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# **ECONOLINE®**

42 X 24 FT

48 X 24 FT

**12 CFM**

**25 CFM**

**Read this manual before operating equipment**

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**Warning! Do not use sand or abrasive containing silica in Econoline machines. Failure to comply will result in a voided warranty.**

# **WARNING**

**DO NOT OPEN CABINET UNTIL BACK  
RACK ASSEMBLY IS INSTALLED**

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BACK RACK COMPONENTS ARE  
PACKAGED INSIDE CABINET. SEE  
INSTALLATION INSTRUCTIONS.

FOR OPTIMUM  
PERFORMANCE  
THIS MACHINE  
MUST BE  
OPERATED WITH DUST  
COLLECTION SYSTEM.

# **BACKRACK ASSEMBLY**

## **Back Rack Assembly Instructions**

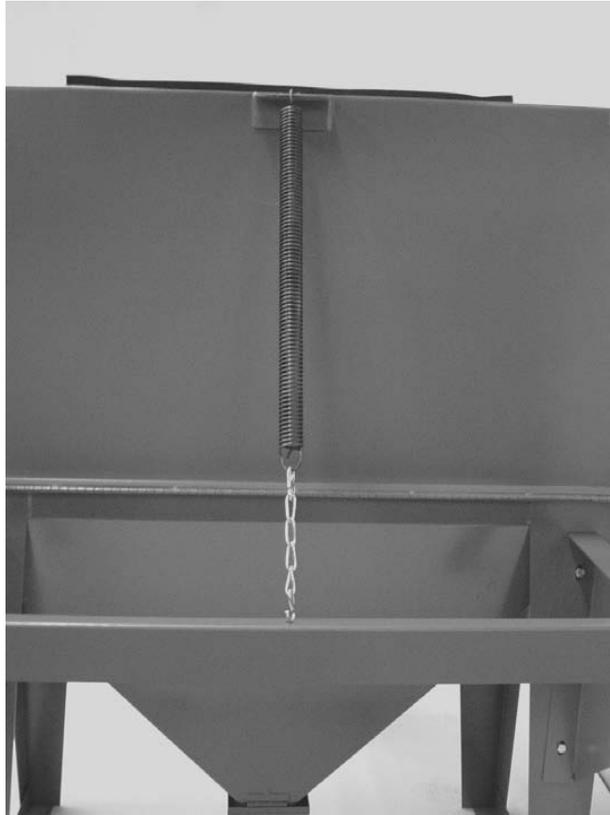
Assembly of this back rack requires the handling and assembly of 5 separate pieces and the attachment of the spring assembly. This may best be accomplished by (2) people.



Begin assembly by securing the wide flange of each triangular bracket with (2) 3/8-16 bolts into cabinet legs. Once the triangular brackets are in position on the back of the cabinet, secure the back rack support legs (2) through the narrow end of the triangular bracket with (4) 3/8-16 bolts and nuts into the leg. Attach the horizontal support, with flange on top, to both support legs with (2) 3/8-14 bolts and nuts through legs.

Note: Tighten all bolts securely only after all pieces have been properly placed into position.

# Back Rest Spring Assembly



To attach the spring assembly to cabinet, insert spring end through hole in bracket in position at top of cabinet back. To attach opposite end of spring assembly to back rack, tilt cabinet top back and insert S-hook into hole in center of horizontal support, bend S-hook to secure.

Note: Tension of spring assembly may be adjusted by number of chain links used.



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# Blast Cabinet Instructions

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Hello and thank you for purchasing an Econoline blast cabinet. **Please read these instructions carefully before attempting to assemble, operate or service this blast cabinet. Failure to comply with these instructions could result in personal injury and/or property damage!**

**Keep these instructions for future reference.**

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When unpacking blast cabinet, inspect unit carefully for any damage that may have occurred during transit.

## **GENERAL SAFETY INFORMATION**

Follow all electrical and safety codes, as well as the National Electric Code (NEC) and OSHA.

**Do Not** operate cabinet or air flow with cabinet door or top open.

**Do Not** use fluids or mix fluids with blast media for blasting. This cabinet is designed to accommodate dry blasting media only.

Keep floor around machine cleaned of media. Most forms of blasting materials are very fine and as a result, slippery.

Important note – check and clean your dust collector frequently

Do not exceed maximum operating pressure of 125 PSI.

Do not use any form of silica sand in cabinet.

**Warning: Do not use sand or any abrasive containing silica. Use of compounds containing silica is a health hazard. Free silica, when inhaled, can lead to silicosis, a potentially fatal disease.**

**WARNING: DO NOT OPERATE CABINETS, OR AIR FLOW WITH CABINET DOOR OR TOP OPEN. THIS COULD RESULT IN SKIN DAMAGE, SERIOUS EYE DAMAGE OR BLINDNESS IF THE BLAST WERE TO COME IN CONTACT WITH UNPROTECTED PARTS OF THE BODY.**

**WARNING: THIS IS A DRY-BLAST UNIT, IT IS NOT MADE TO ACCOMMODATE MOISTURE OR FLUIDS OF ANY KIND USED SEPARATELY OR AS A MIX WITH BLAST MEDIA**

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# Unpacking and Assembly

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**When unpacking your blast cabinet, inspect the unit carefully for any damage that may have occurred during transit.**

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## **DO NOT USE QUICK DISCONNECTS**

Attach the light box assembly and foot pedal to the cabinet (both can be found in the cardboard box inside the cabinet). Attach your air-line to the safety switch (see assembly diagram). Use ½" inside diameter air hose with a brass hose barb 3/8" NPT. (Smaller I.D. hose will affect cabinet performance by restricting the incoming air flow).

Plug dust collector's electric cord into outlet in light box assembly. Plug the electric cord from light box into a 110 volt 60 cycle electric line.

Attach one end of dust collector hose to dust collector and insert other end into hole in right side or back of cabinet.

To ready the system, pour approximately 25 to 50 pounds of sandblasting media into the hopper of the cabinet through door opening. Note: your media must not cover the air intake end of the siphon tube.

Air pressure may be regulated anywhere between 10 PSI and 120 PSI depending on the job to be done and media used. Most jobs will be done at pressures of 60 PSI to 80 PSI. Remember when using glass bead, media pressures above 80 PSI will cause your media to fracture and turn to dust.

Softer metals and materials or delicate parts should be cleaned at lower pressures. Non-critical parts requiring rapid cleaning may be done with higher air pressures for speed. It's important to keep in mind that higher pressures will cause media to break down. Nozzles also wear out twice as fast at a PSI of 100 compared to a PSI of 80.

For best results, operator should provide continuous gun movement over work surface. This will produce a nice consistent finish. Lower pressure produces fine finishes.

To blast, insert arms into gloves, grasp blast gun and depress foot pedal (or use trigger on trigger gun.)

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## **PARTS LIST FOR AIR SYSTEM**

<b>DESCRIPTION</b>	<b>Part #</b>
2. Door safety switch	411706
3. Air hose connecting safety switch to pressure regulator (40")	201863
4. Pressure regulator	411116R
5. Air gauge only	411116G
6. Siphon tube	201785
7. Air hose connecting regulator to foot pedal (53")	201412
8. Foot pedal	201714YW
9. Trap door spring	411601
10. Trap door gasket	410545
11. Air hose connecting foot pedal to brass elbow (66")	201715
12. Trap door	
13. Air inlet connecting air hose from foot pedal to cabinet	411100
13A. 3/4" - 16 Hex nut air inlet to cabinet	411551
14. Gun hose connecting gun to cabinet (40")	201883
15. Gun	
16. Abrasive hose - order in ft. 5 req'd	413403

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### **IMPORTANT**

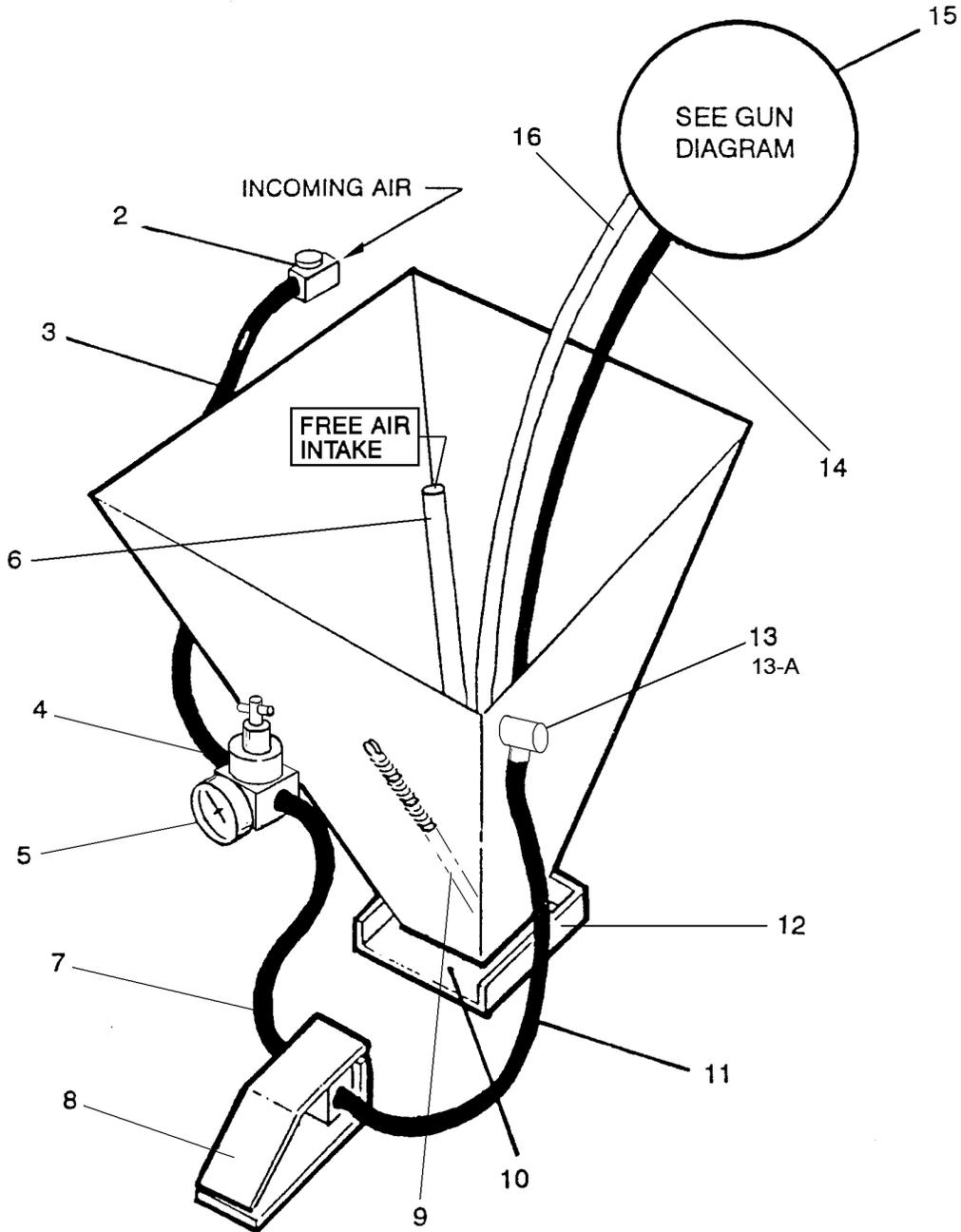
Call 1-800-253-9968 for assistance in locating an ECONOLINE distributor in your area.

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## ASSEMBLY DIAGRAM FOR AIR SYSTEM

**Note:** All valves and regulators have a marking "Air In & Out" or they have an arrow indicating direction of air flow. They will not work if reversed.

**Important:** End of siphon tube (free air intake) must be open for abrasive flow.



## **PARTS LIST FOR BLAST CABINET**

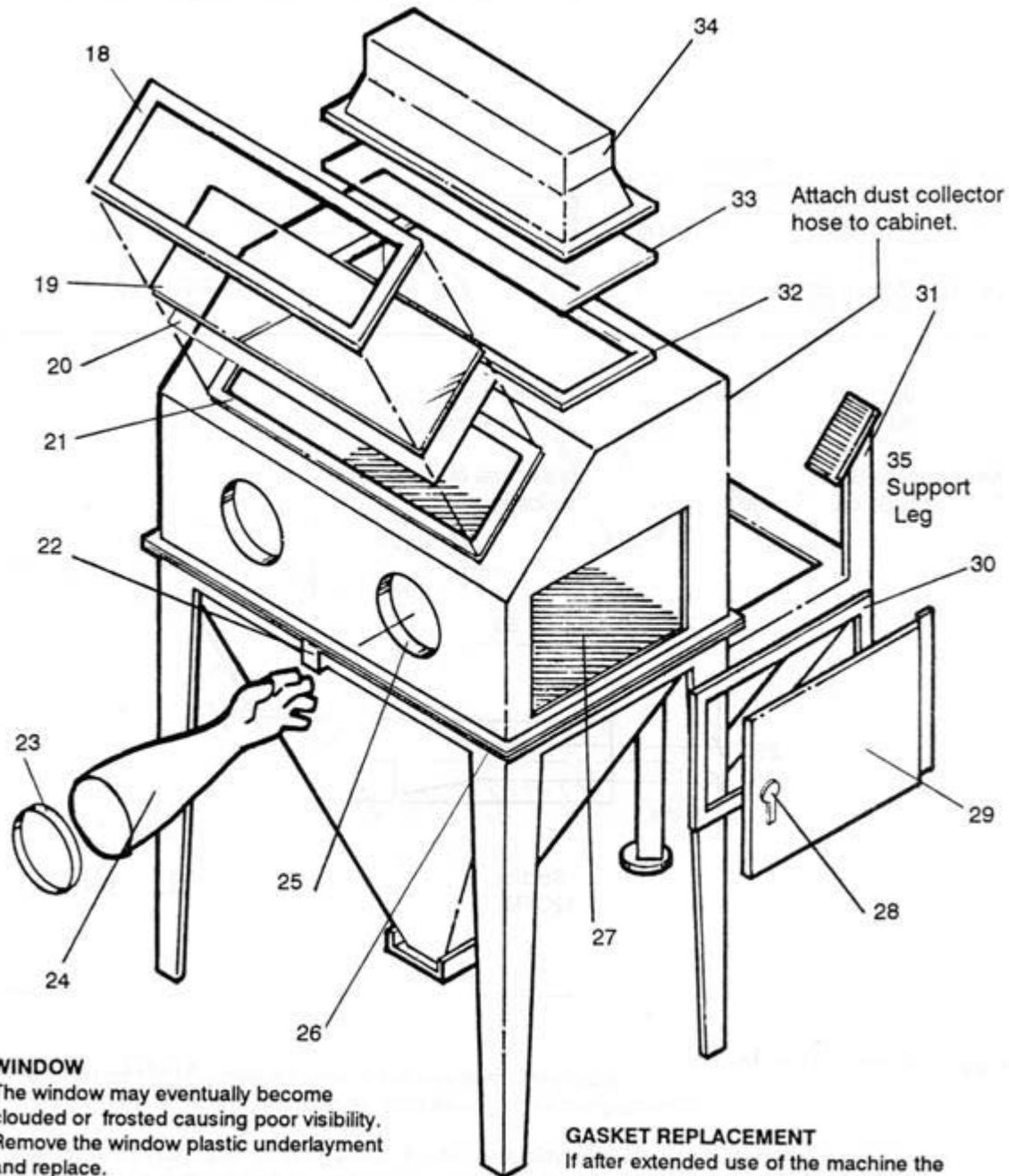
<b>DESCRIPTION</b>	<b>Part #</b>
18. Window frame	309344-66
19. Window plexi-glass 12" x 24"	411405
20. Window underlayment	311535
21. Window gasket material Specify number of feet required	411403
22. Latch flip top	411703
23. Glove clamp (pair)	414511
24. Gloves 24" x 6" (pair) Lefthand only Righthand only	412002 412003L 412003R
25. Armhole gasket	411402
26. Flip top gasket Specify number of feet required	411403
27. Work table (expanded metal)	201338
28. Side door handle assembly (set)	411701 411702
29. Side door	201326-66
30. Side door gasket Specify number of feet required	411403
31. Back rack support	202002-66
32. Lamp box gasket material	411403
33. Lampshield rigid plastic 12" x 25"	411422
34. Lamp box assembly complete	202835-LED

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### **IMPORTANT**

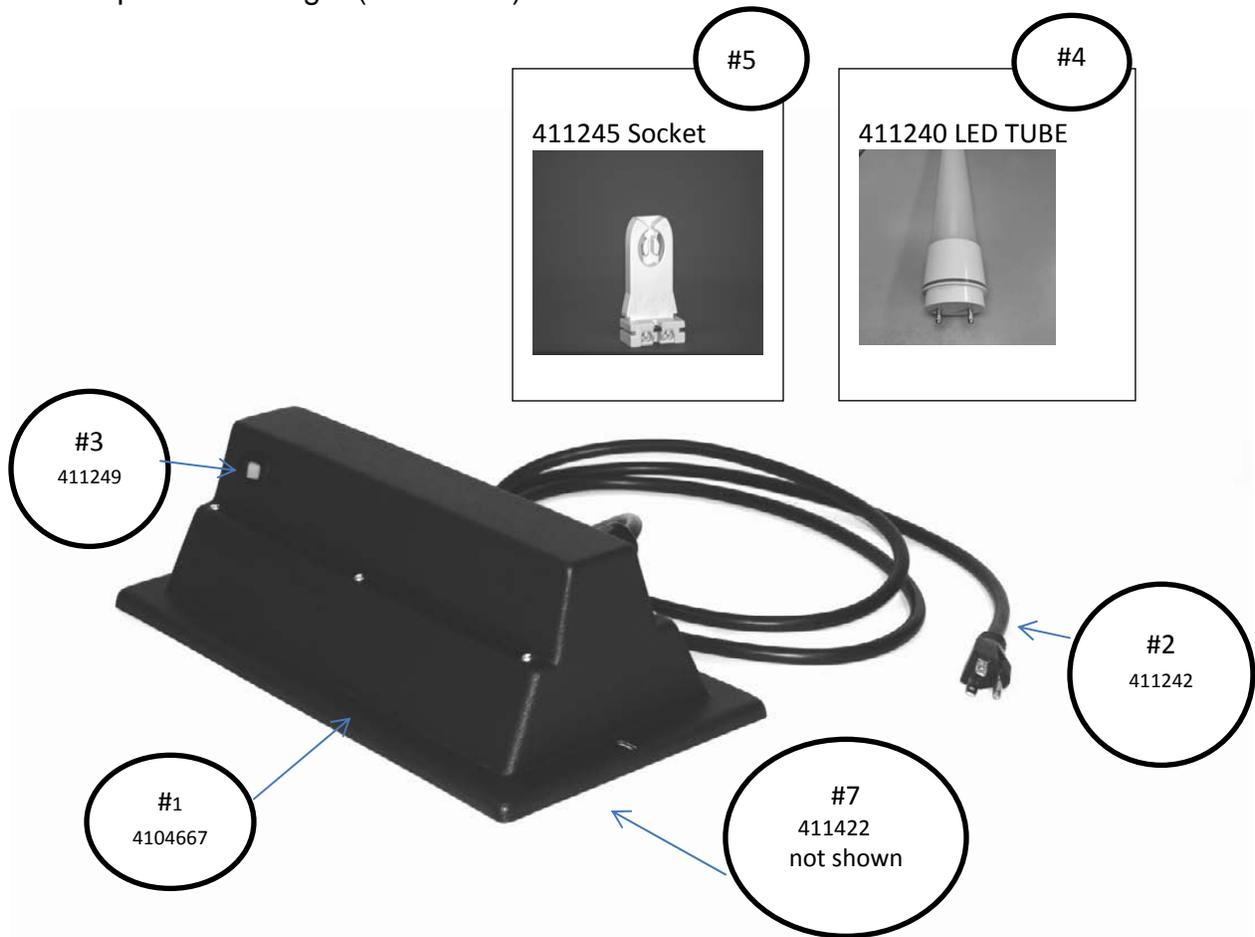
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## ASSEMBLY DIAGRAM FOR BLAST CABINET



# PARTS LIST FOR LARGE LIGHT BOX COMPLETE ASSEMBLY #202835-LED

<u>DESCRIPTION</u>	<u>PART NUMBER</u>
1. Light Box cover only	410466
2. Power Cord	411242
3. Light Switch (on/off)	411249
4. LED tube 7W / T8 / 5000K (2 required)	411240
5. Socket	411245
6. Lamp Shield – large (not shown)	411422



**WARNING:** This fixture has been modified and no longer operates fluorescent lamps. Ballast has been removed and there is line voltage being supplied to sockets. **DO NOT INSTALL FLUORESCENT LAMPS.**

# Gun overview

## Parts List

<i>Part Description</i>		Part #
1. Tungsten carbide nozzle	12 CFM 9/16" O.D. x 1/4" I.D.	410201
	25 CFM 3/4" O.D. x 5/16" I.D.	201382
	45 CFM 3/4" O.D. x 7/16" I.D.	410209
	-Boron carbide nozzle (optional upgrade) 12 CFM	410208
	25 CFM	410207
	45CFM	410206
2. Gun body	12 CFM	201756
	25 CFM	201757
	Pistol grip (fits both 25 and 45 CFM nozzles)	201775
3. Air jet assembly	12 CFM 1/8" I.D.	201394
	25 CFM 5/32" I.D.	201383
	25 CFM for Pistol grip	201851
	45 CFM	201541
4. Complete Gun Assembly	12 CFM	201379
	25 CFM	201381
	Pistol grip -25 CFM	201540
	-45 CFM	201542

The standard nozzle supplied with cabinet is manufactured from tungsten carbide. Note the tapered end of the nozzle goes inside the gun (see drawing).

Boron carbide nozzles are available as an optional upgrade. This material is harder than tungsten carbide and should resist wear longer.

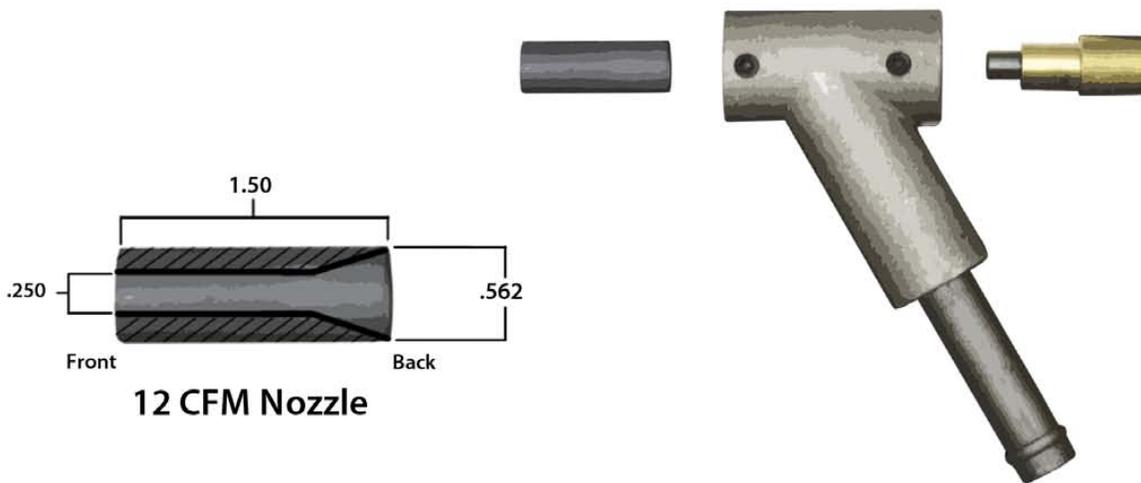
# Gun Diagrams

This blast gun is designed to create a static vacuum. This vacuum draws abrasive through siphon tube and abrasive hose into gun body, where compressed air pushes media through blast nozzle.

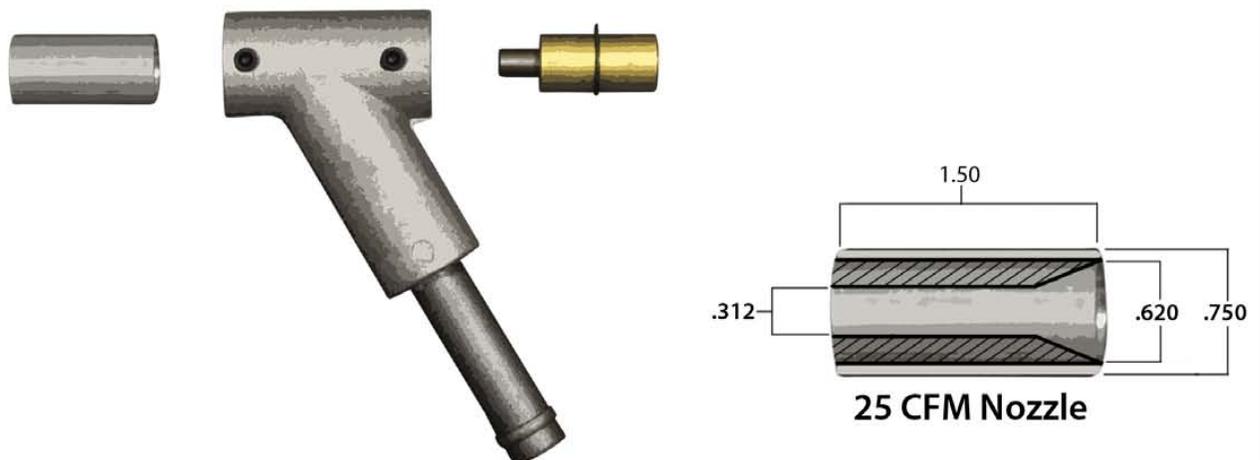
Maintenance and repair of this gun can be done quickly and simply. Loosen allen head screws in gun body to remove and inspect nozzle and air jet for wear.

Excessive wear on either of these parts will cause poor abrasive flow, and blast pattern.

## 12 CFM Gun Assembly



## 25 CFM Gun Assembly



# Pistol Grip Gun Diagram

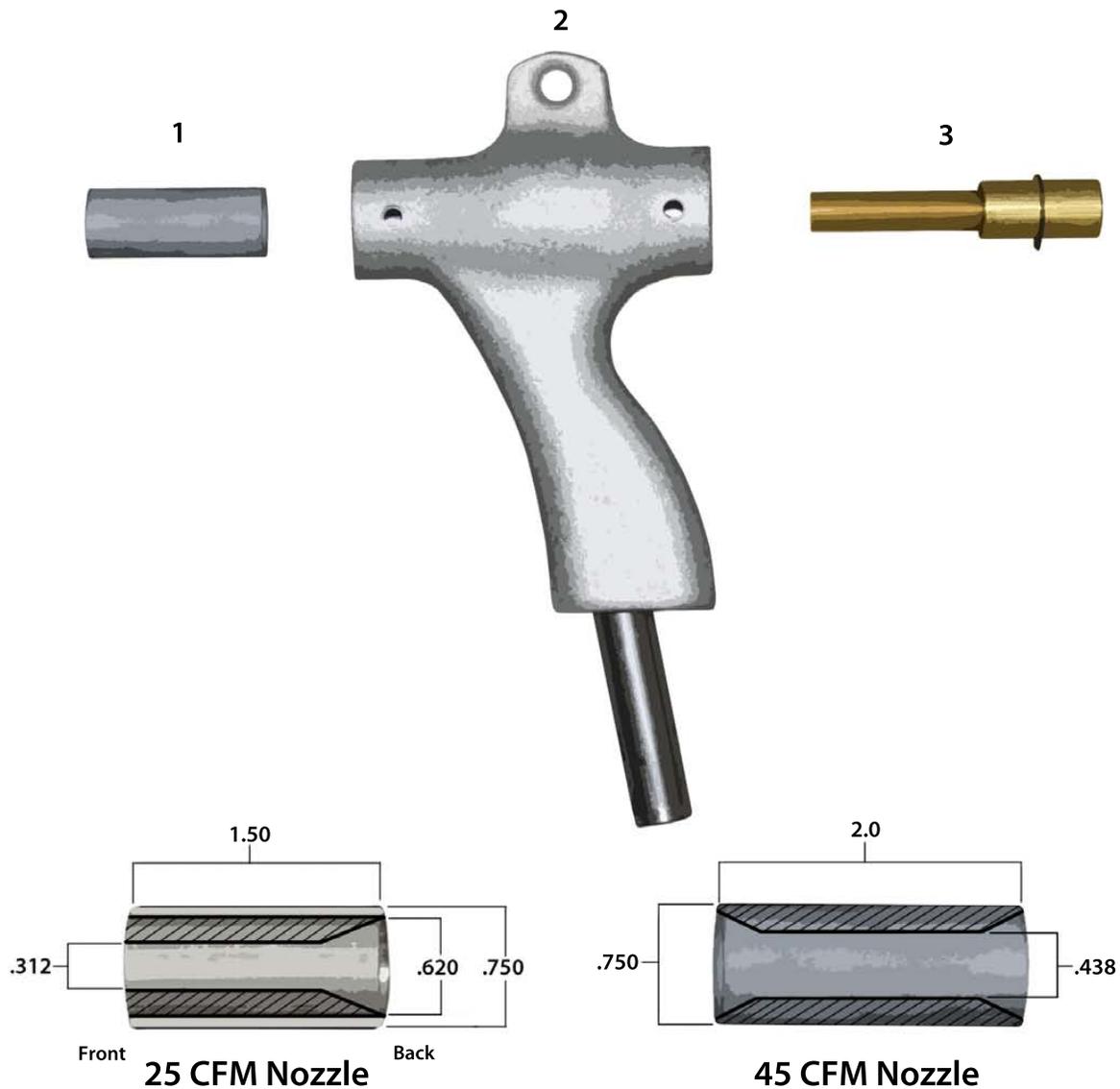
This blast gun is designed to create a static vacuum. This vacuum draws abrasive through siphon tube and abrasive hose into gun body, where compressed air pushes media through blast nozzle.

Maintenance and repair of this gun can be done quickly and simply. Loosen allen head screws in gun body to remove and inspect nozzle and air jet for wear.

Excessive wear on either of these parts will cause poor abrasive flow, and blast pattern.

Note: The 25 CFM nozzle fits both the regular 25 CFM gun body and the pistol grip gun body.

## 25 & 45 CFM Gun Assembly



# Maintenance

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Check gun's blast nozzle and air jet occasionally for signs of wear. When the opening inside the nozzle becomes too large, the result will be a poor blast pattern. If the gun fails to throw media, check abrasive hose, siphon tube and gun body for blockage or leaked air. Excessive wear of air jet will also cause poor or complete loss of abrasive flow.

Water and/or oil in your air line will cause problems with the efficiency of your blasting. Before blasting, always drain water and/or oil from your air lines and compressor. We suggest a quality water filter be installed in the air line between compressor and blast cabinet.

Good visibility speeds up work; Clean dust from window often and replace the plastic window underlayment and window when needed. The lamp shield will also become frosted and require replacement. Visibility is also greatly affected by the condition and type of dust collection system you use. Filters should be cleaned often and dust emptied from canister regularly (more than a gallon of debris is too much).

If after extended use of the machine the gasket around the door or window(s) becomes damaged or worn, it can be replaced (see cabinet overview).

This equipment is designed to the finest point of simplicity. With reasonable care it should give you many years of excellent service.

Blasting by its very nature is a high maintenance process. The same forces acting to separate materials from targeted pieces wear on the system itself.

Keep spare parts in stock to avoid down time.

# TROUBLESHOOTING CHART

SYMPTOM	POSSIBLE CAUSES	CORRECTIVE ACTION
Too much dust in cabinet	<ol style="list-style-type: none"> <li>1. Exhaust unit not functioning efficiently.</li> <li>2. Media is broken down or deteriorated.</li> </ol>	<ol style="list-style-type: none"> <li>1. All models. Remove lid from exhaust canister and clean cloth filter</li> <li>2. Replace blasting media</li> </ol>
Noticeable speed and efficiency are lost in blasting operation	<ol style="list-style-type: none"> <li>1. Media is broken down or deteriorated from constant use.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace media</li> </ol>
Static Electricity	<ol style="list-style-type: none"> <li>1. Weather conditions, excessive dust in unit</li> </ol>	<p><b>1. Proceed as follows:</b></p> <ol style="list-style-type: none"> <li>a. Properly ground the machine</li> <li>b. Allow work piece to rest on the work table grating in the unit. This will discharge static electricity through the cabinet into the unit's ground wire.</li> </ol>
Poor Blast Pattern	<ol style="list-style-type: none"> <li>1. Worn nozzle</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace nozzle</li> </ol>
Poor Abrasive Flow	<ol style="list-style-type: none"> <li>1. Abrasive level too low</li> <li>2. Dirty abrasives</li> <li>3. Wet abrasives</li> <li>4. Worn air jet</li> <li>5. Worn nozzle</li> <li>6. Worn siphon tube</li> <li>7. Insufficient air               <ol style="list-style-type: none"> <li>a. When machine stands idle, check pressure gauge. With foot pedal depressed, needle on gauge should not drop below desired blasting pressure</li> <li>b. Needle should hold steady and not drop during blasting</li> </ol> </li> <li>8. Nozzle installed backwards</li> <li>9. Clogged gun</li> <li>10. Plugged siphon tube</li> </ol>	<ol style="list-style-type: none"> <li>1. Add abrasives</li> <li>2. Replace, possibly install filter screen</li> <li>3. Replace, possibly install water filter</li> <li>4. Replace</li> <li>5. Replace</li> <li>6. Replace</li> <li>7. <b>Proceed as follows:</b> <ol style="list-style-type: none"> <li>a. Larger compressor, larger air line, smaller gun</li> <li>b. Larger compressor, smaller gun</li> </ol> </li> <li>8. Cone shaped end should be installed in towards air jet</li> <li>9. Take apart, clean &amp; reassemble</li> <li>10. Check to see that hole is clear on both sides of the siphon tube</li> </ol>

# What media to use

## Brown Aluminum Oxide

Widely used as a cutting media. It can produce an "anchor" pattern in preparation for re coating. It's excellent for removing heavy foreign matter, de burring, frosting glass and lettering stone. It is extremely fast cutting, can be reused many times and is classified in various sizes for a wide selection of finishes.

## Glass Beads

Available in a wide range of sizes, glass beads are generally the most popular media used in most cabinets today. This all-purpose media is used for honing, polishing, peening, blending, finishing, removing light burrs and cleaning most light foreign matter such as carbon and other surface residues from pistons and valves. Glass bead will not damage the base metal or change its dimensions. Weld and solder flaws can also be detected via glass bead blasting.

## Black Silicon Carbide

When blasting silicon carbide is extremely fast cutting, this sharp media is used for cleaning very hard surfaces such as tungsten carbide.

## Corn Cob

Cleans metal, wood, fiberglass, plastic, masonry, and electric insulators. Won't frost glass, pit aluminum or damage surfaces. Corn cob is the softest media available.

## Black Beauty

A cheaper alternative to aluminum oxide, it breaks down quickly but is ideal for light paint/rust removal from harder surfaces

## Economix

A mixture of glass bead and aluminum oxide this media finds a nice middle ground. Able to remove corrosion glass bead is unable to but less aggressive than pure aluminum oxide.

\*All of Econolines media products encompass finishing, cleaning/removal, and surface treatment

	A.O.	G.B.	S.C.	C.C.	B.B.	E.M.
Cleaning speed	High	Med	Very high	Med	High	Med-high
Re-use	Med-high	High	Med-low	Med-high	Med-low	Med-high
Dust level	High	Low	Med-low	Low	Med	Med
Metal removal	Med-high	Very low	Med-high	Very low	Med-high	Med
Hardness (moh scale)	8-9	5.5	9	4.5	7-7.5	5-6, & 7
Typical blast pressure	20-90	20-55	20-90	20-90	20-90	20-75
Angular or spherical	Angular	Spherical	Angular	Angular	Angular	Both

# ECONOLINE®

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## **Warranty**

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This product has been manufactured and engineered to the highest standards.

### **Five Year Warranty**

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Econoline Abrasive Products guarantees its blast cabinets against defects in material and workmanship for a period of five years from the established purchase date. Econoline will repair or replace, free of charge, any defective parts determined to be covered under this warranty by our factory service personnel.

The parts must be returned to the factory, freight prepaid, with a letter of explanation. Upon acceptance of claim, Econoline will replace the defective part.

### **Conditions**

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This warranty does not apply if the unit has been misused, altered, or used for any purpose other than in accordance with the operating and assembly instructions provided.

This warranty does not cover transportation, interior or exterior finishes, hose assemblies, nozzles, air jets, windows, filters, lamp shields, or media valves.

**OPERATION OF THIS UNIT WITH NATURAL SAND WILL VOID THIS WARRANTY**

## **WARNING:**

**DO NOT USE SAND OR ANY ABRASIVE CONTAINING SILICA. USE OF COMPOUNDS CONTAINING SILICA IS A HEALTH HAZARD. FREE SILICA WHEN INHALED CAN LEAD TO SILICOSIS, A POTENTIALLY FATAL DISEASE.**

