

# COATS®

## 4050A

# Tire Changer

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



## Safety Instructions Operating Instructions Installation 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, INC.**

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HENNESSY INDUSTRIES INC. Manufacturer of AMMCO®, COATS® and BADA® Automotive Service Equipment and Tools.

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### 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 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.



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. Download a copy of the manual from our website at [www.ammcoats.com](http://www.ammcoats.com), or for further information, contact:

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For additional tire, wheel, and/or inflation information contact the following:

RUBBER MANUFACTURERS ASSOCIATION  
1400 K Street N.W.  
Washington, DC 20005  
(202) 682-4800  
[www.rma.com](http://www.rma.com)

TIRE GUIDES, INC.  
The Tire Information Center  
1101-6 South Rogers Circle  
Boca Raton, FL 33487-2795  
(561) 997-9229  
[www.tireguides.com](http://www.tireguides.com)

## 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 could 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!


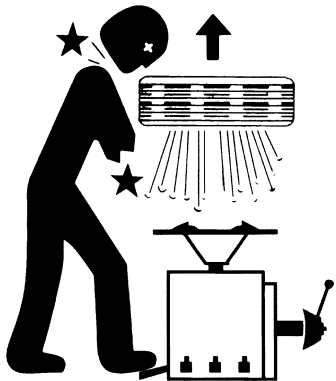



## Owner's Responsibility



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 decals on the unit clean and visible.

 <b>DANGER</b>		 <b>DANGER</b>
<b>Explosion Hazard</b> <b>Never exceed 40 PSI while seating beads.</b>		<b>Explosion Hazard</b> <b>Never inflate tire above manufacturer's recommended pressure after bead is seated.</b>

## Principal Operating Parts

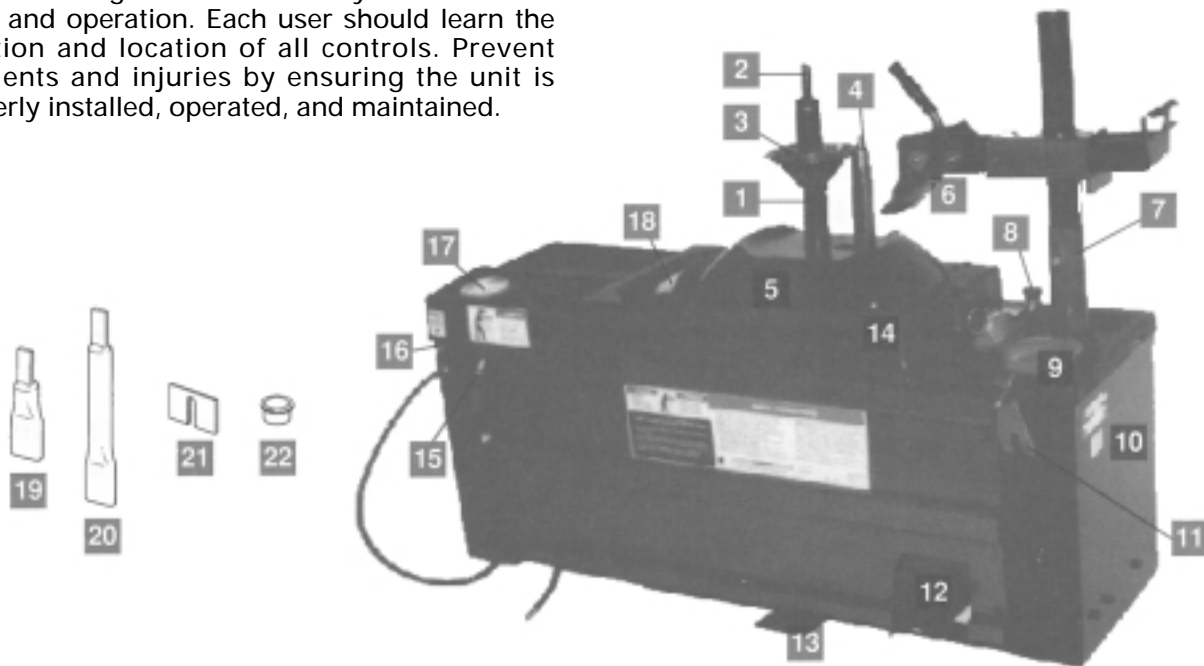
### Know Your Unit

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.



### Do It Now

Now is a good time to fill out the warranty registration card. This card must be mailed within 30 days of purchase or the warranty may be voided.



**1** Center Post

**2** Center Post Key — Rotates combination tool for mounting and demounting operations.

**3** Centering Cone — Centers the wheel to the contoured table top.

**4** Positioning Pin — Engages lug hole in wheel to prevent rotation during mounting and demounting.

**5** Contoured Table Top

**6** Upper Bead Loosener Shoe

**7** Adjustable Upper Bead Loosener — Adjusts to accommodate wide wheels.

**8** Detent Control Knob — Controls the amount of travel of the lower bead loosener to prevent damage to large diameter narrow wheels and reverse mount wheels.

**9** Rubber Lubricant Dispenser

**10** Serial Number Plate — Record the serial number on the Owner's Registry Card and on your copy of the warranty card. Provide this number with any warranty or service claim, and with all parts orders.

**11** Combination Tool — Used in mounting and demounting operations.

**12** Foot Pedal — Operates the air valve for power bead loosening, mounting, and demounting.

**13** Air-Flate Pedal — 3 position pedal for tire inflation via air hose/chuck. Do not press without tire/wheel assembly on unit.

**14** Air-Flate Jets — Expands tire sidewalls to bead seat portion of rim for the bead sealing process.

**15** Air Chuck — Clip-on style.

**16** Manual Release Valve — Allows for manual release of air pressure from the tire.

**17** Air Gauge — Registers tire pressure when air chuck is attached to the valve stem and inflation pedal is released.

**18** Lower Bead Loosener — 2 shoes for lower bead loosening.

**19** Short Center Post Extension (Optional, Part #8108313) — Lengthens center post for wheels between 10 and 14 inches wide.

**20** Long Center Post Extension (Optional, Part #8108313) — Lengthens center post for wheels over 14 inches wide.

**21** 1/4" Shim — Installs on lower bead loosener to prevent damaging aluminum and magnesium wheels with wide flanges.

**22** Hold Down Tube — Used with styled steel wheels to prevent the centering cone from touching the wheel.

## Operating Instructions

The 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

**⚠ 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.

**NOTE:** Always review nicks and scratches with owners of expensive wheel and tire combinations prior to servicing.

**IMPORTANT:** Refer to the Performance Wheels and Tires section of this manual before servicing custom and performance wheel and tire combinations.

**IMPORTANT:** Refer to the Tube Type Tires section of this manual before servicing tires with tubes.

1. Determine the correct side of the wheel for tire removal. Remove the tire from the narrow side (tire mounting side). Tire will not mount or demount from the long side.

**NOTE:** On some wheels, the sides may be nearly equal. Measure carefully. Only the narrow side is used for mounting and demounting.

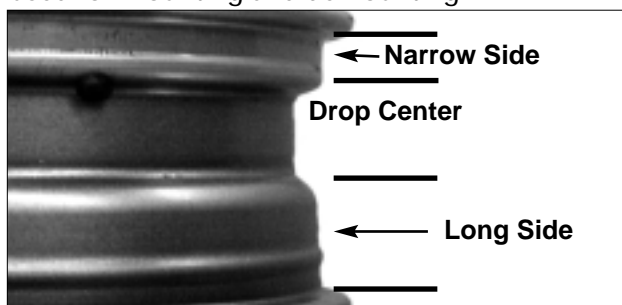


Figure 1 - Determining Tire Mounting Side

2. Remove the valve core and allow all of the air to escape from the tire. Remove all weights from rim.
3. Place the tire/wheel assembly over the center post and down onto the contoured table top, with the narrow side of bead seatup (figure 1). The positioning pin must engage a lug hole in the wheel. Position the tire/wheel assembly so that the valve stem is on the operator's side of the machine.

**NOTE:** Make fine adjustments to the lower bead loosener shoe with the shim kit before placing mag or alloy wheel assemblies on the table top. Refer to the instructions on bead loosener shoe and pages 8 and 12.

4. Thread centering cone clockwise onto the center post. As the tapered end enters the center hole of the wheel, the tire/wheel assembly will adjust itself on the table top. Be sure the cone is hand tight and is centered in the wheel's center hole (Fig. 2).

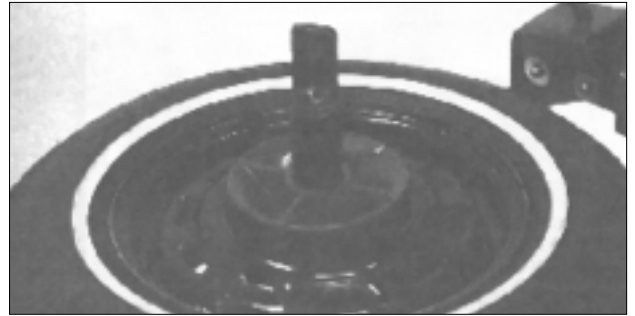


Figure 2 - Thread the Centering Cone onto the Center Post

5. Check the detent control knob for proper setting. Forward is used for all tire and wheel combinations except 15"x4", 16"x5" to 7", and 17.5"x5.5" to 7.5". To move the detent lever, push the knob down, move it to the proper setting, and release the knob (fig.3).



Figure 3 - Positioning the Detent Control Knob

6. Place the upper bead loosener shoe on the tire next to, but not on, the rim (fig.4). Press down on the foot pedal until both bead looseners complete their full stroke. If the top bead is not completely loosened, release the foot pedal until the unit has completed the full return stroke and press the foot pedal again. The ratchet effect on the loosener will deliver a deeper stroke. The repeat cycle is used only if the upper bead is not loosened.



Figure 4 - Positioning the Upper Bead Loosener Shoe

**Note:** If may be necessary to loosen the bead at different points around the wheel circumference to entirely free the bead.

7. Once the tire beads have been loosened from the bead seat of the wheel, lubricate the beads liberally with rubber lubricant (fig.5).

Note: Rubber lubricant makes demounting easier, helps eliminate damage to the tire beads, and assists the movement of the combination tool.



Figure 5 - Lubricate Tire Beads

8. Position the combination tool so that it aligns with the center post key. Insert the demount end of the tool between the tire and rim. Push the tool down towards the center post as shown in figure 6 to lift the tire bead over the rim.

IMPORTANT: Make sure the tool is oriented as shown in figure 6.



Figure 6 - Align, Insert, and Push Down on the Tool

9. Continue to push down on the tool until the center post key protrudes through the slot in the tool and the tool stops against the shoulder of the key. The tool is now positioned properly for operation of the center post key (figure 7). Keep a firm hold on the tool at all times to prevent accidental disconnet.

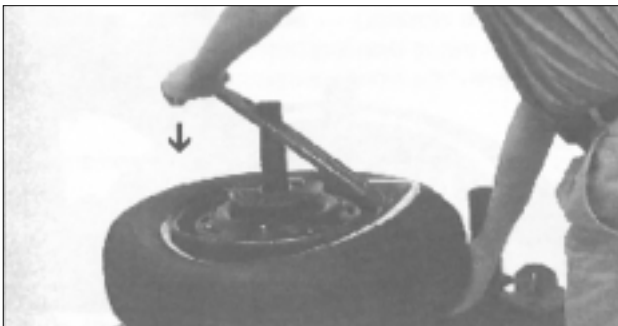


Figure 7 - Tool Properly Positioned

10. Press down on the foot pedal. The counterclockwise rotation of the center post key and combination tool will remove the upper tire bead from the rim. Lifting up on the tire with the left hand as shown by the arrow in figure 8 helps in demounting tougher tires.

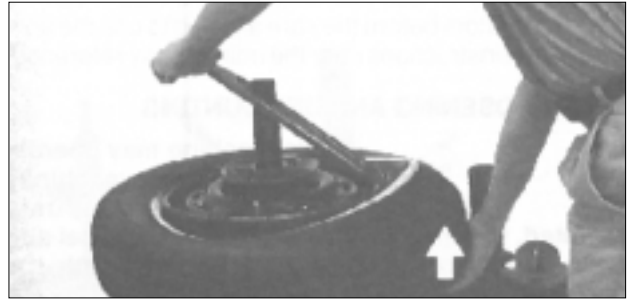


Figure 8 - Removing Upper Bead

10. To remove the lower bead from the wheel, repeat steps 8, 9, and 10.

REMEMBER: Refer to the Tube Type Tire section of this manual before servicing tires with tubes.

**⚠ DANGER** Fast or jerky movement of the bead loosener shoes or the combination tool indicates low cylinder oil level, and may result in throwing or disengaging of the tool, possibly causing serious injury or death to operator or bystander. Do not operate until it has been returned to proper operating condition. See the Maintenance section of this manual for further instructions on maintenance and adjustment.



When the demount operation is complete, proceed with Mounting, page 5.

#### Operator Protective Equipment

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 the 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.

## Mounting

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

**⚠ WARNING** Ensure the tire bead diameter stamped on the tire to be mounted exactly matches the rim diameter stamped on the wheel. Consult the *Rubber Manufacturer's Association* charts for approved rim widths and recommended tire sizes. Mis-matched tires and wheels explode.

**⚠ CAUTION** 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. Tires and/or wheel may explode.

**⚠ CAUTION** If you damage the tire bead during mounting process, **STOP!** Remove the tire and mark it as damaged. Do not mount a damaged tire.

1. Inspect the wheel closely for damage. Remove any rubber or light corrosion from rim (figure 9). Inspect both the inside and outside of the tire, and pay special attention to the bead area. Do not attempt to service heavily corroded wheels. Apply rubber lubricant to the outside of both beads and to the inside of the top bead (figure 10).
2. Place the tire over the wheel as shown in figure 11. Hook the mounting end of the combination tool over the rim flange and place the slot in the tool over the center post key.
3. Grasp the tire and rotate it clockwise until the lower bead contacts the mounting end of the tool. Continue to rotate the tire until the bead slides into the groove on the tool (figure 11).



Figure 9 - Inspect Wheel Before Beginning

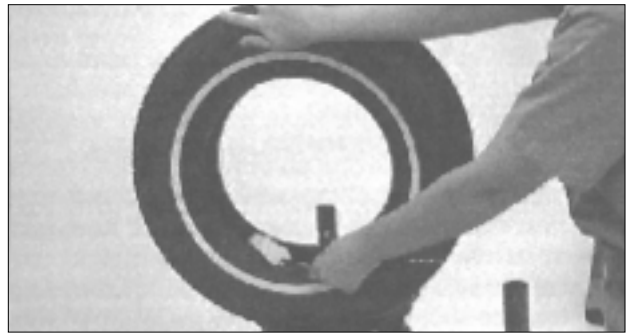


Figure 10 - Lubricate Beads



Figure 11 - Positioning Tire and Combination Tool

4. Push down on the tire with your left hand to hold the lower bead in the drop center of the wheel. Use your right hand to hold the combination tool down over the center post key. Refer to figure 11.
5. Press the foot pedal. Continue to push the tire down into the drop center and maintain pressure against the combination tool while it rotates. Allow the combination tool to make a full cycle.
6. Mount the upper bead in the same manner (figure 12). Repeat steps 2, 3, 4, and 5.



Figure 12 - Mounting Upper Bead

**⚠ WARNING** Do not force the tire onto the rim. Bead damage could result making the tire unsafe and/or creating the risk of injury in mounting operations.

**✓** When you have completed the mounting process, proceed to Inflation, page 6.

## Inflation

Tire inflation is performed in three steps: Bead Seal, Bead Seat and Inflation. These steps are explained in detail on page 10. Read the explanation of each step and understand them thoroughly before proceeding.

**CAUTION** 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.

**DANGER** 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.

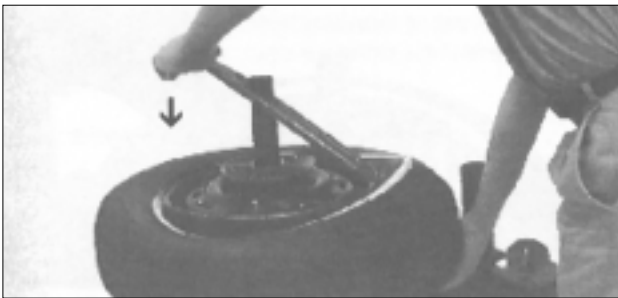


Figure 13 - Air-Flate Pedal Positions

The COATS Air-Flate system is operated with a three position foot pedal (referred to as the Air-Flate pedal). Each position of the Air-Flate pedal performs a specific function (figure 13):

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

**NOTE:** The clip-on chuck on the end of the hose is an important safety aid and should always be an open style with all parts in proper working order.

**Position 2 - Tire Inflation** – By pressing the Air-Flate pedal down to this first activated position, full air line air pressure is applied to the inflation hose for tire inflation. Remove your foot from the pedal (position 1) to read tire pressure on the pressure gauge. See page 7 for pressure limiter information.

**Position 3 - Bead Sealing** – Press the pedal down fully and full air line air pressure is applied to the inflation hose and to the bead seal jets mounted in the top cover.

**CAUTION** Use Position 3 for bead sealing only. Do not use this position without a tire and wheel positioned on the tabletop. Dirt and debris could be blown into the air with enough force to injure the operator or bystanders. Do not use the position to inflate a tire.

## Bead Sealing

1. Connect the inflation hose to the tire valve stem.
2. Lift tire so that the upper bead is against the edge of the rim to create a seal. Be sure the upper bead is over the bottom of the valve stem (figure 14).



Figure 14 - Bead Sealing

3. Depress the Air-Flate pedal to position 2 and hold for 1 second to begin air flow through the inflation hose, then depress the Air-Flate pedal fully to position 3, hold very briefly (less than 1 full second), and remove foot from the pedal. The blast of air through the inflation hose and the top cover jets will expand the tire and seal the beads (figure 14).
4. Check to make sure that the beads are sealed to the wheel. Repeat step 3 if they are not fully sealed.

**NOTE:** Allow time for the surge tank pressure to recover before depressing the pedal to position 3 again.

**TIP:** If the tire and wheel are properly lubricated and the operator cannot achieve bead seal after 3 attempts, it may help to remove the valve core. Remove the air chuck from the valve stem and unscrew the valve core from the stem. Reattach the air chuck and perform the bead seal operation again.

5. Check tire pressure (Air-Flate pedal must be in position 1). If pressure is indicated in tire, bead seal has been obtained. Proceed to Bead Seating.

## Bead Seating

**WARNING** Operator should keep hands, arms, and entire body away from the tire and wheel during the remaining Bead Seat and Inflation procedures. Do not stand over tire, as personal injury could result.

**WARNING** NEVER increase air pressure to exceed 40 PSI when attempting Bead Seat. If unable to obtain Bead Seat, something is wrong. Deflate tire completely, inspect both the tire and wheel, and correct any problems found. Relubricate both tire beads, and reattempt Bead Seal and Bead Seat procedures. Follow all safety instructions in this manual and on machine.



**⚠ 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 sealing equipment may propel upward and outward with sufficient force to cause serious injury or death to operator or bystander.

1. Verify that beads are sealed by checking the gauge for air pressure into the tire. Do not proceed if beads are not sealed.
2. If beads are sealed, loosen the centering cone one full turn. **DO NOT REMOVE IT!**
3. Inject frequent, short bursts of air into the tire by pressing the Air-Flate pedal to position 2 and releasing. Continue the bursts until the beads move outward into their bead seat position. Check the pressure frequently. If beads do not seat, a problem exists. Investigate carefully and correct the problem.



Figure 15 - Stand Back During Bead Seat and Inflation

4. Proceed to the inflation step only when both beads are completely and properly seated.

#### Inflation

**⚠ DANGER** NEVER exceed tire manufacturer's recommended air pressure. Tires can explode, especially if inflated beyond these limits. Keep hands, arms, and entire body back from inflating tire. Avoid distraction during inflation and observe tire pressure frequently to avoid over inflation. Excessive pressure can cause tires to explode, causing serious injury or death to operator or bystander.

REMEMBER: If you removed the valve core for bead sealing, it must be reinstalled before the tire is inflated.

1. Depress the Air-Flate pedal to position 2 and inflate the tire. Release the pedal to position 1 and check the increasing pressure frequently to avoid over inflation.

IMPORTANT: The 4050A is equipped with a pressure limiter to assist the operator with proper tire inflation. The 4050 limiter will keep most car and light truck tires from inflating beyond 60 PSI (smaller tires may reach higher pressures). Tires that require inflation above 60 PSI should be removed from the 4050 and inflated using a safety chamber or safety cage. Tires can be over inflated and explode even with the use of this pressure limiter if other instructions in this manual and on the unit are not followed. Check the function of the pressure limiter regularly and maintain as required for safe and proper operation.

IMPORTANT INFLATION FEATURE: If the Air-Flate pedal is held steady at position 2, the Air-Flate system's pressure limiter will automatically cycle between inflation and off. This cycle will continue until the pedal is released. The operator should check the increasing pressure frequently to avoid over inflation.



Figure 16 - Release Pressure with the Manual Release Valve

<p><b>⚠ DANGER</b></p> <p><b>Explosion Hazard</b> Never exceed 40 PSI while seating beads.</p>		<p><b>⚠ DANGER</b></p> <p><b>Explosion Hazard</b> Never inflate tire above manufacturer's recommended pressure after bead is seated.</p>
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## Performance Tires/Custom Wheels

### Before You Begin - Pre-Operation Notes

Only tire technicians with training on custom wheels should attempt to service expensive custom alloy or aluminum wheels and high performance low-profile tires.

- Ensure all weights have been removed from the wheel before servicing.
  - Assistance will be required on wide wheels.
  - Use ample lubricant during mounting and demounting operations.
  - Always review wheel nicks and/or scratches with the owner before servicing.
1. Check the clearance on the lower bead loosener shoe. If it does not clear the rim lip, install the 1/4" shim (figure 17).

To Install the Shim: Remove the tire/wheel assembly from the tabletop and depress the foot pedal. The loosener shoe will extend to the top of it's stroke. Do not release the pedal. Tilt the bead loosener shoe away from the center post and slip the red 1/4" thick shim over the end of the bolt between the shoe adjusting bar and the lower shoe.



Figure 17- Installing 1/4" Shim

2. To service wheels over 11" wide, extend the upper bead loosener post. Remove the clevis pin, raise the post to the appropriate height, and reinsert the pin (figure 18).



Figure 18- Extending Upper Bead Loosener Post

3. For mounting and demounting tires on wheels from 10" to 14" wide, use the optional short center post extension (part #8108311). Slip the extension over the center post key (figure 19).

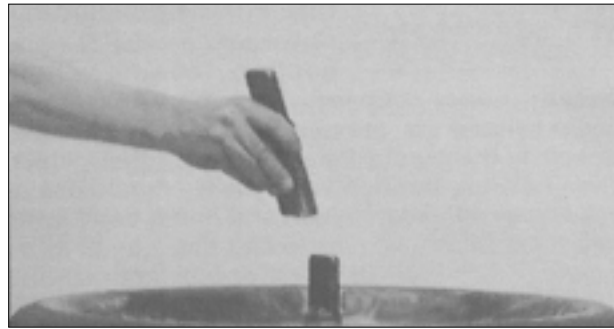


Figure 19- Optional Short Center Post Extension

4. For mounting and demounting tires on wheels wider than 14", use the optional center post extension (part #8108313). Slip the extension over the center post key (figure 20).

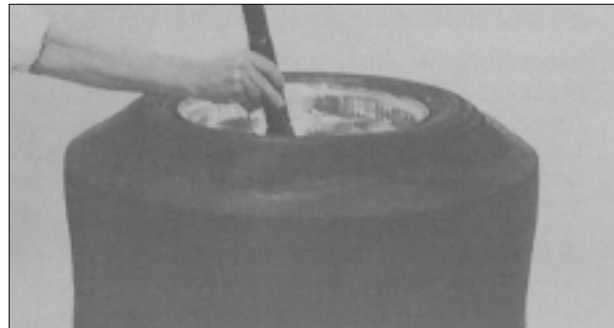


Figure 20 - Optional Long Center Post Extension

5. On wheels with thin or delicate center holes that may be damaged by the centering cone, use the optional Speed Mag or Custom Wheeler Adapter (figure 21).



Figure 21 - Optional Speed Mag Adapter

6. Use the plastic combination tool boots supplied with the optional Speed Mag adapter to prevent scratching of custom wheels (figure 22). Boots may be ordered separately (part #8106568, 10 pairs).

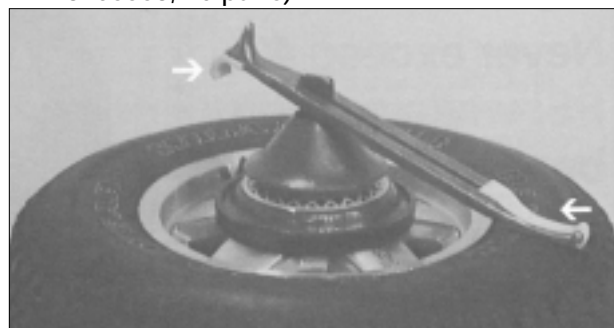


Figure 22 - Combination Tool Boots

## Custom and Special Wheels

### 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.

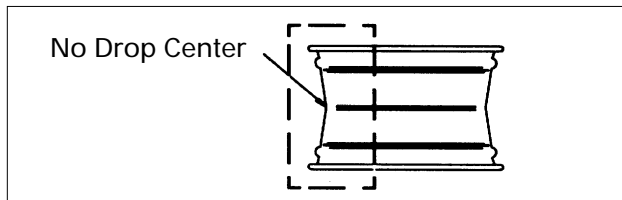


Figure 23 - No Drop Center

### European Performance Wheels (Asymmetrical Hump)

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

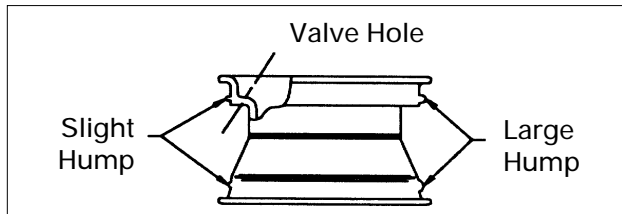


Figure 24 - Asymmetrical Hump on European Wheels

### Wheels with Low Pressure Warning System 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.

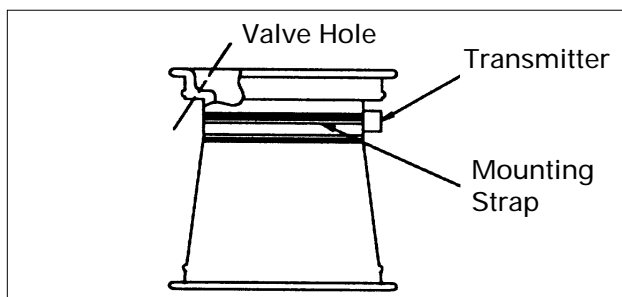


Figure 25 - Wheels with Low Pressure Sensor

## Tube-Type Tires

### Mounting

1. Avoid pinching or forcing the tube.
2. Apply rubber lubricant to the beads of the tire.
3. Mount the bottom bead.
4. Put a small amount of air into the tube to round it out.
5. Apply rubber lubricant to the tube and the mounting end of the combination tool.
6. Insert the tube into the tire.
7. Mount the top bead.

### Demounting

1. After tire beads are loosened, lubricate the beads and rim liberally.
2. Position the combination tool as described in step 8 on page 4.
3. Rotate the center post key/combination tool in short steps. Depress the foot pedal and release if after a short amount of travel. This allows you to stop the process should the tube get pinched.
4. During the demount operation, allow the combination tool to rotate only from the starting position at 5 o'clock to the 11 o'clock position. This will keep the tool from contacting the lower bead loosener as it moves upward each time the machine is cycled.
5. After the upper bead is demounted, remove the tube from the tire and demount the lower bead.

### Do it Now

Always check to be sure you 4050 has a clearly visible operator instruction decal.



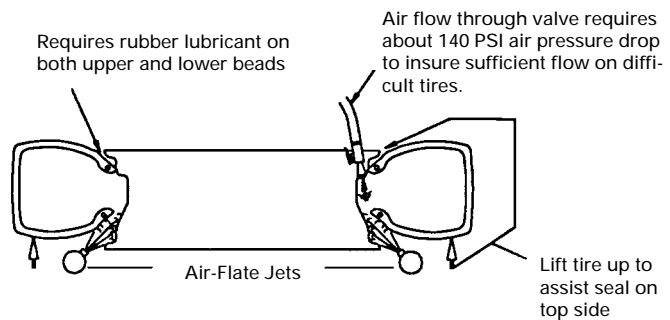
<p><b>⚠ DANGER</b></p> <p>Explosion hazard Never exceed 40 PSI while seating beads</p>		<p><b>⚠ DANGER</b></p> <p>Explosion hazard Never exceed recommended pressure after seating beads.</p>	<p><b>SAFETY INSTRUCTIONS</b></p> <ul style="list-style-type: none"> <li>• Only trained operators should use this machine.</li> <li>• Inspect tire and rim carefully for proper size match, wear or defects. Do not attempt to mount mismatched or damaged tires and rims.</li> <li>• Release air from tire before loosening beads.</li> <li>• Always lubricate beads with approved tire lubricant before demounting, mounting, or seating beads.</li> <li>• Always use protective equipment. Keep area clear of bystanders.</li> <li>• <b>Bead Seating, Bead Seating, and Inflation</b></li> <li>• Use only short bursts of air through the bead seating system to seat beads.</li> <li>• For Bead Seating and Inflation, use short bursts of air and check pressure frequently.</li> <li>• Never exceed the manufacturer's recommended air pressure in any inflation activity. Tires can burst especially if inflated beyond specified limits.</li> <li>• Always <b>KEEP HANDS AND ENTIRE BODY BACK FROM INFLATING TIRE</b>. An exploding tire, rim, or bead seating equipment may be propelled upward and outward with enough force to cause serious injury or death to operator or bystanders.</li> </ul>	<ul style="list-style-type: none"> <li>• Fast or jerky movement of the bead loosener shoes or the mount/demount tool is a serious problem that could result in disengagement or throwing of the tool causing serious personal injury or death to operator or bystanders. Check for low cylinder oil level. DO NOT operate until machine has been properly serviced. See manual for instructions.</li> <li>• For copies of warnings and instructions or further information, contact: Coats, 1801 J.P. Henssley Drive, Lafayette, La 70508.</li> </ul>
<p><b>⚠ DANGER ⚠ CRITICAL SAFETY INFORMATION! TO PREVENT ACCIDENTS AND INJURIES READ AND FOLLOW!</b></p> <p>Failure to read and follow all warnings and instructions may lead to Serious Personal Injury or Death to Operator or Bystanders.</p> <p>Do not operate this machine until you read and understand all warnings on the machine and in the instruction manual. Follow all warnings and instructions during use!</p> <p>The Failure Under Pressure is Very Hazardous! This tire-changer is not a safety device and will not restrain exploding tires, rims or other related equipment.</p>			<p><b>⚠ WARNING</b></p> <p>HELP prevent accidents and injuries — read instructions before operating.</p>	<p><b>OPERATION PEDALS</b></p> <p>INFLATE &amp; AMPLATE PEDAL</p> <p>MECHANICAL FOOT PEDAL</p>

## Stages of Inflation

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

### Bead Sealing (machines equipped with Air Blast)

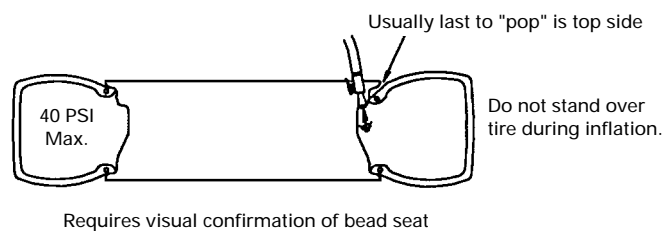
A 140 PSI air blast from the table top jets creates an air curtain to aid in bead sealing. Never exceed 10 PSI in the tire during bead sealing. The tire will contain about 1/2 to 2 PSI when bead seal is obtained.



### Bead Seating

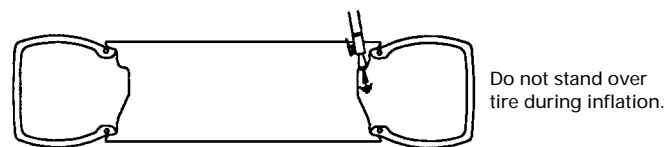
Bead seating usually occurs on the long tapered side of the wheel first and the shorter side last. Bead seating will usually require at least 7 PSI in the tire. 40 PSI is the maximum safe pressure at this stage regardless of operating pressure.

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 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.

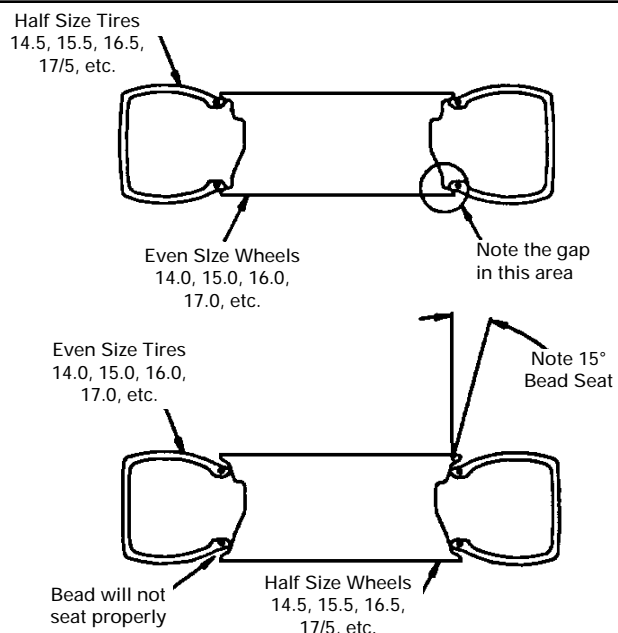


### MIS-MATCHED TIRES AND WHEELS

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

**⚠ DANGER** Mis-matched tire and wheel combinations explode, causing personal injury or death to operator and bystanders.

For safety, do not attempt to mount and inflate mis-matched tires and wheels.



## 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.

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

**⚠ WARNING** 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.

**⚠ CAUTION** Wear protective clothing and use eye protection when making any adjustments or repairs to the machine.

### Cylinder Maintenance

The unique design of the hydraulically dampened 7" cylinder controls bead loosening, mounting, and demounting. Internal sealing surfaces are chrome plated to provide long seal life. A small amount of oil is usually lost after a period of time in lubricating the seals. It is important that the cylinder be filled to the proper level at all times. If the oil becomes low, the machine will surge at the beginning of its stroke. Cylinder oil level should be checked before initial operation and weekly thereafter. A special hydraulic oil must be used.

### Filling 7" Cylinders

Fill only with COATS Hydraulic Oil (part #8101411) or an approved alternate choice (Empak 4061, or Shell Tellus 21). Do not use motor oil or brake fluid.

1. Remove the front panel by removing 4 self tapping bolts and 3 self tapping screws.
2. Depress and hold the foot pedal to extend the cylinder to the top of its stroke.
3. Remove the plastic breather plug. Fill the cylinder to within 1" to 1-3/16" of the access hole in the top. Be careful no dirt falls in through the hole (figure 26).
4. Reinstall breather plug and reattach the front panel.

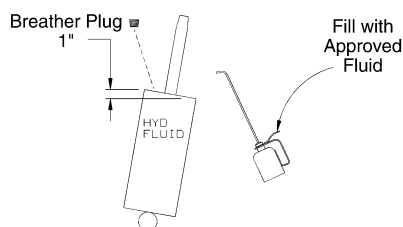


Figure 26 - Filling the 7" Cylinder

### 5" Cylinders

The 5" cylinder requires periodic lubrication. This can be performed without removing the cylinder from the unit.

1. Remove the side panel on the foot pedal side of the unit by removing 4 hex bolts and 3 hex screws.
2. Depress and hold the foot pedal to extend the cylinder to the top of its stroke.
3. Remove the white breather plug on the cylinder and add 1/2 ounce of 10W-30 motor oil with a funnel or long spout oil can (figure 27).

IMPORTANT: Do not fill the 5" cylinder with oil.

4. Reinstall the breather plug and reattach the side panel.

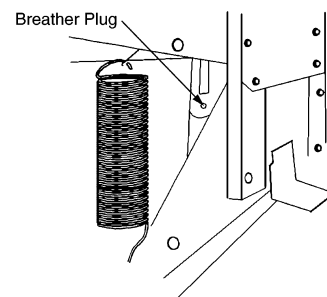


Figure 27 - Lubricating the 5" Cylinder

### Pressure Gauge Maintenance and Calibration

Check the tire pressure gauge function on the unit daily, and perform an accuracy check monthly. Use a pressurized tire and a high quality stick pressure gauge. If necessary, calibrate the dial of the machine gauge.

1. Pressurize a large 15" tire to 30PSI and measure the pressure exactly with a high quality extension type tire gauge. Connect the air chuck to the tire.
2. Remove the gauge lens and loosen the 2 screws at the top of the gauge and rotate the gauge face until the indicator is pointed at the correct pressure as read with the extension type tire gauge (figure 28).
3. Tighten gauge face screws and replace lens.

If gauge is defective, replace it immediately (part #8107980).

Check the function of the pressure limiter weekly as part of your pressure gauge maintenance and calibration.

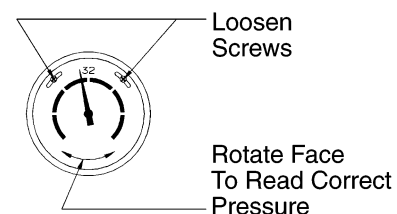


Figure 28 - Calibrating Pressure Gauge

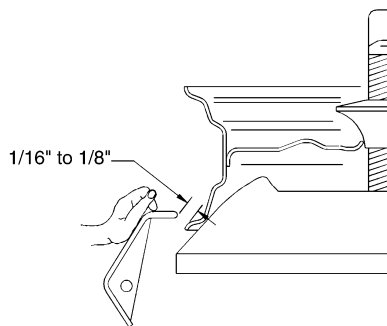
### Lower Shoe Setting

Check the lower shoe setting periodically to make sure that it operates properly and does not contact the wheels.

1. Place a 15" steel wheel on the machine and secure with the centering cone.

NOTE: Make sure the wheel is centered.

2. Depress the foot pedal and run the lower shoe up to 45 degrees above the radius of the lower rim flange. Refer to figure 29.



3. Use your left hand to push against the shoe as forcefully as possible.
4. Measure the gap between the closest point of the shoe and the rim flange. The ideal measurement is between 1/16" and 1/8" .

- If the shoe contacts the rim, add another shim.
- If the gap is smaller than 1/16" , add another shim.
- If the gap is larger than 1/8" , remove one shim.

**IMPORTANT:** A high setting (greater than 1/8") is more desirable than a low setting (less than 1/16"). If additional shims are required, a Shim Kit (part #8101506) is available.

### Routine Maintenance

- A. Keep work surface clean. Pay special attention to the top of the machine.
- B. Clean and wipe down the machine on a regular basis.
- C. Clean the gauge lens frequently with glass cleaner.
- D. Make sure all fasteners are tightened securely.
- E. Make certain that all guards and covers are in place.
- F. Check for worn, damaged, or missing parts (including grips, warnings, instructions, and protective covers). Replace before allowing unit to be used.
- G. Inspect the unit on a daily basis. Check that all systems and functions 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.



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 how to cycle systems and check 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 or technical support, contact an authorized COATS Service Center, or The COATS Company Service Department at (800) 688-6359.

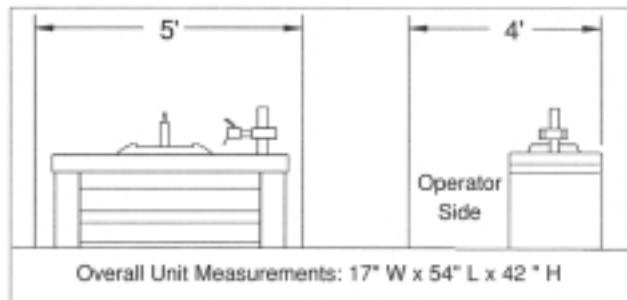
## Installation Instructions

**⚠ CAUTION** 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.

### 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.

### Workspace Requirements



### Air Source

The RC100 requires a 5 CFM air source at 150 PSI. The safe operating pressure range is between 110 PSI and 175 PSI at the machine. For motorcycle and ATV tires, this pressure should be regulated to 90-100 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.

### Floor Mounting

The machine may be mounted to the floor if desired. Use suitable anchors in the mounting holes at each corner of the machine.

# 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.                             | 4 A. Mismatched. (A mis-match of a 16-inch tire to a 16.5-inch rim causing an explosion) | 5. Walk-In Tire and Rim.   | 8. Standing Clear. (Never put any part of your body over the tire changer during inflation.) |
| 2. Rusty Wheels. (particularly in the bead seat area) | 4 B. Mismatched. (16.5-inch tire on a 16-inch rim)                                       | 6. Back Injuries.  | 9. Beads will not Seat at 40 PSI.  |
| 3. Bent or Cracked Wheels.                            |  | 7. Hand or Finger Injuries. (Hands or fingers too close to inflating tire or bead seats which may cause injury.) | 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.**