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# ECONOLINE®

[www.sandblasting.com](http://www.sandblasting.com)

- RA 24-0 super
- RA 30-0 super
- RA 36-1 super
- RA 48-2 super

CFM  12  25

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.)



## Blast cabinet manual

### **Page of Contents**

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Contents and contact information

General safety information

Unpacking and assembly

Cabinet overview

Air-pressure system overview

Light box overview

Gun overview

Cabinet maintenance

Selecting a media

Warranty

### **Contact Information**

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# ***Blast Cabinet Instructions***

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

**Keep these instructions for future reference.**

## **General Safety Information**

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

**Do Not** operate cabinet, or airflow 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 media are fine and as a result slippery.

Important note - check and clean dust collector unit regularly (see instructions included with machine).

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 CABINET, OR AIR FLOW WITH CABINET DOOR OR TOP OPEN. THIS CAN 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.**

# 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.

## Assembly

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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 1/2" 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 the dust collector's electric cord into the outlet in the lamp box. Plug the electric cord from the lamp box into a 110 volt 60 cycle electric line.

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

To ready the system, pour approximately 25 to 50 pounds of sandblasting media into the hopper of the cabinet through the door opening.

Note: media must not cover 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 the media used. Most jobs will be done with a PSI between 60 to 80. Remember, when using glass bead media, pressures above 80 PSI will cause media to break down and turn to dust.

Softer metals and materials or delicate parts should be cleaned at lower pressures.

Noncritical parts requiring rapid cleaning may be done with higher pressure 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 the best results operator should provide continuous gun movement over the work surface. This will produce a nice consistent finish. Lower pressures produce fine finishes.

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

# Cabinet overview

## Parts List

<i>Part Description</i>			<b>Part #</b>
1. Window Frame	(24-0 & 30-0)		309430-66
	(36-1 & 48-2)		309344-66
2. Window Plexiglass	(24-0 & 30-0)		411412
	(36-1 & 48-2)		411405
3. Window underlayment	1 pc 24" x 120" or		311535
	10 precut pieces 12" x 24"		313286
4. Front latch assembly			411712
5. Glove clamp (1 pair)			414511-2
6. Gloves 24 x 6	Pair		412002
	Left hand only		412003L
	Right hand only		412003R
7. Gasket	1/2 "x 1" For: Doors, Windows & Light		411403
	1/4" x 2" Arm ports		411402
	5/16" x 1/2" Front flip door		411401
<b>*(when ordering gaskets specify the number of feet.)</b>			
8. Front door assembly			
9. Expanded metal work surface for:	24-0		201342
	30-0		201344
	36-1		201345
	48-2		201347
10. Lamp shield:	12.5" x 6.875" (24-0 & 30-0)		411423
	12" x 25" (36-1 & 48-2)		411422
11. Light box assembly:	Small (24-0 & 30-0)		202836-LED
	Large (36-1 & 48-2)		202835-LED
12. Grommet			411430

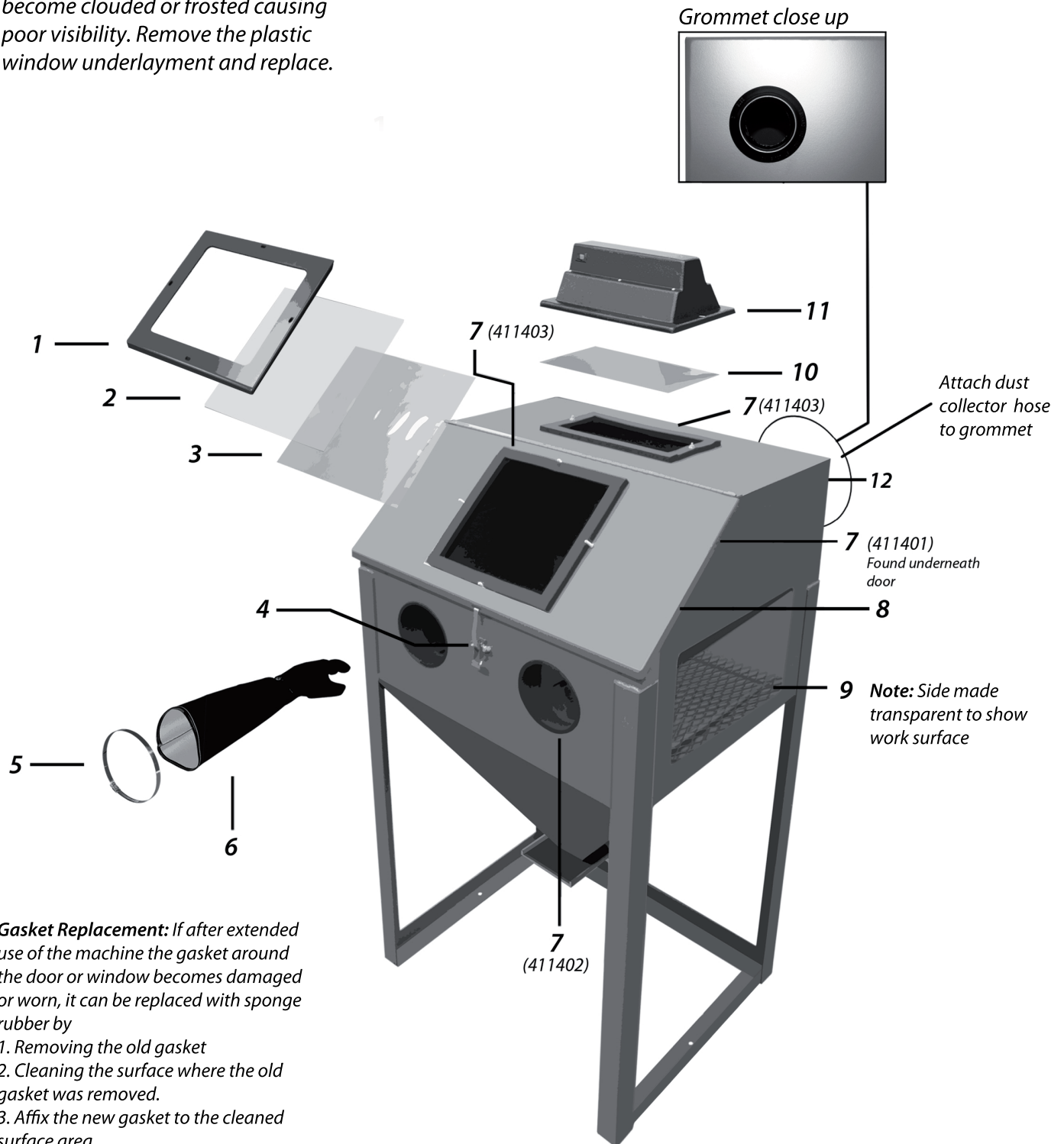
## RA 36-1 & RA 48-2 only

13. Side door handle:	Handle		411701
	Latch		411702
14. Side doors:	Right side		201326-66
	Left side		201532-66

\*Call 1-800-253-9968 for assistance in locating an Econoline distributor in your area

# 24-0 & 30-0 Cabinet Diagram

**Window:** The window may eventually become clouded or frosted causing poor visibility. Remove the plastic window underlayment and replace.



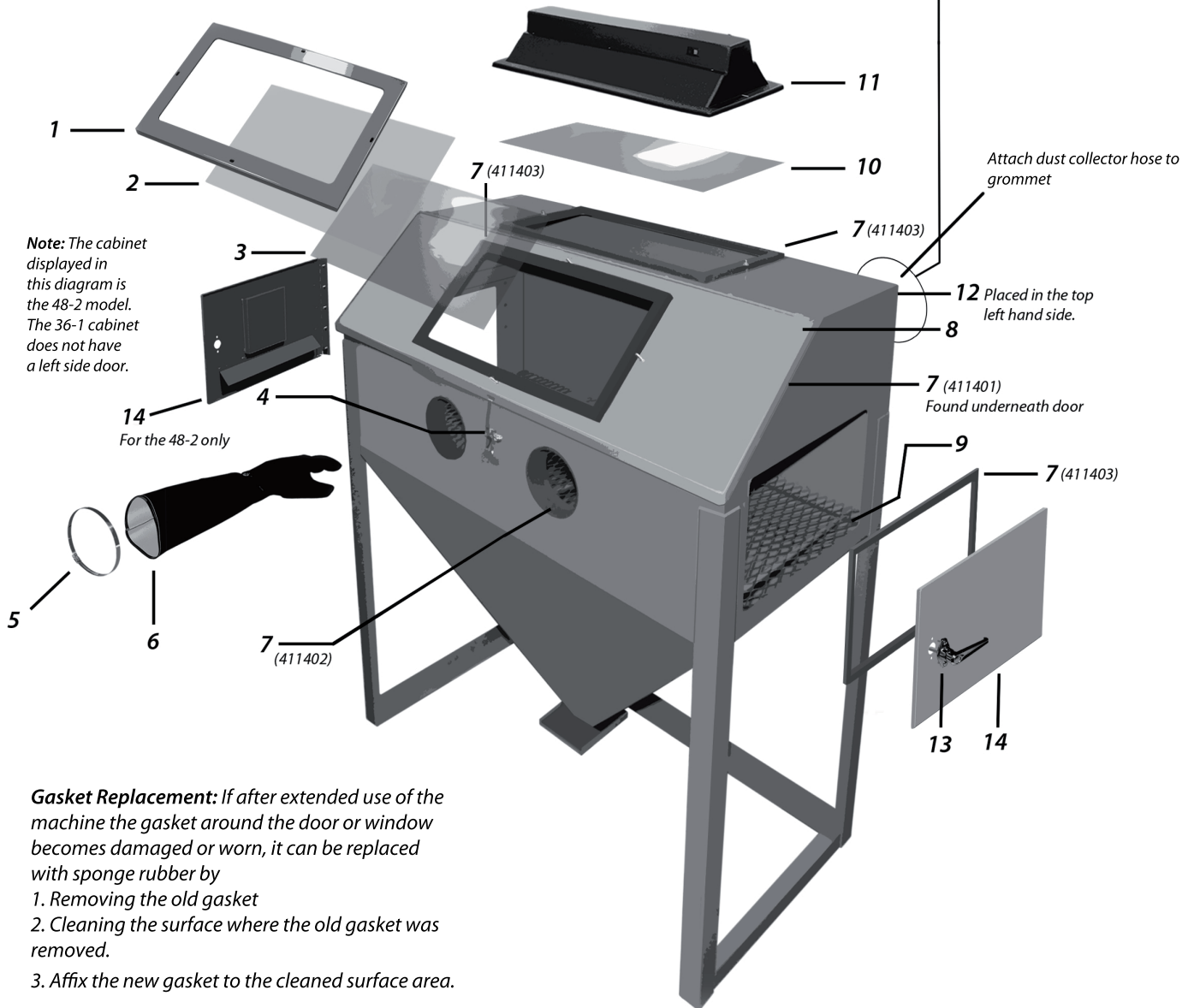
**Gasket Replacement:** If after extended use of the machine the gasket around the door or window becomes damaged or worn, it can be replaced with sponge rubber by

1. Removing the old gasket
2. Cleaning the surface where the old gasket was removed.
3. Affix the new gasket to the cleaned surface area.

# 36-1 & 48-2 Cabinet Diagram

**Window:** The window may eventually become clouded or frosted causing poor visibility. Remove the plastic window underlayment and replace.

Grommet close up



# Air system overview

## Parts List

<i>Part Description</i>		<i>Part #</i>
1. Air intake		
2. Door safety switch		411706
3. Air hose connecting safety switch to	24-0, 30-0, & 36-1	201863
pressure regulator	48-2	201864
4. Pressure regulator		411116R
5. Air gauge only		411116G
6. Siphon tube - universal		201785
7. Air hose connecting regulator to foot pedal		201715
8. Foot Pedal		201714YW
9. Trap door spring		411601
10. Trap door gasket		410545
11. Air hose connecting foot pedal to air inlet		201715
12. Trap door		201325-A
13. Air inlet:	Main component	411100
	Hex nut 3/4"	411551
14. Gun hose: (Connecting gun inside cabinet)		
- for 24-0 & 30-0		201882
- for 36-1		201883
- for 48-2		201872
15. Clear abrasive hose (order in feet)		413403
16. Gun (complete)	(see gun overview)	

\*Call 1-800-253-9968 for assistance in locating an Econoline distributor in your area

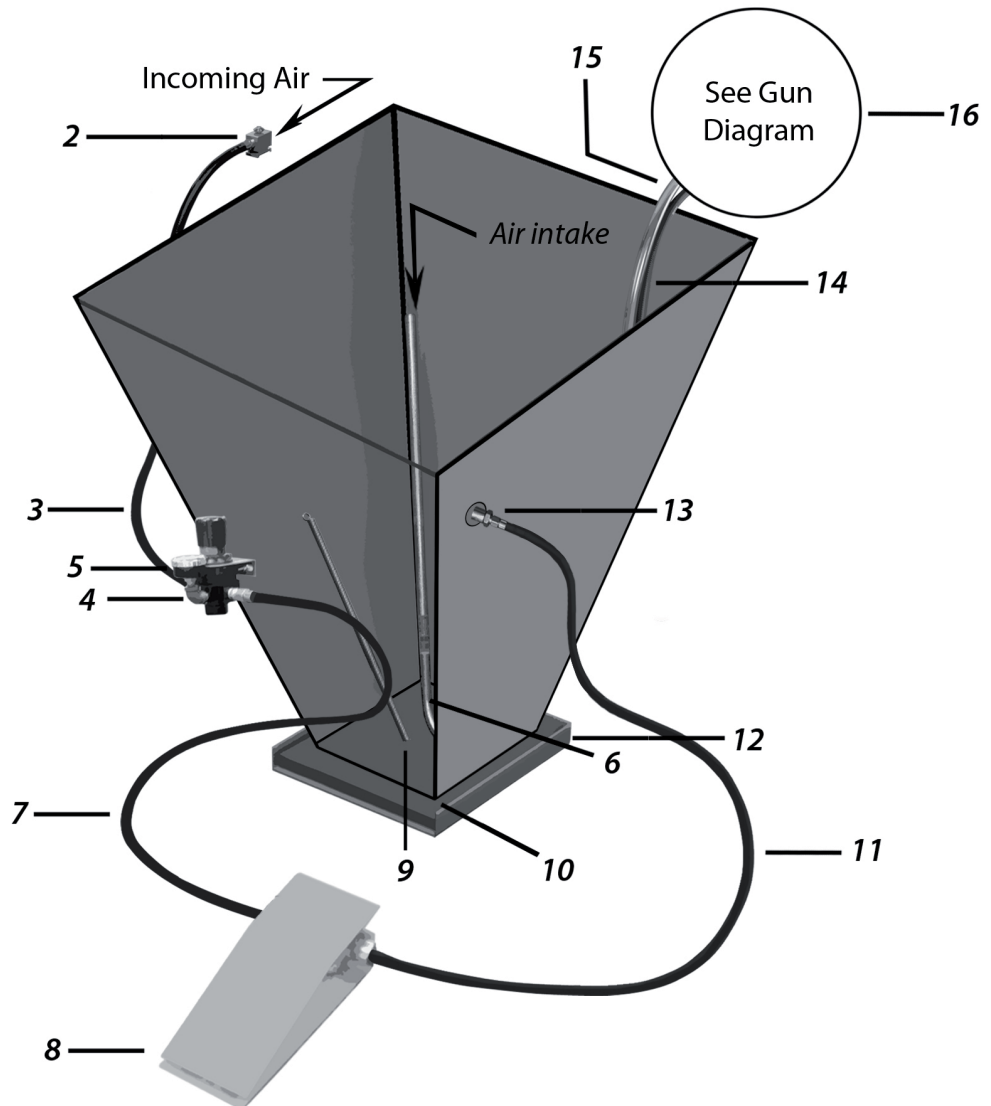


# Air System Diagram

## Notes:

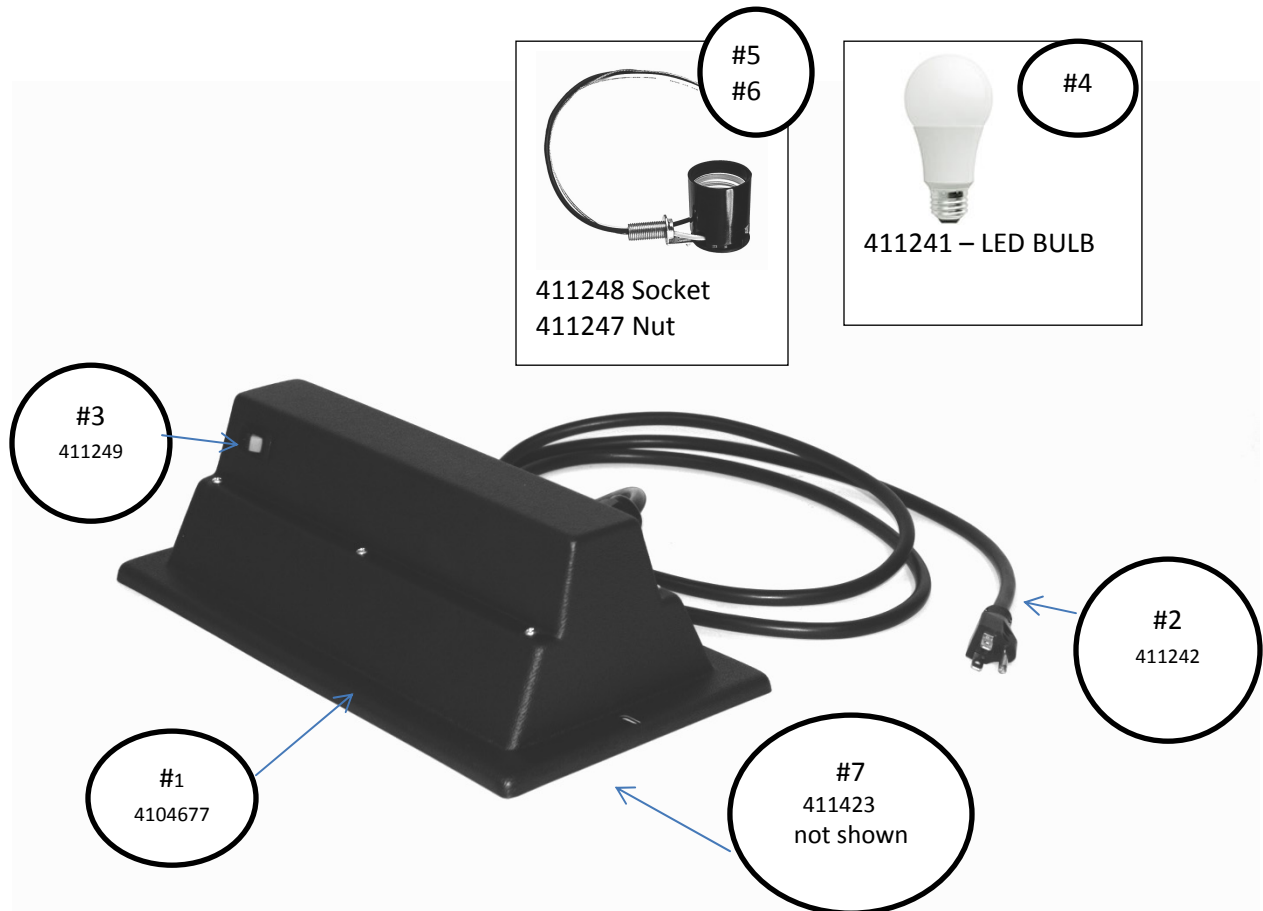
All valves and regulators have a marking "Air In & Out" or they have an arrow indicating direction of air flow. They will not work if reversed.

The end of the siphon tube (free air intake) must be open for abrasive to flow.



# PARTS LIST FOR SMALL LIGHT BOX COMPLETE ASSEMBLY #202836-LED

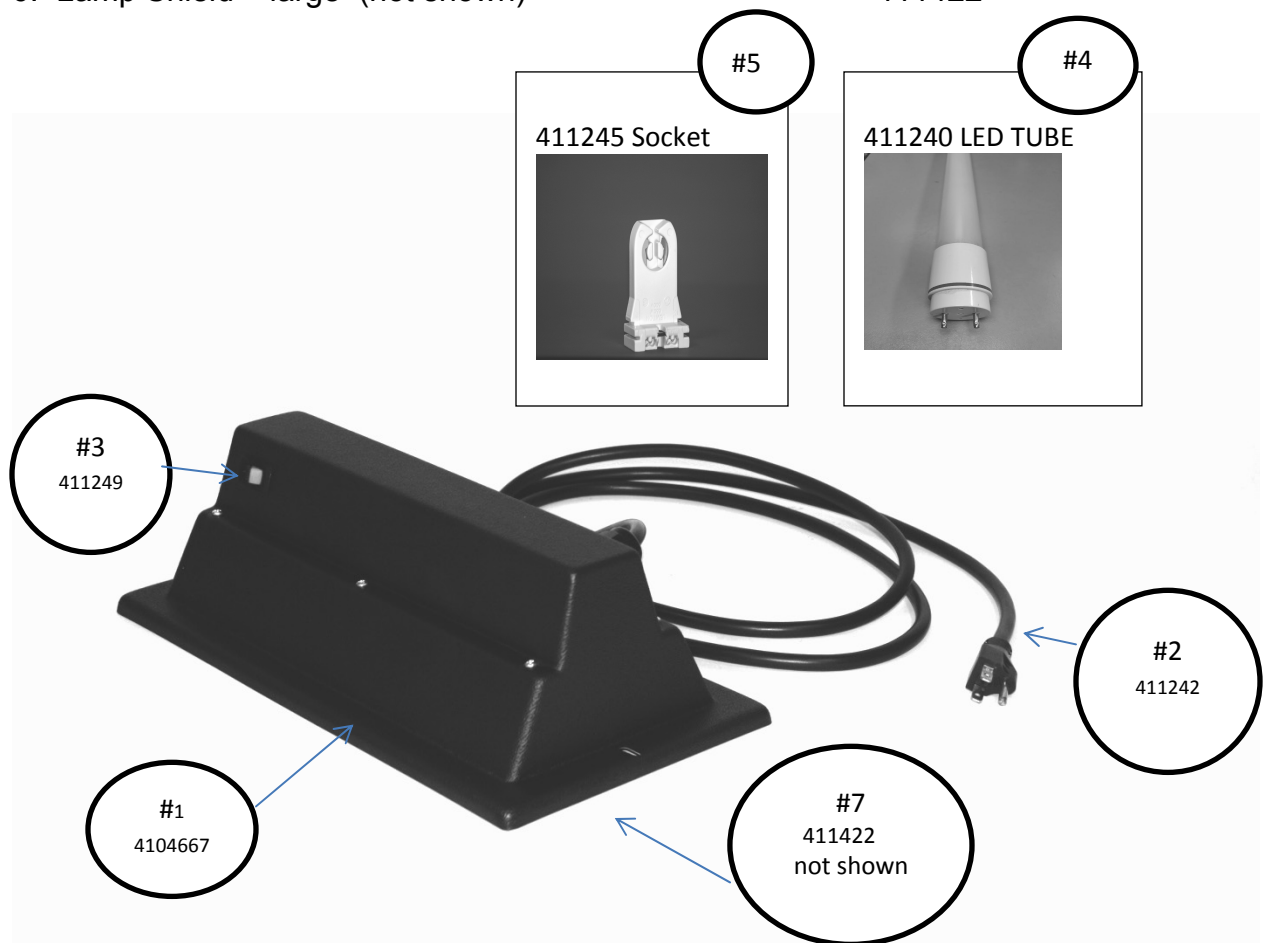
<u>DESCRIPTION</u>	<u>PART NUMBER</u>
1. Light Box cover only	410467
2. Power Cord	411242
3. Light Switch (on/off)	411249
4. Light Bulb LED A19 / 5000K / 9 WATT	411241
5. Light bulb Socket	411248
6. Nut for Socket (not shown)	411247
7. Lamp Shield small (not shown)	411423



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# 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

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## Parts List

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<i>Part Description</i>		<i>Part #</i>
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
-Boron carbide nozzle (optional upgrade)	12 CFM	410208
	25 CFM	410207
2. Gun body	12 CFM	201756
	25 CFM	201757
3. Air jet assembly	12 CFM 1/8" I.D.	201394
	25 CFM 5/32" I.D.	201383
4. Complete Gun Assembly	12 CFM	201379
	25 CFM	201381

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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.

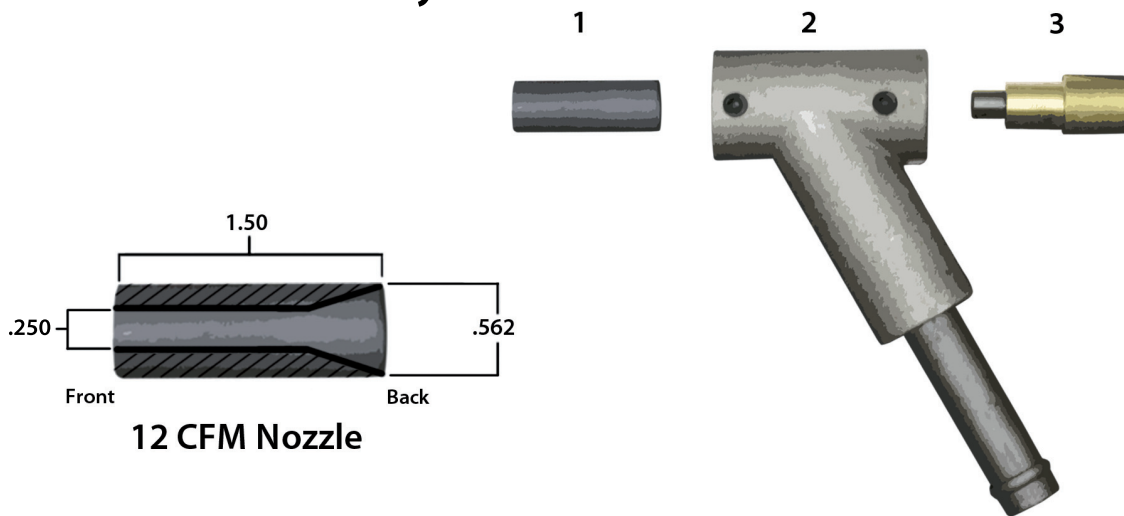
# Gun Diagrams

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.

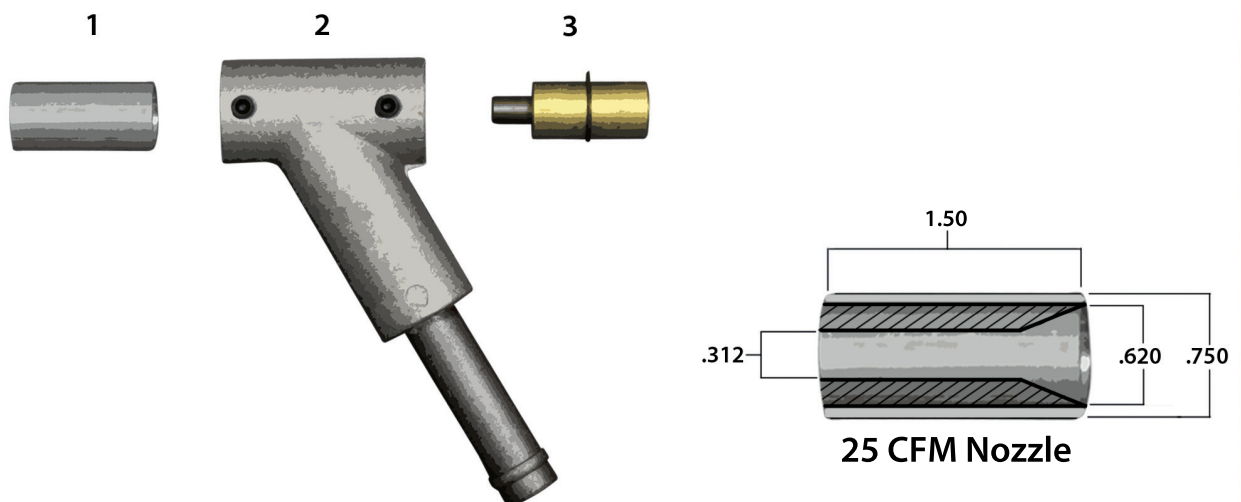
Maintenance and repair of this gun can be done quickly and simply. Loosen allen head screws in gun body to remove and inspect nozzle and air jet for wear.

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

## 12 CFM Gun Assembly



## 25 CFM Gun Assembly



# 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.

# 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



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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.**