

COATS®

APX80A/APX80E

APX90A/APX90E

Rim Clamp® Tire Changer

For servicing single piece automotive and most light truck tire/wheel assemblies



* APX 90 Shown

See
RIM Safety page iv
***Operating
Instructions**
page 4
Unload Instructions
page 18

Installation Instructions
Operating Instructions
Safety Instructions
Maintenance Instructions

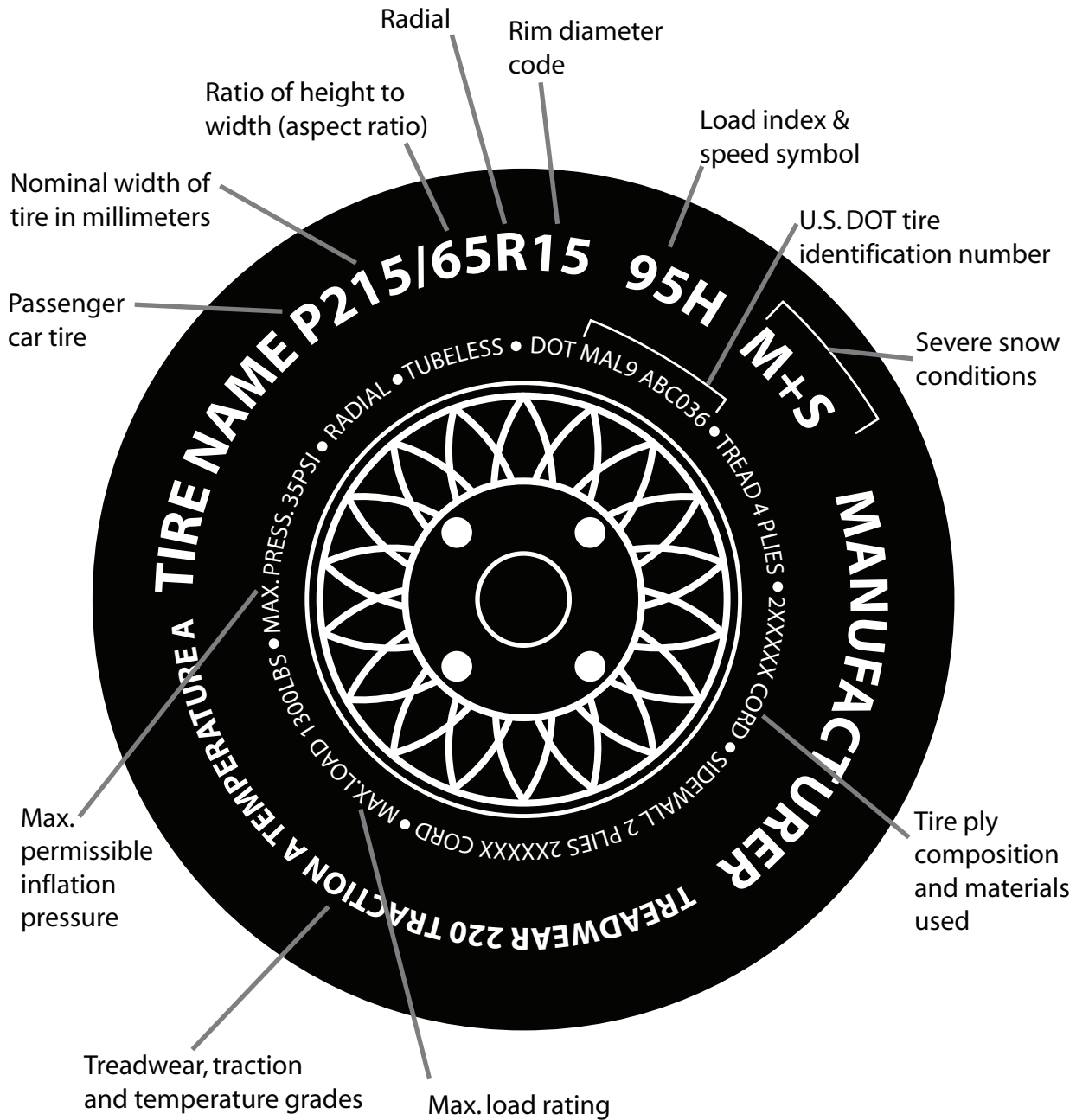
READ these instructions before placing unit in service KEEP these and other materials delivered with the unit in a binder near the machine for ease of reference by supervisors and operators.

**HENNESSY
INDUSTRIES**

1601 J. P. Hennessy Drive, LaVergne, TN USA 37086-3565 615/641-7533 800/688-6359
HENNESSY INDUSTRIES INC. Manufacturer of AMMCO®, COATS® and BADA® Automotive Service Equipment and Tools.

Manual Part No.: 85000226 11
Revision: 06/17

Tire Specifications Diagram



Safety Instructions

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 decals/labels/notices on the unit clean and visible.
- Do not override safety features.

Operator Protective Equipment

Personal protective equipment helps make tire servicing safer. However, equipment does not take the place of safe operating practices. Always wear durable work clothing during tire service activity. Loose fitting clothing should be avoided. Tight fitting leather gloves are recommended to protect operator's 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 given to the use of hearing protection if tire service activity is performed in an enclosed area, or if noise levels are high.

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!

Safety Notices and Decals



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 of either, or further information, contact:

Hennessy Industries, Inc.

1601 J.P. Hennessy Drive
LaVergne, TN 37086-3565
(615) 641-7533 or (800) 688-6359
www.ammcoats.com

For additional information contact:

Rubber Manufacturers Association

1400 K Street N. W.
Washington, DC 20005
(202) 682-4800

Tire Guides, Inc.

The Tire Information Center
1101-6 South Rogers Circle
Boca Raton, FL 33487-2795
(561) 997-9229
www.tireguides.com



Decal Part No. 85611138

Remember R.I.M.

Three Simple Steps To Help Keep Shops Safe

READ INSPECT MOUNT

R.I.M. is a training program developed by Hennessy Industries to help keep tire technicians safe. By following the basic principles of R.I.M., technicians can avoid situations that can cause catastrophic accidents like tire explosions.

R.I.M. stands for read, inspect, and mount:

Read the tire size on a new tire before mounting to make sure it is the proper size for the wheel.

Inspect the wheel for cracks, rust, and or other damage that could cause an unsafe situation.

Mount the tire safely, making sure not to put any part of your body over the tire during inflation.

The most serious of possible accidents is a tire explosion. This is often caused by a tire/rim mismatch.

If a tire explodes on a tire changer, pressure causes it to fly straight up at tremendous speed. If a technician is standing over the tire, he can be seriously injured or killed.

Hennessy's R.I.M. program allows the technician to avoid situations that can cause tire explosions and other accidents. The full program, including training videos, brochures, posters, and other materials, is available from Coats distributors nationwide.



For more details, contact your Coats distributor or e-mail us.

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	 NOTICE
	Read entire manual before assembling, installing, operating, or servicing this equipment.

Principal Operating Parts



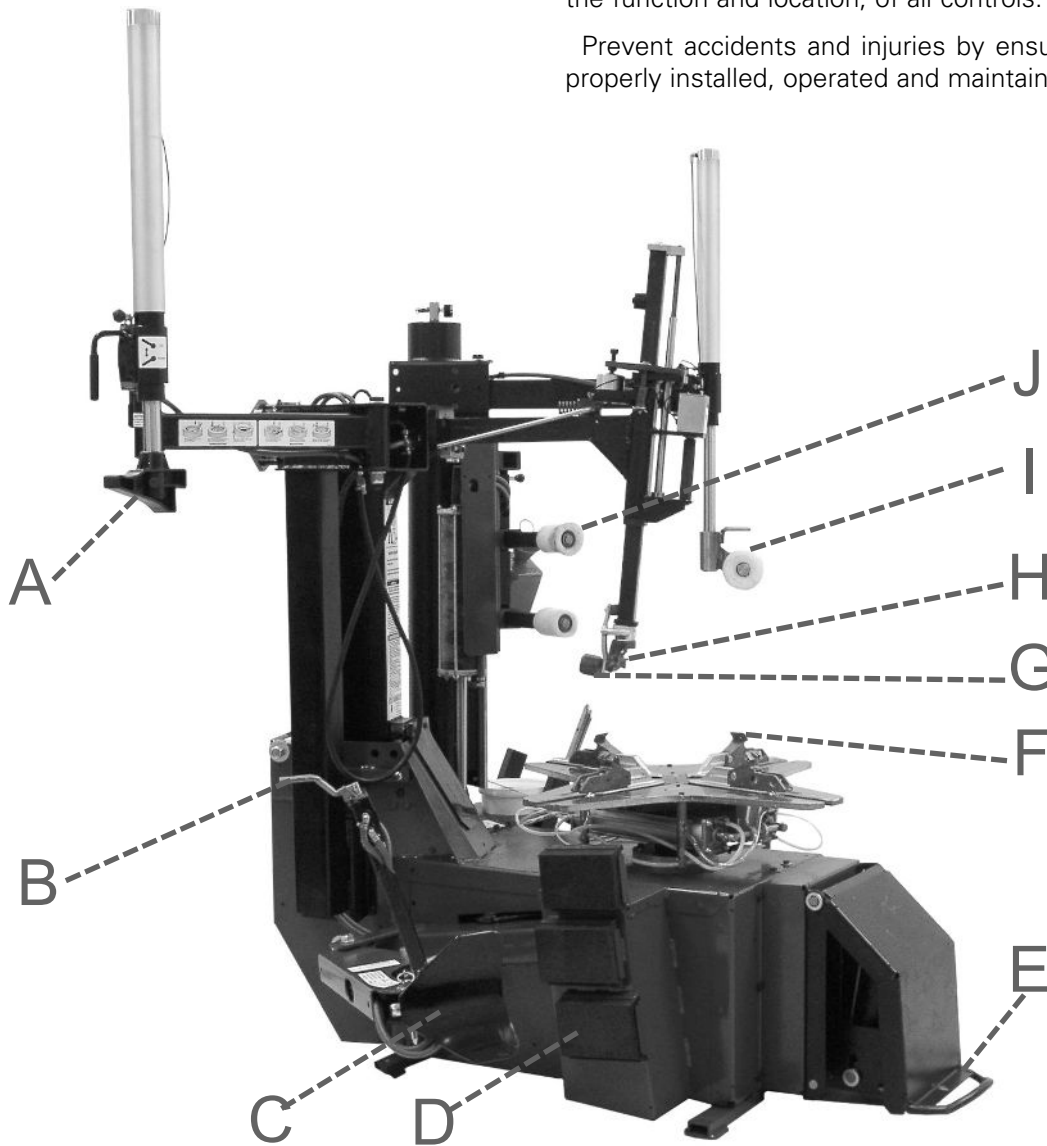
Do It Now!

Now is a good time to fill out the Owner's Registry Card.

Know Your Unit

Compare this illustration with the unit before placing it into service. Maximum performance and safety will be obtained only when all persons using the unit are fully trained in its parts and operation. Each user should learn the function and location, of all controls.

Prevent accidents and injuries by ensuring the unit is properly installed, operated and maintained.



A **Robo Arm™**— Provides extra leverage for runflat and low profile tires.

B **Bead Loosener Handle** — Pull handle up or down that controls operation of bead loosener shoe.

C **Bead Loosener Shoe** — Pivoting shoe for loosening tire beads.

D **Tire Bumper Guards** — Provides protective surface when bead loosening tires.

E **Tire Lift** — Helps position tire/wheel assemblies (if equipped).

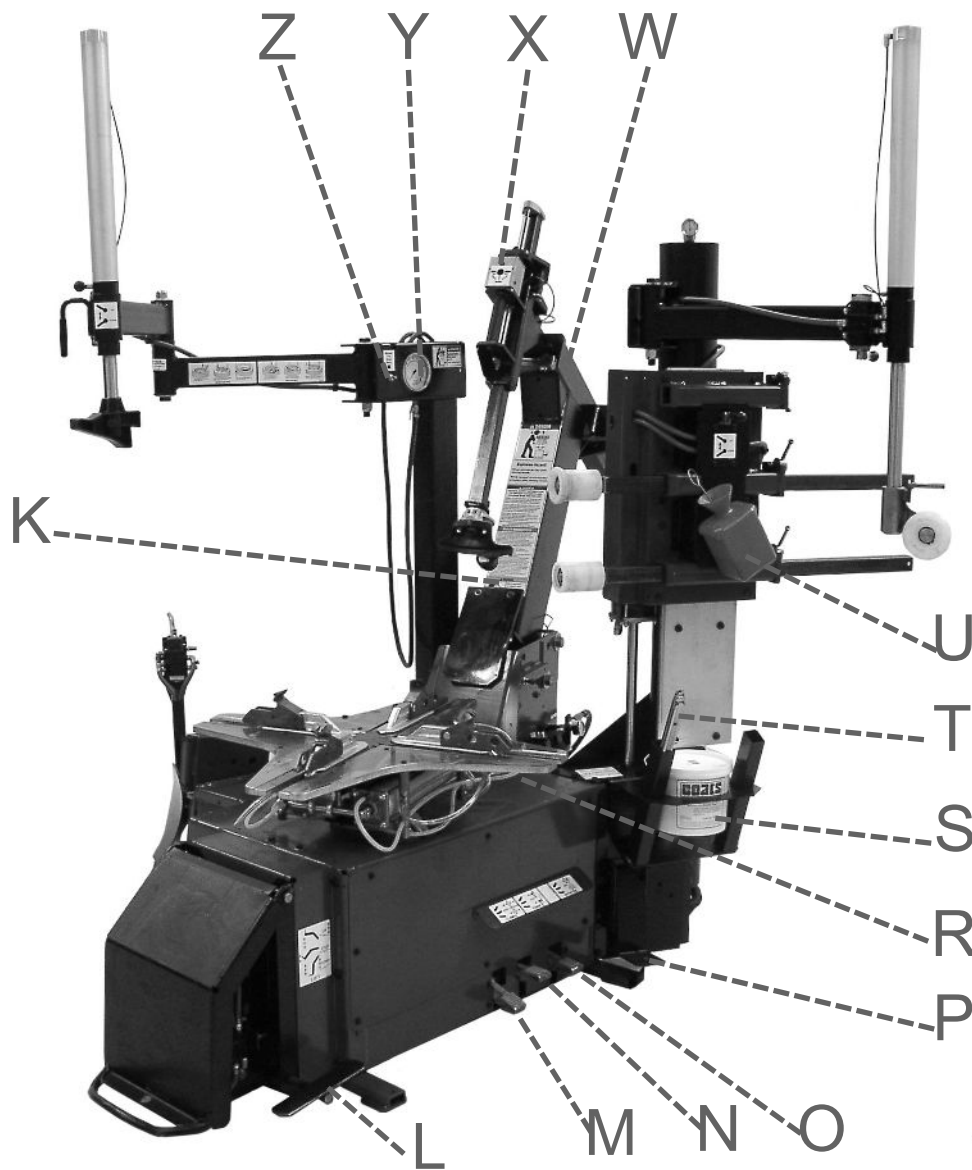
F **Clamps** — Holds wheel to tabletop for tire changing. Position outward to allow outside clamping of wheels.

G **Duckhead®Roller** — Attachment for DuckHead to aid in Mounting tire on the wheel.

H **DuckHead®** — Mounts and demounts tire from wheel.

I **RoboRoller** — Provides extra leverage for runflat and low profile tires (if equipped).

J **Horizontal Power Rollers** — Helps with bead lubrication, assists with mounting, and demounts lower bead without tire tool.



K Important Safety Decal — Important safety information for the operator. DO NOT obstruct with tire stickers or other materials.

L Tire Lift Control Pedal — Three position pedal that raises or lowers the tire lift ramp.

M Clamp Control Pedal — Three-position pedal that opens, holds, or closes rim clamps.

N Tower Tilt Pedal — Two-position pedal that moves tower forward or back.

O Tabletop Pedal — Three-position pedal that controls rotation of tabletop (forward, off, reverse).

P Inflation Pedal — Three-position pedal that allows inflation of tires through air hose and clip-on chuck.

R Bead Sealing Nozzles — Expands tire sidewall to bead seat area of rim to seal tire to rim and allow inflation..

S Lube Bucket — Dispenser for rubber lubricant.

T Bead Lifting Tool — Used to lift and position tire bead correctly on duckhead®.

U Lube Bottle — Dispenser for rubber lubricant.

W Tower — Support for horizontal and vertical slides.

X Slide Locking Valve — Locks and unlocks horizontal/vertical slide and sets correct vertical/horizontal position to maintain duckhead/wheel clearance.

Y Air Inflation Gauge — Registers tire pressure when clip-on chuck is attached to tire valve stem and inflation pedal is released.

Z Release Valve — Allows the manual release of air pressure from tire when clip-on chuck is attached to tire valve.

Operating Instructions

This unit must be properly operated and properly 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.

Bead Loosening and Demounting



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.

A. Remember to remove all weights from both sides of the wheel. Weights left on backside of wheel may cause the wheel to be clamped unlevelled. This may result in the combination Duckhead® contacting the rim causing scratches. On alloy wheels, always rotate the wheel one turn after setting the Duckhead to insure proper wheel chucking.

B. Always review with the owner any nicks and scratches on expensive wheel and tire combinations prior to servicing.

C. Review the performance wheel section of this manual prior to servicing performance tire/wheel combinations.



Loosening the beads on a partially or fully inflated tire is unsafe and causes excess movement and friction against the bumper pads and excessive wear on pivots. Deflate the tire completely to prolong the life of your machine.

1. Deflate the tire completely by removing the valve core from the valve stem (figure 1). Be cautious and do not smoke as a *flammable gas could have been introduced into the tire at some time.*



Figure 1 - Remove Valve Core to Deflate Tire



Tires are always installed and removed from the rim's narrow side.

D. Always loosen the bead on the narrow side of the wheel's drop center first. See figure 2 for more information on the drop center.

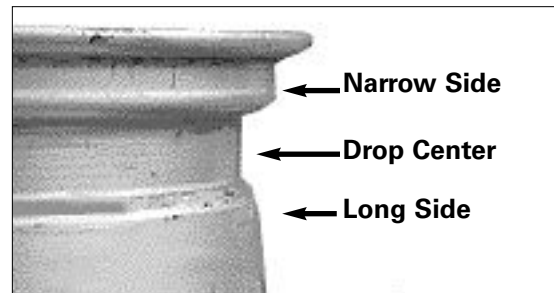


Figure 2 - Determine Narrow Side of Wheel

E. The clamps on the tabletop may extend beyond the tabletop itself. To avoid damaging the clamps, move them to their full inward position before positioning a tire for bead loosening.

F. Use extra care in positioning the bead loosener 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.

2. Actuate valve to position the bead loosener shoe away from the machine and roll wheel into position. The valve stem should be in the 11 o'clock position to accommodate a possible asymmetric safety hump type rim. Position the bead loosener shoe against the tire next to, but not on, the rim. Actuate the bead loosener hand valve to position the shoe and loosen the bead. It may be necessary to loosen the bead in multiple locations around the tire (figure 3).

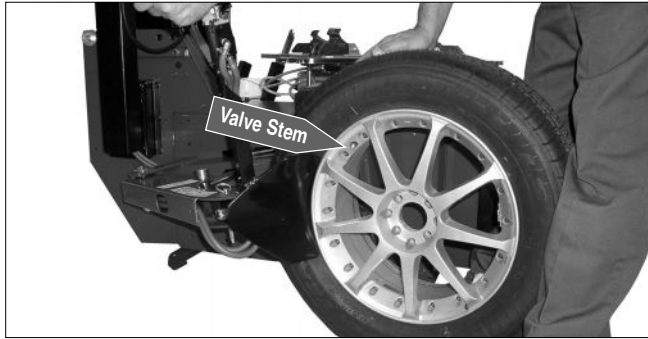


Figure 3 - Position Tire and Bead Loosener Shoe

3. Turn the wheel around and repeat loosening procedure on the other side of the wheel (figure 4). Note that the valve is placed at 11 o'clock for the initial loosening procedure to accommodate a possible asymmetric safety hump type rim.

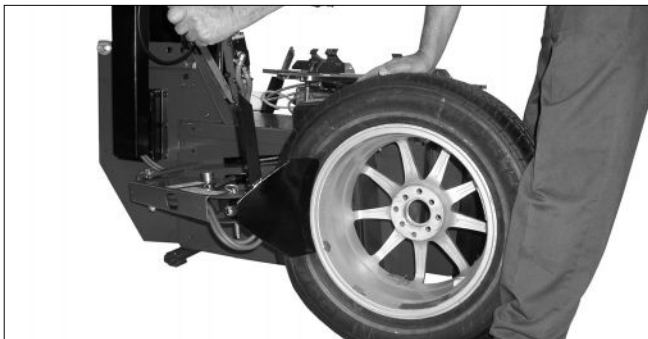


Figure 4 - Position Tire and Bead Loosener Shoe with Wheel Turned Around

G. It will be easier to outside clamp the wheel to the tabletop if the long side of the rim is loosened last.

4. Determine the mounting side of the wheel. The mounting side is the narrow side of the drop center (tire removed in figure 2 for clarity).



Clamp control pedal must be in the full up or full down position (detent position) to maintain clamping force on wheel.

5. Preposition tabletop clamps. Use the clamp control pedal to move the clamps inward (push pedal down). Use the clamp control pedal to move the clamps outward (lift pedal up). Engage the detent position (pedal in full up or full down position) to maintain clamped or unclamped pedal position.



Avoid back injury, use the tire lift or ask another operator for assistance when lifting tire/rim assemblies onto the tire changer.

6. Lift wheel to tabletop or, if equipped, roll tire/wheel assembly on the tire lift bar. Keep wheel vertical and press foot pedal to raise wheel up. Now rotate wheel for placement on tabletop (figure 5).

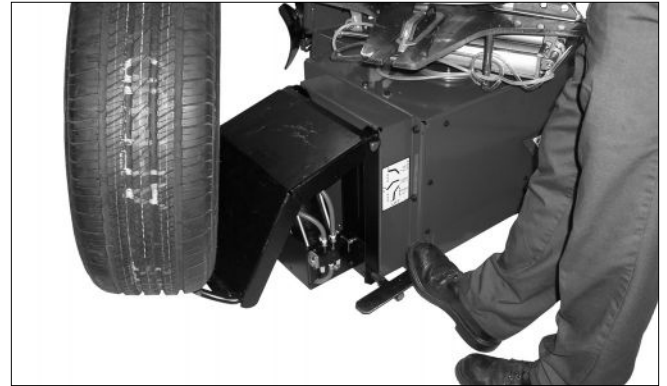


Figure 5 - Lift Wheel to Tabletop

7. Roll tire/wheel assembly on tabletop with mounting side up (figure 6).



Figure 6 - Clamp Outside on Mag Wheels



Clamp control pedal must be in the full up or full down position (detent position) to maintain clamping force on wheel.

8. Use Robo Arm to apply pressure to aid in clamping rim (figure 7). Use the clamp control pedal to move the clamps inward (push pedal down). Use the clamp control pedal to move the clamps outward (lift pedal up). Engage the detent position (pedal in full up or full down position) to maintain clamped or unclamped pedal position.



Figure 7 - Robo Arm Aids Clamping

9. Take time to experiment with the Duckhead® locking system (figure 8).

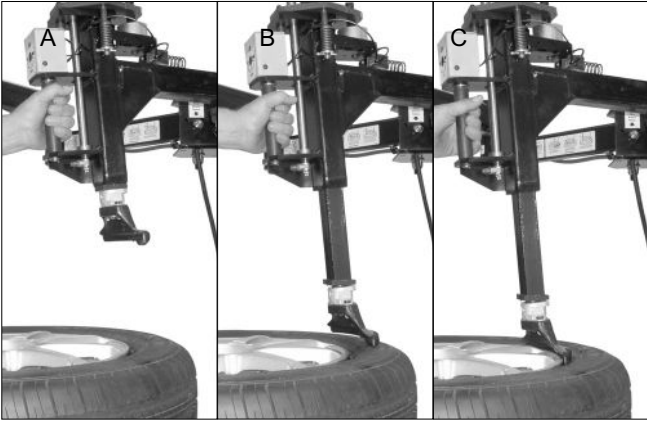


Figure 8 - Turn Slide Lock to Color As Shown, A Green - Duckhead Retracts Up, B Yellow - Duckhead Descends Slowly, and C Red - Duckhead Locks into Position



Make sure the Duckhead is in the retracted position before moving the tower forward, to prevent wheel damage.

10. Using the foot pedal, position the tower forward (figure 9). See figure 8 for Duckhead movement and locking. With the tower forward, allow tool to descend on the tire sidewall (figure 9). Then move the tool toward the rim and actuate the locking button. As the tool locks into place, the Duckhead will move up and back about 1/8-inch.

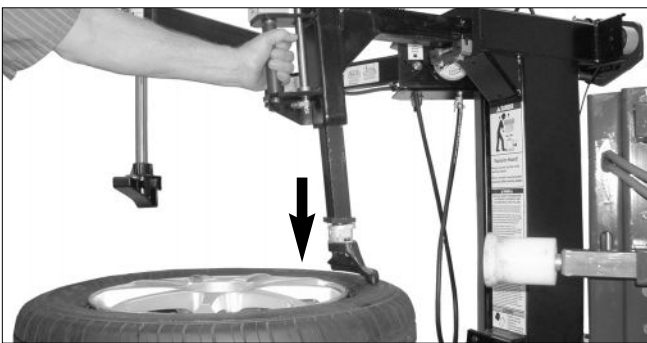


Figure 9 - Position Duckhead

11. Check Duckhead® positioning. A plastic Duckhead should not be very close to the rim edge after it is locked. This clearance will be maintained as long as the slide locking valve remains locked. The operator may move the tower back out of the way and back into place again without needing to reposition the Duckhead (when clamping a like set of wheels).

H. The tool clearance may change with machine use and should be inspected often. Failure to maintain the proper clearance may result in damage to the wheel rim and/or tire.

K. Normal tabletop rotation for demounting is clockwise. Depress the tabletop pedal to rotate this direction. To rotate the tabletop counterclockwise, lift the pedal up with your toe.

L. Tabletop rotation can be stopped at any time by removing your foot from the rotation pedal.



At times during the mounting and demounting procedure, the bead lifting tool may encounter resistance and can be thrown. Keep one hand firmly on the tool to avoid possible tool disconnect. Use the reversing feature to back out of jam-ups. A thrown tool can cause injury.

12. Apply tire manufacturer's approved rubber lubricant liberally to entire circumference of both beads after loosening and placing on tabletop. Using the top bead loosening roller to hold down top bead while rotating wheel will make lubrication easier (figure 10).



Figure 10 - Apply Rubber Lubricant to the Beads

13. Insert smooth curved end of the bead lifting tool over the clockwise end of Duckhead and below the upper bead of the tire. Lift the bead up and over the knob on the Duckhead (figure 11). Also, note the valve stem position to the Duckhead, this position reduces stresses in the bead and allows an easier bead lift. Use Robo Arm to push down on the tire opposite the Duckhead to allow bead to utilize the drop center area of the rim.



Figure 11 - Insert Bead Lifting Tool

14. Depress the tabletop pedal to rotate the wheel. The Duckhead will guide the tire bead up and over the edge of the wheel (figure 12). Continue rotation until the upper bead is demounted.



Figure 12 - Demount Upper Bead

15. For lower bead removal use Robo Arm™ to lift the tire up (figure 13) and position the lower horizontal power roller (figure 14) under the tire.



Figure 13 - Lift the Tire for Lower Bead Removal



Figure 14 -Position Lower Horizontal Power Roller

16. With the tire in position, depress the foot pedal to rotate the tire. The bead loosening roller will guide the lower tire bead off of the rim.

M. With tube-type tires, demount the upper bead and remove the tube before demounting the lower bead.

Mounting

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



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



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



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



When in doubt do not mount.



Never mount a tire and wheel handed to you by anyone without checking both tire and wheel for damage and to be certain the sizes match. Do not let untrained persons operate tire changer and keep bystanders out of service area.



Forcing the tire onto the rim can cause bead damage. If you damage the tire bead during mounting, STOP!, remove tire and mark it as damaged. Do not mount a damaged tire.

1. Before any mounting, inspect tire for damage and verify size match between tire and wheel (fig. 15).



Figure 15 - Verify Size Match Between Tire and Wheel

2. Inspect wheel closely for damage. Clean wheel and remove any light corrosion or rubber residue (figure 16). Do not attempt to service a heavily corroded wheel, damaged wheel, or bent wheel.



Figure 16 - Inspect and Clean the Wheel

3. Inspect valve stem and replace if necessary. Next lubricate tire beads liberally with tire manufacturer's approved rubber lubricant (figure 17).



Figure 17 - Lubricate Tire Beads Liberally

4. Place tire over wheel and move tower arm into position. Position tire so that lower bead is above the rear extension of the Duckhead® and below the front knob (figure 18).

Remember R.I.M. (Read, Inspect, Mount) for every tire.



Figure 18 - Position Tire Against Duckhead®

5. Depress tabletop pedal and rotate wheel to mount lower bead. Use drop center of wheel by forcing down on tire just ahead of the mounting tool, and follow as tire rotates (figure 19). Rotate tabletop until lower bead is mounted.



Figure 19 - Mounting Lower Bead

6. For top bead installation, attach the Duckhead Roller™ to the Duckhead, then rotate tabletop until the valve stem on wheel is 90 degrees ahead of the Duckhead (at 3 o'clock position), see figure 20.



Figure 20 - Position Valve Stem 90° Ahead of Duckhead

7. Using horizontal power roller, press down on tire sidewall between Duckhead and valve stem to hold tire in rim drop center. The bead should also be under right side of the knob on Duckhead (figure 21A).



Figure 21A - Use Power Roller To Hold Tire In Rim Drop Center

8. Use RoboArm™ to push down on tire opposite Duckhead to allow bead to utilize drop center area of rim.



Fig 21B - Use RoboArm To Hold Tire In Rim Drop Center

9. Depress tabletop pedal to rotate the wheel. Use RoboRoller (if equipped) to press down on tire sidewall between RoboArm and horizontal power roller to hold tire in rim drop center.



Fig 22 - Use RoboRoller (if equipped) To Hold Tire In Rim Drop Center

10. Depress tabletop pedal and rotate tire until bead is mounted. Be careful to assure bead stays in the rim drop center in the area ahead of Duckhead.

P. If tabletop rotation stalls, reverse tabletop momentarily until tire bead is again loose on the wheel. Reposition tire on Duckhead, make sure bead is correctly positioned in drop center of the wheel; then attempt mounting again.

R. For tube type tires, mount lower bead first, move tower back, install tube, and then mount upper bead.

Inflation

Tire inflation is performed in three steps: BEAD SEAL, BEAD SEAT, and INFLATION. These steps are explained in detail on page 14. Read the explanation of each step and understand them thoroughly before proceeding.



Tire failure under pressure is hazardous. This tire changer Will Not Restrain Exploding Tires, rims or other related equipment. Inspect tire and wheel carefully for match, wear, damage, or defects before mounting. Always use approved tire bead lubricant during mounting and inflation.



The clip-on chuck allows the operator to keep hands and entire body back from inflating tire. The chuck must be an open/freeflow style with all parts in proper working order.



Check for proper inflation gauge operation. Accurate pressure readings are important to safe tire inflation. Refer to the Operating Maintenance section of this manual for instructions.

The inflation pedal, located at the center of the left side of the machine, controls the flow of air through the inflation hose, and has three positions.

Note: The clip-on chuck on the end of the hose should always be an open/freeflow style with all parts in proper working order.

Position 1 - Tire Pressure – With the inflation hose attached to the tire valve and the pedal in this position, the air gauge will register the air pressure in the tire. Whenever your foot is removed from the pedal, it will return to this position.

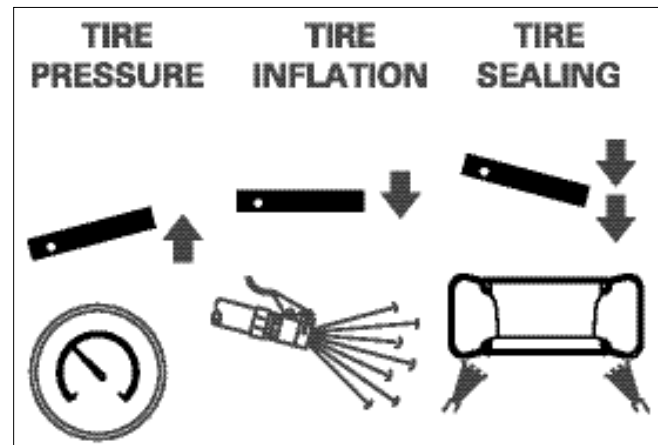
Position 2 - Tire Inflation – This is the first activated position. With the inflation hose attached to the tire valve and the pedal in this position, line pressure is allowed to flow through the valve system and into the tire for inflation. Correct tire pressure is not indicated on the gauge in this position.

Position 3 - Bead Sealing – This is the second and last activated position. With the inflation hose attached to the tire valve and the pedal in this position, line pressure is allowed to flow through the valve and to the air-plate bead seal jets on the tabletop for bead sealing.

1. If the rim has been clamped from the outside for tire mounting, release the clamps, lift the tire, and move the clamps to the center of the tabletop.

The inflation pedal, located at the center of the left side of the machine, controls the flow of air through the inflation hose.

Note the Inflation Pedal Positions (See Diagram)



CAUTION

Use of bead sealing jets without a tire in place can cause dirt and debris to be blown into the air with enough force to injure operator and/or bystander. Do not use the bead sealing control position to inflate a tire.

R. This unit is equipped with a pressure limiter to assist the operator with proper tire inflation. When the inflation pedal is held in position 2, the pressure limiter cycles the machine between position 2 (inflation) and position 1 (at rest, no airflow to tire). This cycling helps to prevent over inflation of the tire. Tires can still be over inflated and explode with the use of this pressure limiter if all of the instructions in this manual are not followed completely. 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 operator's responsibility to follow all instructions and to control inflation pressure as specified in these instructions. Check the function of the pressure limiter regularly and maintain it according to 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 be inflated in a safety cage.

Bead Sealing

1. Position valve stem in front of operator and connect the inflation hose with the clip-on chuck. Hold tire up against upper edge of the wheel. Be sure tire's top bead does not cover the bottom of the valve stem (figure 23).



Figure 23 - Lift Tire Upwards for Bead Sealing

2. Depress inflation pedal to position 2 and hold about one second to begin air flow through tire valve, then depress pedal to position 3 and hold briefly—less than one full second. The blast of air from the jets will expand tire and seal the beads.

3. Release the inflation pedal and allow it to return to position 1. 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 pressure to recover before attempting again.

S. If tire and wheel are properly lubricated and operator cannot achieve bead seal after three or four attempts, the valve core may 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 clip-on chuck and reinstall the valve core. Reattach the clip-on chuck after core is installed.

Bead Seating



NEVER exceed 40 PSI to seat beads while using this tire changer. If more than 40 PSI is permitted by tire manufacturer, **ALWAYS** use safety cage and clip-on chuck. **NEVER** exceed recommended pressure after seating beads. **ALWAYS** keep hands and entire body back 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.



Check tire pressure frequently. If operator is unable to obtain Bead Seat, something is wrong. Deflate tire completely, inspect tire and wheel, correct any problems found, relubricate both tire beads, and reattempt Bead Seal and Seat procedures. Follow all safety instructions in this manual and on machine.

1. Once tire pressure is indicated on the air gauge (inflation pedal in position 1; foot removed from pedal), continue to inject air into the tire (inflation pedal position 2) in short intervals. Check the pressure frequently. Stand back during bead seat. Keep hands, arms, and entire body away from tire during this procedure (figure 24).



Figure 24 - Stand Back during Bead Seat

Inflation



NEVER exceed tire manufacturer's recommended air pressure. Tires can explode, especially if inflated beyond these limits. Use clip-on air chuck, keep hands, arms and entire body back 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. 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 2 to inflate the tire. The pressure limiter will cycle the air flow as described earlier. On most tires, the pressure limiter will cease air flow at approximately 60 PSI. On smaller volume tires the pressure may be higher.
4. Release air pressure from tire by pressing the manual release valve button (inflation hose must be attached to the valve stem, Figure 25). Never add or adjust tire pressure using an air hose without a clip-on air chuck and in-line valve. Do not use a hand-held style air chuck (figure 26).
5. **Important:** 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 air hose must have enough length between the chuck and the operation/in-line valve to allow the operator to stand outside the trajectory.

Note: If you change tires defined as truck tires, they must be inflated per OSHA instructions.



Figure 25 - Location of Manual Release Valve



Figure 26 - Do Not Use a Hand-held Style Air Chuck

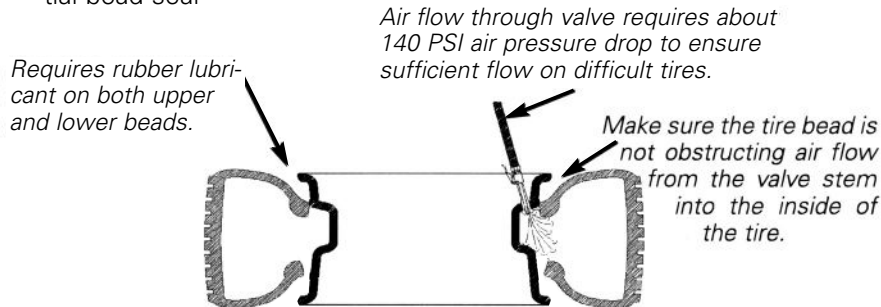
<p>⚠ DANGER</p> <p>Explosion Hazard Never exceed 40 PSI while seating beads.</p> <p>Remember R.I.M. (see page iv and back cover)</p>		<p>⚠ DANGER</p> <p>Explosion Hazard Never inflate tire above manufacturer's recommended pressure after bead is seated.</p>
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Stages of Inflation on a Conventional Tire and Rim

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

Bead Sealing

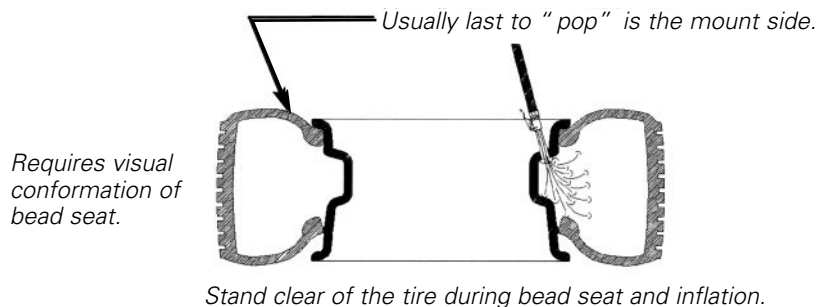
Bead sealing is the process of capturing air pressure between the tire and the rim. The tire will usually contain about 1/2 to 2 PSI at initial bead seal.



Bead Seating

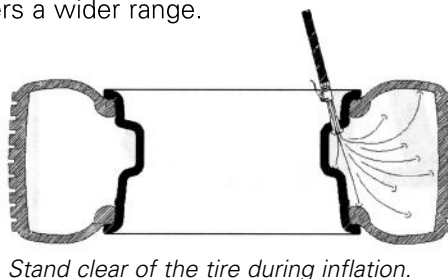
Bead seating usually occurs on the long tapered side of the wheel first and the shorter side last. Bead seating will usually require at least 7 PSI in the tire. 40 PSI is the maximum safe pressure at this stage regardless of tire operating pressure.

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.



Inflation

After the beads are seated, the tire is ready to be inflated. 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.

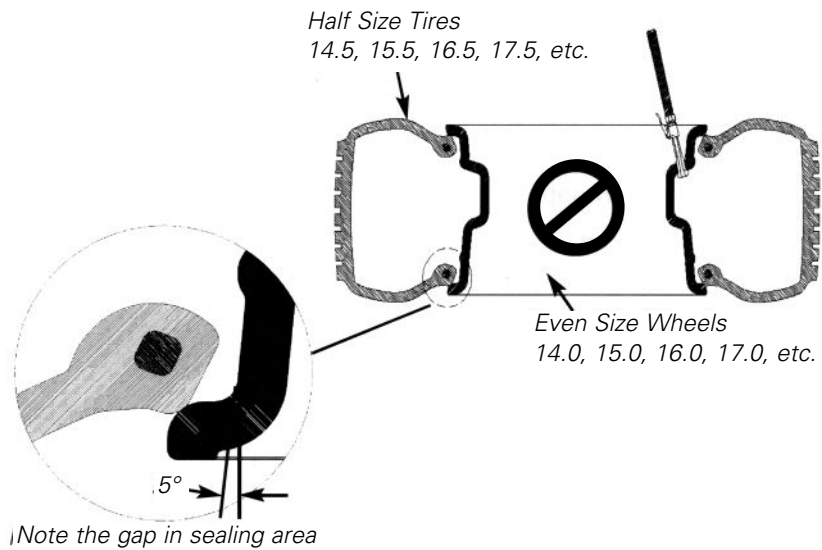
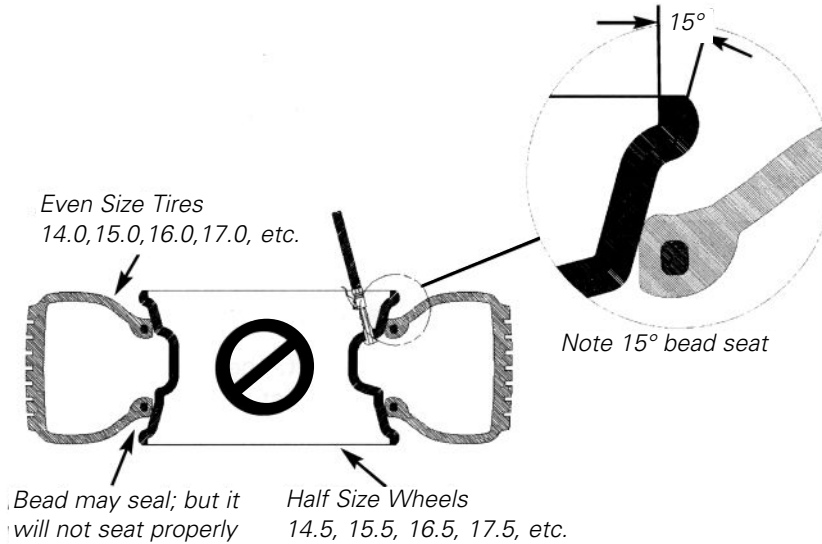


Mismatched Tires and Wheels

Never attempt to mount and inflate mis-matched tires and wheels.



Mismatched tire and wheel combinations can explode, causing personal injury or death to operator and/or bystanders.



Maintenance Instructions

Read and follow all the maintenance instructions provided in this manual to keep the machine in good operating condition. Refer to the other materials received with the unit and to the service bulletins from the manufacturer for additional instructions on proper maintenance and service. Regular inspections and proper maintenance are essential to preventing accidents and injuries.



Before making any inspection, adjustment, or repair, disconnect the power source and block out all moving parts to prevent injury.



Keep the machine and the immediate work area clean. Do not use compressed air to remove dirt and debris from the machine. Foreign material may be propelled into the air and into operator or bystander causing personal injury.



Wear protective clothing, equipment and eye protection when making any adjustments or repairs to the machine.

A. 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.

B. Check the adjustment of the Duckhead once a month.

C. The transmission in this machine is a sealed unit packed with grease and should need no normal maintenance.

D. The tabletop, clamps, steel Duckhead, and other working surfaces should be cleaned with a vaporizing solvent every month.

E. Inspect clamps. If using Max-Grip™ clamps then replace any worn or damaged grips and covers or if using other clamps then remove metal chips and dirt from the serrations with a wire brush every month.

F. Check the tire pressure gauge function daily, and check the accuracy monthly. Use a pressurized tire and a high quality stick-type pressure gauge. If necessary, adjust the dial of the machine gauge. If the gauge is defective, replace it immediately (part number 107985). Contact COATS at (615) 641-7533. Check function of the pressure limiter weekly. Always reinstall the lens after adjusting the gauge.

G. Make sure all fasteners are securely tightened.

H. Make certain that all guards and covers are in place.

I. Check for worn, damaged or missing parts including grips and protective covers. Replace them before allowing the unit to be used.

J. On a daily basis, inspect the unit and check to be certain that all systems are operating normally. Detailed inspection and testing procedures are specified for various components at regular intervals. Set up a chart and assign responsibility for these items.



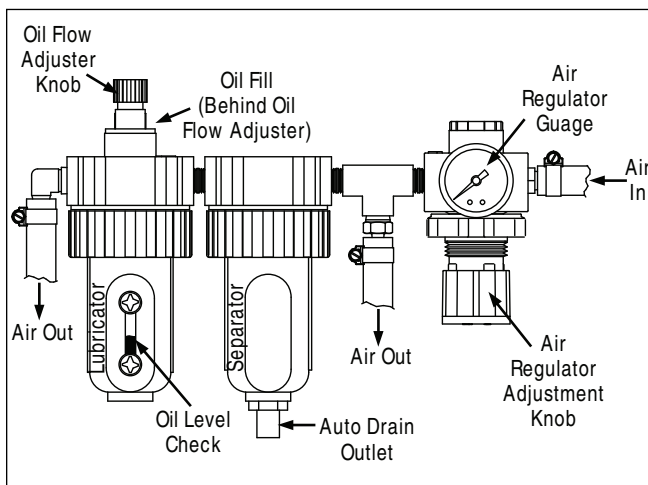
Replace any damaged or missing safety decals. They are available from COATS, (800) 688-6359.

Important: 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. For example, how to loosen or tighten fasteners. Also basic procedures such as cycling systems and checking operation of the equipment are not fully described since they are known to anyone who does mechanical and service work. 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 COATS directly, (800) 688-6359.

Separator/Lubricator Maintenance (If equipped)

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

- A.** Disconnect air supply to machine.
- B.** The Separator (Filter) unit is equipped with an automatic drain and should not normally need draining.
- C.** If the fluid level is greater than 1/4" from the top of the gauge, add oil. Remove the filler plug on top of the lubricator and add SAE 10W non-detergent oil or an air tool oil to bring the level up to 1/4" from the top of the gauge. Replace filler plug and clean up any spilled oil.
- D.** Adjust the oil flow by turning the black flow adjustment knob and turning it to increase or decrease the flow. Watch the formation of oil drops in the see-through oil chamber. Reconnect the air supply and continually cycle the bead loosener through full strokes and count the drips during the cycles. The delivery of oil to the airline should be about 1 drop per 10 cylinder cycles. Adjust flow as required.



Oil Injector Maintenance (If equipped)

The oil injector requires servicing as least annually. The oil level in the oil reservoir tank should be checked regularly.

Add oil to oil reservoir tank when fluid level is a quarter full or below. Remove cap from the oil reservoir tank and add Chevron Regal® & O 32 oil to full line (air tool oil is an acceptable substitute). Replace cap and clean up any spilled oil.

Important: An air lock will form if the hose between the reservoir and injector is ever empty of oil. In this case, after filling the reservoir tank, the line must be bled of air at the injector connection as follows:

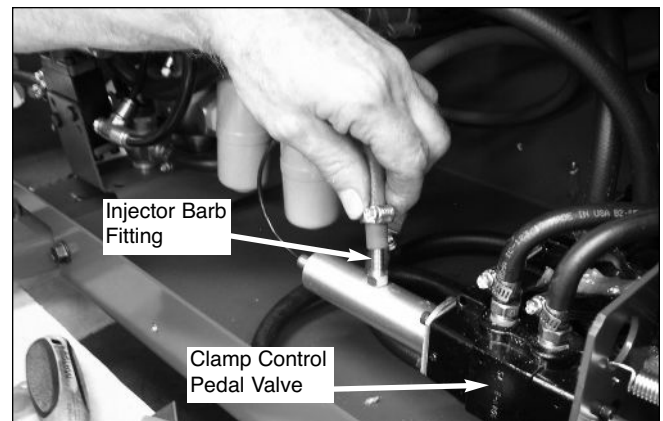
- 1.** Disconnect all power sources, both air and electricity inputs. Allow any stored air in the reservoir to escape by depressing the inflate pedal.

- 2.** Remove the side panel and locate the oil injector.

- 3.** Prime the oil injector.

a. Oil Injector With Bleeder Screw

Loosen bleeder screw until oil drips from screw and all air is relieved from the oil line hose. Retighten the bleeder screw.



b. Oil Injector Without Bleeder Screw

Remove the oil line hose from the injector barb fitting. Allow air to escape from the hose by lowering the hose end below level of reservoir until oil is present. Drip oil into hose barb fitting on injector until barb fitting is full. Reinstall oil line hose onto oil injector barb fitting.

- 4.** Reconnect air/electric sources and cycle the clamp control pedal a few times checking for oil and air leaks.

- 5.** Test the machine for full function before returning the machine to operation.

- 6.** Monitor oil consumption to ensure oil is being used in system.

Pressure Limiter Maintenance



Operating a tire changer with a defective, improperly adjusted, or by-passed pressure limiter could cause an operator to accidentally over pressurize a tire, resulting in a tire explosion with severe injury or death to the operator or bystanders.

Always be sure that the pressure limiter is present and is operating properly.



Never inflate tire above manufacturer's recommended pressure after bead is seated. Pressure limiter is set at 60 PSI. Any required inflation above 60 PSI should be performed in an inflation chamber/safety cage or securely mounted on the vehicle if an inflation chamber is not available. A tire explosion may cause personal injury or death to operator or bystanders.

The 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.

IMPORTANT: For models with **"Bead Sealing Only"** on the tire changer, maximum limiter pressure is 15 PSI (NOT 60 PSI).

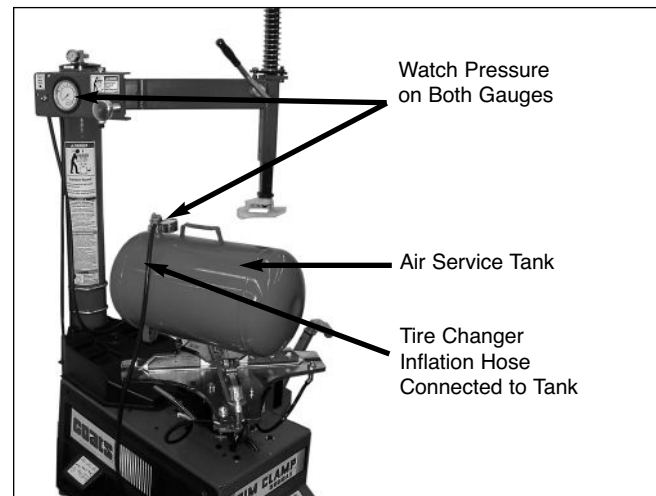
Check operation of the pressure limiter as shown and described below at least monthly:

- 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 200 PSI pressure rating.
- 3.** Depress inflation pedal to position 1 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 airflow automatically. Both gauges should read 60 PSI \pm 5 PSI.

5. Release inflation pedal. Check 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.

6. Replace pressure limiter if it fails to cycle properly during inflation, if it fails to shut air supply off at 60 PSI, or if it malfunctions in any other way. Do not operate machine with a faulty pressure limiter.



Unload and Installation Instructions

Review the following unload and installation procedures carefully. Refer to them as necessary when the machine is delivered, unloaded and installed to verify that you are proceeding properly and safely.

This unit weighs over 1,200 lbs. Do not attempt to lift or move without assistance. Make sure all moving parts are secured before moving the unit.



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 place safety poster and instructions near the unit.

Machine Delivery Unload Procedure

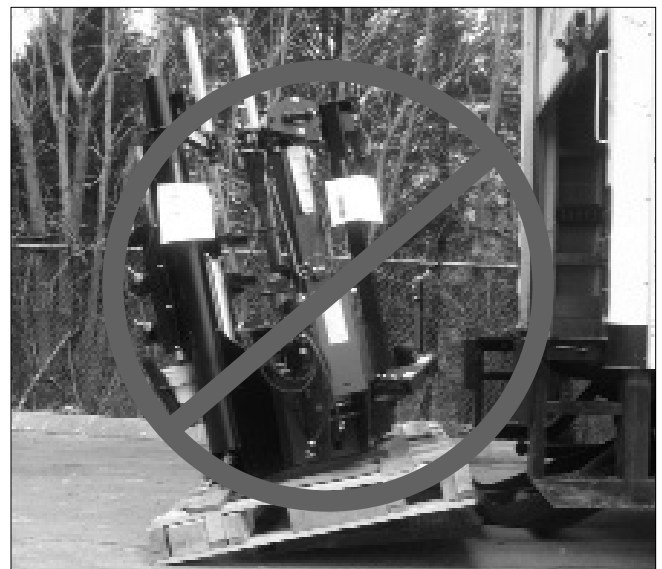
A. It is acceptable to use a fork-truck to unload the machine from a delivery truck.



B. It is acceptable to use a utility tilt trailer to unload the machine that is on a pallet from a delivery truck.



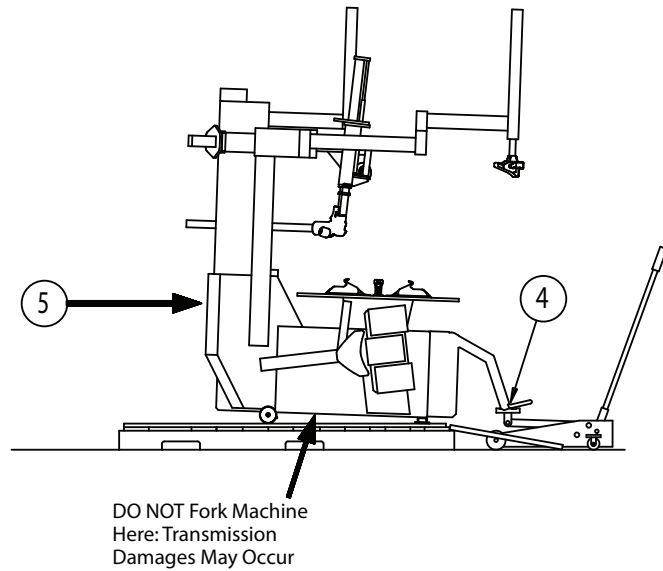
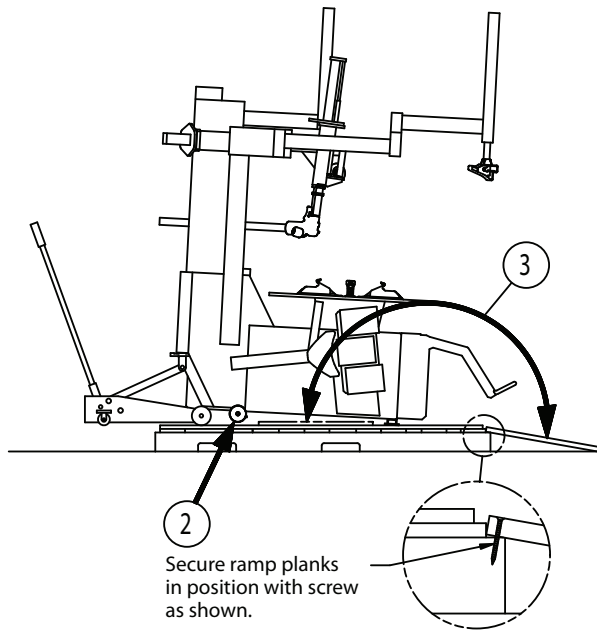
C. It is not acceptable and can be dangerous to use a lift-gate delivery truck to unload the machine from a delivery truck.



APX90 Unload Instruction

1. Remove lag bolts holding chassis to pallet.
2. Jack up rear of machine; install axle and wheels as shown.
3. Remove ramp planks and position as shown.
4. Move jack to front (add air pressure to machine).
5. Slowly push machine off pallet.
6. Locate machine in shop at proper location and remove wheels.

APX90



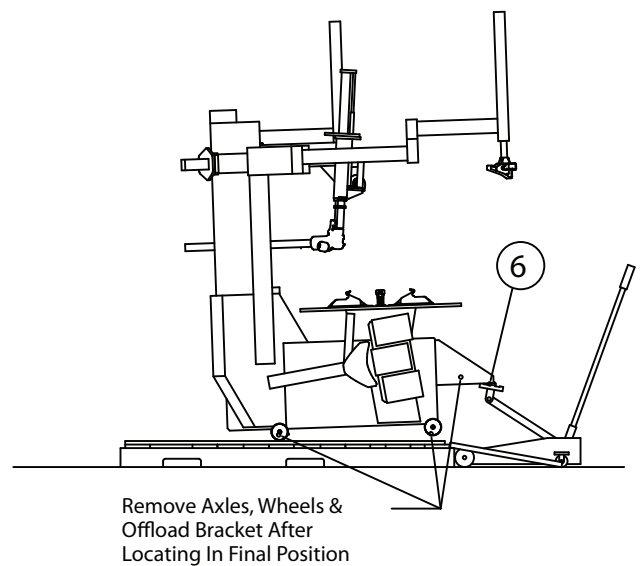
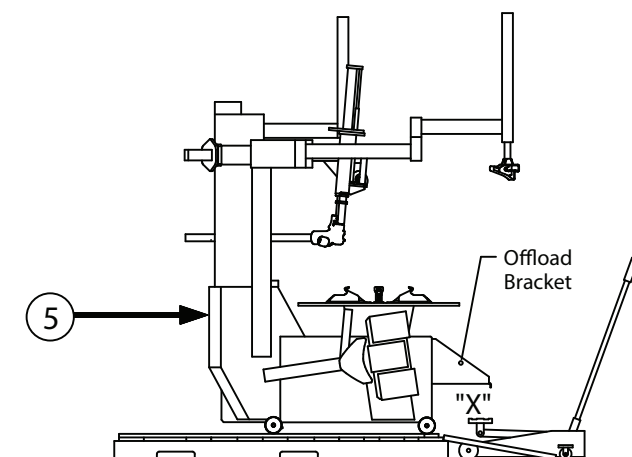
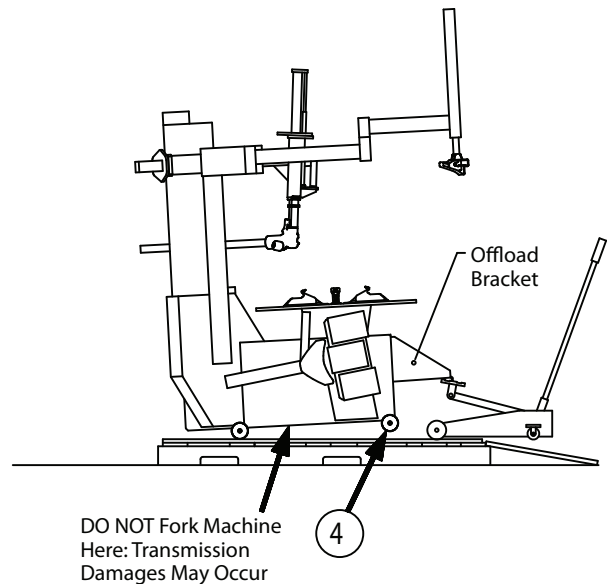
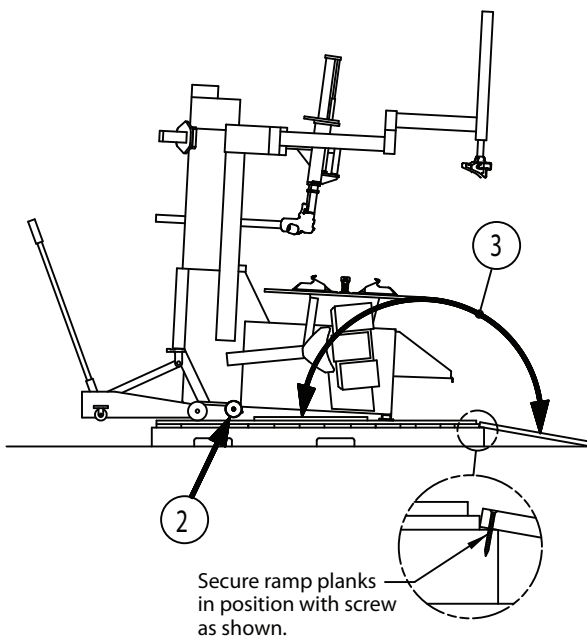
APX80 Unload Instruction

1. Remove lag bolts holding chassis to pallet.
2. Jack up rear of machine; install axle and wheels as shown.
3. Remove ramp planks and position as shown.
4. Jack up front of machine and install axle and wheels as shown.
5. Slowly push machine forward to position offload bracket over jack.

6. Jack up front of machine and slowly move machine off pallet.

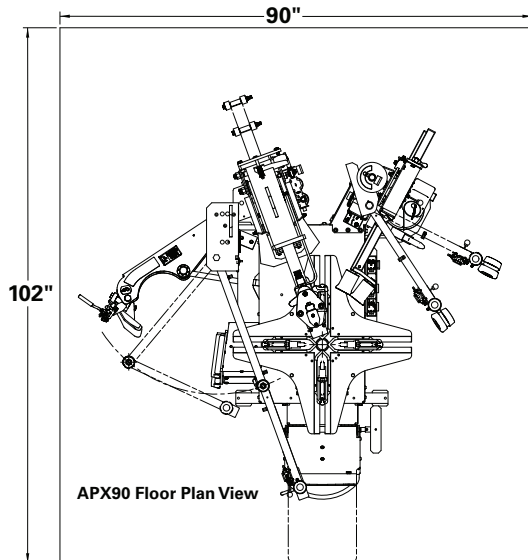
7. Locate machine in shop at proper location and remove wheels and temporary off-load bracket.

APX80



Location

Select a location using the drawings below. 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.



Air Source

The all-air models require a 14 to 15 CFM air source at 150 PSI. The air/electric models require a 5 CFM air source at 150 PSI. The operating pressure range for all models is between 125 PSI and 175 PSI at the machine.

The unit is furnished with a 1/4" pipe thread male fitting for easy connection. This connection is located on the right side of the rear of the machine. A 1/4" ID hose (or pipe) for connection to the machine is satisfactory. Sufficient air pressure assures good performance.

Electrical Source

Electrical models require power as follows:

- 30 amp, 115V electrical circuit (Domestic)
- 25 amp, 115V electrical circuit (CSA)
- 15 amp, 220V electrical circuit (Export)

Refer to the caution decal that is located by the unit's power cord.

Refer to the serial tag located on the lower part of the machine for specific electrical requirements for the unit. 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 (less than 1 ohm) between ground and building ground.

Floor Mounting

The machine should be securely bolted to the floor with suitable anchors using the hole at each corner of the machine base.

ONE WORD FOR SAFETY

R.I.M.

READ INSPECT MOUNT

READ...

Mounting and inflating the wrong size tire can get you hurt. *Read* the size on the tire and make sure it matches the rim. Be especially careful about putting a smaller tire on a larger rim, such as a 16-inch tire on a 16.5-inch rim.

Inflation of a mismatched tire and rim can cause an explosion.

INSPECT...

Before you put any tire on a rim, *inspect* the rim for rust, tough spots, bent edges, or cracks that could prevent the tire from seating right. If you spot any of these problems, don't mount the tire until the rim has been checked by your shop foreman.

Inspect the tire for bead damage.

MOUNT...

Once you've made sure the tire is OK and the right size and the rim is OK, *mount* the tire safely. NEVER, ever lean over the tire when you're inflating it. If a tire does explode, it will go straight up. You don't want to be over the tire if that happens. Also, never over-inflate the tire, even if the bead doesn't seat. Never inflate over 40 PSI. If the tire hasn't seated, something is wrong. Deflate the tire and check it and the rim again. If it doesn't work the second time, try another tire.

BE CAREFUL OF THESE SITUATIONS:

1. Damaged Bead or Beads.

2. Rusty Wheels.
(particularly in the bead seat area)

3. Bent or Cracked Wheels.

4 A. Mismatched.
(A mis-match of a 16-inch tire to a 16.5-inch rim causing an explosion)

4 B. Mismatched.
(16.5-inch tire on a 16-inch rim)

5. Walk-In Tire and Rim.

6. Back Injuries.

7. Hand or Finger Injuries.
(Hands or fingers too close to inflating tire or bead seats which may cause injury.)

8. Standing Clear.
(Never put any part of your body over the tire changer during inflation.)

9. Beads will not Seat at 40 PSI.

10. Improper Inflation.

Remember R.I.M. (Read, Inspect, Mount) for every tire.



FAILURE TO READ AND FOLLOW ALL WARNINGS AND INSTRUCTIONS IN THIS MANUAL CAN LEAD TO SERIOUS PERSONAL INJURY OR DEATH TO OPERATOR OR BYSTANDER.

THE OWNER IS RESPONSIBLE FOR MAINTAINING THE OPERATION INSTRUCTIONS AND DECALS FOR OPERATOR REFERENCE. FOR ADDITIONAL COPIES, CONTACT THE COATS® COMPANY, 1601 J.P. HENNESSY DRIVE, LAVERGNE, TENNESSEE, 37086 - (800) 688-6359.

TIRE FAILURE UNDER PRESSURE IS HAZARDOUS! This tire changer Will Not Restrain Exploding Tires, rims or other related equipment.

TIRES CAN EXPLODE, ESPECIALLY IF INFLATED BEYOND SPECIFIED LIMITS. DO NOT EXCEED TIRE MANUFACTURERS RECOMMENDED AIR PRESSURE.

AN EXPLODING TIRE, RIM, OR BEAD SEATING EQUIPMENT MAY PROPEL UPWARD AND OUTWARD WITH SUFFICIENT ENERGY TO CAUSE SERIOUS INJURY OR DEATH TO OPERATOR AND/OR BYSTANDERS.