



2800/2801 Environmental Lathe-Enclosure™



Installation Instructions Operating Instructions Safety Instructions Maintenance Instructions

READ these instructions before placing unit in service. KEEP these and other materials delivered with the unit in a binder near the machine for ease of reference by supervisors and operators.

HENNESSY INDUSTRIES, INC.

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HENNESSY INDUSTRIES INC. Manufacturer of AMMCO®, COATS® and BADA® Automotive Service Equipment and Tools.

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Table of Contents

Definitions of Hazard Levels	ii
Owner's Responsibility	ii
General Safety Instructions	iii
Before You Begin	1
Safety Notices and Decals	1
Cautions and Dangers	1
Receiving	2
Installation – 2800 and 2801	3
Unpacking the Enclosure	3
Preparing the Bench for Installation	3
Assembling and Installing the Enclosure	3
Additional Installation – 2801 only	6
Assembling Shield	6
Electrical Wiring	6
Operation	7
Maintenance	7
Parts Identification 2800 and 2801	8
Parts Identification – 2801 parts only	8
Shield Assembly	8
Wiring View	9
Hood Switch Mounting	9
Foot Switch Assembly (assy part #40044)	9
Magnet Mounting	9
Stop Switch Mounting	9

Definitions of Hazard Levels

Identify the hazard levels used in this manual with the following definitions and signal words:

DANGER

Watch for this symbol:



It Means: Immediate hazards which will result in severe personal injury or death.

WARNING

Watch for this symbol:



It Means: Hazards or unsafe practices which could result in severe personal injury or death.

CAUTION

Watch for this symbol:



It Means: Hazards or unsafe practices which could result in minor personal injury or product or property damage.

Watch for this symbol. It means BE ALERT! Your safety, or the safety of others, is involved.

Owner's Responsibility

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

- Follow all installation instructions and make sure installation conforms to all applicable Local, State, and Federal Codes, Rules, and Regulations; such as State and Federal OSHA Regulations and Electrical Codes.
- Carefully check the unit for correct initial function.
- Read and follow the safety instructions. Keep them readily available for machine operators.
- Make certain all operators are properly trained, know how to safely and correctly operate the unit, and are properly supervised.
- Allow unit operation only with all parts in place and operating safely.
- Carefully inspect the unit on a regular basis and perform all maintenance as required.
- Service and maintain the unit only with authorized or approved replacement parts.
- Keep all instructions permanently with the unit and all decals/labels/notices on the unit clean and visible.



Failure to follow danger, warning and caution instructions may lead to

serious personal injury to operator or bystander, or damage to property. Do not operate this machine until you read and understand all the dangers, warnings and cautions in this manual. For additional copies of either, or further information, contact:

**Hennessy Industries
P.O. Box 3002, 1601 J.P. Hennessy Drive
LaVergne, TN 37086-1982
615/641-7533 or 800/688-6359**

General Safety Instructions

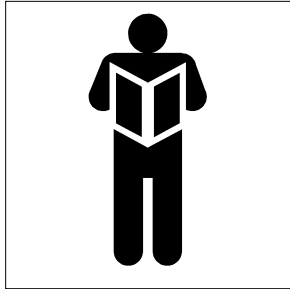
Before operating the lathe, review the warning information on the lathe and the cautions, warnings and dangers in this manual. Also review the following general safety instructions. Failure to follow safety instructions could result in personal injury to operator or bystanders and damage to the lathe or personal property.

1. Keep guards in place and in working order.
2. Remove adjusting keys and wrenches from the tool before turning it on. Make this a habit.
3. Keep work area clean. Cluttered areas and benches invite accidents.
4. Avoid dangerous operating environments. Do not use power tools in areas where explosive vapors are present or in damp or wet locations. Do not expose them to rain. Keep the work area clean and well lighted.
5. Keep children away. All bystanders should be kept completely away from the work area.
6. Make the workshop kid-proof. Use padlocks and master switches, and remove starter keys.
7. Don't force a tool. It will do the job better and safer at the rate for which it was designed.
8. Use the right tool. Don't force a tool or an attachment to do a job for which it was not designed.
9. Dress properly. Loose clothing, gloves, neckties, shop rags or jewelry may get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.
10. Wear eye protection. Safety glasses, goggles, or a face shield will help protect the operator from injury. Use a face shield and dust mask during dusty operations.
11. Secure the work properly to the unit for setup and tool bit positioning. Do not attempt to hold a drum or rotor steady on the arbor with your hands. Both hands must be free to operate unit.
12. Don't overreach. Keep proper footing and balance at all times when lathe is in operation or when working around the unit.
13. Maintain tools with care. Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
14. Remove power from the unit and disconnect tools before servicing and when changing accessories such as blades, bits, cutters, etc. Follow lock-out and tag-out procedures as required.
15. Avoid unintentional starting. Make sure the switch is in the OFF (O) position before plugging the machine in or performing any maintenance or service work.
16. Use recommended accessories. Consult the manufacturer's catalogs for recommended accessories. Use of improper accessories may cause risk of injury to operator or bystanders.
17. Never stand or lean on a lathe. Serious injury could occur if the lathe is tipped or if the cutting tool is unintentionally contacted.
18. Check damaged parts carefully. Before further use of the lathe, a guard or other part that is damaged should be carefully checked. Immediately replace all damaged, missing, or non-functional parts. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect operation. Guards and other parts that are damaged should be properly repaired or replaced before lathe is used again.
19. Always feed the work into a blade or cutter and against the direction of rotation. Cutters and tool bits are designed to cut from the inside of a drum or rotor to the outer edge. Do not attempt to cut from the outside edge in to the center.
20. Never leave tools running unattended. Turn the power off. Don't leave the tool until it comes to a complete stop.
21. Never use compressed air to blow the tool clean. Chips and dust may be driven between machined parts and into bearings, causing undue wear. They may also contact persons in the area causing personal injury.
22. Operate the lathe in the proper environment. The lathe incorporates parts such as snap switches and power receptacles which tend to produce arcs or sparks. Therefore, when located in a garage, the unit should be in a room or enclosure provided for the purpose, or should be at least 18" or more above the floor to minimize the risk of igniting fuel vapors.

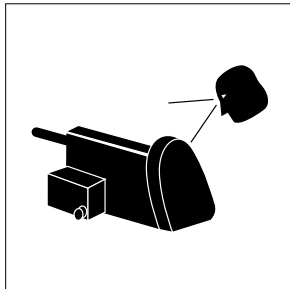
Before You Begin

Safety Notices and Decals

For your safety, and the safety of others, read and understand all of the safety notices and decals included here and on the unit.



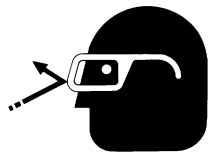
Read entire manual before installing, operating, or servicing this equipment.



Proper maintenance and inspection is necessary for safe operation.



Do not operate a damaged lathe.

⚠ CAUTION ⚠ Prevent accidents and injury, read and follow instructions.		
		
1. Read and follow instructions. 2. Always wear eye protection, avoid loose clothing and jewelry. 3. Keep all guards, shields, and covers in place and in working order. 4. Keep bystanders out of work area. 5. Unplug unit from power source before servicing or adjusting. 6. Maintain unit properly, keep work surfaces and work area clean.		

– WARNING –

This equipment incorporates parts such as snap switches and power receptacles which tend to produce arcs or sparks. Therefore, when located in a service facility, the unit should be in a room or enclosure provided for the purpose, or should be at least 18" or more above floor to minimize the risk of igniting fuel vapors.

⚠ Cautions and Dangers

1. Eye and face protection requirements:

"Protective eye and face equipment is required to be used where there is a reasonable probability of injury that can be prevented by use of such equipment." OSHA 1910.133 (a).

Protective goggles, safety glasses, or a face shield must be provided by the purchaser/user and worn by the operator of the equipment. Make sure all eye and face safety precautions are followed by the operator(s). Keep bystanders out of the area.

2. Do not remove any safety equipment, belt guards, or shortcut controls or operations.

3. Make sure drums and rotors are properly and squarely mounted before starting lathe, and that all parts are secure.
4. Do not wear loose clothing, jewelry, or gloves when operating or working around a lathe.
5. Do not overload the lathe. Read and understand the lathe specifications. Overloading is poor machine tool practice, shortens the life of the lathe, and could cause a failure resulting in personal injury.

Receiving

The shipment should be thoroughly inspected as soon as it is received. The signed bill of lading is acknowledgement by the carrier of receipt *in good condition* of shipment covered by our invoice.

If any of the goods called for on this bill of lading are shorted or damaged, do not accept them until the carrier makes a notation on the freight bill of the shorted or damaged goods. Do this for your own protection.

NOTIFY THE CARRIER AT ONCE if any hidden loss or damage is discovered after receipt and request the carrier to make an inspection. If the carrier will not do so, prepare a signed statement to the effect that you have notified the carrier (on a specific date) and that the carrier has failed to comply with your request.

IT IS DIFFICULT TO COLLECT FOR LOSS OR DAMAGE AFTER YOU HAVE GIVEN THE CARRIER A CLEAR RECEIPT.

File your claim with the carrier promptly. Support your claim with copies of the bill of lading, freight bill, invoice, and photographs, if available.

Although AMMCO's responsibility ceases upon delivery of the shipment to the carrier, we will gladly assist in tracing lost shipments. Our willingness to assist in every possible manner does not make AMMCO responsible for collection of claims or replacement of lost or damaged materials. Shipping damage claims will not be handled under warranty.

CAUTION

This installation procedure requires 2 persons to complete. The enclosure is large and heavy and cannot be unpacked, moved, or positioned safely by one person. The removal and reinstallation of a lathe requires 2 persons.

Use care to avoid dropping or damaging the Enclosure. Have one person hold the collector while the other removes packing materials or shipping cartons. During installation, one person will need to hold the Enclosure in place on the bench until it is securely fastened to the bench.

Installation - 2800 and 2801

Unpacking the Enclosure

The collector is packed standing on end in the shipping carton. The required brackets and hardware are included inside the carton. Unpack the unit in an area large enough to allow the unit to be laid out, opened, and spread out.

1. Remove the strapping from the shipping container and remove the top cover.
2. Remove the tool board and all other items packed around the Enclosure. Be careful not to scratch the viewing window.

NOTE: The chip bucket contains the chip tube, all the necessary fasteners, and some of the bracketry.

3. Carefully lay the Enclosure on a pad on the floor.
4. Slide the lower carton off of the unit.
5. Stand the Enclosure on end in the middle of the work area (fig. 1).

NOTE: Place a pad or blanket under the Enclosure to avoid damaging the outside surfaces of the unit.

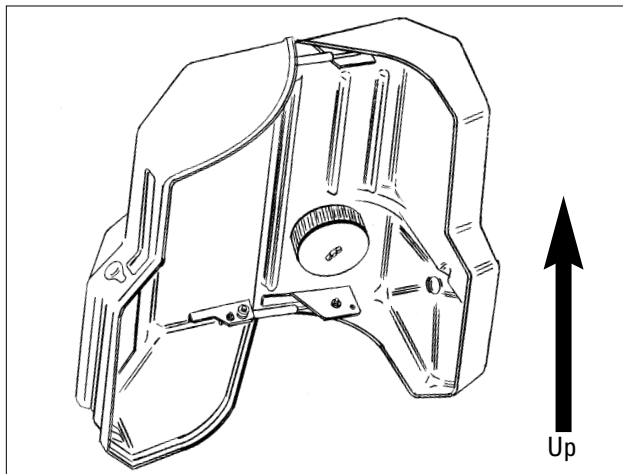


Figure 1 – Stand unit on end and open

5. Open the Enclosure and remove any parts or materials packed inside.

IMPORTANT: Use care not to scratch the window.

Preparing the Bench for Installation

6. If a lathe is attached to the bench, remove it now.
7. Move the bench to a position where all sides are easily accessible, and there is sufficient room to install the collector.
8. If the bench has a tool board or sign attached, remove them now. Be sure to remove all mounting for the board and/or sign as well.
9. Clear the bench of all tools and materials.

Assembling and Installing the Enclosure

10. Open the Enclosure and locate the loose end on both gas struts attached to the top cover of the Enclosure.

NOTE: One person will need to hold the Enclosure open at a workable distance while the other attaches the struts.

11. Snap the socket on the loose end of the strut onto the ball stud on the mounting bracket on the lower half of the Enclosure (fig. 2). Repeat for the second strut.

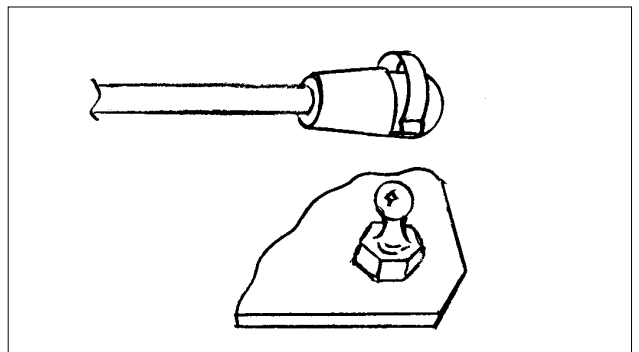


Figure 2 – Snap strut end onto ball stud

12. Lift the Enclosure and set it in place on top of the bench.
13. Locate the lathe mounting holes in the bottom of the Enclosure that will be used to mount your lathe. Break the seals open on these holes only.
14. Adjust the position of the Enclosure on the bench so that the holes in the bottom of the enclosure align with the mounting holes in the top of the bench.
15. Use your lathe mounting bolts and nuts to attach the Enclosure to the bench. Snug the bolts at this time, but do not tighten.
16. Locate the Enclosure tool board and the 2 vertical mounting brackets.
17. Locate and remove the bolt and nut at each end of the hinge on the lower section of the Enclosure back wall.

18. Locate and attach the horizontal mounting bracket to the vertical brackets using 1/4x20 phillips screws and nuts (fig. 3). Do not tighten.

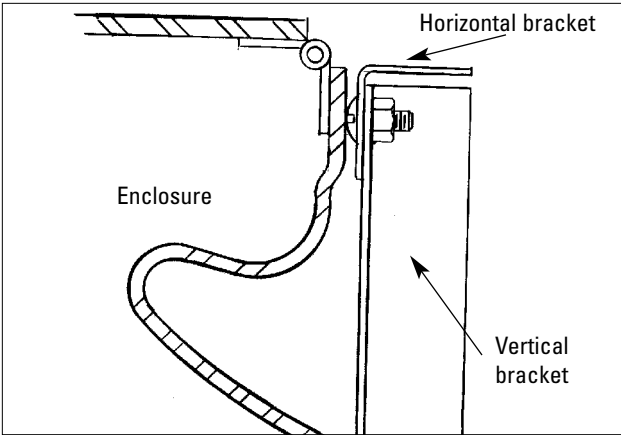


Figure 3 – Mounting horizontal bracket

19. Secure the Enclosure to the horizontal bracket by replacing the bolts and nuts removed in step 18, this time including the horizontal bracket in the process (fig. 4). Do not tighten.

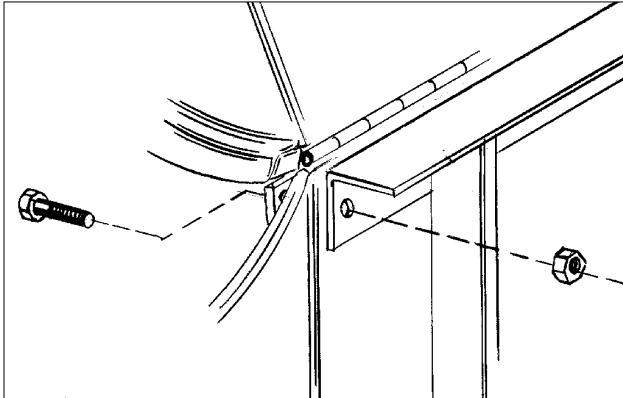


Figure 4 – Secure Enclosure to horizontal bracket

20. Secure the tool board and the brackets to the Enclosure, as in fig. 5, using (4) 1/4-20x2 1/2 bolts and nuts. Insert the bolts through the tool board, then through the mounting holes in the Enclosure back wall, and finally through the vertical brackets. Snug the nuts down, but do not tighten.

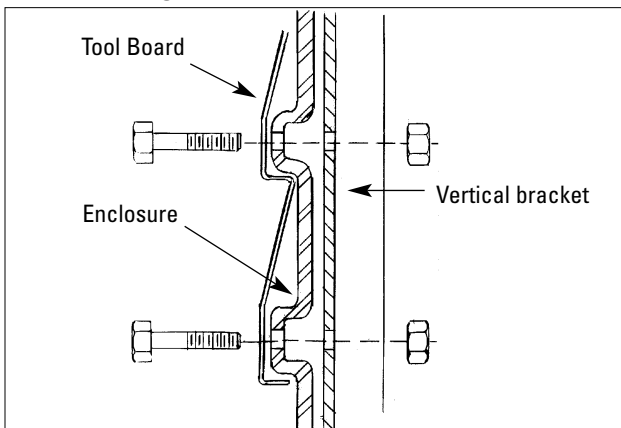


Figure 5 – Mount tool board

21. Remove the lathe mounting bolts from the mounting holes in the bench and Enclosure.
22. Place your lathe inside the Enclosure.
23. Align the mounting holes in the lathe with the mounting holes in the Enclosure and the bench.
24. Insert the lathe mounting bolts supplied with the 2800 through the lathe, the Enclosure, and the bench.
25. Position the Enclosure as far FORWARD and the lathe as far REARWARD on the bench as the mounting bolts will allow.
26. Snug nuts onto the lathe mounting bolts. Do not tighten.
27. Measure the distance from the top bracket mounting hole on the back of the bench to the vertical mounting bracket extending down from the Enclosure. Make separate measurements for both sides (bench mounting hole to vertical bracket).

The “L” brackets that will be used to secure the vertical brackets to the bench are adjustable. The measurements just taken will be used to assemble the “L” brackets to the correct size.

28. Locate the 2 short “L” brackets and the 2 longer “L” brackets. 1 short bracket will be assembled with 1 long bracket to form a spacer bracket. 2 spacer brackets will be made in the following steps.
29. On a smooth, flat surface, stand 1 short bracket and 1 long bracket next to each other on end. Viewed from above, they should form a “U” shaped assembly. The holes in the long bracket should align with the slots in the short bracket.

IMPORTANT: Assemble these spacers on a smooth, flat surface so that the 2 brackets remain parallel. It is extremely important that the spacer brackets are assembled parallel so that the Enclosure can be properly installed.

30. Insert a bolt through the 2 brackets and finger tighten a nut onto the bolt. Repeat for the second hole/slot on the bracket.
31. Repeat step 30 for the second spacer bracket.
32. Use the measurements taken in step 27 to size the spacer brackets. Slide the brackets in or out to adjust the width of the spacer. When one bracket matches the first measurement and the other bracket matches the second measurement, securely tighten the nuts on both brackets.

33. Install the newly constructed spacer brackets in their appropriate location between the bench and the vertical brackets with the short bracket side of the spacer next to the bench and the long bracket extending upwards. Be sure to match the sized spacers to the correct measured location. Use 8 bolts and nuts. Hand tighten the fasteners at this time.

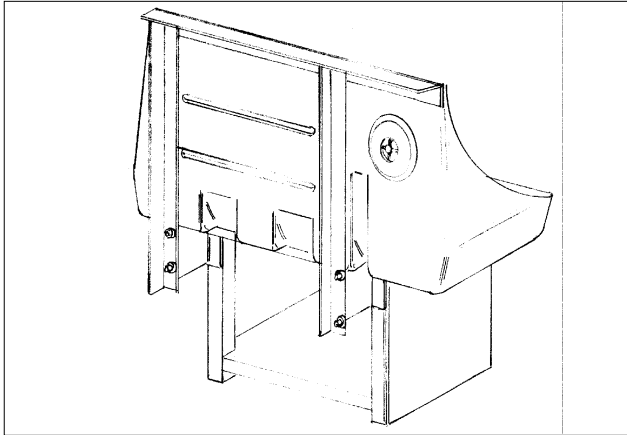


Figure 6 – Completed bracket assembly

34. The top cover must mate properly with the lower portion of the Enclosure when closed. If they do not, shimming of the rear support structure is required.
35. Raise the top cover and measure the distance from the floor to the front lip of the lower portion of the Enclosure. Measure in multiple locations.

The measurement should not vary more than 1/4" across the front of the Enclosure (fig. 7). If it does vary by more than 1/4", shim the structure until the measurements are satisfactory.

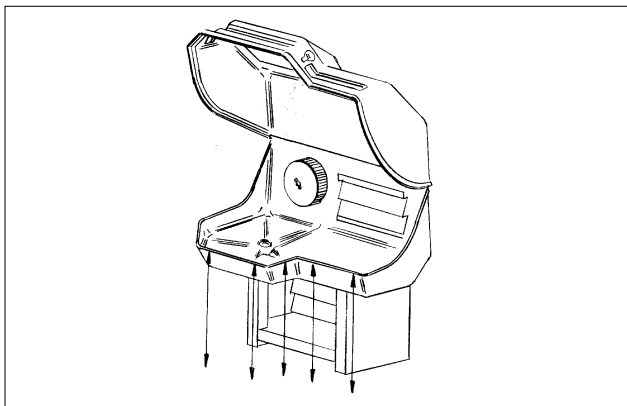


Figure 7 – Measure in multiple locations

36. Install alignment shims at the fasteners between the spacer brackets and the vertical support brackets as necessary to achieve satisfactory measurements across the front.

The Enclosure may also be shifted within the tolerances allowed by the lathe mounting bolts to fine tune the adjustment.

37. When the front of the Enclosure is level within 1/4" and the top cover mates properly to the lower portion, tighten all fasteners securely.
38. Check the fit of the top cover to the lower portion again after tightening, and readjust as required.
39. Attach the 2" chip tube to the fitting under the Enclosure chip tray with the hose clamp (fig. 8).

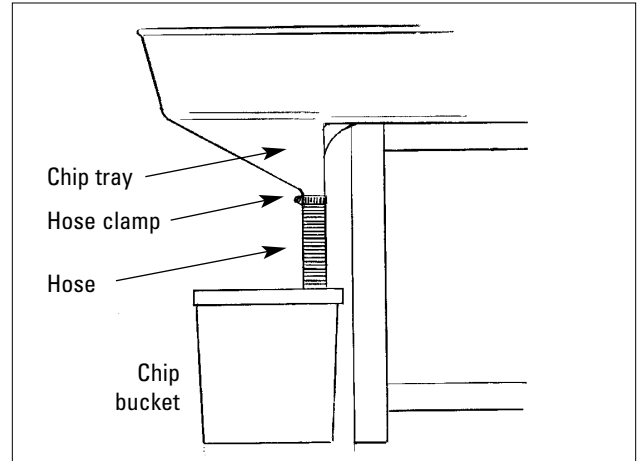


Figure 8 – Chip hose and bucket

40. Slip the other end of the tube into the hole in the top of the chip bucket and move the bucket into place under the chip tray.
41. Route the lathe power cord through the hole in the back of the enclosure and plug it into a suitable power source.
42. Plug the Enclosure power cord into suitable power source.
43. Attach handle and pull strap using the two (2) 5/16 - 18 x 1 1/4 screws, washers and lock nuts to the hood.

After placing the screws through the handle and the plastic, slide the pull strap over the right-hand screw. Then slide washers over both screws and secure with the nuts.

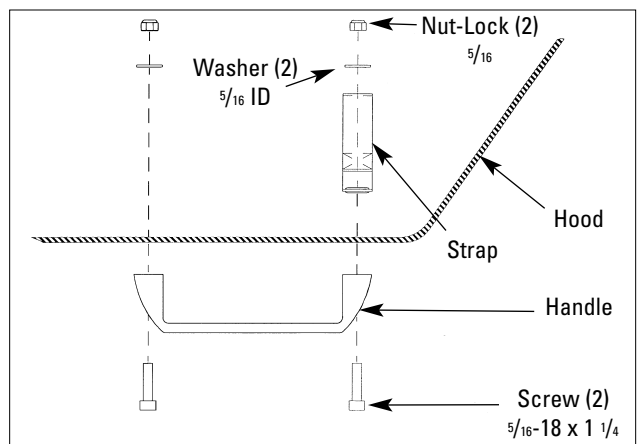


Figure 9 - Handle and pull strap assembly

Additional Installation - 2801 only

Assembling Shield

1. Position the shield top & side assembly as shown in fig. 10.

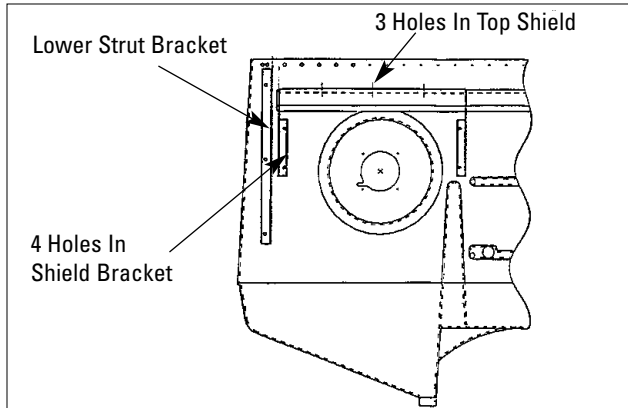


Figure 10 - Shield assembly

Place ¼-20 screws through the top & side assembly and the plastic base from the front side. Attach washers and nuts from the rear of the unit and tighten.

Place a #10-24 screw through the top side of the hinge and through the corresponding hole in the plastic shield.

4. Position the shield support so that its beveled corners are facing the beveled corners on the mating shield stop.

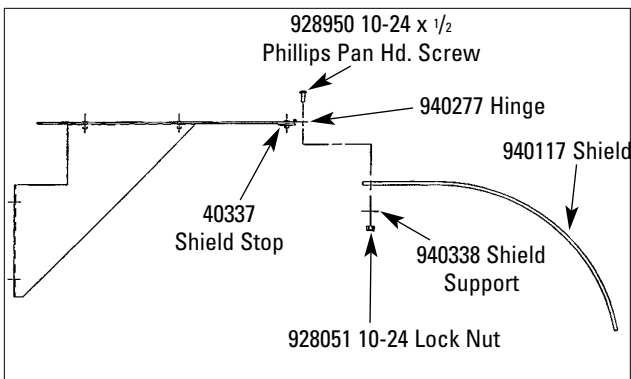


Figure 11 - Plastic shield assembly

Attach nut to screw. Assemble the remaining (5) screws and nuts before tightening any of them.

6. Attach electrical box assembly to the back of the enclosure using (2) ¼" bolts, washers and nuts.

Electrical Wiring

7. Remove the cover on the round box by taking out the two screws.

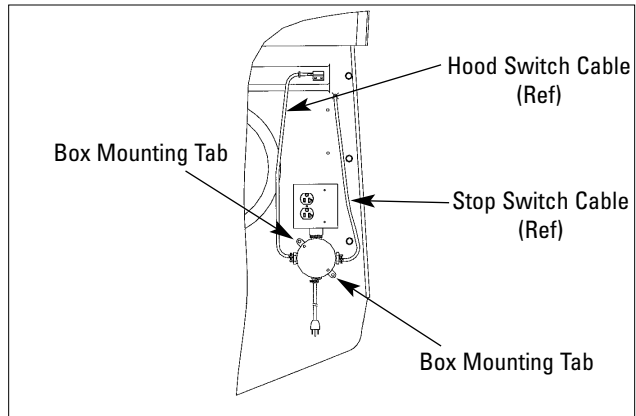


Figure 12 - Electrical box

8. Insert the emergency stop cable through the empty box connector until the outside jacket just enters the round box, or is completely inside the connector.

Tighten the two connector screws.

9. Loosen the two screws that are clamping the foot switch cable enough to push the hood switch cable into the box.

Tighten the two connector screws.

10. Remove the screw-on connector from the BLACK wire of the foot switch and add the BLACK wire from the hood switch.

Screw connector on tightly.

11. Join the WHITE wires from all three switches together with a screw-on connector.

12. Connect the BLACK wire from the stop switch to the jumper wire from the outlet using a screw-on connector.

13. Re-attach the round cover plate and gasket to the box with the two screws.

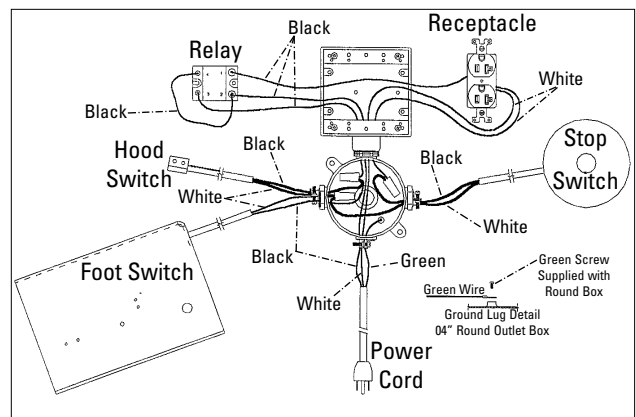


Figure 13 - Electrical wiring assembly

Operation

IMPORTANT: Do not plug fan or lathe into a wall power source. Fan and lathe power cords must be plugged into the Enclosure electrical receptacle or the safety features will not function.

1. Plug the fan cord into the Enclosure receptacle.

Plug the lathe cord into the Enclosure receptacle.

3. Plug the ELE power cord into an approved power source.
4. Push the lathe power switch to the ON position.
5. Lower shield.
6. Lower hood and pull the emergency switch out. Lathe will come ON.
7. Push stop switch in and the lathe will shut off.

Note: Lathe will only run under one of these conditions:

(1.) Hood is fully lowered.

(2.) Foot pedal is depressed—use only for setting up toolbits depth of cut prior to lowering hood.

Maintenance

1. Check the air filter regularly for contamination. The replacement interval for the filter is directly proportional to use. Replace the filter when the air flow is diminished.

The filter is the same air filter typically used in GM passenger cars with the 454 cubic inch gasoline engine.

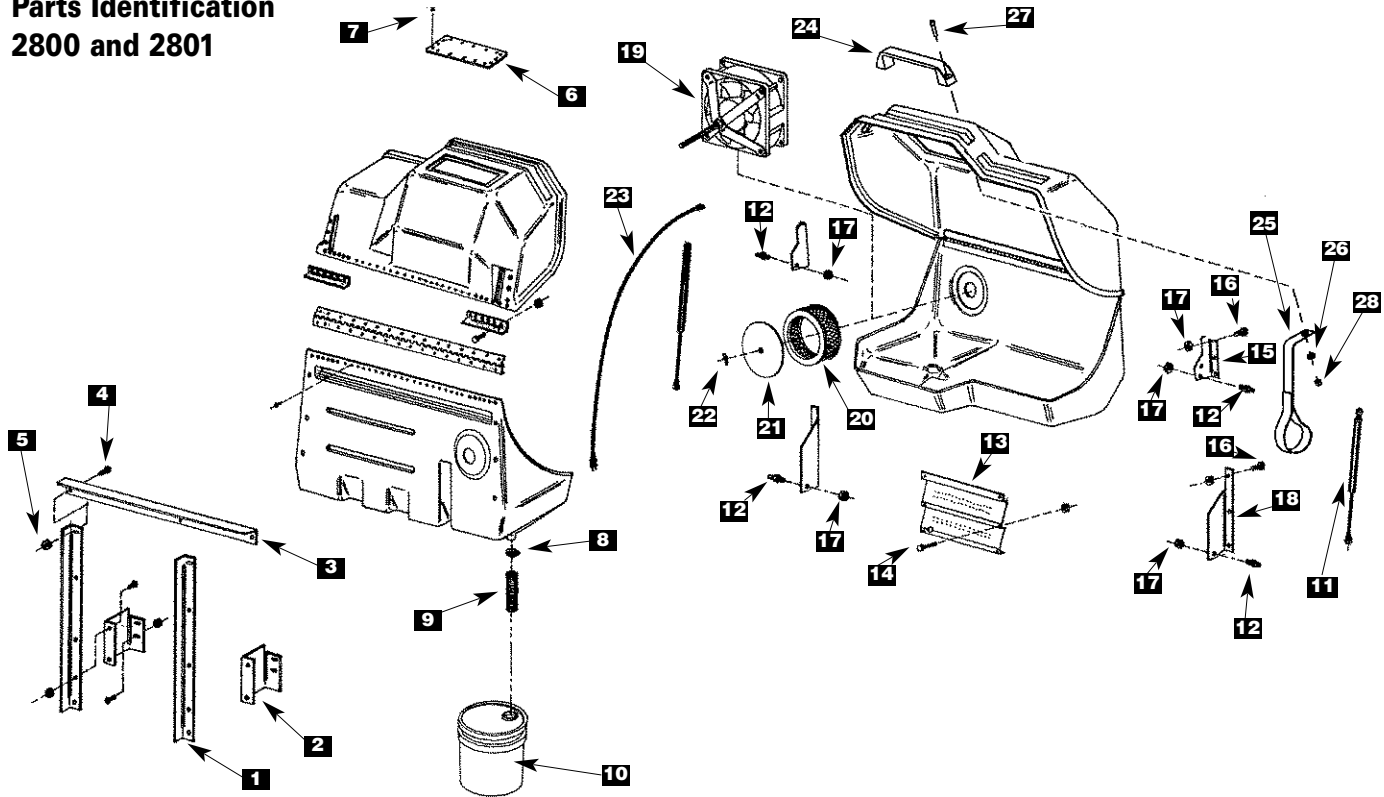
Seal the used filter in a plastic bag before disposal.

2. Check the chip tube periodically to make sure it is securely attached to the chip tray. Inspect the tube for holes or cracks. Replace the tube if it is damaged or leaks.

The chip tube is a typical 2" pre-heater hose.

3. If the gas struts are damaged, or begin to weaken, replace them with struts of the same force and length as the originals. Failure to use the correct strut may create a hazard to the operator. Replacement struts are available from AMMCO.
4. Check the chip bucket and empty it before it reaches capacity. If the chip bucket becomes full, chips and other material will back up into the chip tray and the interior of the Enclosure. Dispose of the material in the bucket properly.

Parts Identification 2800 and 2801

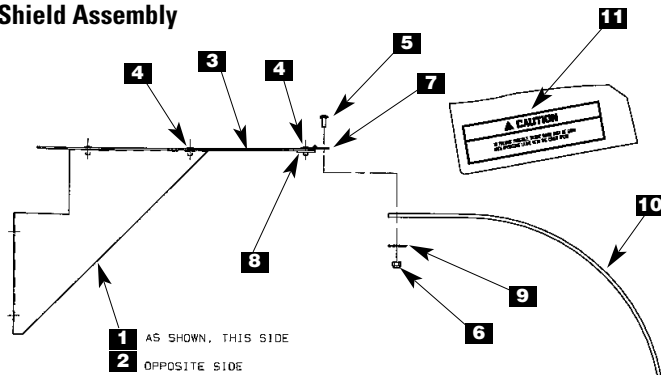


ITEM	PART NO.	QTY.	DESCRIPTION
1	40030	2	Angle, vertical mounting bracket
2	40028-01	2	Spacer, vertical angle mtg-outer
	40028-02	2	Spacer, vertical angle mtg-inner
3	40027	1	Angle, horizontal mounting
4	24100	14	Screw, ¼-20x¾
5	24557	20	Nut, ¼-20 hex, flange
6	29906	1	Window
7	40136	16	Screw, 10-24x½
	40137	16	Washer, #10 stainless, black oxide
8	40082	1	Hose clamp
9	40000	1	Chip tube
10	29999	1	Chip bucket w/lid
11	40052	2	Strut, gas
12	40053	2	Stud, ball
13	29969	1	Board, tool
14	301818	6	Screw, ¼-20x2½ HHCS

ITEM	PART NO.	QTY.	DESCRIPTION
15	40025-01	1	Bracket, gas strut
	40025-02	1	Bracket, gas strut
16	40084	14	Screw, ⅝x18x1¼
17	8182178	18	Nut, ⅝x18 hex flange
18	40024-01	1	Bracket, gas strut
	40024-02	1	Bracket, gas strut
19	40002	1	Fan assy. - 115V
20	29905	1	Filter
21	29864	1	Cover, filter
22	6358	1	Nut, wing ¼-20
23	40089	1	Cord assy., power
24	40350	1	Handle
25	40351	1	Strap
26	278	2	Washer, ⅝ I.D.
27	40381	2	Screw, ⅝x18x1¼
28	181183	2	Nut, lock ⅝

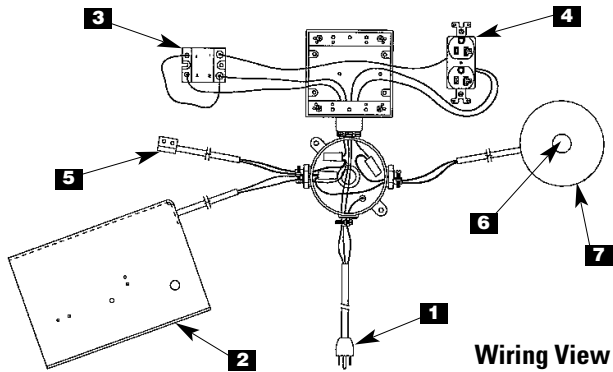
Parts Identification - 2801 parts only

Shield Assembly



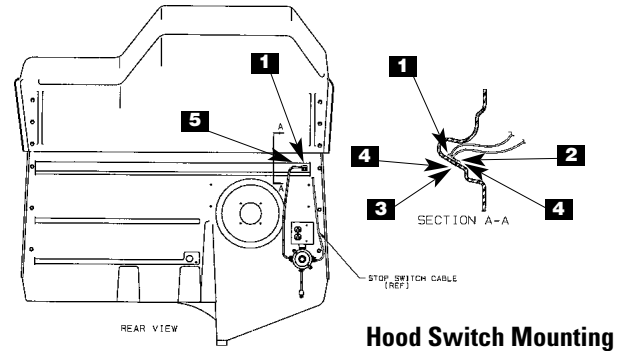
ITEM	PART NO.	QTY.	DESCRIPTION
1	-----	1	Side, shield, RH
2	-----	1	Side, shield, LH
3	-----	1	Top, shield
4	-----	10	Rivet, pop, ⅜x.250
5	-----	6	Screw, 10x24x½, pan hd phillips
6	-----	6	Nut, 10-24 lock, ESNA
7	-----	1	Hinge
8	-----	1	Stop, shield
9	-----	1	Support, shield
10	40417	1	Shield, chip (with decal)
11	40166	1	Decal, warning

Parts Identification - 2801 parts only

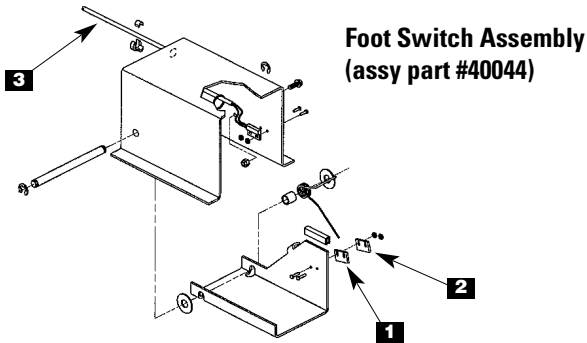


ITEM	PART NO.	QTY.	DESCRIPTION
1	40121	1	Cord, power
2	40044	1	Foot switch assy
3	40051	1	Relay, SPST, 1 H. P.
4	40120	1	Receptacle, duplex, 20A
5	40125	1	Switch, hood
6	40220	1	Switch, stop
7	40221	1	Plate, stop switch

ITEM	PART NO.	QTY.	DESCRIPTION
1	40125	1	Switch, hood
2	-----	2	Screw, socket hd cap, 4-40x $\frac{5}{8}$
3	-----	2	Nut, hex, kep, 4-40
4	-----	4	Washer, plain, #4, type B
5	-----	1	Tie, wire



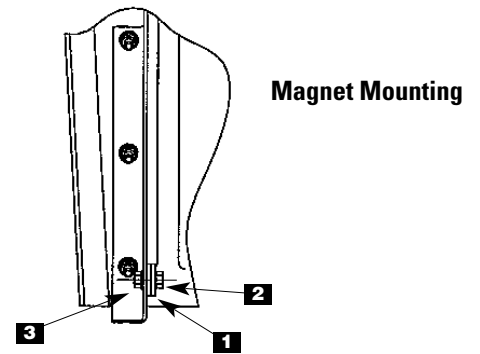
Hood Switch Mounting



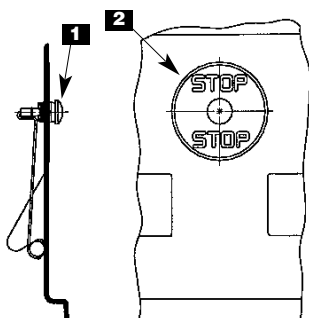
**Foot Switch Assembly
(assy part #40044)**

ITEM	PART NO.	QTY.	DESCRIPTION
1	40057	1	Shim, switch magnet
2	40050	1	Magnet, switch
3	40124	1	Cord, assy, foot switch

ITEM	PART NO.	QTY.	DESCRIPTION
1	109947	2	Magnet, hood switch
2	111447	1	Screw, nylon, $\frac{5}{16}$ -18x1 HHCS
3	-----	1	Nut, hex, $\frac{5}{16}$ -18 washer hd whiz lock



Magnet Mounting



**Stop Switch
Mounting**

ITEM	PART NO.	QTY.	DESCRIPTION
1	40220	1	Switch, stop
2	40221	1	Plate, stop switch

