

# Operation Manual

## Tire Changer



\*Read these instructions before placing unit in service.

\*\*Keep these and other materials with the unit in a binder near the machine for easy reference by supervisors and operators.

\*\*\*You will need the manual for the information of the machine, such as safety warning and precautions, assembly, operating, maintenance and parts list / assembly diagrams.

\*\*\*\*Keep your invoice with this manual for future reference. Manufacturer shall not be liable for any injury to persons on damage to things caused by failure to comply with these regulations and can cancel warranty coverage.

# Installation, Operation, Maintenance

## (1) Technical Data

Model	A	B	C
Electric Requirements	See the manufacturer's serial plate		
Max. Wheel Diameter	39"	39"	42"
Max. Wheel Width	12"	13"	14"
Outside Clamping—Rim sizes	10" ~ 18"	11" ~ 21"	10" ~ 24"
Inside Clamping—Rim sizes	12" ~ 20"	13" ~ 23"	12" ~ 26"
Max Inflation Pressure	116-145PSI (8-10 Bar)		
Bead Breaker Force	2500kgs		
Max Rotating Torque (Turntable)	795 ft.lbs (1078N.m)		
Noise Level	<70db		
Overall Dimensions (L x W x H)	38.2" x30.3" x37.4" (97x77x95cm)	38.2" x30.3" x37.4" (97x77x100cm)	45.3" x30.3" x39.4" (115x77x100cm)
Shipping Weight	230kg	235	262kg
Voltage	0.9 ~ 1.1 of nominal voltage		
Frequency	0.98~1.02 of nominal frequency		
Ambient Temperature	5~40°C		
Operation Humidity	30~95%		
Installation altitude NOT exceed	1000m		
Transport / Storage temperature	-25~55°C		

## (2) ASSEMBLY INSTRUCTION

Fig. 1

2-1 Transport

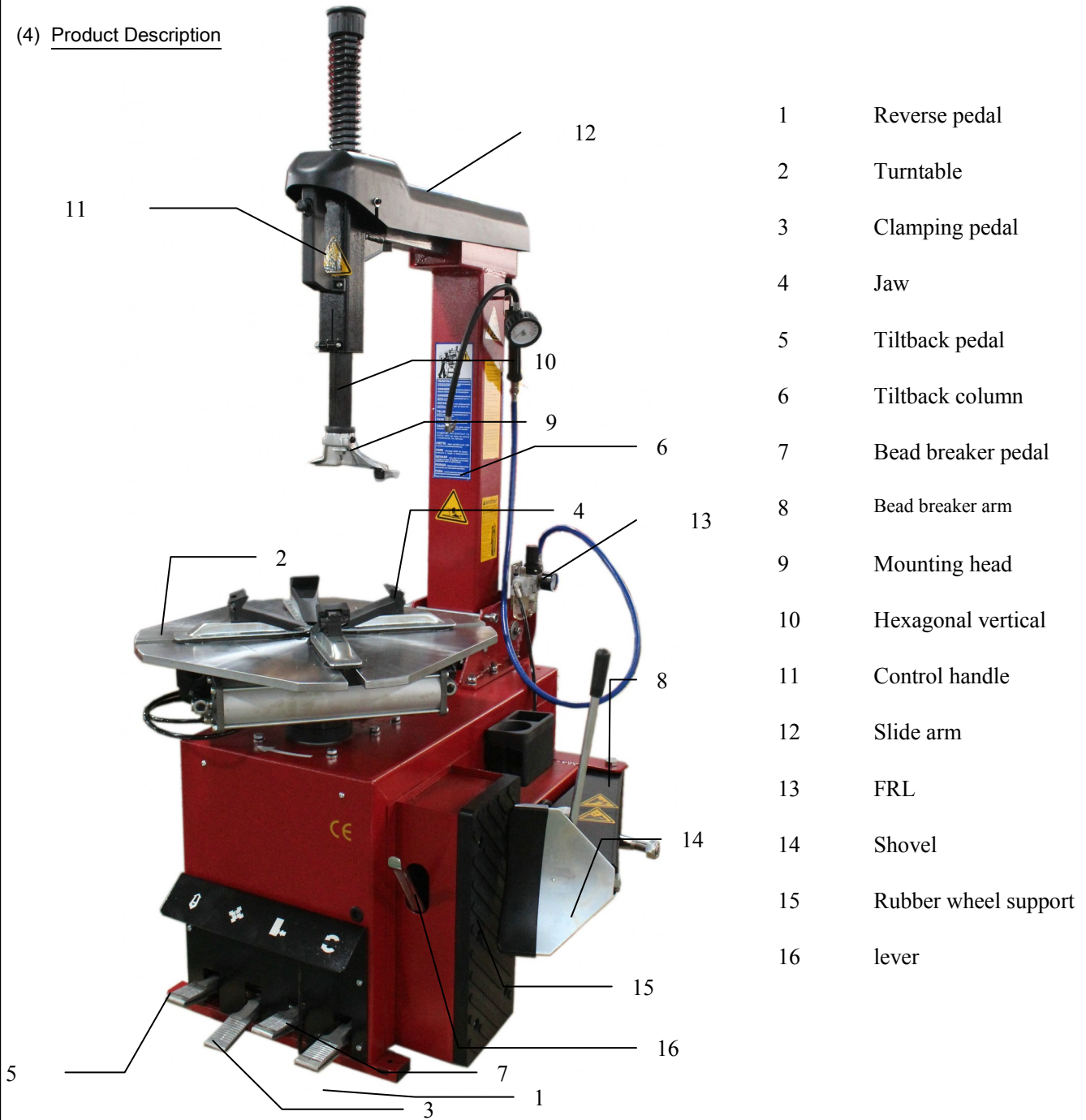
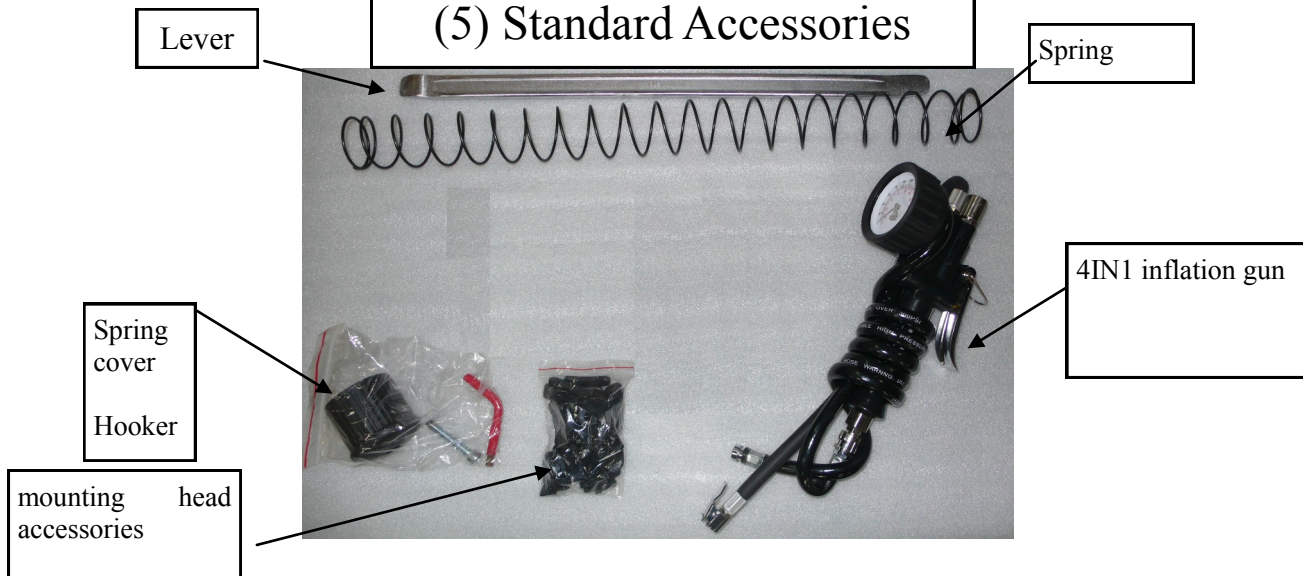
When transporting the machine it must be handle with a forklift truck with the forks Positioned

2-2 Unpacking





















When unpacking, check to make sure all parts shown on the spare parts List/Assembly. Diagrams are included. If any parts are missing or broken, please call the manufacturer or the dealer as soon as possible.

(3) Workplace Requirements

The machine's workplace requires 1400(width)×1685(depth) with at least 500 mm of clear space from each wall. Place the tire changer on a firm, smooth and unbroken floor. Drill four holes in the floor corresponding to the holes pre-drilled in the base of the machine. Holes should be 80mm deep. Its diameter is 10mm. Then insert the expansion plugs and lighten with the 10mm spanner.

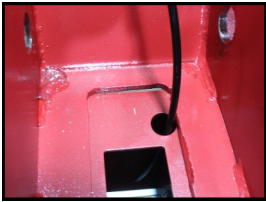
(4) Product Description(5) Standard Accessories

## (6) Optional Upgrade Accessories

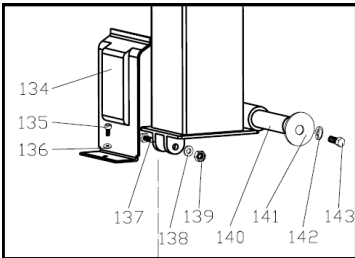
	<b>ATV</b> All Terrain Vehicle Adapter Set
	<b>MC</b> Motorcycle Adapter Set
	<b>LRA</b> Large Rim Adapter Set
	<b>MAAS</b> Motorcycle Deluxe and ATV Adapter Set
	<b>UMAS</b> Motorcycle Deluxe Adapter Set
	<b>SPJP</b> Short Plastic Jaw Protector
	<b>LPJP</b> Long Plastic Jaw Protector
	<b>TLPP</b> Tire Lever Plastic Protector
	<b>MHPP</b> Mounting Head Plastic Protector
	<b>SFRL</b> Standard Filter + Regulator + Lubricator Installed on all Coseng tire changers except on model C288S Factory set at 8 bar / 116 PSI
	<b>STL</b> Standard Tire Lever (400 mm)
	<b>ETL</b> Extended Tire Lever (600 mm)
	<b>HDTL</b> Heavy Duty Tire Lever
	<b>IG</b> Complete Inflation Gun
	Professional "4 in 1" inflation gauge 1. Draw air 2. Pressure testing 3. Deflate 4. Inflate
	<b>PMH</b> Plastic Mounting Head For swing arm tire changer
	<b>MPMH</b> Motorcycle Plastic Mounting Head
	<b>BBSPP</b> Bead Breaker Shovel Plastic Protector
	<b>NHMC</b> No Hands Mounting Clamp
	<b>REPP</b> Rim Edge Plastic Protector



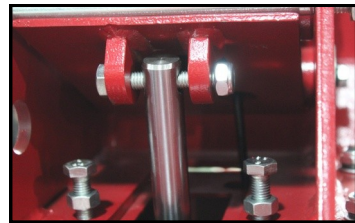
## (7) Assembly procedure



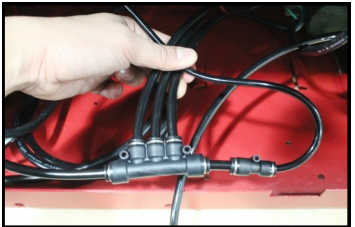
Step 1. With assistance, place the vertical column in its tilt back seat on the Body Assembly. Push the air hose through the large round hole into the body.



Step 2. Insert the pin (140) through the column and fasten it with screws (143) and washers (142).



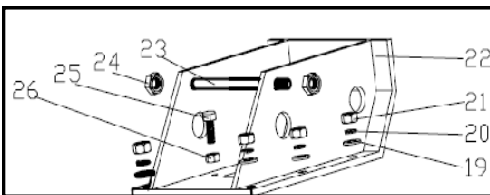
Step 3. Using the screw (137) tighten with the self-locking nut (139) and washer (138) to connect the pin of the post tilting cylinder.



Step 4. Remove the four screws from the left side cover and remove it. Connect the air hose from the column to the 6mm connector.

Step 5. Replace the side cover and fasten with its screws.

Step 6. Install the plastic guard (134) and fix it with the screws and washer (135,136).



Step 7. Install the stopper bolt (23) with self lock nut (24). Don't too tight.

### 5-2 Pneumatic link up

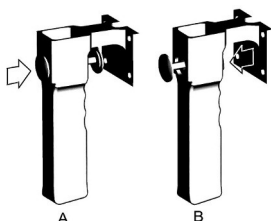
- 1) Push the clamping pedal all the way down to ensure that the jaws on the turntable do not open unexpectedly.
- 2) Connect the inflation gun, if it is to be installed, to its connector.
- 3) Connect the tire changer to a compressed air network (suggested working pressure from 8bar) using the connector. Use a compressed air hose with an inside diameter of 7~8 mm.

### 5-3 Electric link up

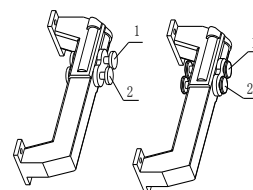
- 1) Before making any electric link up, check to be certain that the main voltage corresponds to what is stamped on the voltage tag.
- 2) It is absolutely essential that the system is equipped with a good grounding circuit.
- 3) The machine must be connected to a power supply line circuit bracket set for 30mA

## (6) Operating Instructions

- 1) Depress the Reverse Pedal down, the turntable should turn in a clockwise direction. Pull the pedal up and the turntable should turn anti-clockwise.
- 2) Open the bead breaker arm manually and depress the bead breaker pedal. The bead breaker arm will close. When the pedal is released, the pedal should return to its original position.
- 3) Depress the Jaw Clamp Pedal once to open the four jaws. When the pedal is depressed again, the four jaws should close.
- 4) Depress the Column tilting pedal the vertical column will tilt back bringing it to non-working position and again to working position.
- 5) Press the button on the chrome steel handle, both the vertical arm and horizontal arm will be locked in position. Press the button inside the chrome steel handle, to return to the original position, and the locked vertical arm and horizontal arm is released. Note: This standard version is not included when D version installed.



Standard version



D version Fig 4.2

BUTTON REPOSITION PRESS BUTTON

- (6) Press the button 1 (Fig.4-2), the vertical slide 10 (Fig.2) descends, facilitating the positioning of the tool head against the rim flange. Press the button 2(Fig.4-2), the operating arms are locked simultaneously, and the tool head automatically moves away 2mm from the rim flange (see chapter on demounting). Both button return, all the operating arms are unlocked simultaneously and the vertical slide10 (Fig.2) is raised.

### **(7) 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 mount/demount head contacting the rim causing scratches. On alloy wheels, always rotate the wheel one turn after setting the Mounting head 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 custom and special wheel section of this manual prior to servicing custom or special 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.

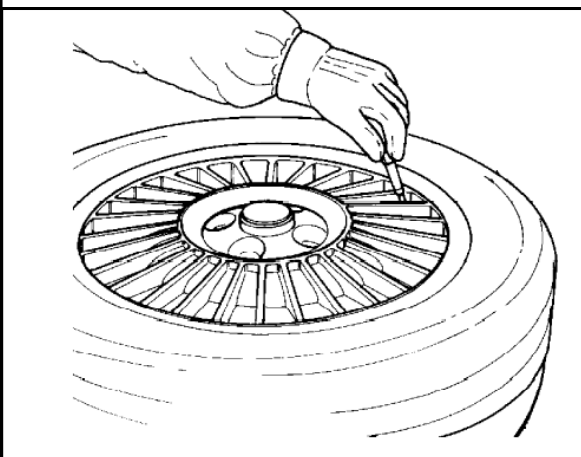


Figure 1 - Remove Valve Core to Deflate Tire



**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 (tire removed in figure 2 for clarity).

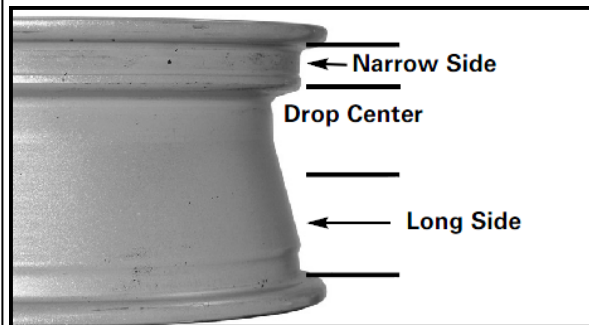


Figure 2 - Determine Narrow Side of Wheel

**E.** The clamps on the table top may extend beyond the table top 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. Pull the bead loosener shoe away from the machine and roll wheel into position. The valve stem should be in the 2 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. Press the bead loosener foot pedal to actuate the shoe and loosen the bead. It may be necessary to loosen the bead in multiple locations around the tire (figure 3).

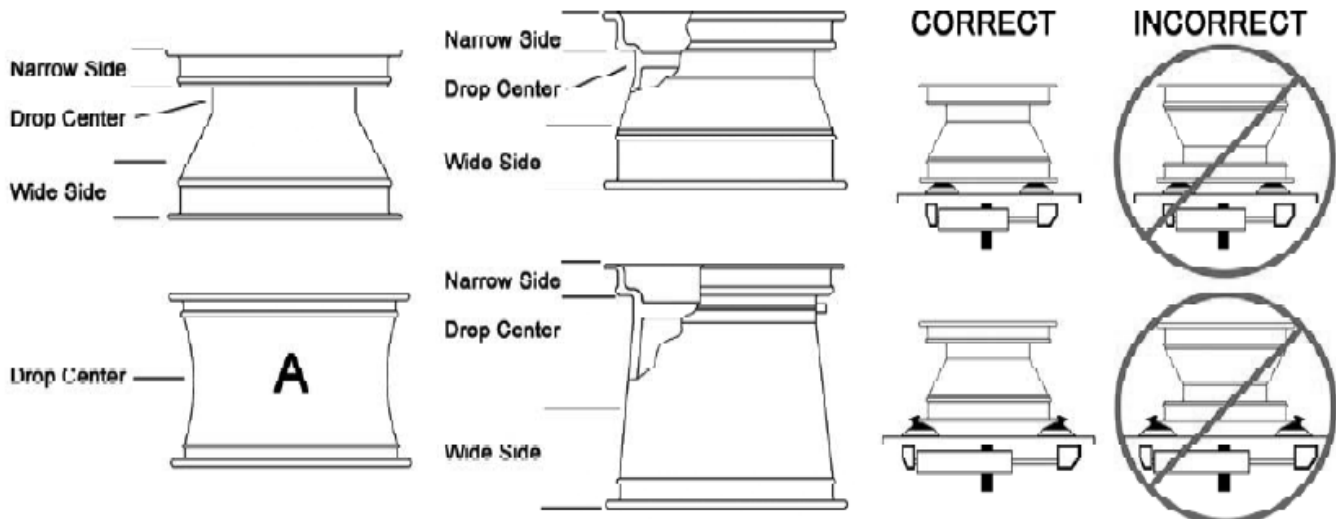


Figure 3 - Position Tire and Bead Loosener Shoe

3. Turn the wheel around and repeat loosening procedure on the other side of the wheel. This should be the long side of the drop center (figure 2).

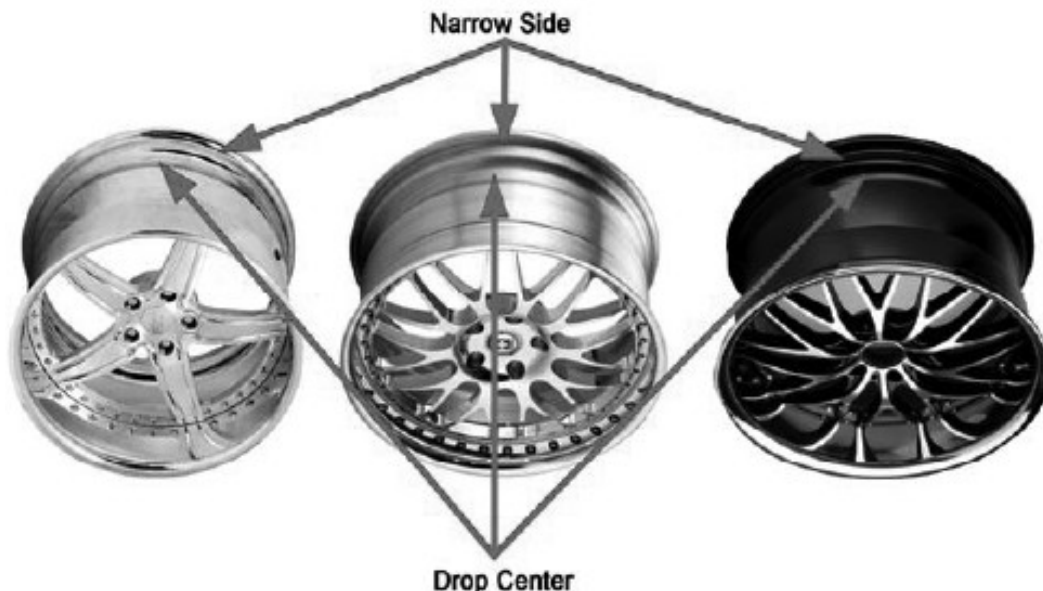
# Important

1. it is important to understand that tires and / or tire beads do not stretch. It is nearly impossible to mount /dismount the top bead of the tire unless the top bead of the tire is positioned deep into the drop center area of the wheel.
2. Find the position of the drop center on the wheel. Clearly identify the drop center, narrow side and wide side flanges.
3. The tire must always be demounted or mounted with wheel positioned on the turntable with narrow side facing upward and the deepest part of the drop center facing upward.



Warning—the wheel illustrated above in diagram A has little or no prominent drop center. These are not dot approved wheel configurations. The tire or wheel—or both—can be damaged during mounting procedures causing the tire to explode under pressure, resulting in serious injury or death.

Important note –most aftermarket and many OEM performance wheels are REVERSE DROP-CENTER configurations. These wheels must be mounted on the turntable with the hub or wheel-face positioned downward on the turntable and the narrow side and deep art of the drop center facing upward.



4. Place tire/wheel assembly on table top with mounting side up



5. Use the clamp control pedal to move the clamps inward or outward.

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



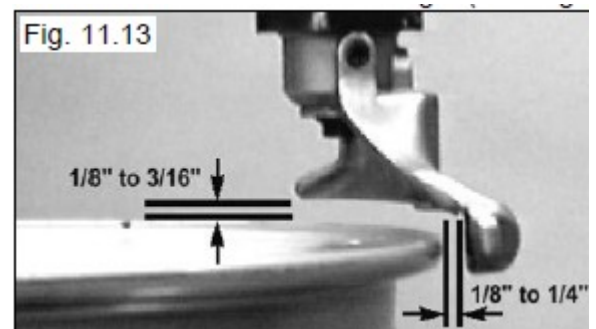
7. Move the tower forward by depressing the tower tilt pedal, then press the control button to unlock the horizontal slide. Pull the mount/demount head forward.



8. Push the vertical slide down and position the demount head into contact with the rim edge.

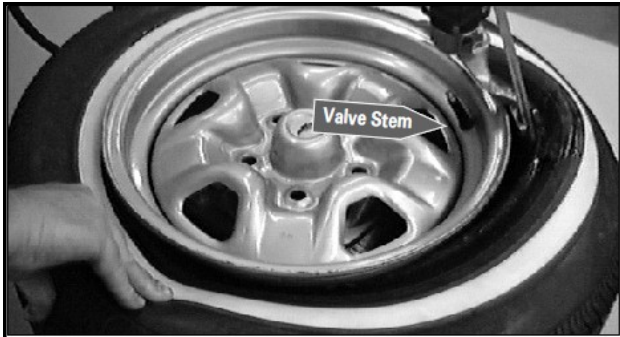


9. Push the locking valve button to lock the slides into place. As the slides lock, the mount/demount head will move upward approximately 1/8 inch and backward 1/8 inch from the rim edge. The mount/demount head roller should not be in contact with the rim edge.





10. Insert the smooth curved end of the bead lifting tool over the forward end of the demount head and below the top bead of the tire. Lift the bead up and over the knob on the Mounting head (figure 10). Also, note the valve stem position to the Mounting head. Use your free hand to press down on the tire opposite the Mounting head to allow the bead to utilize the drop center area of the rim, this position reduces stresses in the bead and allows an easier bead lift.



11. push the tool bar down toward the wheel to lift the tire bead up and over the right-side knob portion of the demount head. Hold the tool bar in this position.



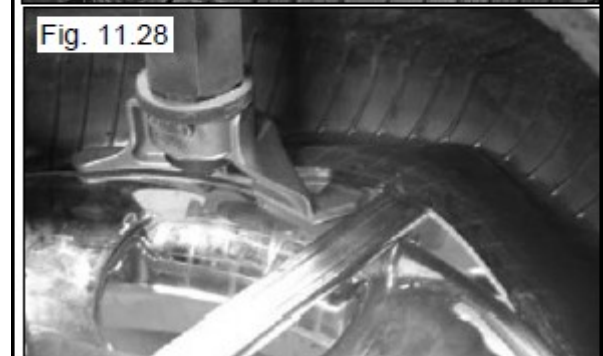
12. Depress the table top pedal to rotate the wheel clockwise. Leave the left hand in position opposite the demount head and allow to follow the wheel rotation to assist the bead into drop center while demounting. Hold the tool bar down until demount nears completion.



13. lift and hold tire so it is positioned with lower bead in the drop-center portion of the wheel. If the tire is large/wide or has become stuck on the lower part of the rim, the lower bead helper disk maybe used to un-stick and raise the tire.



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



15. Depress the table top pedal to rotate the wheel. The demount head will guide the bead up and over the edge of the wheel. Continue rotation until the lower bead is de-mounted. The helper disk should be removed during rotation. Swing the disc out of the way to complete de-mounting.



16. after the tire has been removed from wheel, depress the tower tilt pedal to move the tower away from the wheel.



### MOUNTING

1. inspect the wheel closely for damage. Clean the wheel and remove any light corrosion or rubber residue. Do not attempt to service heavily corroded wheels.

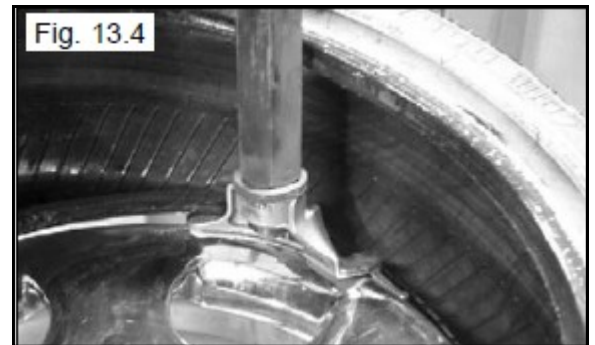


2. Inspect tire for damage, paying close attention to the beads. Verify tire and wheel size match.

3. lubricate both tire beads liberally with tire manufacturer approved lubricant.



4. place tire over wheel and move tower and mount/demount head into position as described earlier. Position tire so that the lower bead is above the duckbill side of the mount/demount head and below the right front knob.



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

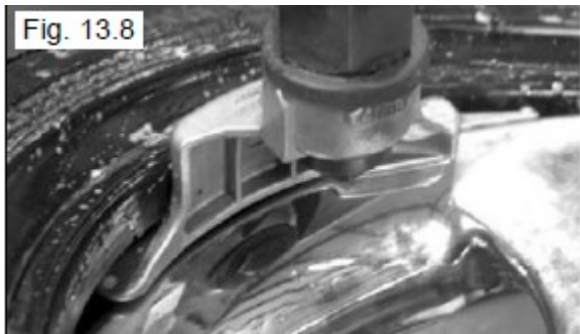


For the top bead, rotate the table top until the valve stem is directly across from the mount head. Lift the upper bead above the left "duckbill" side of the mount/demount head and below the right front knob.





7. with the left side helper, press down on the tire near the right side assist roller to hold the tire in the drop center



8. depress the table top pedal and rotate the tire until the bead is mounted. The left side helper shoe will follow the tire during rotation



If your machine is without any assistant arm, you need our hand press down the bead as following instruction.

9. For top bead installation, rotate the table top until the valve stem is directly across from the mount head. Lift the upper bead up and over the rear of the mount head. With your left hand press down on the tire between the mount head and the valve stem to hold the tire in the drop center. Depress table top pedal and rotate tire until bead is mounted. Be careful to ensure bead stays in the rim drop center in the area ahead of Mounting head (figure 18).



### **(9) Inflation**

Tire inflation is performed in three steps: BEAD SEAL, BEAD SEAT, and INFLATION. These steps are explained in detail on page 12. Read the explanation of each step and understand them thoroughly before proceeding.

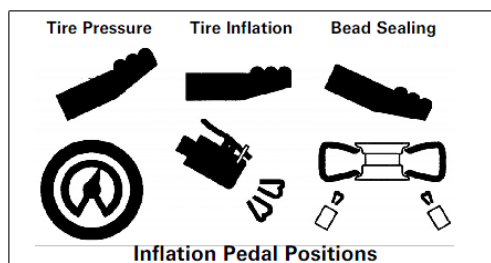
The inflation pedal, located at the rear of the left side of the machine, controls the flow of air through the inflation hose, and has three positions. **Note:** The clip-on chuck on the end of the hose should always be an open/freeflow style with all parts in proper working order.

**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 airflute bead seal jets on the table top 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 table top.





**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.**

S. 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.

### **(10) 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 19).



*Figure 19 - 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.

T. 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.

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 20). Tire beads should move outward and “pop” into their bead seat position as pressure inside the tire increases. If this does not happen, a problem exists. Investigate carefully.



*Figure 20 - Stand Back during Bead Seat*

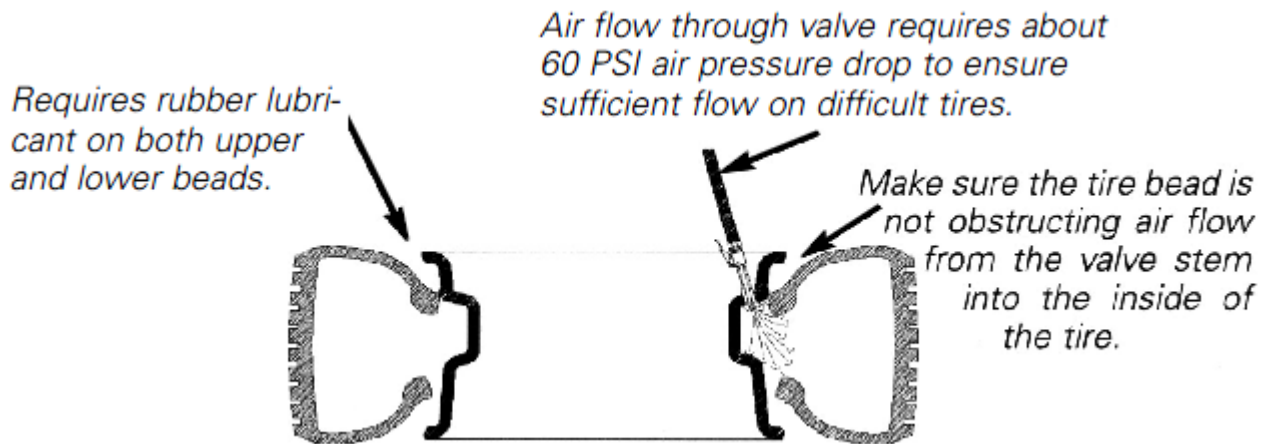


## (11) Stages of Inflation on a Conventional Tire and Rim

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.

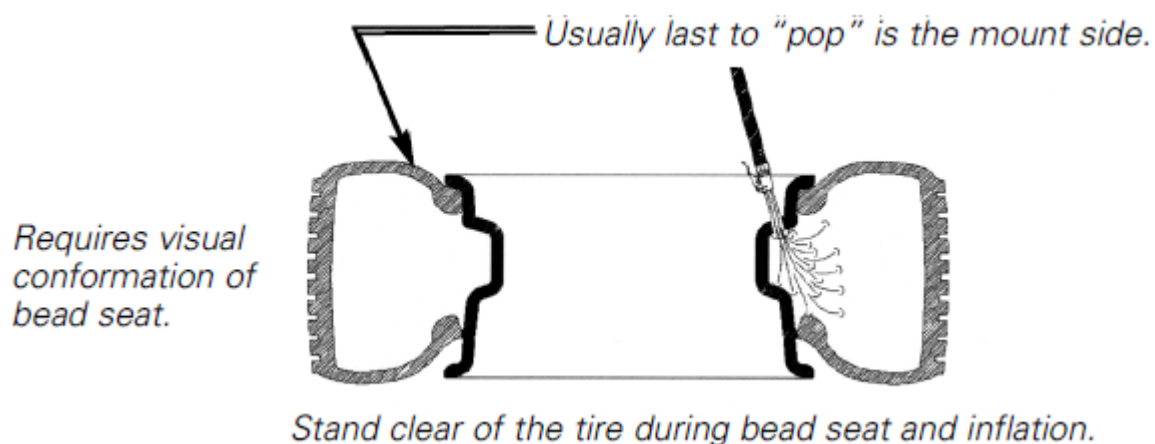
### **Bead Sealing**

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.



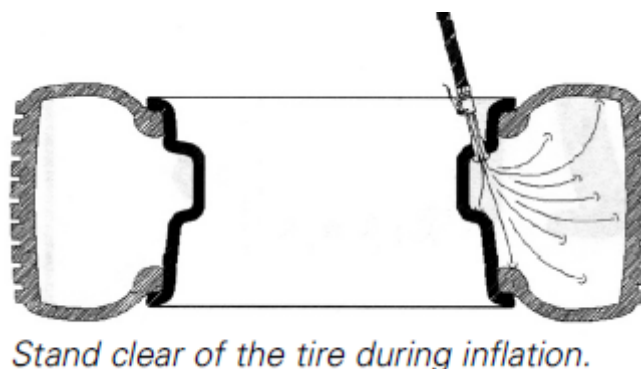
### **Bead Seating**

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.



# 4-IN-1 Tire Inflating Gun

## instruction

*(IP, or IT system will not include 4IN1 Tire inflating Gun)*

### Introduction

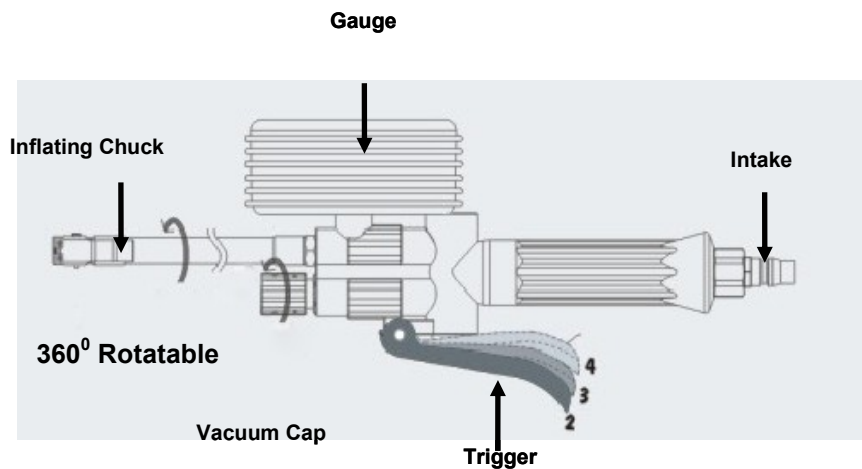
Under-inflation burns more fuel and leads to shortened tire life. Check your tire pressure at least once a month. Every liter of fuel consumed by a small vehicle releases 2.4 kg of CO<sub>2</sub> or a truck 12 kg into the environment, contributing to climate change.

This Tire Inflation Gun is a vacuum gun, inflating gun, a deflating gun and a tire pressure meter all-in-one. The Gun has durable steel construction with no moving parts to wear out.



### Features

- Four functions works on tire maintenance; (1) vacuuming tire air, (2) inflating tire air, (3) deflating tire air and (4) measuring tire pressure.
- This Gun has a chuck with a 13/15mm diameter, 400/1000mm long hose for 360 degree rotatable which allows it to connect to a tire valve conveniently.
- A built-in large dual scales (0-16 bar/0-240 psi) gauge makes air pressures easy to read.
- This Gun can be used not only on automotive tires also in the other fields.
- This Gun facilitates users while changing a truck's inner tire.



### Operation

**Vacuum Tire :** Connect air source (Nitrogen) into the Gun's intake valve, and inflating chuck into car tire chuck valve in appropriate places. Spin the rotatable vacuum cap and press the trigger. Then, you can see the indicator of the meter move to bottom left, start vacuuming. Once complete the vacuuming, spin back the rotatable vacuum cap, then can do tire inflation.

**Measure Tire Pressure:** Connect inflating chuck into car tire chuck valve in appropriate place, the meter will start indicating the tire pressure.

**Deflate Tire:** When you need to deflate an over-inflated-pressure tire, press the trigger to the half while inflating the tire till reaching the desired tire pressure.

**Inflate Tire:** Connect air source (Nitrogen) into the Gun's intake valve, and inflating chuck into car tire chuck valve in appropriate places. Turn OFF the rotatable vacuum cap and press the trigger. Then, you can see the indicator of the meter move to top right, start inflating the tire.



