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# Installation, Operation and Maintenance User's Manual

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**Aston Tire Changer Model# ATC-5733**



**ASTON TECHNOLOGIES, INC.**

## **Warning!**

FAILURE TO OPERATE THIS EQUIPMENT AS DIRECTED MAY CAUSE INJURY OR DEATH. PLEASE READ THIS ENTIRE MANUAL PRIOR TO INSTALLATION AND OPERATION. BY USING THIS PRODUCT, YOU AGREE THAT YOU FULLY UNDERSTAND AND COMPREHEND THE FULL CONTENTS OF THIS MANUAL. MAKE SURE ALL OPERATORS READ AND UNDERSTAND. KEEP YOUR INVOICE WITH THIS MANUAL FOR FUTURE REFERENCE. MANUFACTURER SHALL NOT BE LIABLE FOR ANY INJURY TO PERSONS OR DAMAGE TO THINGS CAUSED BY FAILURE TO COMPLY WITH THESE REGULATIONS AND CAN CANCEL WARRANTY COVERAGE.

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.

## **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.

## **IMPORTANT SAFETY INSTRUCTIONS READ BEFORE OPERATING UNIT**

- Read and understand all safety warning procedures before operating the machine.
- Before performing any services or maintenance, always disconnect the machine from its air supply source. Pump the bead breaker pedal several times to evacuate all compressed air from the machine and disconnect the unit from its electrical supply source.
- Keep hands and feet clear. Remove hands and feet from any moving parts.
- Keep work area clean and dry. Cluttered, damp or wet work areas invite injuries.
- Keep children away from work area. Do not allow children to handle this machine.
- Consider work area environment. Do not expose equipment to rain. DO NOT use in damp or wet locations. Keep area well lighted.
- Only trained operators should operate this equipment. All non-trained personnel should be kept away from work area. Never let non-trained personnel come in contact with or operate machine.

- Use machine correctly. Use machine in the proper manner. Never use adapters other than what is approved by the manufacturer.
- Do not override or disable safety valves and/or devices.
- Always insure that all safety procedures are followed before any attempt is made to work on or near the equipment.
- Dress properly. Non-skid steel-toe footwear is recommended when operating machine.
- Guard against electric shock. This equipment must be grounded while in use to protect the operator from electric shock. Never connect the green power cord wire to a live terminal. This is for ground only.
- DANGER! The motor on this machine contains high voltage. Disconnect power at the receptacle before performing any electrical repairs. Secure plug so that it cannot be accidentally plugged in during service.
- WARNING! RISK OF EXPLOSION. This equipment has internal arcing or sparking parts which should not be exposed to flammable vapors. This machine should not be located in a recessed area or below floor level.
- Maintain with care. Keep unit clean for better and safe performance. Follow manual for proper lubrication and maintenance instructions. Keep control pedals and/or buttons dry, clean and free from grease and oil.
- STAY ALERT. Watch what you are doing. Use common sense. Do not use tools when you are tired or distracted from the job at hand.
- Check for damaged parts. Check for condition of all moving parts, breakage of parts or any condition that may affect the machines operation. Do not use if any component is broken or damaged. Replace or repair damaged or worn parts immediately.
- Never remove safety related components or device from the machine. Do not use if safety related components are damaged or missing.
- To reduce fire hazard, keep engine/motor exterior free of oil, solvent, or excessive grease.
- Illegible and missing warning labels must be replaced immediately. Do not use the tire changer if one or more labels are missing. Do not add any object that could prevent the operator from seeing the labels.

## **TIRE AND WHEEL SERVICE SAFETY INSTRUCTIONS**

Only properly trained personnel should service tires and wheels. Read all safety and operating instructions thoroughly before use. The following safety instructions are for one-piece wheels only.

- Always refer to the manufacturer's procedures for multi-piece wheels.
- The machine must be connected to a power supply line circuit bracket set for 30mA.
- Always keep all working surfaces clean and free of debris.
- Always wear durable personal protective work clothing and safety gear during tire service activity.
- To avoid personal injury and/or machine damage, always make sure the tire rim is firmly secured on the tire changer with the jaws.
- Always remove all wheel weights and the valve core to deflate the tire before servicing.
- Never place your hands between the vehicle wheel rim and the jaws during the locking/clamping stage.
- Always be aware of what each person is doing and what they will do before attempting any two-person operation.
- Always cover the electric motor and switch box before cleaning the tire changer. Be sure water or cleaner does not enter the motor or switch box.
- Always disconnect the electric power and air supply before attempting any maintenance.

## Demounting & Mounting

- Always clean and inspect the wheel prior to any service.
- Never stand on the frame or work table while demounting or mounting a tire.
- Always keep hands, feet, and other objects away from moving parts while the machine is turned on.
- Always place the narrow bead seat to the outside when clamping. Failure to demount the tire from the narrow bead seat side may cause damage to the tire beads.
- Always apply an approved rubber lubricant to rim flanges and both tire beads before demounting or mounting and seating the beads.
- Never mount a tire on a damaged or rusty wheel as tire or wheel failure may result during inflation. Explosion from failure may result in severe injury or death of the operator and bystanders.

## Inflation

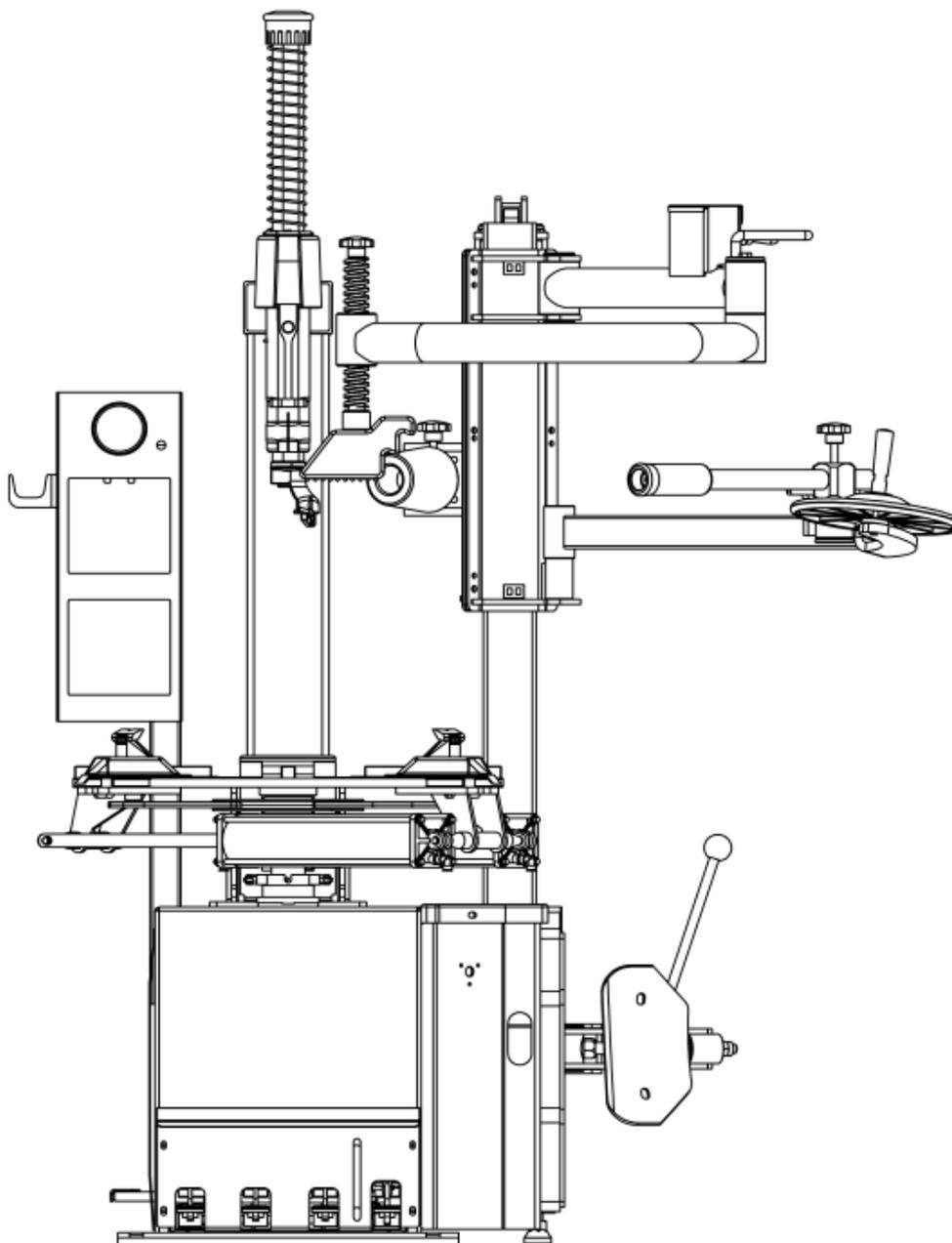
- Always be sure the bead opposite the tool is in the drop center before rotating the tire when demounting or mounting to avoid damage to the tire beads.
- Always follow all applicable Local, State, and Federal Codes, Rules, and Regulations; such as the Federal OSHA Standard Number 1910.177.
- Always use an approved inflation chamber or inflation cage equipped with a self-gripping chuck and remote inflation gauge and valve.
- Always inflate the tire to manufacturer's recommended cold operating pressure.
- **DO NOT OVER INFLATE!** Tire or wheel failure during and after inflation may result in an explosion capable of causing severe injury or death.
- Never reinflate a tire that has been run under inflated or flat without first demounting the tire and checking for wheel and tire damage.
- Always inspect the tire interior for loose or broken cords, cuts, penetrating objects, and other damage. Discard tires that cannot be properly repaired.
- Never rework, weld, heat or braze wheels.
- Never strike the tire or wheel with a hammer.
- Always be sure the tire diameter exactly matches the wheel diameter.

## Danger!

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

Semi-automatic swing arm tire changer

Parameters: rim: 12"-24", Tire width: 14"-28", tire diameter: 1190mm



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## Overview

### 1.1 Important note

1.1.1 Thank you for your purchase and use of this product. Please read and follow the safety instructions. Keep them readily available for machine operators.

1.1.2 Service and maintain the unit only with authorized or approved replacement parts.

### 1.2 Qualified users

1.2.1 Make certain all operators are properly trained, know how to safely and correctly operate the unit, and are properly supervised.

1.2.2 Electrical appliances must be operated by the normal electrician.

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

### 1.3 Notes

1.3.1 Before using the product, please carefully read every part of the manual, especially the operation of the safety and mechanical maintenance of the part.

1.3.2 Use the tire assembly machine must be operated by professional training personnel.

1.3.3 Tire disassemble is forbidden to use in explosive gas.

1.3.4 Before the machine is connected, the user must ensure that the use of power and gas supply and mechanical requirements, the circuit system must be operated by professional staff.

1.3.5 In the operation process, do not face close to the turntable, so as to avoid dust and other debris hit the operator's eyes. In order to ensure safety, mechanical operation, to be careful, do not touch the inflatable pedal, so as to avoid accidents.

1.3.6 To operate tire inflation must be very careful, strictly according to the instructions for operation, if the tire suddenly burst, tire assembly machine design and structure is not to protect the operator's personal safety (or any mechanical in the vicinity of the kind).

1.3.7 Operation of the tire changer, necklace, loose clothing, etc., may give the operator to bring personal injury.

1.3.8 In the process of removing or installing the operation of the tire, the turntable has always been to ensure that the clockwise rotation; if there is a counter clockwise rotation indicates that the turntable is a failure or operator error.



## 1.5 Noise standard

The noise of the tire changer shall be less than 70dB. for your health, and it is recommended that you place a noise meter in your operating area.

## Equipment description

### 2.1 Product introduction

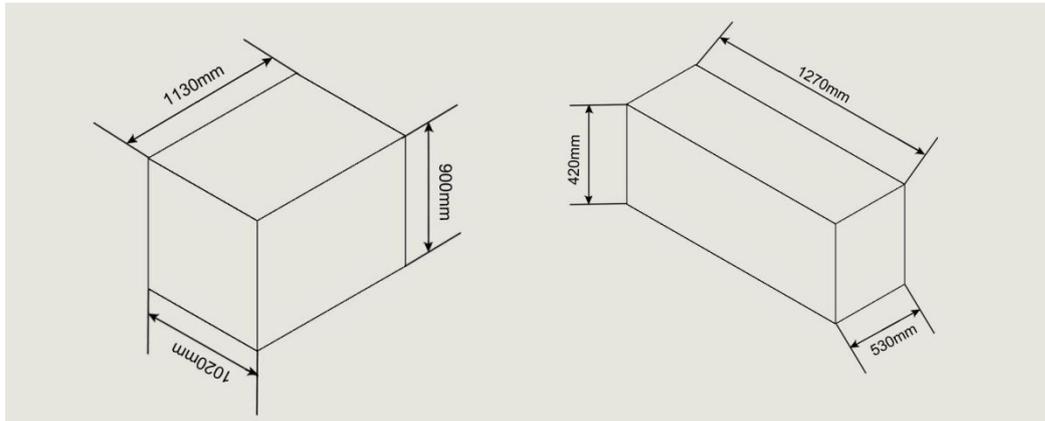
This model of semi-automatic tire changer is a half - automatic, convenient and quick disassemble and installation of wheel size of 10" to 28", the tire width of 110-380mm and the diameter of the tire is 1040mm.

### 2.2 Specifications

Special points	Technical parameters
Outer rim	12 " — 24 "
Inner rim	14 " — 28 "
Maximum tire diameter	1190mm
Maximum tire width	400mm
Pressing force (10bar)	5510lbs. (2500kg)
Operating air pressure	8bar— 10bar ( 116— 145psi )
Maximum charge pressure	3.5bar ( 50psi )
Power supply voltage	120V 1ph / 220V 3ph
Motor power	1.5kw
Outline dimension	Ctn.1: 1130*1020*900 Ctn.2:1270*530*420
Net weight	749 lbs. (340kg)
Working state noise	<70dB (A)

## 2.3 Transportation

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



## 2.4 Figure and part name

G: Wheel Clamp

P: Tower

U: Bead Breaker Pedal

I: Mounting / Dismounting head

R: Bead Breaker

V2: Turntable Pedal

V3: Hypsokinesis

Z: Bead Breaker Pad

Y: Turntable

N: Hypsokinesis arm

K: Locking Handle

Q: Oil Drier

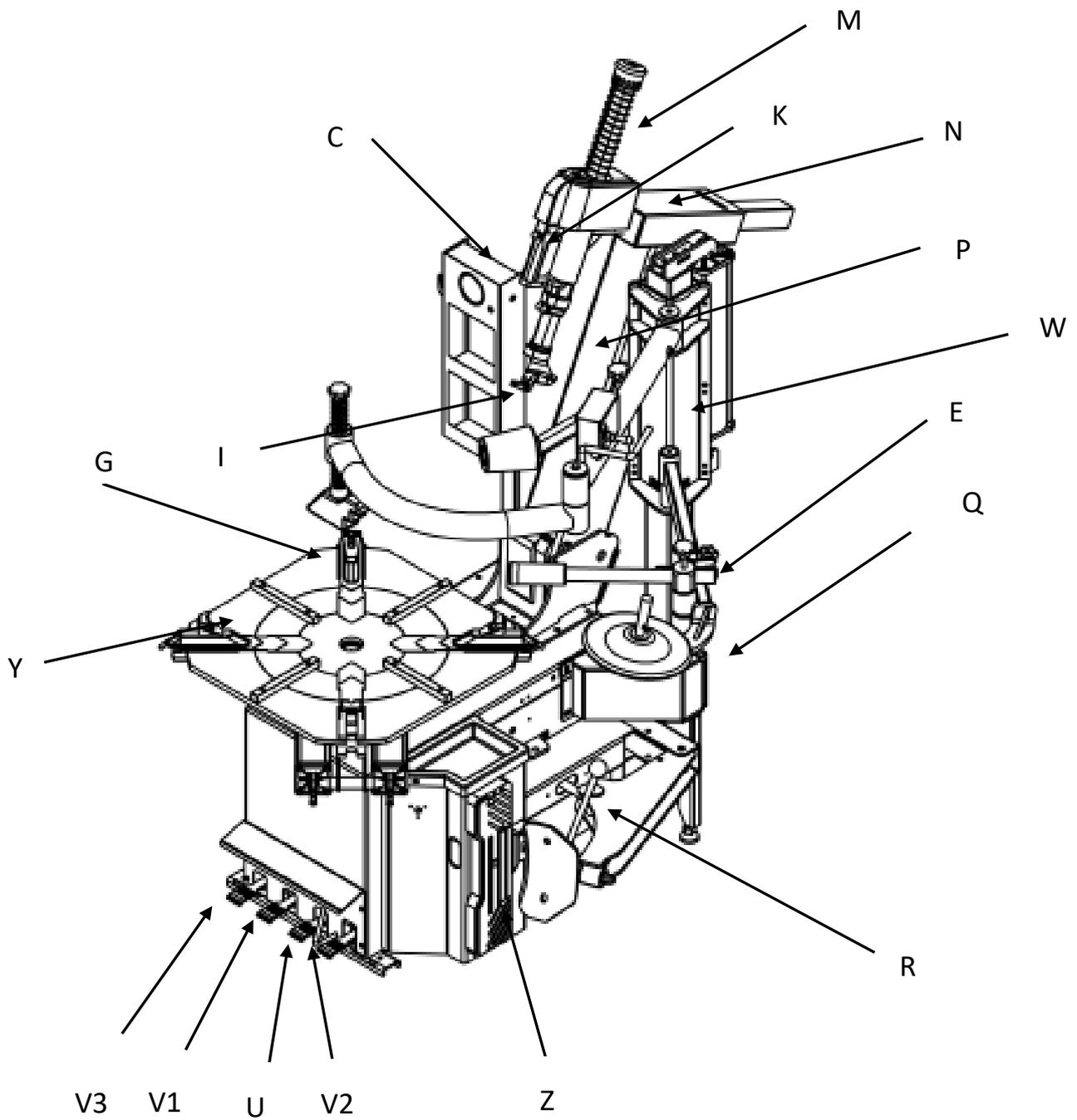
V1: Wheel Clamp Pedal

C: Inflatable

E: Hand Wheel

M: Vertical Reverse Spring

W: Three positions Pressing Arm

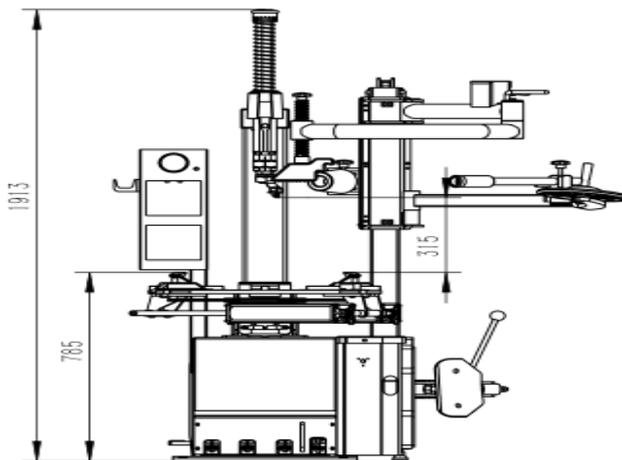
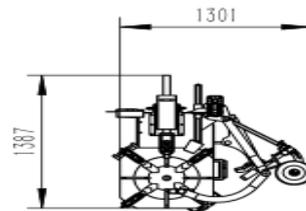


## Installation and commissioning instructions

### 3.1 Installation Preparation

#### 3.1.1 installation location

- 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.
- Equipment installation location should be at least up to the standard shown in Picture, which can ensure the normal operation and the machine parts are not subject to any restrictions. The tire changer is forbidden to use in explosive gas.



#### 3.1.2 Installation equipment and tools

- ◇ Installation equipment and tools

#### 3.1.3 inspection products

- ◇ The shipment should be thoroughly inspected as soon as it is received. The signed Bill of Lading is acknowledgement by the shipping carrier as receipt of this product as listed in your invoice as being in a good condition of shipment. If any of these goods listed on this Bill of Lading are missing or damaged, do not accept goods until the shipping carrier makes a notation on the freight bill of the missing or damaged goods. Do this for your own protection.

### 3.1.4 Unpacking

- ◇ Check the packaging damage and the rain and other damage phenomenon, using the tool unpack the packing as shown in Picture, please dispose of packaging box, lest the environmental pollution.
- ◇ Check the condition of the machine, in accordance with the packing list to check if there is any damage or lost, once found contact the dealer and manufacture immediately. If you find that the leakage but still installed, we will not assume any responsibility. If you have any questions, please do not use the machine, the supplier contact.

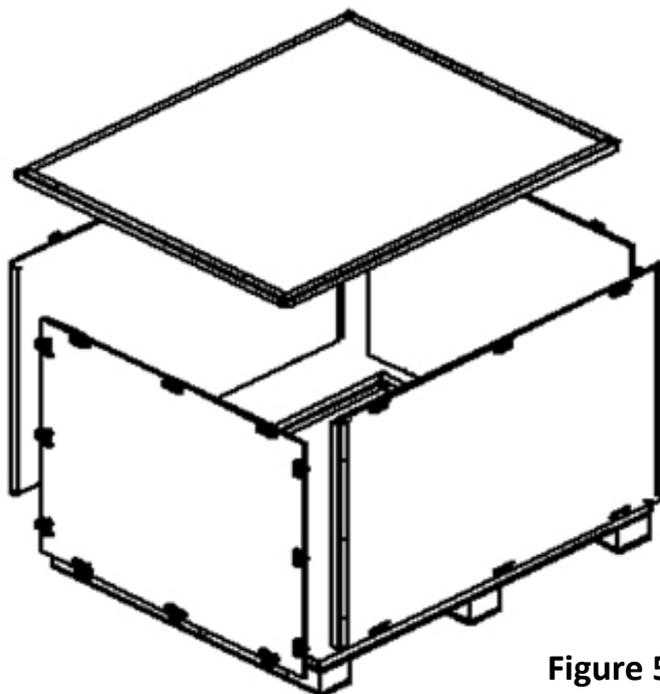


Figure 5

## 3.2 Precautions during installation

- ◇ All bolts must be tightened.
- ◇ Power cord, no broken skin, no broken pipe, and other damage.

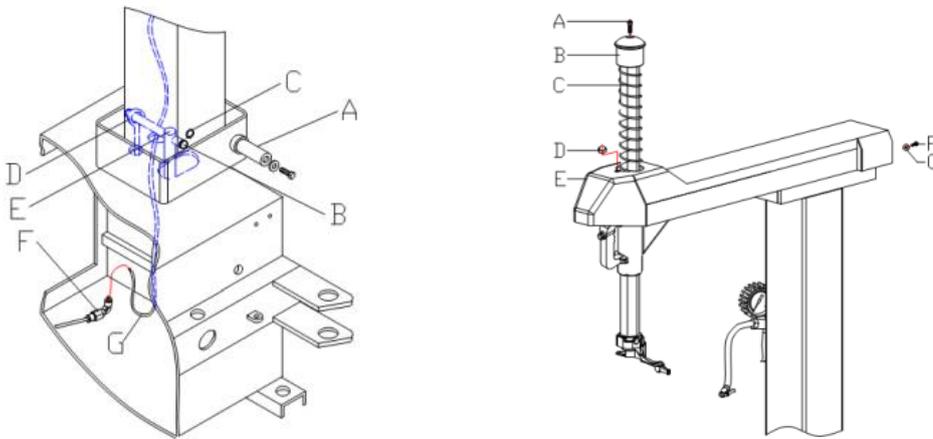
## 3.3 Main installation procedure

### 3.3.1 Standard configuration installation

- ◆ The first step: Place the machine on the chosen place, and then fix it to the ground by fixing screw.
- ◆ The second step: Lift the tilting arm and insert the PU hose (G) into the hole (Fig3).

(Do not bend the hose) Then take out the part A (shown in Fig.3) from the accessory box, unscrew the cap on the top of part A, insert the part A into the hole that go through the main box of the machine and the bottom of the tilting arm, then tighten the bolt.

- ◆ The third step: Take out the part B (shown in Fig.3) from the accessory box, unscrew the spring on one side of part B, then insert part B into the hole that go through the part D, E, then screw the spring. Take out the side panel on the side of the machine. Connect the PU hose (G) that go through the main box of the machine with the part F.
- ◆ The forth step: mount the part E on the arm (Fig.4), then mount parts D, C, B, A, G, F in sequence. During the operation, pay attention to the PU hose and other parts.



### 3.4 Check the project table after installation

No.	Inspection item	Yes	No	Remarks
1	Whether the power supply voltage is consistent with the requirements of the equipment			
2	Whether the components are installed correctly			
3	Whether the bolts, screws, nuts are tightened			

**Note:** Please fill in the inspection item list after the installation is finished.

### 3.5 Commissioning and debugging

#### 3.5.1 Commissioning

- ◇ After the installation of the machine but before the connection with the power supply, it is necessary to determine the user's power supply, the gas source and the requirements

of the machine is consistent.

- ◇ The machine is connected to the circuit, the circuit must be fitted with a fuse that is in line with the operating rules. The automatic circuit breaker of 25A is required to be operated by professional personnel. The power plug of the tire changer is provided with the customer.
- ◇ The compressed air system is connected to the machine by a pipe joint on the right side of the tank.

### **3.5.2 Debugging**

- ◇ Step 1: turn on the power and gas supply, depress the Turntable Rotation pedal, turntable should be clockwise. Raise the Turntable Rotation pedal, the turntable should be anti-clockwise rotation. (If the turntable is opposite to the specified rotation direction, the position of the two lines in the three-phase plug should exchange position.)
- ◇ The second step: depress the Bead Breaker Pedal, start the Bead Breaker device; when the pedal is released, the Bead Breaker device to return to the original position.
- ◇ The third step: depress the Jaw Clamp Pedal, open the 4 clamps; release the Jaw Clamp Pedal, the Jaw Clamps returns to the original position.

## **Operation declaration**

### **4.1 Operating notes**

- ◇ Check the connection of air pipe is in place, ensure that no air leakage, ensure the operation space to meet the requirements, then start work.
- ◇ Before any operation, the gas in the tire is needed to be released, and the balance block of the tire balancing device is removed.

### **4.2 Disassemble operation process**

#### **4.2.1 Bead Loosening**

- ◇ Deflate tire completely by removing the valve core from the valve stem. To avoid damaging the clamps and/or wheel, move the clamps to their full inward position before

positioning a tire for bead loosening.

- ◇ Pull the bead breaker blade away from the machine and roll the wheel into position. If servicing a performance wheel or any other wheel with Tire Pressure Sensor), make sure that the valve stem is either in the 12 o'clock or 6 o'clock position.
- ◇ Position the bead breaker blade against the tire next to, but not on, the rim or the sidewall of the tire. Press the breaker pedal to actuate the blade and loosen the bead. It may be necessary to loosen the bead in multiple locations around the tire. Use extra care in positioning the bead breaker blade on larger wheels/tires, and on alloy wheels.



- ◇ Turn wheel around and repeat procedure on the other side of the wheel. This should be the long side of the drop center. It will be easier to clamp the wheel to the table top if the lower bead is loosened last.
- ◇ Determine the mounting side of the wheel. The mounting side is the narrow side of the drop center.

#### WHEEL CONFIGURATION



## 4.2.2 Wheel Clamping

- ◇ Fixed the block in the Right helper arm in the center of Press Wheels.
- ◇ Place tire/wheel assembly on Table Top with mounting side up.



- ◇ Use the Wheel Clamp Foot Pedal to move the Clamps inward (pedal down) or outward (pedal up).

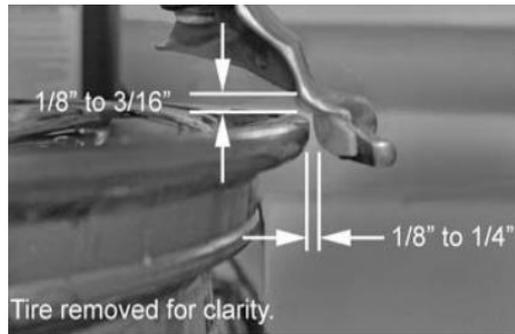
## 4.2.3 Tire mounting

- ◇ Apply tire manufacturer's approved rubber lubricant liberally to entire circumference of both upper and lower beads after loosening bead and placing on table top.



**THE RIM AND BEAD MUST BE LIBERALLY LUBRICATED. FAILURE TO USE AN ADEQUATE LUBRICANT CAN LEAD TO THE BEAD BINDING ON THE RIM AND DAMAGE TO THE MOTOR AND OR VOID THE WARRANTY .**

- ◇ After the wheel is secured to the Turntable, set the vertical shaft in the working position.
- ◇ Push the Vertical Shaft down and position the Mount/ Demount Head into contact with the rim edge.
- ◇ Press the button on the locking handle to lock. As the slide is locked, the Mount/ Demount Head will move upward approximately 1/8 inch and backward 1/8 inch from the rim edge. The Mount/Demount head roller should not be in contact with the rim edge.



**NOTE:**

**THIS CLEARANCE WILL BE MAINTAINED AS LONG AS THE VERTICAL SHAFT REMAINS LOCKED. THE OPERATOR MAY SWING THE ARM OUT OF THE WAY AND BACK INTO PLACE AGAIN WITHOUT NEEDING TO REPOSITION THE HEAD WHEN CHANGING A LIKE SET OF WHEELS. THE TOOL CLEARANCE MAY CHANGE WITH MACHINE USE AND SHOULD BE INSPECTED OFTEN. FAILURE TO MAINTAIN PROPER CLEARANCE MAY RESULT IN DAMAGE TO THE WHEEL RIM OR TIRE.**

- ◇ Lift the bead onto the mount/demount head with the bead lifting tool, and step on the turntable control pedal to turn the turntable clockwise till the upper bead is completely separated.



**THE BEAD LIFTING TOOL AND DEMOUNT HEAD MAY ENCOUNTER RESISTANCE OR COME UNDER LOAD AT TIMES DURING THE MOUNT AND DEMOUNT PROCEDURES. KEEP ONE HAND FIRMLY ON THE TOOL TO AVOID POSSIBLE TOOL KICK BACK. USE THE REVERSING FEATURE (LIFT TABLE TOP PEDAL UPWARDS) TO BACK OUT OF JAM UPS.**

**NOTE:**

**FOR LOW PROFILE TIRES, GET THE UPPER BEAD INTO THE DROP CENTER OF THE WHEEL.**

- ◇ Push the Bead Lifting Tool down toward the wheel to lift the tire bead up and over the tab of the demount head. Hold the Bead Lifting Tool in this position. Depress the Table Top Foot Pedal to rotate the wheel clockwise.



- ◇ Hold the Bead Lifting Tool down until the upper bead is solidly above the rim. Continue rotating the wheel clockwise until the upper bead is completely demount.
- ◇ Liberally lubricate the lower bead again, if there was any difficulty lubricating the lower bead earlier.
- ◇ Insert the smooth curved end of the Bead Lifting Tool over the tab end of Mount / Demount Head and below the lower bead of the tire. Push the Bead Lifting Tool down toward the wheel to lift the tire bead up and over the left tab side knob portion of the Mount/ Demount Head. Hold the Bead Lifting Tool in this position.



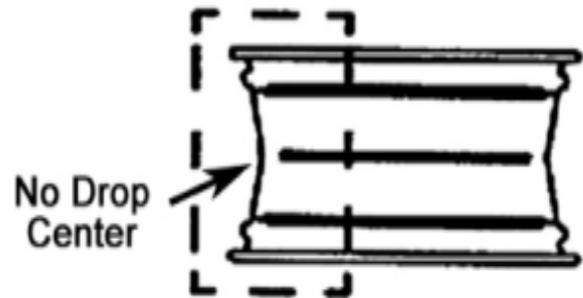
- ◇ Depress the Table Top Pedal to rotate the wheel
- ◇ The Mount / Demount Head will guide the bead up and over the edge of the wheel. Continue rotation until the lower bead is demount.

### CUSTOM AND SPECIAL WHEELS

IF A CUSTOM WHEEL IS DAMAGED WHILE DEMOUNTING, STOP, AND AVOID DAMAGING THE OTHER WHEELS. CONTINUE ONLY WHEN THE CAUSE IS IDENTIFIED AND CORRECTED.

### ALLOY WHEELS

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



### EUROPEAN PERFORMANCE WHEELS (ASYMMETRICAL HUMP)

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

### WHEELS WITH TIRE PRESSURE WARNING SENSORS

- ◇ After both tire beads are loosened, try to remove the tube. If you cannot remove the tube lubricate the beads and rim liberally.

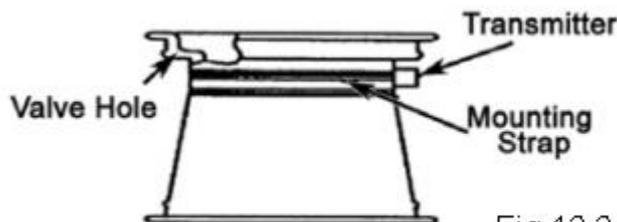


Fig 12.2

## DEMOUNTING TUBE TYPE TIRES

### 4.2.4 Demount Tube type tires

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

#### REMEMBER:

TABLE TOP ROTATION CAN BE STOPPED AT ANY TIME BY REMOVING YOUR FOOT FROM THE ROTATION PEDAL. NORMAL TABLE TOP ROTATION

FOR DEMOUNTING IS CLOCKWISE. DEPRESS THE TABLE TOP PEDAL TO ROTATE THIS DIRECTION. TO ROTATE THE TABLE TOP COUNTERCLOCKWISE, LIFT THE PEDAL UP WITH YOUR TOE.

### 5.1 Mounting

- ◇ 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.
- ◇ inspect tire for damage, paying close attention to the beads. Verify size match between tire and wheel.
- ◇ Lubricate both tire beads liberally with tire manufacturer's approved lubricant.



THE RIM AND BEAD MUST BE LIBERALLY LUBRICATED. FAILURE TO USE AN ADEQUATE LUBRICANT CAN LEAD TO THE BEAD BINDING ON THE RIM AND LEAD TO DAMAGE TO THE MOTOR AND OR VOID THE WARRANTY.



THE INFORMATION IN THIS SECTION MUST BE READ AND FOLLOWED CAREFULLY TO PREVENT ACCIDENTS AND INJURIES DURING MOUNTING.



CHECK TIRE AND WHEEL CAREFULLY BEFORE MOUNTING. MAKE SURE THE TIRE BEAD DIAMETER AND WHEEL DIAMETER MATCH EXACTLY. CONSULT THE RUBBER MANUFACTURER'S ASSOCIATION FOR APPROVED RIM WIDTHS FOR TIRE SIZES.

ATTEMPTS TO FORCE A BEAD SEAT ON MISMATCHED TIRES AND WHEELS CAN CAUSE THE TIRE TO VIOLENTLY EXPLODE, LEADING TO SERIOUS PERSONAL INJURY OR DEATH TO OPERATOR AND/OR BYSTANDERS.



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.



NEVER MOUNT A DAMAGED TIRE. NEVER MOUNT A TIRE ON A RUSTY OR DAMAGED WHEEL. DAMAGED TIRES AND/OR WHEELS MAY EXPLODE.



**IF YOU DAMAGE THE TIRE BEAD DURING MOUNTING, STOP! REMOVE THE TIRE AND MARK IT AS DAMAGED. DO NOT MOUNT A DAMAGED TIRE.**

- ◇ Place tire over wheel and move Vertical Arm and Mount/ Demount Head into position as described earlier.
- ◇ Manually push the tire down into the drop center of the wheel directly across from the Mount/ Demount Head to reduce the tension force on the bead. Depress the Table Top Pedal and rotate the wheel to begin mounting the lower bead. Rotate the Table Top until the lower bead is fully mounted.

**NOTE:**

**LOW PROFILE TIRES MAY REQUIRE USE OF THE BEAD LIFTING TOOL.**

**NOTE:**

**THE FOLLOWING PROCEDURES SHOW THE ASSIST TOWER BEING USED; THE TIRE CHANGER YOU ARE USING MAY NOT HAVE THE ASSIST TOWER INSTALLED. \***

- ◇ Swing the Assist Tower into position and lower the Roller Arms so that they press down on the tire to hold the upper bead in the drop center. The Upper Arm must be locked and positioned next to the Mount-demount Head.
- ◇ Depress the Table Top Pedal. As the Turntable rotates the Lower Arm will follow the tire around. Keep rotating the table until the bead is mounted





**DO NOT FORCE THE TIRE ONTO THE RIM. BEAD DAMAGE COULD RESULT MAKING THE TIRE UNSAFE AND/OR CREATING THE RISK OF INJURY.**

## **MOUNTING TUBE TYPE TIRES**

- ◇ Lubricate the beads and rim liberally.
- ◇ Position the Mount/Demount Head as described earlier. Mount the bottom bead first.
- ◇ Apply rubber lubricant to the tube. Insert the tube into the tire, paying careful attention not to pinch the tube. Round out the tube with a small amount of air.
- ◇ Lower the Arm Rollers onto the tire as described earlier.
- ◇ Round out the tube with a small amount of air. Apply rubber lubricant to the tube.
- ◇ Depress the Table Top Pedal and rotate only a short distance at a time.
- ◇ Mount the top bead.

## **INFLATION**

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



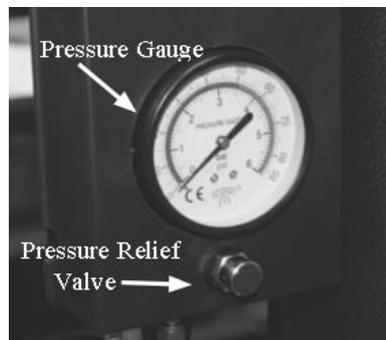
**CHECK INFLATION GAUGE FOR PROPER OPERATION. ACCURATE PRESSURE READINGS ARE IMPORTANT TO SAFE TIRE INFLATION. REFER TO THE OPERATING MAINTENANCE SECTION OF THIS MANUAL FOR INSTRUCTIONS. IF THE RIM HAS BEEN CLAMPED FROM THE OUTSIDE FOR TIRE MOUNTING, RELEASE THE CLAMPS ONCE BEAD SEAL IS OBTAINED, LIFT THE TIRE, AND MOVE THE CLAMPS TO THE CENTER OF THE TABLE TOP.**

**THE CLIP-ON AIR CHUCK ON THE END OF THE INFLATION HOSE AND ALL INFLATION RELATED COMPONENTS SHOULD BE CHECKED WEEKLY FOR PROPER OPERATION. DO NOT USE THIS MACHINE FOR TIRE INFLATION IF ANY PARTS ARE DAMAGED OR APPEAR NOT IN PROPER WORKING ORDER.**

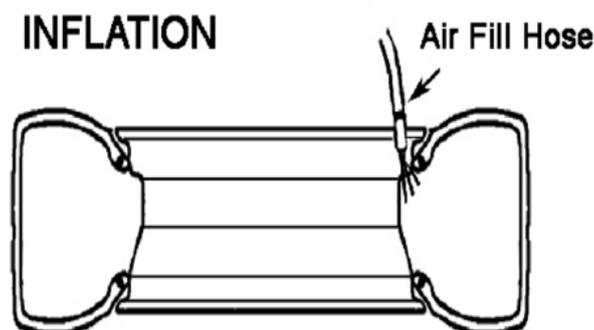


**TIRE FAILURE UNDER PRESSURE IS HAZARDOUS. THIS TIRE CHANGER IS NOT INTENDED TO BE A SAFETY DEVICE TO CONTAIN EXPLODING TIRES, TUBES, WHEELS, OR BEAD SEALING EQUIPMENT. INSPECT TIRE AND WHEEL CAREFULLY FOR MATCH, WEAR, OR DEFECTS BEFORE MOUNTING. ALWAYS USE APPROVED TIRE BEAD LUBRICANT DURING MOUNTING AND INFLATION.**

- ◇ Position One - 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



- ◇ Tire Inflation - With the Inflation Hose attached to the tire valve and the pedal depressed, line pressure is allowed to flow through the valve and into the tire for inflation. Tire pressure is not indicated on the gauge in this position





**CHECK THE FUNCTION OF THE PRESSURE LIMITER REGULARLY. 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 ONLY BE INFLATED IN A SAFETY CAGE.**



## **Tire Inflation**

The unit is equipped with a Pressure Limiter/Regulator to assist the operator with proper tire inflation. The Pressure Limiter will keep most car and light truck tires from inflating beyond 60 PSI. It is the operator's responsibility to follow all instructions and to control inflation pressure as specified in these instructions.

## **Stage of Inflation**

**THIS MACHINE IS NOT INTENDED TO BE A RESTRAINING DEVICE FOR EXPLODING TIRES, TUBES, OR RIMS. KEEP HANDS AND BODY CLEAR AT ALL TIMES AND AS FAR BACK AS POSSIBLE DURING INFLATION. DO NOT LEAN OVER THE TIRE WHILE INFLATING. AN EXPLODING TIRE, RIM OR OTHER WHEEL COMPONENT CAN CAUSE DEATH TO OPERATOR AND/OR BYSTANDER. REMAIN CLEAR AT ALL TIMES.**

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

## **BEAD SEALING**

- ◇ Position valve stem in front of operator and connect the inflation hose after removing

the valve core

- ◇ Step on the inflation pedal to allow air to flow into the tire and seal the beads.



## 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.



**OPERATOR SHOULD KEEP HANDS, ARMS, AND ENTIRE BODY AWAY FROM THE TIRE DURING THE FOLLOWING BEAD SEAT AND INFLATION PROCEDURES. DO NOT STAND OVER TIRE, AS PERSONAL INJURY COULD RESULT FROM INFLATING TIRE.**

- ◇ Once tire pressure is indicated on the air gauge (inflation pedal depressed, continue to inject air into the tire in short intervals. Check the pressure frequently. Stand back during bead seat. Keep hands, arms, and entire body away from tire during this procedure. Tire beads should move outward and “pop” into their bead seat position as pressure inside

the tire increases. If this does not happen, a problem exists. Investigate carefully.

- ◇ Release air pressure from the tire by pressing the manual Pressure Relief Valve.



**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.**



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



**IF OPERATOR IS UNABLE TO OBTAIN BEAD SEAT, SOMETHING IS WRONG. DEFLATE TIRE COMPLETELY, INSPECT TIRE AND WHEEL, CORRECT ANY PROBLEMS FOUND, RE-LUBRICATE BOTH TIRE BEADS, AND REATTEMPT BEAD SEAL AND SEAT PROCEDURES. FOLLOW ALL SAFETY INSTRUCTIONS IN THIS MANUAL AND ON MACHINE**

## **STAGE FOUR / TIRE INFLATION**

- ◇ Make sure both beads are seated. When both beads are seated, the tire is ready for inflation.
- ◇ Replace the valve core if it was removed.

- ◇ Depress the Inflation Pedal to inflate the tire. DO NOT STAND OVER TIRE DURING INFLATION.
- ◇ Do not inflate the tire above the manufacturer's recommended pressure as stamped on the tire sidewall. The typical inflation pressure for automobile tires is between 24 and 45 PSI. Light truck inflation pressure typically covers a wider range. Release air pressure

**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.**



**NOTE:**

**WHEN INFLATING TIRES THAT REQUIRE MORE THAN 60 PSI, ALWAYS USE A SAFETY CAGE AND AIR HOSE WITH A CLIP-ON AIR CHUCK AND IN-LINE VALVE. THE HOSE MUST HAVE ENOUGH LENGTH BETWEEN THE CHUCK AND THE OPERATION/IN-LINE VALVE TO ALLOW THE TECHNICIAN TO STAND OUTSIDE THE TRAJECTORY**

**BEFORE MAKING ANY INSPECTION**

**ADJUSTMENT, OR REPAIR, DISCONNECT THE POWER SOURCE AND OR AIR SUPPLY 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.**

## Maintenance

### 6.1.1 Maintenance

- ◇ Prohibit unauthorized personnel for maintenance operation. To extend the service life of the tire changer, maintenance should be performed according to the requirements of the manual. If the machine is not maintained regularly, the operation and reliability cannot be guaranteed, and even cause danger to the operator or the people in the vicinity of the machine. Before any maintenance operation, circuit and gas supply device must be disconnected, turn off the switch. In order to release the pressure of the air from the line, it is necessary to press the pedal 3-4 times.
- ◇ It must be professional staff using the original spare parts do the timely replacement of damaged parts. The safety device (safety valve, control valve) of the unauthorized removal or replacement is a violation of state regulations on work safety. (Note: the manufacturer is not responsible for damage caused by the parts of other manufacturer and the damage caused by the disassembling of the safety device).

### 6.1.2 Tending

- ◇ Regular use of diesel oil to clean the turntable, to prevent the formation of dirt. Daub lubricating oil in the skidway of the clamps.
- ◇ As shown in figure 15-a, control oil mist level that in the oil mist device, if the oil level is lower, you need to unscrew the oil F, and then as figure 15-a., control oil mist level, HG ISO and viscosity of VG32 ISO type oil mist is recommended. (like: ESSO Febis K32, MOBIL Vacouline 1405, KLUBER32). when stepping the pedal 3 to 4 times, check whether there are oil drops into the oil cup F, if not, adjust screw D.
- ◇ As shown in figure 15-b, 20 days after the first use of the machine, re-tighten the screw A and B that is in the clamps.
- ◇ As shown in figure 15-c, machine horsepower is not enough, check the triangle belt of the motor by the following steps: (before any operation, to cut off the power) first, Unscrew the 4 screws on the side of the box, remove the left side protective plate of the tire changer, second, use special adjustment screw X (Figure 15-c) that is in the motor support base to adjust the triangle belt.

- ◇ As shown in figure 15-d, If the (I) lock is not good or cannot be stopped at the top of the 2mm, it is necessary to adjust the nut on the operating arm.
- ◇ As shown in figure 15-e, when cleaning or replacing silencer which controls the opening or closure of the clamps(G), follow the following steps: first, unscrew the 4 screws on the side of the box, remove the left side protective plate on the tire changer. Second, in the pedal (V1, V2) system which controls the opening or closure of the clamps(G), unscrew silencer. Clean with compressed air nozzle, if damaged, replace with the same parts.

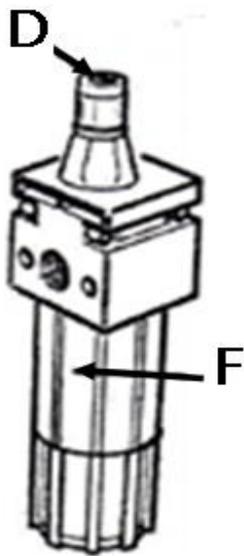


Figure 15-a

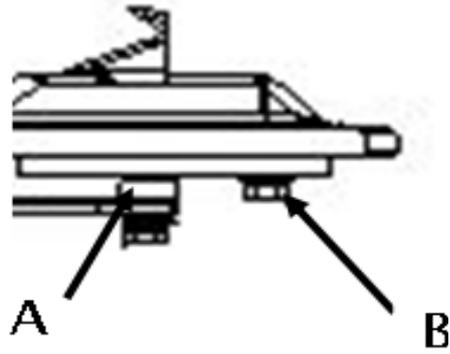


Figure 15-b

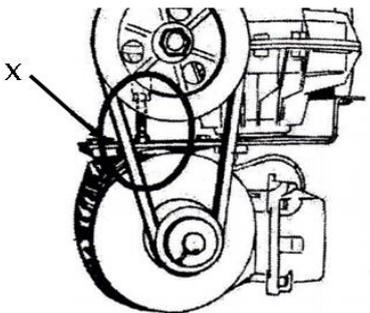


Figure 15-c

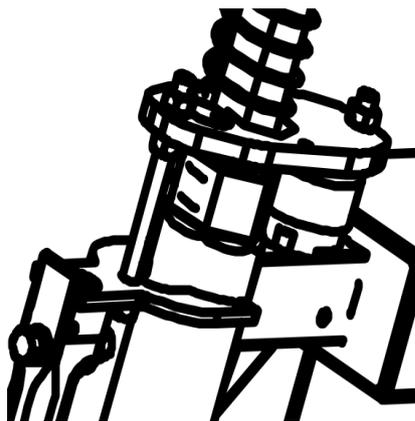


Figure 15-d

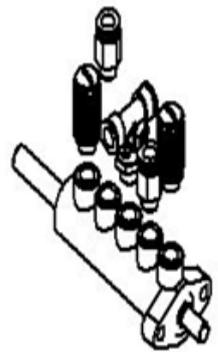


Figure 15-e

## **6.2 Storage and scrap**

### **6.2.1 Storage**

- ◇ If you want a long-time storage of machine, please disconnect all the energy supply, and lubricate the skidway of the clamps on the turntable to prevent oxidation.

### **6.2.2 Scrap**

- ◇ In accordance with the law of the metal and nonmetal for scrap processing. In the specified place release the oil inside the machine.

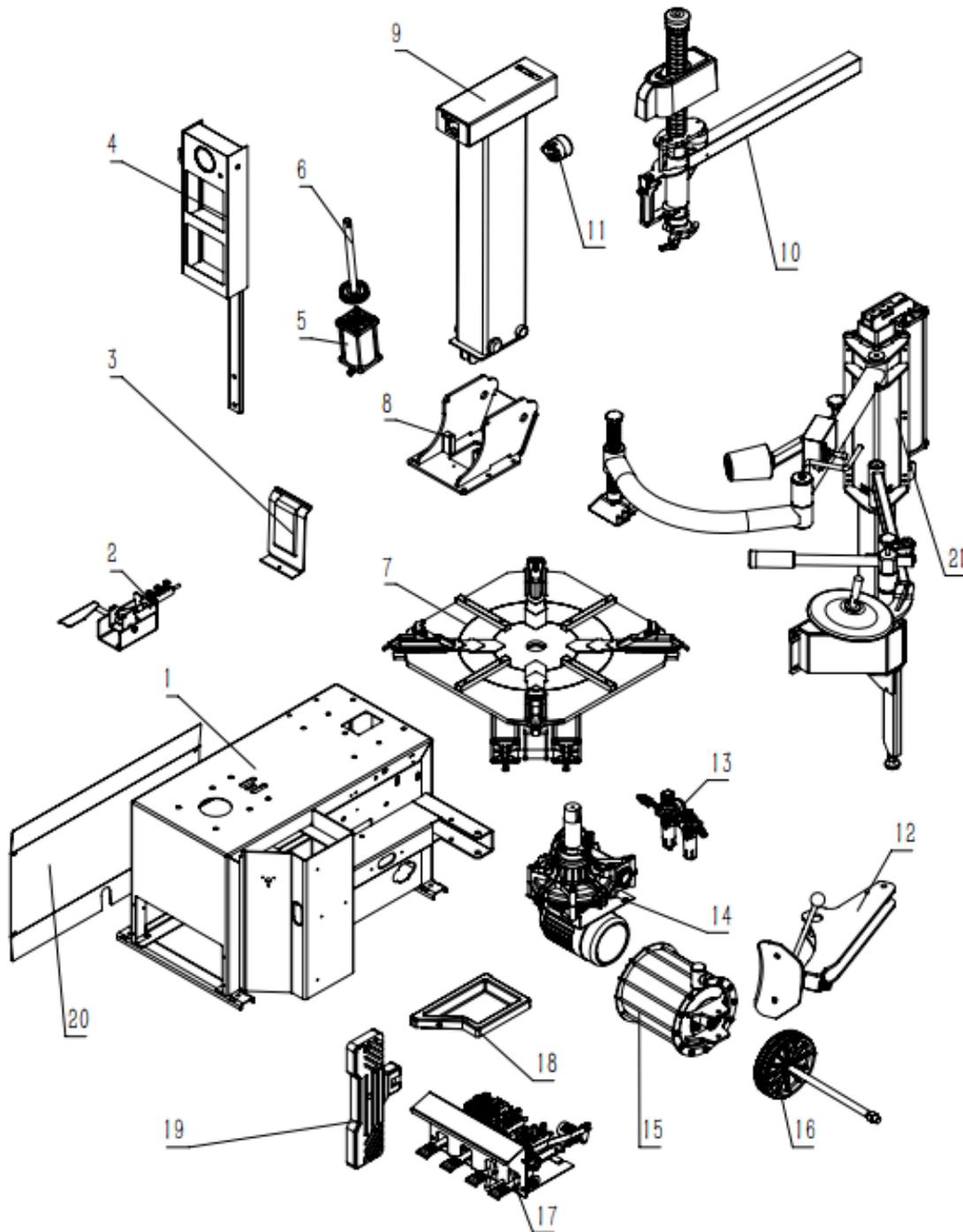
## Fault causes and Solutions

Note: if you cannot solve the failure, please contact the manufacturer to provide help. We will be the first time to help you to solve the failure. Provide the relevant fault information and fault pictures, thus the manufacturer can get rid of the trouble at the fastest speed.

Failure phenomenon	Failure cause	Resolvent
Unidirectional rotation of the turntable	Universal steering switch damage	Replace universal steering switch
Rotary table does not rotate	Triangle damage	Replace triangle belt
	Universal steering switch damage	Replace universal steering switch
	Motor fault or line fault	Check motor and external plug or socket
Rotary clamp opening / closing speed is slow	Muffler blockage	Clean or replace muffler
The turntable can't lock the rim correctly	Clamps have trouble	Replace clamps
	Rotary cylinder has trouble	Replace cylinder or repair cylinder sealing ring
Working head can touch the rim	Lock plate adjustment is not correct or faulty	Adjust or replace the locking plate (Figure 18/d)
	Working head screw loose	Tighten screws (Figure 12/a)
The pedal is not located at work position.	Return spring has trouble	Replace return spring
Operating difficulties of the tire device	Muffler blockage	To clean or replace the silencer (Figure 18/f)

	Cylinder sealing ring damage of pressure device	Replace sealing ring
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## Parts List and Exploded Drawings



1	5751100	Box Weld
2	6209100	Inflation Pedal
3	5622105	Front Cover
4	5759000	Tool Box Unit
5	5625100	Tilt-Back Cylinder
6	5625200	Tilt-Back Cylinder Piston
7	730	Turntable Unit
8	5755000	Tilt Tower Plate Weld
9	57513200	Tower Weldment
10	575132310	Horizon Arm Unit
11	1011000	Tilt-Back Cylinder unit
12	5754400	Bead Breaker Unit
13	301200	FRL Unit
14	8807000	Gear Box Unit
15	8805100	Φ 200 Aluminum Cylinder Unit
16	8805200	Φ 200 Aluminum Cylinder Piston
17	5758000	Aluminum Pedals
18	5751110	Soap Tool Box
19	5621012	Bead Breaker Pad
20	5751116	Side Cover
21	3310000	Helper Arm Unit
22	8806000	Transmission ASSY's

### **LIMITED WARRANTY**

Aston® Wheel Service Equipment is warranted for the period of one year on all operating components to be free of defects in material and workmanship. Aston® shall repair or replace at their option for the warranty period those parts returned to the factory freight prepaid which prove upon inspection to be defective. Aston® will pay labor costs for the first 12 months only on parts returned as previously described. These warranties do not extend to defects caused by ordinary wear, abuse, misuse, shipping damage, improper installation or lack of required maintenance. This warranty is exclusive and in lieu of all other warranties expressed or implied. In no event shall Aston® be liable for special, consequential or incidental damages for the breach or delay in performance of the warranty. Aston® reserves the right to make design changes or add improvements to its product line without incurring any obligation to make such changes on product sold previously. Warranty adjustments within the above stated policies are based on the model and serial number of the equipment. This data must be furnished with all warranty claims.