	Washer; M6 X12mm flat		7	279	Tilt tower rubber shock



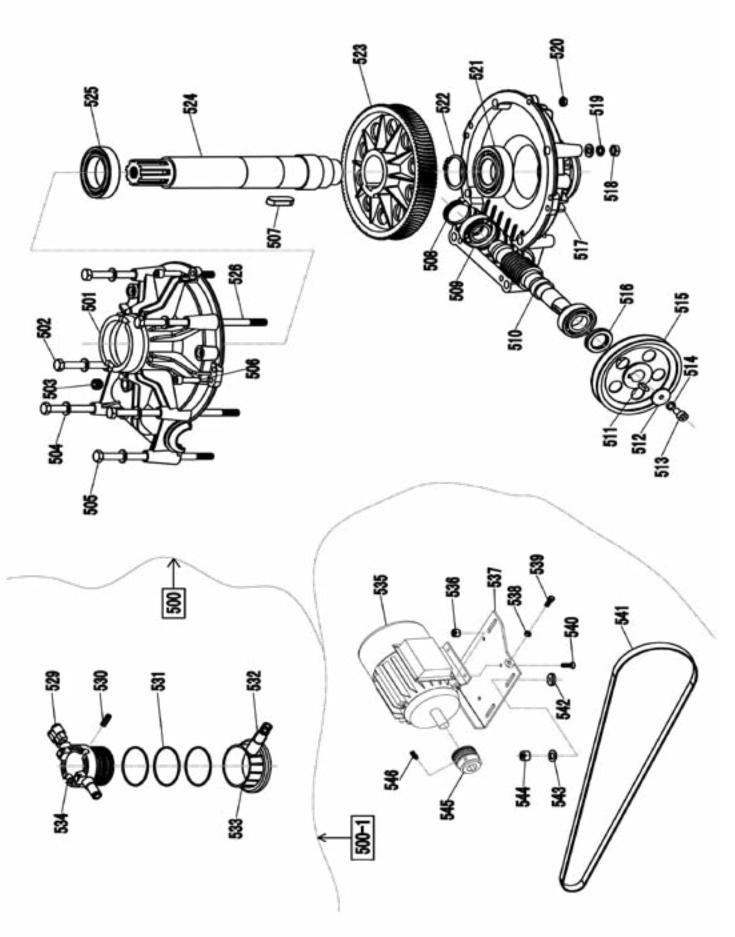
<u>P/N</u>	DESCRIPTION
300	X-Shape tabletop unit
300-1	Turntable assy
301	Turntable
302	Jaw clamp cylinder
302-1	Fitting; 1/8NPT to 8mm
302-2	Small front cylinder cover
302-3	Locking nut M8
302-4	Turntable cylinder connecting screw bolt
302-5	O-Ring 16 X 2.4
302-6	Small piston
302-7	WasherØ12
302-8	Locking nut M12
302-9	Small rear cylinder cover
302-10	T-union
302-11	Banjo bolt
302-12	O-ring 75 X 2.65
302-13	washerØ12
302-14	O-ring 75 X 5.7
302-15	Jaw clamp cylinder rod
302-16	Jaw clamp cylinder body
302-17	Y-ring 32 X 20 X 6
302-18	Jaw clamp cylinder wear strip
302-19	O-Ring 25 X 3.1
303	Jaw clamp cyl bracket
304	Small cylinder cover

305	Seeger ringØ12
306	Connecting rod spacer
307	Connecting rod sleeve
308	WasherØ12
309	Bolt M12 X 1.75 X 45
310	Square turntable
310-1	Square turntable assy
311	Snap ring 65mm
312	Eccentric bushing
313	WasherØ12
314	control panel bush
315	control rod
315-1	Square turntable assy
316	Square turntable press pin
317	Turntable bush
318	Slide guide plate unit
319	Slide shim adjustment
320	Large cylinder cover
321	Jaw clamp support
322	Jaw clamp
323	Jaw clamp cover set
324	Screw M10x25
325	Jaw clamp slide
326	Pin 4 X 10mm
327	Pin 8 X 20
328	Flat socket cap screw; M16 X 2.0 X 40
329	Screw M8x25
	-



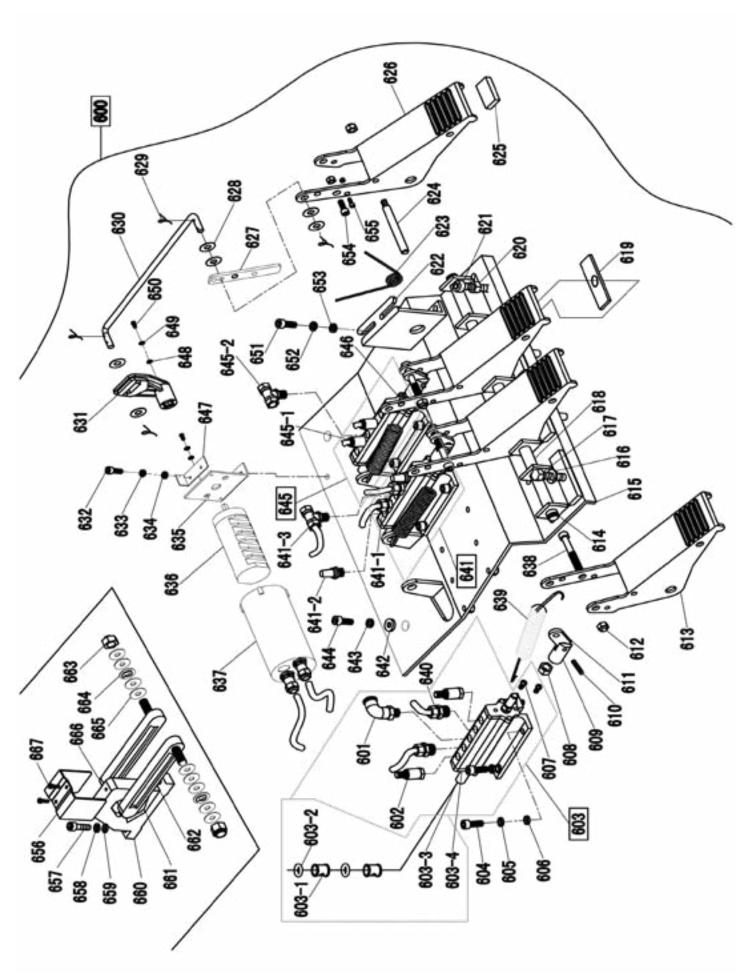
<u>P/N</u>	<u>DESCRIPTION</u>
400	BB cylinder
401	Cylinder liner
402	Thin nut M18
403	Piston limit bowl
404	Y-ringØ200X12×6
405	BB cylinder piston
406	O-ring 193 X 5.7
407	Eccentric bushing
408	BB cylinder wear strip
409	O-ring 25 X 3.1
410	Y-ring 25
411	Metal bushing
412	Screw M12x30
413	Screw bolt M6x16
414	Cylinder flange unit
415	Bead breaker cylinder rod
416	Elbow brass union G1/4"Ø10
416-1	BB flow control valve 90°
417	Piston limit bowl pad
418	WasherØ6
419	WasherØ6
420	Small nut M6
421	Double nipple G1/4"Ø10
422	Silencer G1/4"
423	Release valve
423-1	BB flow control valve straight

424	Release valve washer
425	Union G1/8"Ø10
426	Releave valve
427	Releave valve sealing cup
428	Bead breaker blade knob-14
429	BB blade stop pin
430	Bead breaker bracket
431	Bead breaker distance adjusting knob
432	bead breaker pivot pin
433	Bead breaker pin unit
434	WasherØ6
435	Screw M6x16
436	Washer Ø6
437	Bead breaker units
438	Lock nut M16
439	Locking nut M17
440	Waved washerØ16
441	SpacerØ16
442	Seeger ringØ35
443	Metal bushing 22 X 12 X 17.3
444	Screw M12 25
445	Locking nut M14
446	Bead blade support
447	Bead breaker blade
448	Bead breaker blade cover
449	Bead breaker cover plug
450	Screw M14x95



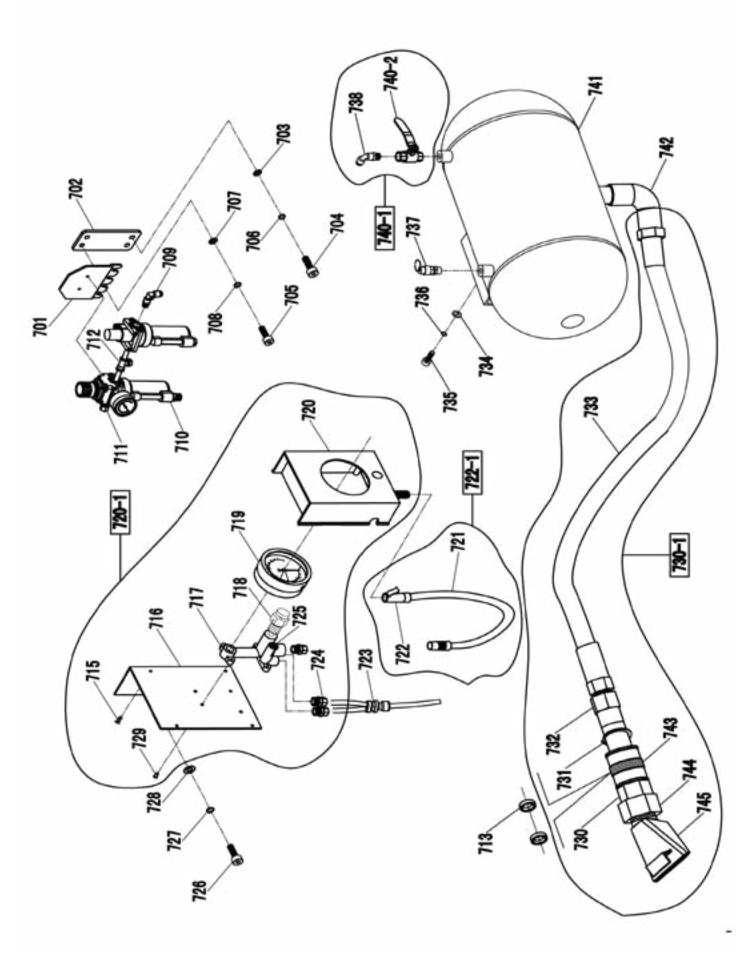
<u>P/N</u>	DESCRIPTION
500	Transmission assy
500-1	Rotary joint block
500-2	Rotary valve sealing ring
500-3	200 cylinder sealing units
501	Screw bolt M10x170
502	Screw bolt M10x200
503	SpacerØ10
504	Reduction gear shaft
505	Shaft sleeve
506	Oil plug 45x8
507	Worm rod M2
508	Cone bearing 7205
509	Drive belt pulley (cone belt)
510	Washer 6x6x20
511	WasherØ8
512	Screw bolt M8x16
513	Worm rod pad
514	Oil sealing Ø40X25X8
515	Nut M10
516	WasherØ10
517	WasherØ10
518	Nut M10
519	Lower box of reduction gear box
520	Bearing 80208
521	Reduction gear box(alumium)

522	Turntable key 12 X 8 X 35
523	Bearing 80110
524	Upper flange of reduction gear box
525	Screw bolt M8x30
526	Screw bolt M10x180
527	Oil fill tube
528	Oil fill tube plug
529	Quick Y-union
530	Jack bolt M6x20
531	O-RingØ60X2.65
532	Fitting; 8mm X 1/4" 90°
533	Rotary joint block outer piece
534	Rotary joint block inner piece
535	Electric motor
536	Locking nut M8
537	Motor plate unit
538	Nut M8
539	Screw bolt M8x40
540	Screw M8x30
541	V-belt; R26 1245mm
542	Rubber washer
543	SpacerØ10
544	Nut; M10 X 1.5 NL
545	Motor pulley
546	flat point set screw M8x16



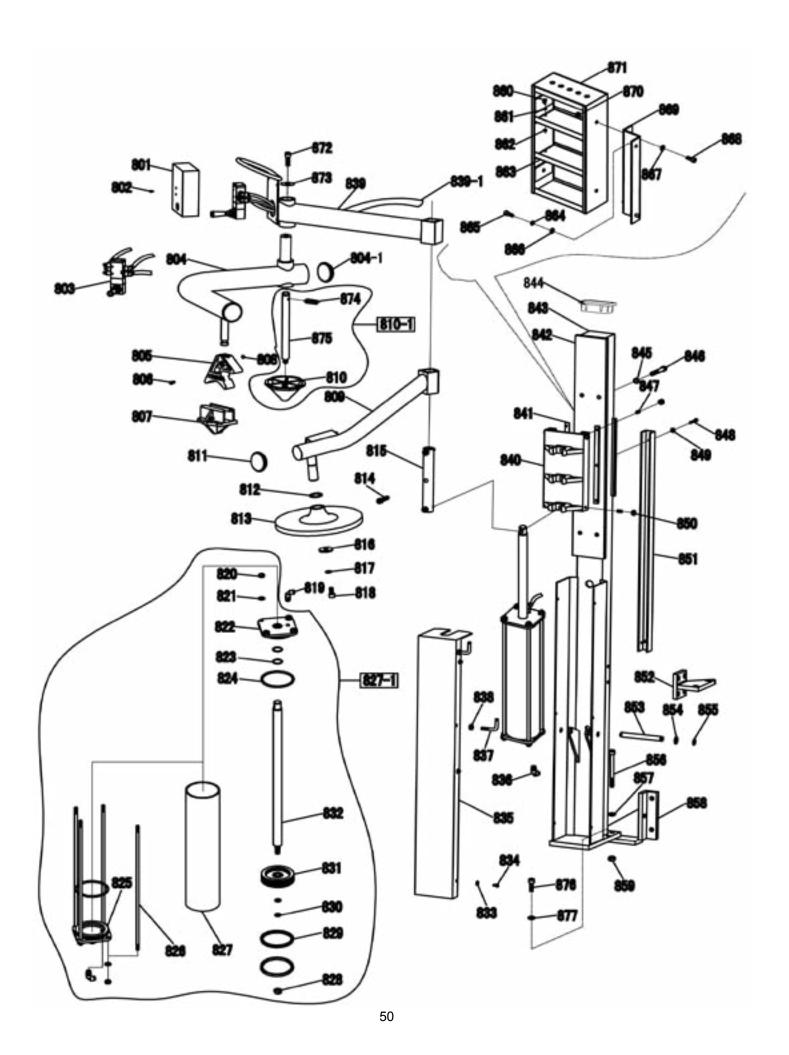
P/N	DESCRIPTION
600	Front foot pedal assy
601	Elbow union G1/8″Ø8
602	1/8" adjusable silencer
603	Tilt tower are valve
603-1	Air valve O-ring spacer
603-2	O-ring 17X4
603-3	Air valve spool (all valves)
603-4	Air valve end cap
604	Screw M6x12
605	WasherØ6
606	WasherØ6
607	Screw M4x10
608	Nut M8
609	Foot pedal link
610	Spring pin M4 X 20
611	Air valve connecting link
612	Locking nut M6
613	Foot pedal (right)
614	Seeger ring Ø12
615	Front foot pedalmounting bracket
616	WasherØ8
617	Screw bolt M8x16
618	Foot pedal shaft
619	Control system shim adjustment
620	Nut M8
621	Screw M8x50
622	Torsion spring bracket
623	Foot pedal torsion spring
624	Foot pedal limit rod
625	Foot pedal rubber insert
626	Foot pedal (left)
627	Two-speed switch board
628	Spacer Ø6
629	Fork pinØ3X25
630	Directional switch cam linkage
631	Turntable directional switch cam
632	Screw M6x12
633	WasherØ6

634	WasherØ6
635	Directional switch bracket
636	Directional switch
637	Directional switch cover
638	Screw M6x55
639	Foot pedal return spring
640	Union G1/8"Ø8
641	Jaw clamp are valve
641-1	Union G1/4"Ø10
641-2	Silencer G1/4"Ø10
641-3	T-union G1/4"Ø10
642	spacerØ6
643	WasherØ6
644	Screw M8x20
645	Bead breaker air valve
645-1	Quick union G1/4"Ø10
645-2	T-union G1/4"Ø11
646	Cylinder postioning bush
647	Two-speed switch stop limit
648	Washer Ø6
649	Washer M6 X 12mm flat
650	Screw M5x16
651	Screw M6x16
652	WasherØ6
653	WasherØ6
654	Screw M8x20
655	Screw M6x20
656	Foot pedal cam cover
657	Screw M6x20
658	Washer; M6 X 12mm flat
659	WasherØ6
660	Foot pedal cam
661	Foot pedal cam leaf spring
662	Foot pedal cam link
663	Locking nut M8
664	Waved washer
665	Washer Ø8
666	Foot pedal cam link
667	Screw M3x10



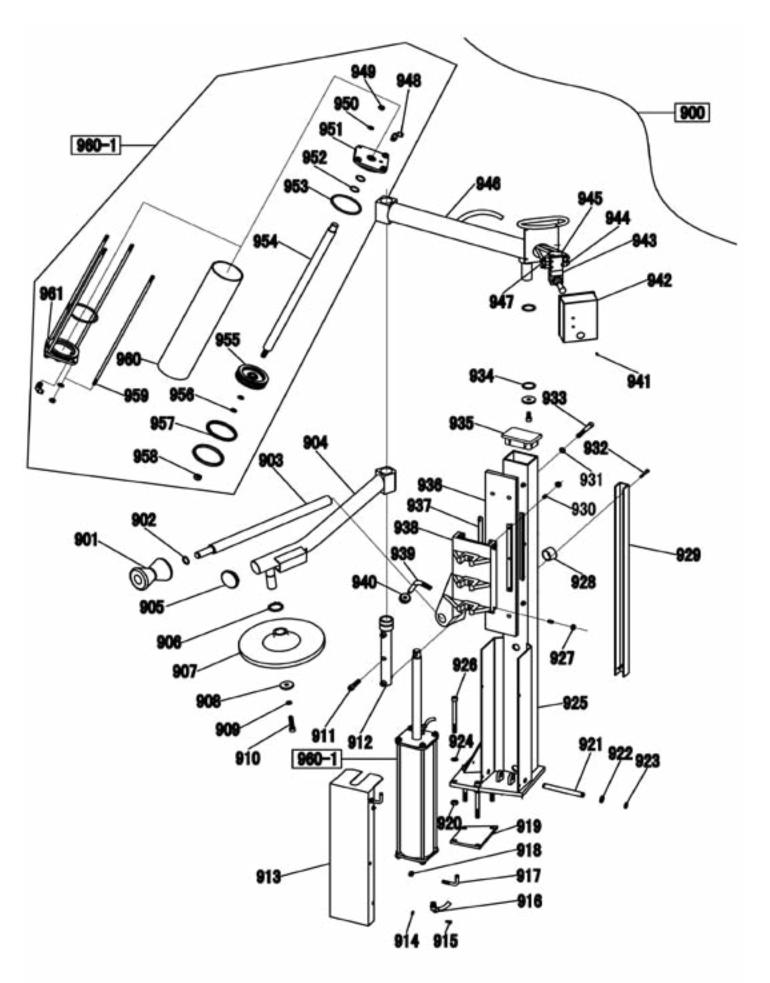
<u>P/N</u>	DESCRIPTION
701	UFRL support
702	UFRL bracket
703	WasherØ8
704	Screw M8x20
705	Screw M8x16
706	Washer Ø8
707	Washer Ø8
708	Washer Ø8
709	G1/4"Ø10
710	Air/oil regulator
711	Air fitting spacer
712	Fitting; 1/4 X 8mm tee
713	Turbo blast seal kit
715	Self-tapping screw
716	linflator assy base
717	Tire inflator relief valve
718	Air release valve
719	Air inflating gauge
720	Inflation system plastic cover
720-1	Tire inflator box assy
721	Coiled hose
722	Air chuck
722-1	inflation hose assy
723	Y-union

724	Union G1/8"Ø8
725	Plug G1/8"
726	Screw M6x20
727	Washer; M6 X 12mm flat
728	WasherØ6
729	Self-tapping screw M4x16
730	Turbo blast nozzle adaptor
730-1	complete turbo blast assembly
731	Snap ring; 40mm
732	1" hose connector
733	Turbo blast 1" hose
734	Washer Ø8
735	Screw M8x25
736	Washer Ø8
737	Pressure release valve
738	Fitting; 8mm X1/4"90°
739	Gauge;
740	Air regulator; 28 mm mount
740-1	Air tank regulator assy
740-2	1/4" ball valve
741	Air tank
742	Fitting; 1" 90°
743	Hose clamp
744	Turbo blast handle / Connector
745	Turbo blast valve
746	Turbo blast nozzle



P/N	DESCRIPTION
801	L/R assest arm cover
802	SHCS M4 X 0.7 X 30mm
803	Assist arm control valve
804	Assist tower bent arm
804-1	Assist tower bent arm plug
805	Assist arm block
806	Screw M6x30
807	Wheel restraint
808	Nut M6
809	Helper demounting unit
810	Assist arm cone
810-1	complete cone assembly
811	Assist arm end plug
812	Seeger ring Ø25
813	Plastic disc
814	Screw M10-45
815	Assist arm connecting link
816	Seeger ring
817	Ø14X2.5
818	Screw M10x25
819	Quick elbow union G1/4"Ø6
820	Nut M8
821	WasherØ8
822	Cylinder front flange
823	O-ring Ø30X2.6
824	O-ring Ø94X3.15
825	Assist tower rear cyl plate
826	Cylinder connecting bolt
827	Left assist tower cyl body
827-1	Left assist tower cylinder
828	Locking nut M12
829	Y-ring 94x84x6
830	O-ringØ14X2.5
831	Assist tower cyl piston
832	Left assist tower cylinder rod
833	WasherØ6
834	Screw M6x10
835	Left assist tower cyl cover
836	G1/4"Ø10
837	Turbo blast hook

838	nut M8
839	Power-assist arm unit
839-1	Metal braided hose cover
840	Slide unit
841	Assist tower plastic slide
842	Slide plate
843	Power-assist tower unit
844	Assist tower top plug
845	WasherØ10
846	Screw M10x75
847	Flat point set screw M8x25
848	SHCS M6 X 1.0 X 40 BOC
849	WasherØ6
850	Nut M8
851	Assist tower air hose cover
852	Chassis box support unit
853	Assist tower lower pin
854	WasherØ12
855	Seeger ringØ12
856	Screw M10x120
857	WasherØ10
858	Power assist tower bracket
859	Nut M10
860	Washer M4
861	Screw M4
862	Nut M4
863	Divided board
864	WasherØ8
865	Screw M8x16
866	WasherØ8
867	WasherØ8
868	Screw M8x20
869	Tool box support
870	Nut M8
871	Tool box
872	SHCS M12 X 1.75 X 30
873	washer
874	ball detent
875	Cone shaft
876	Hexagon Ssrew M8X30
877	Pad



<u>P/N</u>	DESCRIPTION
900	Upgrade tower (R-26AT to a R-26-DT)
901	Double cone BB roller
902	Snapr ring #20
903	Double cone BB roller rod
904	Bead lifting arm unit
905	Assist arm end plug
906	Seeger ring Ø25
907	Plastic disc
908	Seeger ring
909	Washer Ø10
910	Screw M10x25
911	Screw M10x45
912	Connecting axle
913	Cylinder cover
914	Washer Ø6
915	Screw M6x10
916	Quick elbow union G1/8"Ø6
917	Turbo blast hook
918	nut M8
919	Helper lower support
920	NutM10
921	Cylinder stop pin
922	Washer Ø12
923	Seegar ring Ø12
924	WasherØ10
925	Power-assist squre tower unit
926	Screw M10x120
927	Nut M8
928	Bead pressing rod back flange
929	Assist tower air hose cover
930	Flat point set screw M8x25
931	Washer Ø10
932	SHCS M6 X 1.0 X 40 BOC
933	Screw M10x75
934	Washer
935	Power-assist tower cover
936	Sliding plate

937	Assist tower plastic slide
938	Slide
939	Locking knob
940	Ball
941	SHCS M4 X 0.7 X 30mm
942	L/R Assist arm valve cover
943	Assist arm control valve
944	Quick elbow union G1/8"Ø6
945	Quick elbow union G1/4"Ø6
946	Pressing rod unit
947	Quick elbow union G1/4"Ø6
948	Quick elbow union G1/4"Ø6
949	Nut M8
950	Washer Ø8
951	Cylinder front flange
952	O-ringØ30X2.6
953	O-ringØ94X3.15
954	Piston rod
955	Assist tower cyl piston
956	O-ring Ø14X2.5
957	Y-ring 94x84x6
958	Locking nut M12
959	Cylinder connecting bolt
960	Cylinder liner
960-1	Right assist tower cylinder
961	Assist tower rear cyl plate
302-R	Cylinder sealing units
500-2	Rotary valve sealing ring
500-3	Ø200 cylinder sealing units

SERVICE and MAINTENANCE NOTES

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For Parts Or Service Contact:

BendPak Inc. / Ranger Products 1645 Lemonwood Dr. Santa Paula, CA. 93060

> Tel: 1-805-933-9970 Toll Free: 1-800-253-2363 Fax: 1-805-933-9160

## www.bendpak.com www.rangerproducts.com

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