

**ABRASIVE CLEANER
MANUAL #20547**

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 **WARNING**

Do not proceed with these instructions until you have READ the orange cover of this MANUAL and YOU UNDERSTAND its content.* These WARNINGS are included for the health and safety of the operator and those in the immediate vicinity.

***If you are using a Clemco Distributor Parts and Maintenance Guide refer to the orange warnings insert preceding the Index before continuing with the following instructions.**

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1.0 INTRODUCTION

1.1 Scope

1.1.1 This manual covers the set-up, operation, maintenance, troubleshooting and the replacement parts for the Clemco Blast Room Air-wash Abrasive Cleaner.

1.2 Hazard Alerts

1.2.1 Clemco uses signal words, based on ANSI Z 535.2-1991, to alert the user of a potentially hazardous situation that may be encountered while operating this equipment. ANSI's definitions of the signal words are as follows:

! NOTICE

“Notice” is used to indicate a statement of company policy as the message relates directly or indirectly to the safety of personnel or protection of property.

1.3 Description

1.3.1 The Clemco abrasive cleaner is designed for heavy, continuous usage in industrial blast rooms. The unit mounts above the blast machine(s), and is fed by a bucket elevator. Oversized materials, dust and fines (abrasive worn too small for most applications) are automatically discharged, while reusable abrasive is retained and held in the storage section. Abrasive held in the storage section automatically refills the blast machine each time the machine is depressurized.

! NOTICE

A substantial amount of abrasive cleaning should take place in the enclosure ventilation and dust collection system. Should the abrasive to be cleaned by this equipment contain excessive concentrations of fine contaminants due to the absence of an efficient ventilation and dust collection system, this cleaning process may not be able to remove all fines in a single pass.

1.3.2 Typical abrasive cleaner set-ups are shown in Figures 1 and 2. Figure 1 shows the cleaner mounted over a single blast machine. Figure 2 shows a cleaner over two machines using a two-pot stand assembly.

! CAUTION

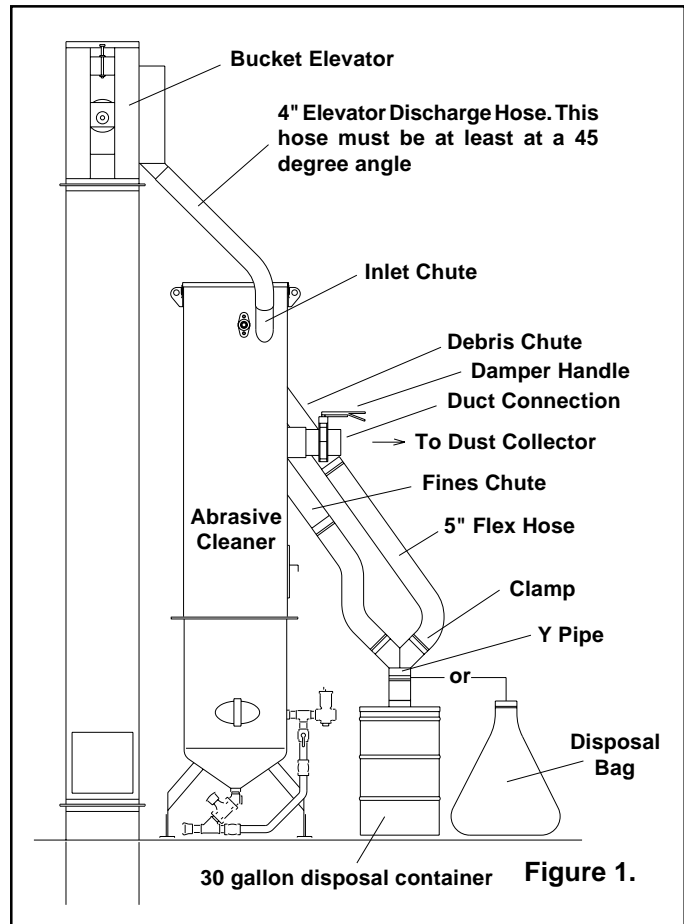
“Caution” is used to indicate a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

! WARNING

“Warning” is used to indicate a potentially hazardous situation which, if not avoided, could result in death or serious injury.

! DANGER

“Danger” is used to indicate an imminently hazardous situation which, if not avoided, will result in death or serious injury.



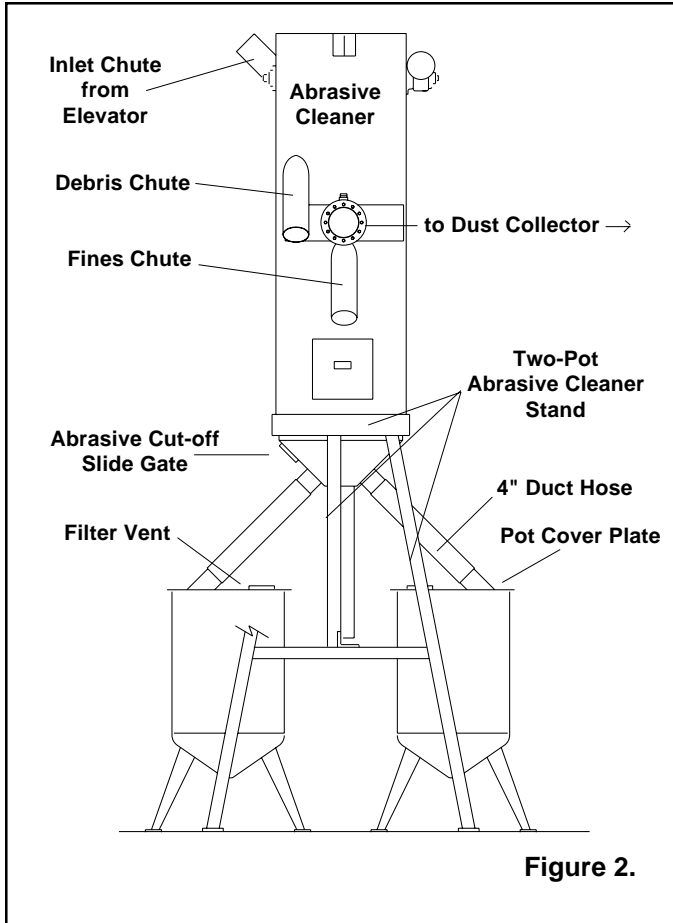


Figure 2.

1.3.3 Abrasive cleaners are furnished in right hand, or left hand models. The difference is which side the drive motor and inlet chute are located. When facing the cleaner's duct connection, right hand cleaners have the drive motor on the right side, left hand units have the drive motor on the left side. The illustration in Figure 3 shows a right hand cleaner.

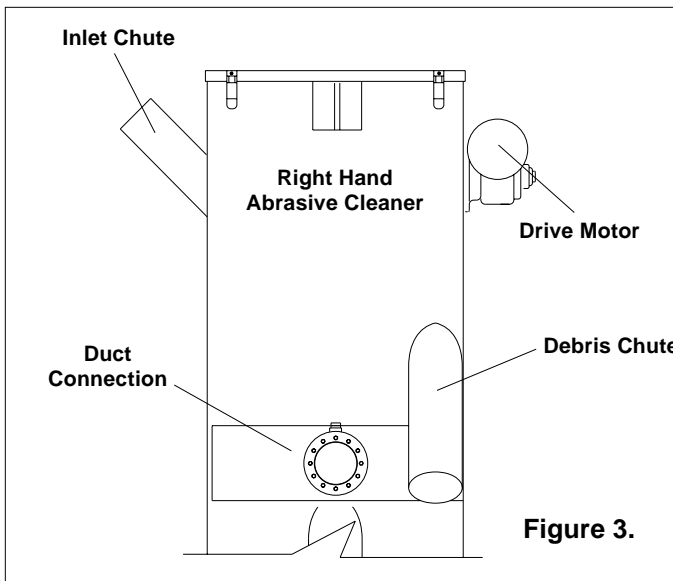


Figure 3.

2.0 INSTALLATION

! WARNING

The blast machine and abrasive cleaner must be assembled and used on a flat, level surface. The blast machine and cleaner must be adequately supported to ensure stability when the cleaner is loaded with abrasive. Failure to secure the blast machine and cleaner could permit them to topple, resulting in death or serious injury.

! NOTICE

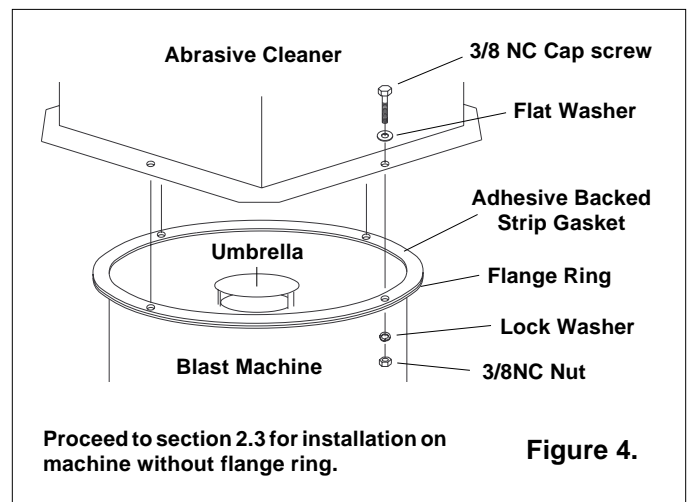
An umbrella must be installed over the blast machine pop-up opening for this application. If an umbrella is not installed, the weight of the abrasive will prevent the pop-up valve from closing.

2.1 Set-Up

2.1.1 The blast machine should be in its permanent position. Uncrate the cleaner in close proximity to the blast machine.

2.1.2 Position the abrasive cleaner so that when it is placed on the blast machine, the inlet chute will be toward the bucket elevator discharge, and the 6" diameter dust collector duct connection is facing toward the dust collector ducting.

2.2 Installation on blast machine with flange ring



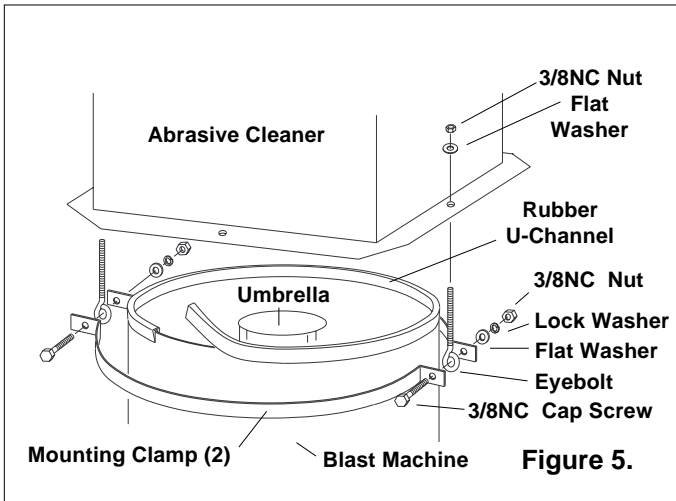
Proceed to section 2.3 for installation on machine without flange ring.

Figure 4.

2.2.1 Install the 5/16" adhesive backed strip gasket to the blast machine flange ring (or two-pot stand flange). Punch out the gasket material to expose covered bolt holes.

2.2.2 Proceed to section 2.4.

2.3 Installation on machine without flange ring
(see Figure 5).



2.3.1 Loosely attach the mounting clamps to the blast machine as shown in Figure 5. The top of the clamps should be approximately 2" to 3" from the top of the machine. Do not tighten the bolts at this time, the abrasive cleaner connections must line up to their connecting components before securing the mounting clamps.

2.3.2 Place the rubber U-channel extrusion over the rim of the blast machine. To obtain a tight seal the ends of the extrusion must be square cut and tightly compressed. Use rubber adhesive to hold the extrusion in place during assembly.

2.4 Common connections

2.4.1 Connect a cable or chain to the cleaner's lifting eyes and hoist the cleaner above the blast machine (or two-pot stand). The abrasive cleaner weighs approximately 600 lbs.

2.4.2 Lower the cleaner onto the blast machine. If the blast machine has a mounting flange, ensure that the bolt holes line up, as the cleaner is lowered straight down to its final position. If the pot attachment clamps is used, align it by guiding the mounting clamp eyebolts into the holes on the cleaner's flange.

2.4.3 Check that the blast machine and cleaner are oriented correctly.

2.4.4 Check the angle between the elevator discharge and abrasive cleaner inlet. The discharge hose must have at least a 45-degree angle to ensure abrasive flow.

2.4.5 Using the fasteners provided, secure the cleaner to the blast machine flange, or mounting clamp as shown in Figures 4 and 5. Ensure that all fasteners are tight.

2.4.6 Anchor the blast machine (or two-pot stand if used) to the floor.

2.4.7 After the blast machine is firmly anchored, remove the lifting chains/cables from the abrasive cleaner.

2.4.8 Connect a 4" discharge hose from the bucket elevator to the abrasive cleaner inlet. If required put a stiffener on the hose to prevent it from sagging under the load of abrasive.

2.4.9 Connect a 6" diameter duct from the duct connection on the cleaner to the dust collector or dust collector ducting. The abrasive cleaner requires 600 cfm of air at 4" static pressure. A straight line duct to the dust collector is ideal. Avoid 90-degree bends where possible.

2.4.10 Attach the 5" x 5' flex hose between the debris chute (upper chute) and one leg of the Y pipe.

2.4.11 Connect the 5" x 4' flex hose between the fines chute (lower chute) and the other leg of the Y pipe.

2.4.12 Position the 30-gallon debris disposal drum (or optional bag) in its permanent location.

2.4.13 Measure the distance between the bottom leg of the Y pipe and 30- gallon drum lid, and cut the 5" x 36" flex hose to connect between the two parts.

2.4.14 Install and tighten all flex hose clamps.

2.4.15 Check that the drum lid is secure on the drum.

! WARNING

Do not work under the cleaner while it is hanging from the lifting devise. Severe injury or death could occur if the cleaner is released from the lift device before it is secured to the blast machine.

!NOTICE

During operation, the abrasive cleaner cover must be secure, and flex hoses must be tight and in a sealed container. The cleaner operates on negative pressure; any leaks will decrease the cleaner's efficiency.

2.4.16 Connect wiring to the motor. Motor is 1/4 HP, 230/460 V. 3 PH, 60 HZ, unless specified otherwise by the user.

! NOTICE

All wiring and motor controls are provided by the purchaser. When used in conjunction with a recovery system and dust collector, components should be interlocked so the dust collector energizes first, abrasive cleaner second and recovery system third.

! WARNING

Shorting electrical components could result in serious electrical shocks, or damage equipment. All electrical work must be performed by a qualified electrician, and comply with applicable codes.

2.4.17 Check the gear reducer oil level.

2.4.18 Jog the motor, and check the rotation of the screened drum, by comparing it to the rotation decal. NOTE: If there is any doubt if the drum is rotating correctly, remove the inlet hose and drop a bolt into the inlet chute. If the drum is rotating correctly, the bolt will be discharged through the trash chute within a few seconds. If the drum is not rotating correctly the bolt will bounce around in the drum, and not be discharged.

3.0 OPERATION

3.1 Abrasive Loading

3.1.1 Abrasive loading should be done in accordance with the instructions provided with the recovery system.

3.1.2 When initially loading the system, calculate the storage capacity of each component. The abrasive cleaner holds approximately 10 cubic feet (cu.ft.) of abrasive, or approximately 2500 lbs. of metallic abrasive. Clemco 6-cubic-foot blast machines hold approximately 1500 lbs. of metallic abrasive.

3.1.3 How much abrasive it takes to fill the system depends on the recovery equipment. A full recovery system (one that recovers abrasive as it is used) should not be filled with more than a total of 10 cu. ft. Ten cu. ft. with a Clemco 6-cubic-foot blast machine, will fill the abrasive cleaner to about 12 inches above the bottom, or half way up the access door. That provides 6 cu. ft. in the machine and 4 cu. ft. in the abrasive cleaner.

! NOTICE

During blasting the pop-up valve (blast machine filling port) is sealed, so abrasive will not enter the blast machine. As abrasive is recovered, the level in the abrasive cleaner will rise. By the time the blast machine is empty, the abrasive cleaner will be nearly filled to the full capacity of 10 cubic feet.

NEVER add new abrasive unless all recoverable abrasive has been retrieved into the blast machine and abrasive cleaner. Doing so will overflow the cleaner.

3.1.4 A partial recovery system, such as a 3 x 3 Hopper System, may be filled with 16 cubic feet of abrasive. This provides 6 cu. ft. for the blast machine, and 10 cu.ft. for the abrasive cleaner. When the cleaner is filled with 10 cu. ft. the level will be approximately 30" above the bottom.

3.1.5 Two-pot stands hold an additional 3.5 cu. ft., making the total capacity of the stand and abrasive cleaner 13.5 cu. ft. Since each blast machine holds 6 cu. ft., two machines have the capacity of 12 cu.ft. This means the abrasive cleaner with the two-pot stand and the two machines are at full capacity when abrasive reaches the 4" fill hose on the blast machine cover plates.

3.2 Damper Setting

3.2.1 Initially the damper should be fully open. Full open is when the handle is in line with the outlet as shown in Figure 1.

3.2.2 After the abrasive cleaner has been operational for one hour, check the disposal container for abrasive. If a large amount of abrasive (small amounts are normal) appears in the container, partially close the damper gate by one notch. Check this adjustment periodically until only approximately 1/2 lb. appears after 4 to 8 hours of operation.

4.0 MAINTENANCE

4.1 Gear Reducer

4.1.1 Unless stated otherwise in the instructions supplied with the gear reducer, the lubricant should be changed after the first 100 hours of operation. Thereafter lubricant should be changed every six months.

4.1.2 Recommended Lubricant

4.1.2.1 Follow recommendations on the instructions supplied with the gear reducer.

4.1.3 Changing Lubricant

4.1.3.1 Drain the oil and flush the gear case with an approved non-flammable, non-toxic solvent, and refill with an approved lubricant.

4.1.4 Inspect lubricant level monthly.

4.2 Bearing Lubrication

4.2.1 Lubricate the idler bearing (drum shaft bearing) with any good quality general purpose bearing grease every six months.

4.3 Disposal Container

4.3.1 Check the disposal container daily. Empty when required.

5.0 REPLACEMENT PARTS

5.1 Abrasive Cleaner

Figure 6

Item	Description	Stock No.
(-)	Abrasive Cleaner , Complete, w/30 gal. drum, right hand	21354
(-)	Abrasive Cleaner , Complete, w/30 gal. drum, left hand	21282
(-)	Abrasive Cleaner , Complete, w/disposal bag, right hand	21355
(-)	Abrasive Cleaner , Complete, w/disposal bag, left hand	21281
1.	Drum screen, stand. w/ 3/16" holes	21290
	Opt. w/ 1/8" holes	21353
2.	Shaft, drum	06805
3.	Bearing, 1" idler	06812
4.	Gear reducer, 60:1	06811
5.	Motor, 1/4 hp 230/460 V, 3ph, 60hz	02980
6.	Hose, 5" light lined flex, specify length in feet.....	12467
7.	Gasket, adhesive backed, 5/16" x 1" strip, specify length in feet.....	00187
8.	Gasket, adhesive backed, 3/16" x 1" strip, 4' required	00186
9.	Clamp, 6-1/2" hose	00750
10.	Y pipe, 5"	21286
11.	Latch, spring w/ strike	11876
12.	Valve, 5" butterfly	21289
13.	Adapter, 6" pipe	21287
14.	Lid assembly, 30-gallon drum	21284
15.	Drum, 30-gallon disposal	10306
16.	Bag, 4 cu. ft. disposal	21083

! WARNING

Failure to wear approved respirators and eye protection when emptying the disposal container could result in serious eye irritation and lung disease or death. Toxicity and health risk vary with type of media, and dust generated by blasting. Identify all material that is being removed by blasting, and obtain a materials safety data sheet for the blast media.

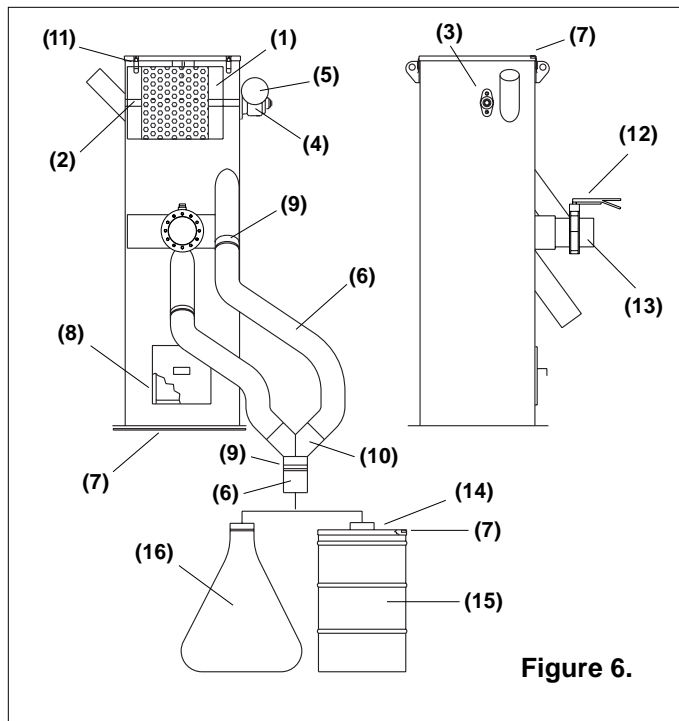


Figure 6.

5.2 Accessories

Figure 6

Item	Description	Stock No.
(-)	Attachment Kits, 24" dia. machines, with flange	06855
	without flange	10289
(-)	Two-pot stand	2594
(-)	Cover assembly, for 24" dia. machines, with flange	03104
	without flange	02582
1.	Hose, 4" duct 2 ft required	00716
2.	Clamp,	02806
3.	Filter, air inlet	00249
4.	Clamp, air inlet filter	00251
5.	Gasket, 7/16" x 1" strip specify length required	00190
6.	Gasket, 5/16" x 5/8" strip 2 ft. req'd per filter	00188
7.	Screw, 10 x 3/4 self tap	03912

