BLACK 🛡 DIAMOND

Auto Equipment

Operation Instructions





Manufacturer reserves the right to change specifications of the machines without notice.

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1. Column Assembly	10. Cabinet	19. Roller
2. Locking handle	11. Front cover	20. Beak breaker Handle
3. Slide arm lock	12. Pedal control	21. Adjustable bead breaker rod
4. Column	13. Mounting head axiel	22. Bead break shovel
5. Inflation gauge	14. Locking rod	23. Lever
6. Tire press handle	15. Washer	
7. Tire press	16. Mounting head	
8. Jaw	17. Disc-roller assist arm	
9. Turntable	18. Tire disc	

(1) SPECIFICATIONS

Outside clamping	10"-24"
Inside clamping	12"-26"
Max. wheel width	14"
Max. wheel diameter	42.5"
Working air pressure	8-10bar
Bead breaker force (at 8bar)	5500 lbs of bead breaking force
Turntable Speed	6 RPM
Voltage/Power	110V/60Hz/1 PH
Shipping weight	8 91 lbs
Net Weight	8 36 lbs

(2) IMPORTANT SAFETY INSTRUCTIONS

1. Eye and face protection recommendations:

"Protective eye and face equipment is required where there is a reasonable probability of injury that can be prevented by safety glasses, or a face shield must be provided by the owner and worn by the operator of the equipment. Care should be taken to see that all eye and face safety precautions are followed by the operator. ALWAYS WEAR SAFETY GLASSES. Everyday glasses only have impact resistance, they are not safety glasses.

2. Do not disable hood safety interlock system, or in any way shortcut safety controls and operations.

3. Be sure that wheels are mounted properly, the hubnut engages the arbor for not less than four (4) turns, and the hub nut is firmly tightened before spinning the wheel.

4. Read and understand this manual before operating. Abuse and misuse will shorten the functional life.

5. Be sure the balancer is properly connected to the power supply and electrically grounded.

6. Do not operate equipment with a damaged cord - or if the equipment has been dropped or damaged - until it has been examined and repaired by a qualified serviceman.

7. Do not let cord hang over edge of table, bench, or counter or come in contact with hot manifolds or moving fan blades.

8. If an extension cord is necessary, a cord with a current rating equal to or more than that of the equipment should be used. Cords rated for less current than the equipment may overheat. Care should be taken to arrange the cord so that it will not be tripped over or pulled.

9. Keep guards and safety features in place and in working order.

10. Wear proper clothing. Safety toe, non-slip footwear and protective hair covering to contain hair is recommended. Do not wear jewelry, loose clothing, neckties, or gloves when operating the balancer.

11. Keep work area clean and well lit. Cluttered and/or dark areas invite accidents.

12. Avoid dangerous environments. Do not use power tools or electrical equipment in damp or wet locations, or expose them to rain.

13. Avoid unintentional starting. Be sure the balancer is turned off and power disconnected before servicing.

14. Disconnect the balancer before servicing.

15. Use only manufacturer's recommended accessories. Improper accessories may result in personal injury or property damage.

16. Repair or replace any part that is damaged or worn and that may cause unsafe balancer operation. Do not operate damaged equipment until it has been examined by a qualified service technician.

17 Do not allow untrained persons to operate machinery.

18. To reduce the risk of fire, do not operate equipment in the vicinity of open containers or flammable liquids (gasoline).

19. Adequate ventilation should be provided whenworking on or operating internal combustion engines.

20. Keep hair, loose clothing, fingers, and all parts of body away from moving parts.

21. Use equipment only as described in this manual.

22. Use only manufacturer's recommended attachments and accessories.

(3)OWNER'S RESPONSIBILITY

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

2. Follow all installation instructions.

3. Carefully check the unit for correct initial function.

4. Read and follow the safety instructions. Keep them readily available for machine operators.

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

6. Allow unit operation only with all parts in place and operating safely.

7. Carefully inspect the unit on a regular basis and perform all maintenance as required.

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

9. Keep all instructions permanently with the unit and all decals/labels/notices on the unit clean and visible.

10. Do not override safety features.

(4) OPERATOR PROTECTIVE EQUIPMENT

Personal protective equipment helps make tire servicing safer. However, equipment does not take the place of safe operating practices. Always weardurable work clothing during tire service activity. Loose-fitting clothing should be avoided. Tight-fitting leather gloves are recommended to protect operator's hands when handling worn tires and wheels. Sturdy leather work shoes with steel toes and oil-resistant soles should be used by tire service personnel to help prevent injury in typical shop activities. Eye protect ion 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 hearingprotection if tire service activity is performed in an enclosed area, or if noise levels are high.

(5) OPERATION SETTING

- Pressure setting: the machine to work properly due within 7-10 bar pressure range, so supply pressure should reach 7 bar above.
- Fuel settings: lubricator oil and fuel is calibrated at the factory. If the fuel goes in too fast or too slow, use a screwdriver to adjust the oil mist on the needle, and then step on the foot pedal pressure tire 5 to 10 times. If the lubricator drops a drop of oil, it meets the requirement. Remember to regularly refill 32 # hydraulic oil to the oil cup (2/3 cup).

(6) TRANSPORTATION

The machine must be sent with original packing. The machine must be packaged with the corresponding tonnage. Forklift loading and unloading, the truck according to FIG position insert foot.

(Figure 1)

(7) UNPACKING THE MACHINE

After removing the packaging, please do a visual damage check of the machine and its components. If in doubt, please contact your dealer. Package materials such as plastics, polystyrene, nails, screws, wood, cartons and other waste must be placed in a box, according to local regulations. Please check the box that comes with the packing list when unpacking. Note: When disassembling the machine, you must wear gloves to avoid contact with the packaging material and scratch or galling.



(8) INSTALLATION

Positioning and installation

- The machine has been placed in selected positions, marked expansion screws, tighten the mounting steadily.
- All electrical installation must be performed by qualified person.
- Before installation and connection, check if the power voltage of the machine on the nameplate matches the labe, which also cable with a protective grid must be installed and there is a good ground cover protection and automatically install air leakage switch on the main power source, Drain power set at within 50mA / s.
- Check the motor rotation direction (this check only for machines equipped with three-phase motors).
- Depress the turntable forward / reverse control pedal wheel should rotate clockwise, counterclockwise rotary dial, you can swap any two at the switch
- Phase cable connector, if user does not follow the above instruction, ,factory will not be responsible to any damage caused by above instructions.

Note: If the machine does not have the power plug, the user must install a self-consistent voltage and machine power plug.

- The machine requires air pressure with range 7-10 bar (100-140 psi) to meet the guaranteed use of the machine, if less than 7bar (100psi), bead breaker shovel may not be working as usual.
- Must use blow piper before air hose newly installed in order to avoid damage from the new pipe to the machine. Users has to regularly drain he air compressor.
- Connect the air compressor and filter system on the machine. After the connection, user should check on the lubricator pressure gauge whether the requirements in the pressure setting is met, if not please check the tubing or air compressor if it is defective.

Installation column:

- 1) 6 bolts, gaskets and nuts of the fuselage upper column are temporarily unscrewed.
- 2) the column placed in the fuselage, the corresponding hole position, and tighten with a nut.

1 Place the spring, 2 Close the hex cap, 3 Tighten the screw again



Step 2

(9) OPERATION INSTRUCTION

This unit must be properly operated and properly maintained to help avoid accidents that could injure the operator or bystanders, or damage the unit. 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.

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 unleveled. This may result in the combination mount/demount tool contacting the rim causing scratches. On alloy wheels, always rotate the wheel one turn after setting the Duckhead mount/demount tool to insure proper wheel clamping.

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

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

Change a new tire



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.



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).

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. Actuate valve (or pull) to position the bead loosener. Shoe away from the machine and roll wheel into position. The valve stem should bein 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. Actuate the bead loosener handle/button to position the shoe or press the bead loosener pedal to position the shoe and loosen the bead. It may be necessary to loosen the bead in multiple locations around the tire (figure 3).

3. Apply tire manufacturer's approved rubber lubricant liberally to entire circumference of both tire beads after loosening



NOTE: If you upgrade to purchase lift version, Read Step 4.

4. Press tire lift to lift up the tire until it is raised to turntable, and align the tire and fit it on the clamping jaws as figure 4.

NOTE: Determine the mounting side of the wheel. The mounting side is the narrow side of the drop center.

Note: The wheel clamps can be positioned in one of two different ranges: Use the inner holes for 10-24" diameter wheels and the outer holes for 12-26" wheels.

figure 4.



(Figure. 5)

Note: In the process of using the lift, pay attention to the clamping jaws or clamping cylinder is opened. In the open stage, avoid using the lift, to avoid damaging the cylinder or workbench.

figure 5.



5.Use Robo Arm to apply pressure to aid in clamping rim (figure 6). Use the clamp control pedal to move the clamps inward (push pedal down) or outward (lift pedal up). Engage the detent position (pedal in full up or full down position) to maintain clamped or unclamped.

figure 6.

6. Place removable head to the edge to the rim. if tire is hard, the bead attached to the rim cannot reach the edge.please press the following:(1) press down the tire and place the mounting head to tread rim at about 3-5mm and lock the handle. Figure 7 &8.

(2)



(Figure (Figure 8)



Lift the lever on the mounting head and make sure the bead is off the rim. Use the pressing roller tire down, (figure 9). Separate of the bead and the rim (bead pressed in the second position of the rim or down). Remember to lock the column.





9).





(Figure

NOTE: if the bead is very hard, use tire roller to press down the tire bead and lift up the bottom bead (figure 7 &8) put the mounting head and put the lever into tire bead. lift the tire bead to the top of the tire head. Turn the work table clockwise, the tire will be smooth and rapid separation of the rim.

NOTE: As it is hard to ensure the gap of rim and mounting head. So the head is placed in dismantling the working position, you should find the highest point of the rim spokes and the low side of tire bead . And then determine the mounting head position in the working process.



(Figure 11)



(Figure 12)

Install a new tire.

1. Use a rubber lubricant recommended by the manufacturer to de-lubricate the rim and rim. If the rim has been removed from the turntable, re-clamp it to the turret .Pull the rocker arm back to its working position.

CAUTION: Do not place your hands on the rim when moving the work arm to the working position to avoid scratching your hands.

2.Hand the head against the edge of the rim lock the hex post.

The lower rim of the tire is located on the raised end of the disassembly head , as shown.13 Key: If the tire tubeless, so that the valve and the disassembly head is located in a straight line.

For run flat tire, place tire roller close to mounting head. and tire press to mounting head and tire press at 4 / 5 o' clock of the wheel. Figure 14. Control the foot pedal to turn the table until the tire is install on the rim.







(Figure 13)

(Figure 14)

(Figure 15)

Change a new tire(Leverless mounting head)

(if you purchase leverless mounting head, , please note below caution and following step.)

NOTE: As it is hard to ensure the gap of rim and mounting head. So the head is placed in dismantling the working position, you should find the highest point of the rim spokes and the low side of tire bead . And then determine the mounting head position in the working process.



1 Release the tire roller. Move assist arm to press down the tire bead on the opposite the position of the head 180°, and then lift up the hook. To avoid damagin the bead, lubricate the bead in advance.

2, Release the tire roller. Move assist arm to press down the tire bead on the opposite the position of the head 180°, and then lift up the hook. To avoid damagin the bead, lubricate the bead in advance.



(Figure 19)

13



3. Use yellow plastic knife to block the tire bead slided back. (Figure 20)

(Figure

18)

4. To remove the inner tube

(1) remove tire roller (remember well before moving roller scale)
(2) according to place rollers inside of the tire and reach the rim edage,
(3) lift up roller wheel and separate tire and rim separation (the operation can be repeated until the tire is separated

NOTE: lubricate the bottom side bead before remove the inner tube.

(Figure 20)

Install a new tire (Leverless mounting head)

- 1. Before any mounting, inspect tire for damage and verify size match between tire and wheel. Inspect wheel closely for damage. Clean the wheel and remove any light corrosion or rubber residue .Do not attempt to service a heavily corroded wheel, damaged wheel, or bent wheel.
- 2. inspect valve stem and replace if necessary. Next lubricate tire beads liberally with tire manufacturer's approved rubber lubricant

3. Place tire over wheel and move arm into position making sure the valve stem is at the 9 o'clock position in front of bead lock. Position tire so that lower bead is above the rear extension of the mount/demount tool and below the front knob.

4. Depress table top pedal and rotate wheel to mount lower bead. Use drop center of wheel by pushing down on tire just ahead of the mounting tool, and follow as tire rotates (figure 12). Rotate table top until lower bead is



mounted.

5. To Install the upper mounting tires , place mounting head above the tail. Then use tire roller to depress the bead. After that, put the assit arm at 3 o'clock and depress the bead. (figure 21).

(Figure 20)

NOTE: apply lubricator on the bead before demount the upper bead.

6. Depress the pedal turntable, the turntable is rotated so that the tires will be able to easily mount the rim. Once Tire fitting is blocked, you should be immediately stopped the operation, and turn turntable is rotated counterclockwise, remove obstacles until smooth loading the tire rim.

NOTE: During the rotation of the turntable, the tire is mounted to the final stage can be run repeatedly pause and then start, and appropriate to enhance the nondominant hand, so as not to strain the tire.

(9) INFLATION

Tire inflation is performed in three steps: BEAD SEAL, BEAD SEAT, and INFLATION.

Use inflating gun to inflate the tire.

Note: The clip-on chuck on the end of the hose is a safety item that must 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 in this position the air gauge will register the air pressure in the tire.

Position 2 - Tire Inflation – This is the first activated position. With the inflation hose attached (using the clip-on chuck) 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 – With the inflation hose attached to the tire valve and the pedal in this position, line pressure is allowed to flow through the valve and to the air-flate bead seal jets on the table top for bead sealing.



Stages of In ation on aConventional 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.

Requires visual confirmation of bead seat.



Stand clear of the tire during bead seat and inflation.

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. For tires requiring more than 40 PSI to bead seat use safety cage.

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.



Stand clear of the tire during inflation.

(10)MAINTENANCE TIPS

- Regular clean condensate oil and water separator cup inside.
- Regular clean operation panel lock lever and quick nut, and drip an appropriate amount of lubricating oil.
- Regularly check and tighten all bolts connecting member.
- Keep the hexagonal rod dry and clean (clean diesel) and use appropriate amount of lubricating oil drip.
- Check the drive belt tension, when you need to adjust the adjustment screw to adjust in order to achieve the role of the drive belt tension.
- Keep a clean machine and work area to prevent dust from entering the movable member.
- Van opposite produce joint surface and an opposite surface friction combined with displacement, weekly use of lithium-based lipid oil to lubricate.
- Regularly clean the control valve and the silencer on the valve so that it will not affect the cylinder working properly. Unscrew the muffler should be cleaned with water or cleaning with compressed air to blow dirt.
- After each tire and the tire should be removed to clean the operation panel and debris on the box in order to avoid debris during use due to excessive lead operation panel wear.

