

*Eastwood*

DO THE JOB RIGHT.

Part #13667

# BLASTING SYSTEMS

## INSTRUCTIONS FOR 13943 & 13944



## EASTWOOD BLASTING SYSTEMS

Abrasive blasting has always been an alternative to chemical stripping on most parts of an antique or specialty car. Used with care, abrasive blasting can quickly and safely remove paint, coatings, rust and corrosion from all but the most delicate parts.

An abrasive blaster is a very simple tool. Siphon-fed blasters work by rushing a stream of compressed air past a hose connected to a supply of abrasive media. This rush of air creates a partial vacuum, pulling abrasive into the air stream.

Air pressure slams the abrasive particles against the work surface. The force of the airblast combines with the sharp edges of the abrasive to strip the surface clean.

One drawback to abrasive blasting is the dust it creates. Abrasive will get into the smallest openings. So suspensions, transmissions and other driveline parts should be removed or otherwise carefully protected when blasting a chassis. Uncovered window glass, paint, and body trim can also be damaged if not protected.

## ABRASIVE BLASTING BASICS

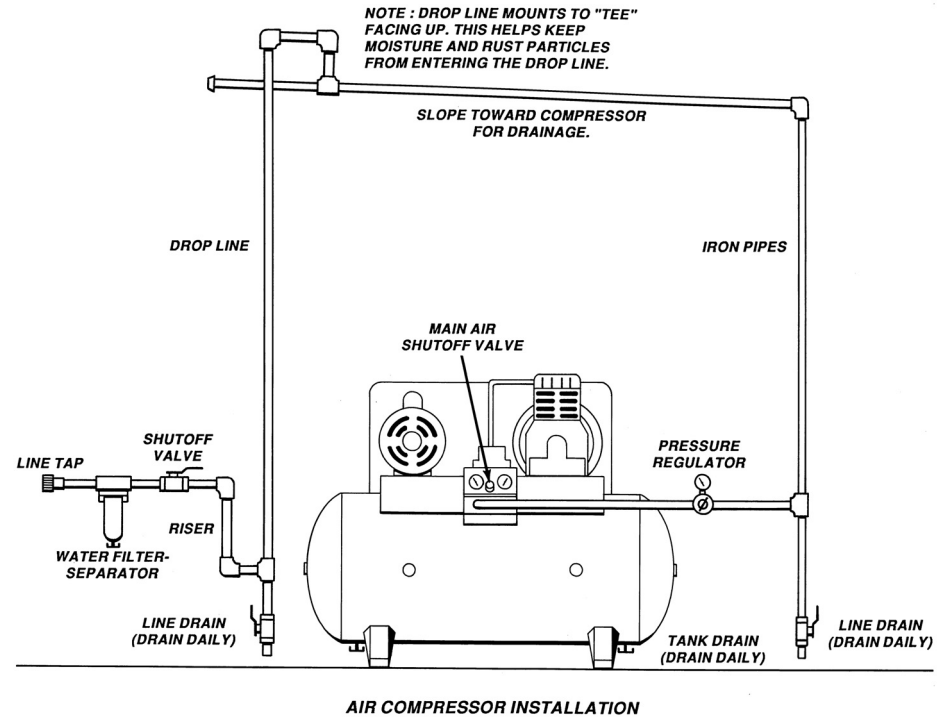
Because abrasive blasting works so well at removing old paint, rust, and corrosion, it becomes frustrating when things don't go well. The two keys to successful abrasive blasting are: a reliable supply of dry air, and dry abrasive blasting media (grit). The presence of moisture in the air supply or blast media will freeze, causing a possible blockage in your abrasive blaster. Eastwood offers a moisture separator (#34103) suitable for this application. Refer to the last page of this booklet for details.

## SAFETY

**IMPORTANT:** Repair procedures and techniques, tools, and parts for servicing motor vehicles, as well as the skill and experience of the individual performing the work vary widely. It is not possible to anticipate all the conceivable ways or conditions under which a vehicle may be serviced or repaired, or to provide cautions as to all of the possible hazards that may result. Standard and accepted safety precautions and equipment, such as gloves, NIOSH-approved respiratory protection, and eye protection, must be used during cutting, grinding, chiseling, chipping, prying abrasive blasting, or any other process that can cause material removal or projectiles. Before performing any operation, you must be completely satisfied that neither your personal safety nor the condition, performance, or value of the vehicle will be endangered.

## COMPRESSOR SETUP

Too many people install a water separator right on the air compressor's tank where the air is the hottest. The warm air carries the moisture as water vapor which easily passes right through most water separators. Install the water separator away from the air compressor to allow the air to cool, condensing the water vapor which will be better captured with the separator.



## USING THE SIPHON BLASTER

Always use safety equipment when using your blaster. NEVER point the blastgun at anyone.

Join the chrome pickup tube to the rubber hose. The rubber hose slides onto the inner tube about 1-1/4" allowing about 1/4" opening above the outer tube for proper air venting.

The other end of the rubber hose attaches to the gun head. You will need to install a 1/4" NPT air fitting (available locally) in the abrasive blaster's handle.

Simply place the pickup tube into the bottle of clean, dry, sifted media and you're ready to blast. Note that there is an vent at the top of the pickup tube, where the rubber attaches. Keep it open and above the abrasive media.

The blast gun should be held almost directly on the object to be cleaned, but at enough of an angle so that the abrasives don't rebound at the operator. Abrasive power is increased as you hold the gun closer to the work. A cabinet, curtain or large carton cut open will help confine the blast to some extent.

Higher air pressure increases the cutting power and the speed of the job. Use no less than 5/16" inside diameter air hose, no longer than 50 feet, with no splices or other restrictions.

## CAUTION

Particles are emitted from the blaster gun under pressure. Eye protection is an absolute must. A full hood and long rubber gloves are recommended. A NIOSH-approved respirator is also required to keep abrasive dust from the lungs. Breathing in regular silica sand may cause silicosis.

Chrome pickup tube and rubber hose assembly



Allow for a 1/4" gap between hose and outer pickup tube

## MAINTENANCE

Since any form of abrasive blasting involves abrasives under pressure certain parts of the blaster are subject to wear. The wear rate depends on the amount of usage, the type of abrasive used, the nozzle size and air pressure.

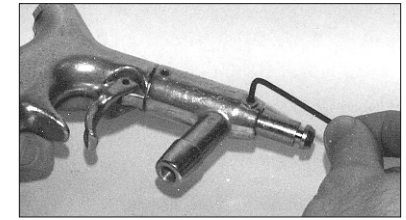
Replace the nozzle when you notice too much air and blast media being used, cleaning speed is reduced or when air and media escapes through the warning groove in the nozzle. Nozzle replacement on your Siphon Blaster is easy. After disconnecting the unit from the air supply, lay it on its side. The right side contains two set screws. A hex wrench is used to remove the front set screw.

If, after quite a bit of use, you determine your Siphon Blaster needs an overhaul, parts replacement is easy. In addition to the nozzle replacement described above, there is an air jet in the gun body.

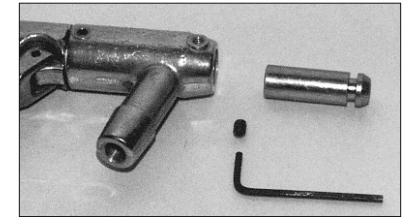
The wear on the air jet is external because of the abrasive passing over the jet to enter the nozzle. To obtain maximum power, the inside diameter of the air jet must be 1/2 the size of the inside diameter of the nozzle. When the air jet is worn, it will deflect the air and media downward and will cut a groove in the nozzle. Generally, the ratio of wear is one jet to every three or four nozzles.

To remove the air jet, locate the set screw on the handle end of the gun. Remove this set screw and separate the gun body from the round siphon head.

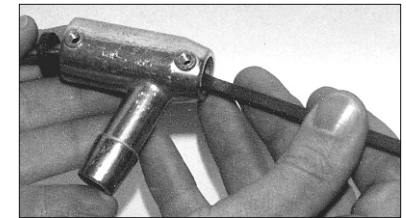
The air jet is held in by a rubber seal. Simply push gently on the jet with a screwdriver, as shown and it will come out along with the seal washer.



Loosening set screw

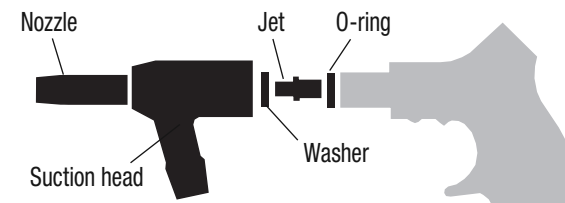


Nozzle removed



Removing air jet

### Suction Head Kit (#22033)



## TIPS AND TECHNIQUES

Nearly all abrasive blasting difficulties can be traced to just a few common setup or operator errors. As outlined in this booklet, proper air compressor installation is most important. Any abrasive blasting or air powered tool, for that matter, can't be expected to do its job if water or oil from the air compressor is passed along through the lines to the tool or abrasive blaster. In nearly all cases, problems with wet media packing are due to improper air compressor installations.

To help collect the abrasive for recycling and to minimize clean-up lay a tarp on the driveway before abrasive blasting. Since the abrasive blaster will blow holes through most tarps, don't point the gun directly at the tarp. If you must point the gun toward the tarp, e.g. when blasting small parts, lay a piece of plywood down first to protect the tarp. Lay the parts on the plywood and blast away. Screen abrasive before each use with our Abrasive Sifter Screen (#22022). Blast media from the tarp can be swept up, then sifted through this screen before re-use. The use of sifted blast media is important even with new blast media being used for the first time because it removes small stones and other debris which could clog the abrasive blaster. Sifting used blast media is even more important to remove rust and other particles which could clog the abrasive blaster.

## TECH TIP

Most restorers carefully save all the screws and bolts removed during dismantling. These fasteners can be poked through a sturdy piece of cardboard. With the bolt heads all lined up, they can easily be abrasive blasted, primed and painted while still being stored neatly, ready for use at vehicle reassembly.

## TROUBLESHOOTING

- **Insufficient air to blasting gun:**
  - Air line from compressor too small. Use air line with 5/16" or larger I.D.
  - Leading edge of air jet worn unevenly. Replace with new air jet or regrind leading edge flat and re-use.
- **Media surging:**
  - Moisture in Media and/or air supply. Media can pick up moisture from compressed air. Mount moisture trap for air supply on cabinet for thorough drying.
  - Wrong nozzle/air-jet match. Assure proper nozzle/air-jet match.
    - For steel nozzles: Use 13/64" I.D. gold nozzle with gold air jet.  
Use 1/4" I.D. silver nozzle with silver air jet.  
Use 5/16" I.D. black nozzle with black air jet.
    - For ceramic nozzles: Carefully measure nozzle I.D. to make sure the proper air jet used, as with steel nozzles noted above.
  - Rubber washer for AirJet is missing or installed incorrectly.
  - Too much air pressure. For most medias, 80 psi works best.
  - Siphon Tube blocked. Remove blockage and sift media to remove debris. To temporarily dislodge blockage, place gloved finger over nozzle and momentarily activate trigger.
  - Siphon Tube completely buried under media. Pick-up Tube needs to be exposed where 3/16" hole is drilled and where rubber hose connects. Make sure there is a gap (approx. 1/4") between end of siphon hose and outer-most siphon tube. (See instructions.)
  - Kinked or worn Siphon Hose. Check hose for kinking, and shorten if necessary. Worn siphon hose will collapse and restrict abrasive media flow. Replace with 1/2" I.D. automotive heater hose.
  - Extensive use will eventually wear out the inner pick up tube. At the same time, the abrasive blast gun will probably need replacement (order part #22009 to replace both).

| Blast Media Selection Chart  | Grit    | Part # | Type of Blasting Project           |                                      |                                    |
|------------------------------|---------|--------|------------------------------------|--------------------------------------|------------------------------------|
|                              |         |        | Removal of carbon, rust, and paint | Paint removal, no rust (sheet metal) | Cleaning aluminum, brass, die-cast |
| Glass Bead                   | 70/100  | 22023  | Good                               | Good                                 | Better                             |
| Glass Bead                   | 100/170 | 13772  | Good                               | Good                                 | BEST                               |
| Ground Glass                 | 40/70   | 13779  | BEST                               | Good                                 | -                                  |
| Silicon Carbide              | 60      | 22019  | Better                             | Good                                 | -                                  |
| Aluminum Oxide               | 60      | 22021  | BEST                               | Good                                 | -                                  |
| Aluminum Oxide               | 90      | 13792  | BEST                               | Good                                 | -                                  |
| Automotive "M" Soda          | -       | 11806  | -                                  | BEST                                 | Better                             |
| Rust Removal Profile XL Soda | -       | 50494  | Better                             | Good                                 | -                                  |

# ADDITIONAL ITEMS

**Replacement Siphon Head Assembly** Blaster heads can wear out. We've put together a replacement set complete with nozzle and air jet to match original specs.

22033 Siphon Head Kit

## Matched Nozzles and Air Jets

For 1 HP Compressors – 13/64" Nozzles 7 CFM @ 80 PSI

22047 Includes 4 gold steel nozzles, air jet, and washer

22048 Includes 3 ceramic nozzles, air jet, and washer

For 1-1/2 - 2 HP Compressors – 1/4" Nozzles 15 CFM @ 80 PSI

22044 Includes 4 silver steel nozzles, air jet, and washer

22043 Includes 3 ceramic nozzles, air jet, and washer

For 2 HP & Up Compressors – 5/16" Nozzles 20 CFM @ 80 PSI

22075 Includes carbide nozzle, 3 air jets, and washer

22045 Includes 4 black steel nozzles, air jet, and washer

22046 Includes 3 ceramic nozzles, air jet, and washer

**Rubber Blasting Gloves** Extra thick rubber gloves protect hands and forearms from common abrasives, yet are comfortable and flexible. One size fits all.

22010 Rubber Abrasive Blasting Gloves

**Blast Hoods** These high quality blast hoods come with sewn-in ventilation screens and use an easily replaceable 4" x 5" lens. Extends downward to cover the chest area.

22096 Economy Blast Hood      22096LENS Replacement Lens

**Water Trap** Made for high capacity compressors (115 CFM) and up to 150 PSI line pressure. Inlet and outlet have 1/2" pipe threads. See compressor installation diagram on page 3.

34103 Moisture Separator

**Vinyl Protector Caps** This set of 123 assorted size vinyl caps and plugs protect threads, pipe ends, shafts, etc. while blasting. Quicker and easier than masking tape to keep paint out of the freshly blasted parts, too!

22003 Vinyl Protector Set, (69 Caps, 54 Plugs)

**Sifter Screen** Lets you separate unwanted materials from recycled media. Helps avoid clogged nozzles. Large 11" diameter sifting area.

22022 Abrasive Sifter Screen



**If you have any questions about the use of this product, please contact**

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