



SmartAsh Cyclonic Barrel Burner



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INTRODUCTION

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This manual contains information on the operation and maintenance of the SmartAsh Cyclonic Barrel Burner manufactured by Elastec, Inc. All data in this publication is based on the latest product information.

Elastec reserves the right to make changes at any time without notice and without incurring any obligations.

If a problem is encountered, or if you have questions about your Elastec equipment, please call one of our consultants at **(618) 382-2525**.

Elastec products are designed to provide safe and dependable service when operated according to instructions. It is important to read and understand this manual before operating this system. Proper Personnel Protective Equipment (PPE) should be utilized, failure to do so may result in personal injury or equipment damage.

Your SmartAsh serial number is _____

★ SERIAL NUMBER MUST BE INCLUDED WHEN ORDERING PARTS.

WARNING: This product is not for use with materials containing liquids such as gasoline or paint thinners. All materials must have a flash point higher than 100 degrees Fahrenheit (38 degrees Celsius)!

CONTACT INFORMATION

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The air-powered SmartAsh uses no external fuel. Simply load a 55-gallon (208-liter), open head steel drum, light the load and clamp on the lid. A whirlwind of fire and intense heat is created inside the drum, burning your refuse with no smoke and no smell. Thousands of satisfied customers are currently using SmartAsh around the world to eliminate a wide variety of burnable waste materials. Combustion is complete, leaving ash equal to 3% by volume of the original load.

Refer to Component Identification found on Page 7 to identify the major components to be discussed in this manual. Listed below are some of those components:

- **Blowers:** Two blowers behind the motor cover draw air into the plenum. The air feeds to the drum through the air hose and lid.
- **Spark Screen and Spark Deflector:** The lid has two elements to block emissions of burning material: the spark screen on top, and the internal spark deflector, which can be seen beneath the exhaust vent in the lid.
- **Clamps:** Four clamps hold the lid in place during burning.
- **Porthole and Porthole Cover:** The porthole can be found on the lid and can be closed by rotating the cover back into place.

CAUTION: If unit has been in operation, the porthole cover will be hot. Use the end of the stir rod to close to avoid injury.

- **Air Shutter Control:** Regulates air flow and controls the blower output.
- **Saf-Start Unit:** Safety device that prevents SmartAsh from restarting automatically after a power disturbance or interruption, even if the switch is left in the ON position.

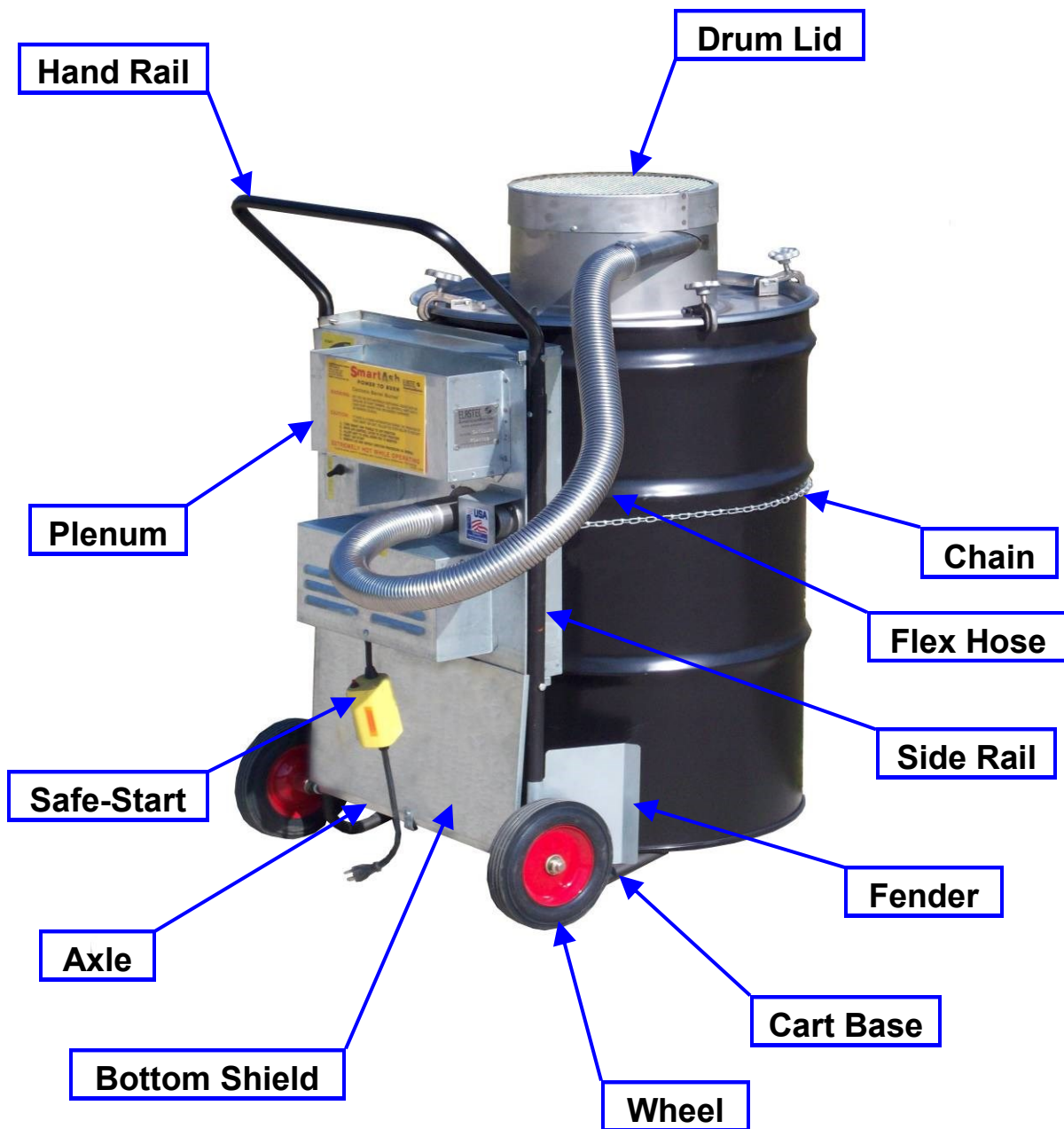
Before the first burn, the operator should practice mounting the lid on the drum and securing it with the clamps. It is also a good idea to walk through the ignition procedure a few times prior to the first burn to become acquainted with the operation of the system.

To avoid accident or injury, please follow these safety precautions:

1. Read and understand all instructions.
2. Follow all warnings and instructions marked on the product.
3. This product must be disconnected from the power source when there is a chance that water may come in contact with the electrical connection.
4. Ensure that the SmartAsh is on stable ground and in no danger of falling or tipping.
5. Wear safety glasses and gloves at all times during operation.
6. The combustion system must stand free and clear of surrounding buildings, vegetation or other combustible material. Please allow 10 feet (3 meters) of space. Care should be taken to ensure that no flammable items are above the emission screen.
7. Never touch the combustion chamber (steel drum) or lid while incinerating refuse.
8. Refer servicing to qualified personnel under the following conditions:
 - The power supply cord is frayed or damaged.
 - Liquid has been in contact with the electrical system.
 - The product has been damaged and exhibits a distinct change in performance.
9. Do not operate this product in the vicinity of flammable gases.
10. Aerosol or pressurized cans cannot be incinerated in this system.
11. If the operator is unsure if certain items can be safely incinerated, consult the manufacturer for details and instructions. Please refer to Page 4 for contact information.
12. Use only outdoor three-wire electric cord connected to a grounded outlet. Do not run cord over wet ground. Keep cord away from drum. If cord becomes damaged, replace immediately.
13. Ensure that no aerosol cans are in the load.
14. Ensure that clothing does not come into contact with drum or lid during burning.

Tools Required: Hammer, Phillips Screwdriver, Adjustable Wrench (or 7/16" and 3/8" Sockets)

Components: Assembly Kit (2 Wheels, 2 Fenders, Chain, Fasteners), Plenum, Drum Lid, Flex Hose, Cord Lock, 2 Side Rails, Cart Base, Hand Rail, Bottom Shield, Axle and Stir Rod (in 2 parts)





1. Open cardboard box; remove contents. Open box labeled "0KIT-AS010" and bag labeled "0KIT-HA010" and set contents nearby.



2. Place cart base on work surface.



3. Mount wheel and push nut onto wheel. Wheel has step shoulder on one side. Ensure that shoulder is facing in, toward axle.



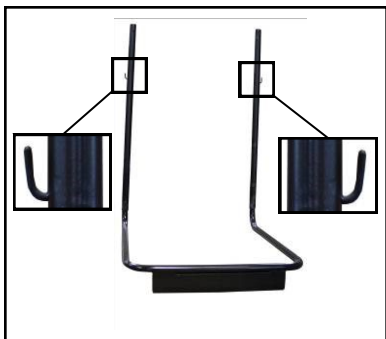
4. Use hammer to drive on push nut.



5. Repeat Steps 3 and 4 for second wheel to complete axle assembly.



6. Place axle assembly near open side of cart base. Ensure that axle tabs are on the inside.



7. Ensure that chain hooks are on the outside.



8. Ensure that mounting holes are lined up in lower portion of side rail.



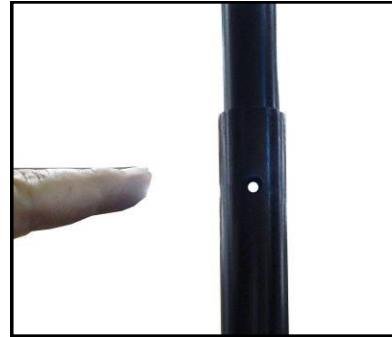
9. Line up axle tab mounting holes with side rail mounting holes.



10. Using two 1/4" bolts on each side, mount axle tabs to side rails. Hand-tighten.



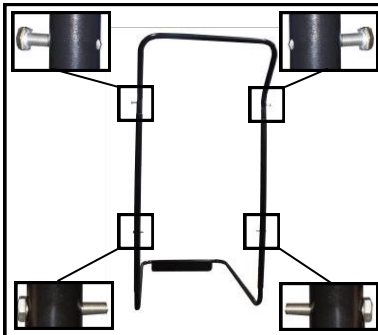
11. Insert cart handle into side rails.



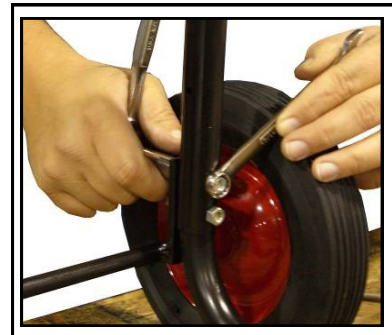
12. Ensure that mounting holes are lined up in upper portion of side rail.



13. Use 1/4" screws and nuts to attach handle to side rails and tighten, using 3/8" wrench or socket.



14. Install 1/4" bolts into side rails as shown. Lower bolts should be screwed in all the way, upper bolts through side rails only.



15. Tighten nuts to bolts mounting axle tabs to side rails with 7/16" wrench or socket.



16. Install fender to side rail with 1-1/2" long screw, using the top hole only. Fender flare is to the outside.



17. Repeat Step 16 for second fender.



18. Position assembly in this manner.



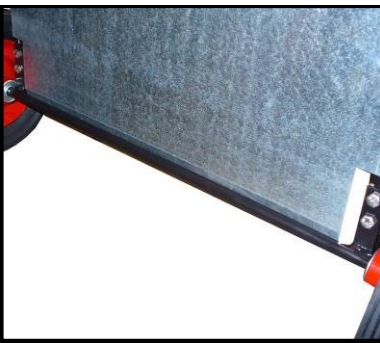
19. Place plenum between side rails. This is a tight fit. Remove two screws at bottom of plenum.



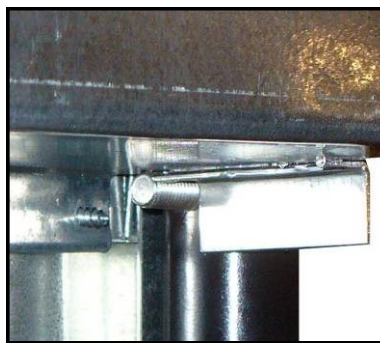
20. Lift plenum and align bottom shield with two holes in the plenum from which the two screws have just been removed.



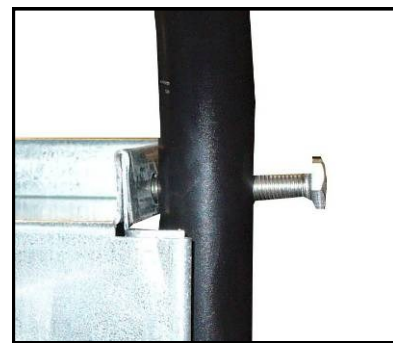
21. Ensure that mounting holes are lined up and attach plenum to bottom shield, using two new screws.



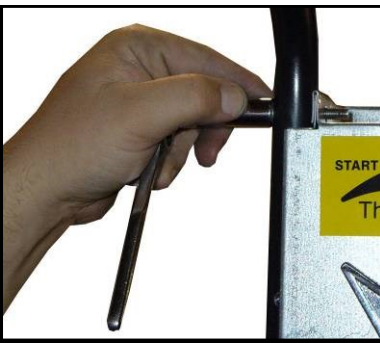
22. Ensure that bottom shield is in front of axle.



23. Plenum should rest on screws in lower side rails as shown.



24. Install 1/4" bolt into upper-most portion in each side rail. Ensure that bolt goes through plenum mounting hole. Tighten.



25. Repeat Steps 23 and 24 on other side.



26. Assembly of cart is now complete.



27. Set open head drum onto cart.



28. Attach chain to hook as shown.



29. Wrap chain around barrel. Pull tight to remove any slack and attach to second hook.



30. Set drum lid on drum.



31. Rotate clamps into position and tighten by turning knob.



32. Slide flex hose over snap button on 2-inch outlet on plenum.



33. Slide flex hose over snap button on 2-inch inlet on drum lid.



34. Install plug in cord lock.



35. Assemble stir rod by inserting upset end over straight end and push together.



36. See above for assembled unit.

The first step in getting your SmartAsh ready is to determine the electrical power required for your particular unit (110-volt or 220-volt). You will then need to choose the correct electrical outlet for the unit. **NOTE: Choose an outlet with a 20-amp breaker or greater.** Due to the high amperage draw of the SmartAsh, it should be the only appliance on the circuit when possible. The 110-volt unit draws 27 amps at start-up and 14 amps during operation. The 220-volt unit draws 9 amps at start-up and 7 amps during operation.

Saf-Start mechanisms are installed on SmartAsh units to guard against improper restart of the unit after a power interruption has stopped the airflow.

Saf-Start is a very sensitive electrical control device. It will disengage when there is a power interruption or fluctuation in the power supply that is below recommended levels. It will even detect a split second fluctuation that is below the recommended levels.

In some instances, the power supply switch is turned on and the Saf-Start disengages due to an overloaded circuit. The operator may need to reduce the number of appliances on the circuit, use an outlet on a different circuit or reduce the length of the extension cord used.

NOTE: The Saf-Start must be reset each time the unit is plugged in.

SELECTING A DRUM

1. Use a standard open head 55-gallon drum in good condition.
2. The lip must not be damaged.
3. The drum lid will not fit a “de-headed” oil or chemical drum.
4. Do not pierce holes in the drum.
5. If the lid does not fit, the drum may be out of round. Check the drum and correct as follows:
 - Measure across top of drum in several directions. If there is a difference of more than 1/4 inch (6 millimeters) in measurements, the drum is out of round and needs adjustment.
 - To correct, place drum on its side with the “long” measurement vertical. Lean on the drum rim and use body weight to depress the rim.
 - Re-measure the drum and repeat the process until correction is made.

NOTE: If the drum is painted, it may smoke when used for the first time.

REQUIRED ACCESSORIES

1. Three-wire, outdoor electrical extension cord
 - Under 25 feet (15 meters) = No lighter than 18 gauge
 - Over 50 feet (30 meters) = No lighter than 16 gauge
2. Safety glasses
3. Gloves (appropriate for hot surfaces)
4. Several sections of newspaper or cardboard
5. Matches or lighter

PREPARING TO BURN

1. Select a site at least 10 feet / 3 meters from buildings, hedges and trees. Place SmartAsh on bare ground, gravel or concrete. Do not burn on asphalt surfaces, lawn or ground with dry vegetation, as drum bottom becomes very hot.
2. Position SmartAsh so that cart, air supply and operator are upwind and drum is downwind.
3. Connect SmartAsh plug to extension cord and cord to grounded electrical outlet. Depress the reset button on Saf-Start plug.

WARNING: To prevent accidental interruption of burning, install cord lock and arrange slack in cord beneath plug-in.

NOTE: If there is a power interruption during the operation of your SmartAsh unit, follow the steps below for restart:

- Turn toggle switch to OFF position.
- Move air control latch to START position.
- Allow unit to cool for 10 minutes.
- Reset Saf-Start.
- Remove lid and repeat ignition procedure as normal.

WARNING: Failure to observe these cautions may result in rapid internal combustion when air returns. This could cause damage to the drum lid or lip and could cause possible personal injury.

CAUTION: Operator must wear safety glasses and gloves at all times during operation.

1. When burning oil-soaked absorbents, place a layer of unused absorbents in the drum first. This will absorb free liquids that drain from oily materials during burn. Load the oily materials. **NOTE: The drum has expanded rings that encircle it.** These are called rolling hoops. Do not put load material above the top hoop. Ample space over the load encourages good start-up and efficient burn.

2. Prepare the load for ignition by adding a top layer of paper or cardboard. The paper supplies a fast, easy initial fuel source for start-up. If load appears difficult to ignite, lay a section of newspaper on top of the load with one corner in forward area.

WARNING: DO NOT USE GASOLINE TO START THE BURN.

3. Place lid on drum with inlet pipe pointing to rear and the clamps resting on top of the lid. Lift lid and slide it to the rear between arms of cart handle, leaving front part of drum uncovered.

4. Insert air hose in lid.

5. Light prepared segment of paper. Turn on power.

6. When fire is established, grasp front and back lid handles and place lid on the drum.

7. Apply clamps as follows:

- Lower all clamps to rim of lid.
- Push all clamps inward toward drum. If clamp encounters resistance, it is because screw attached to hand wheel is sticking out below clamp and obstructing clamp movement. Correct by spinning hand wheel counter-clockwise to retract screw.
- When clamps are in position against drum, tighten all clamps evenly so that lid fits properly. This will ensure a good seal.
- Clamps are in the correct position when the back end of the clamp is flush with back end of clamp mounting bracket.
- When applying clamps, walk to the back of the unit from clamp to clamp to avoid the exhaust stream. **NOTE: Unit may briefly smoke until it reaches the operating temperature.**

8. Take position behind the cart. Turn control latch slowly from START to RUN until visible and audible signs indicate fire is burning vigorously.

TENDING BURN

CAUTION: Operator must wear safety glasses and gloves at all times during operation.

1. The air control setting should be checked periodically during burn.
2. Advance control latch as far as possible without causing gusting or turbulence. If unstable conditions arise, turn control latch back slowly to START position.
3. Optimum control latch setting produces vigorous yet smooth combustion.

TERMINATING BURN

1. Progress of the burn near termination can be judged by observation through the porthole or by insertion of the manufacturer-supplied stir rod into the porthole.

CAUTION: The stir rod is specially designed to prevent flame from traveling through rod during stirring. Do not use anything other than this rod to stir contents of burner during operation.

2. If drum interior is completely dark, or if the stir rod reaches the bottom of the drum without obstruction, the burn is usually complete.
3. Termination of burn is frequently indicated by a dusting or smoking episode.
4. If observation through the porthole reveals that fire is still present but only in part of the drum, the termination of the burn can be expedited by breaking up remaining clots of flame with stir rod.
5. When the burn is complete, the unit should be allowed to cool for several minutes. Avoid touching the clamps or porthole until unit has cooled. Be sure to wear gloves when removing the lid.



BURNING ABSORBENT MATERIAL

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WARNING: Do not burn absorbents that contain volatile liquids, such as gasoline.

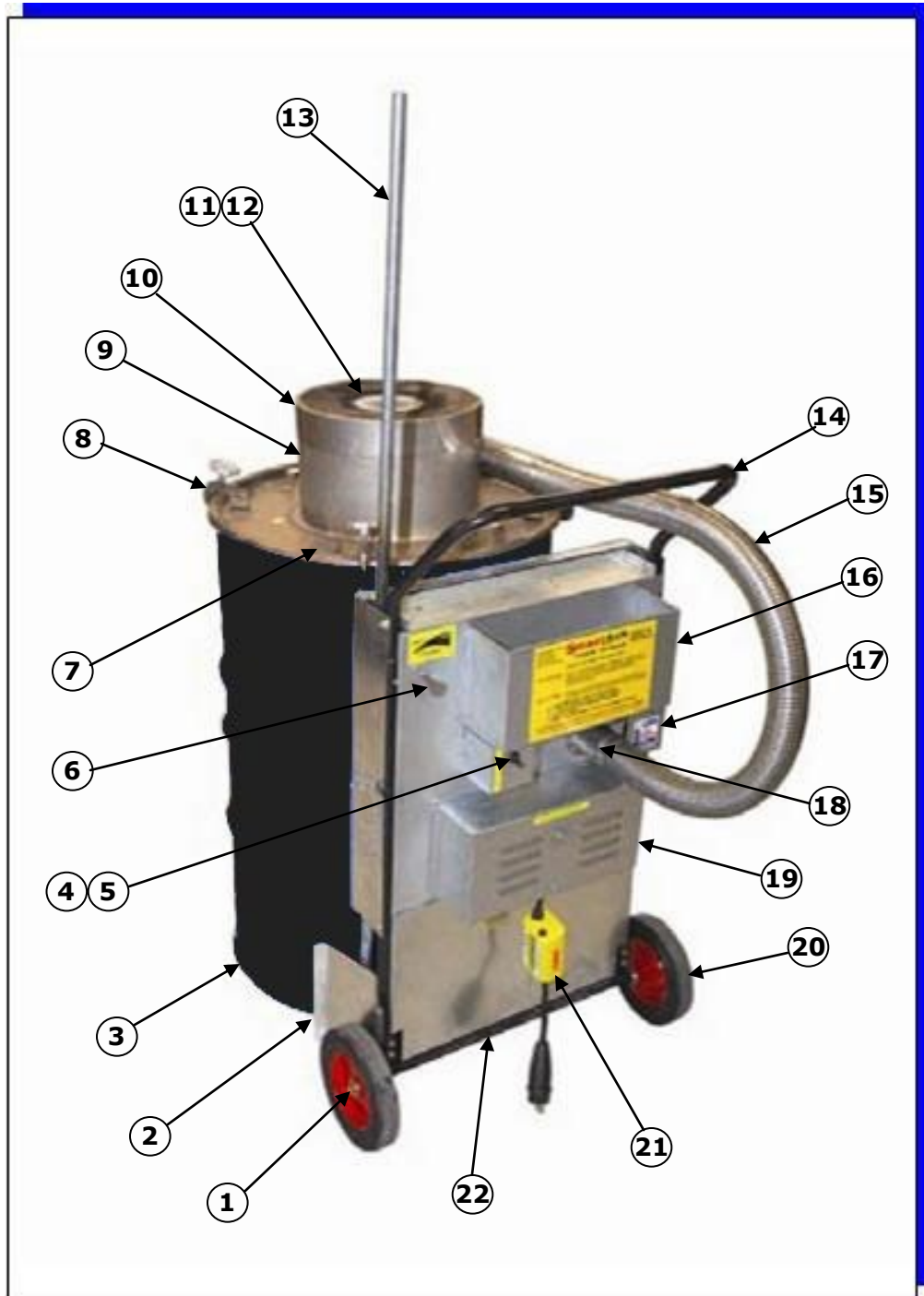
WARNING: Do not burn materials with a flash point lower than 100 degrees Fahrenheit (38 degrees Celsius).

Before loading oily absorbents, load drum with a layer of new absorbent material. They should cover the bottom of the drum and be approximately one to three inches deep.

WARNING: Do not burn absorbents that are over-saturated with oil. Allow them to drain. If oil liquids are present, add more absorbent material.

WARNING: Do not attempt to burn absorbents that are water-soaked, even if they are mostly soaked with oil. Allow the water to drain away.

An ample amount of paper or cardboard must be used as starter fuel to generate the heat required to sustain a fast, quality burn.



Numbers refer to parts listed on following pages.



110v & 220v PARTS LISTS

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110v (OSMARAS110) Parts List			
Item #	Part #	Description	Quantity
1	4AXLENU010	Axle Push Nut	2
2	4FENDCA010	Fender	2
3	4DRUMOP012	Open Head Drum (Optional)	1
4	4SWITTO010	Toggle Switch 110v	1
5	4BOOTTO001	Toggle Switch Boot	1
6	4LATCAI010C	Air Shutter Control	1
7	4COVEST010C	Stir Port Cover	1
8	0KIT-LI510	Lid Clamp Assembly	1
9	4LID-DR010	Drum Lid Assembly	1
10	4BANDTO000C	Top Band S/S	1
11	4SPACSC010	Screen Spacer	1
12	4SCRESP010	Spark Screen	1
13	4ROD-ST000	Stir Rod	1
14	4CARTSM010C	Cart SmartAsh Assembly	1
15	4HOSEFL708	Flex Hose S/S 45"	1
16	4PLEN--110C	Plenum Box Assembly	1
17	4COVEAI010	Air Port Cover	1
18	4AIRP-036C	Air Port 2-1/4"	1
19	4COVEBL010	Blower Cover	1
20	4WHEECA010	Cart Wheel	2
21	0KIT-SA110	Saf-Start Kit	1
22	4AXLECA080P	Axle	1
23	4LOCKCO010	Cord Lock (Not Shown)	1
24	4SHIEBO010	Bottom Guard	1

220v (OSMARAS220) Parts List			
Item #	Part #	Description	Quantity
1	4AXLENU010	Axle Push Nut	2
2	4FENDCA010	Fender	2
3	4DRUMOP012	Open Head Drum (Optional)	1
4	4SWITTO010	Toggle Switch 110v	1
5	4BOOTTO001	Toggle Switch Boot	1
6	4LATCAI010C	Air Shutter Control	1
7	4COVEST010C	Stir Port Cover	1
8	0KIT-LI510	Lid Clamp Assembly	1
9	4LID-DR010	Drum Lid Assembly	1
10	4BANDTO000C	Top Band S/S	1
11	4SPACSC010	Screen Spacer	1
12	4SCRESP010	Spark Screen	1
13	4ROD-ST000	Stir Rod	1
14	4CARTSM010C	Cart SmartAsh Assembly	1
15	4HOSEFL708	Flex Hose S/S 45"	1
16	4PLEN--220C	Plenum Box Assembly	1
17	4COVEAI010	Air Port Cover	1
18	4AIRP-036C	Air Port 2-1/4"	1
19	4COVEBL010	Blower Cover	1
20	4WHEECA010	Cart Wheel	2
21	0KIT-SA220	Saf-Start Kit	1
22	4AXLECA080P	Axle	1
23	4LOCKCO010	Cord Lock (Not Shown)	1
24	4SHIEBO010	Bottom Guard	1



SPECIAL 110v PARTS LIST

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In this version of the SmartAsh Cyclonic Barrel Burner, the plenum has been designed to allow the unit to be wall-mounted. This eliminates the need for the cart assembly. The length of the flex hose that connects the plenum assembly to the drum top has been increased, as well. If you plan to use the SmartAsh Cyclonic Barrel Burner in one fixed location, this would be a good choice.

OSMARAS110S Parts List			
Item #	Part #	Description	Quantity
3	4DRUMOP012	Open Head Drum (Optional)	1
4	4SWITTO010	Toggle Switch 110v	1
5	4BOOTTO001	Toggle Switch Boot	1
6	4LATCAI010C	Air Shutter Control	1
7	4COVEST010C	Stir Port Cover	1
8	0KIT-LI510	Lid Clamp Assembly	1
9	4LID-DR010	Drum Lid Assembly	1
10	4BANDTO00oC	Top Band S/S	1
11	4SPACSC010	Screen Spacer	1
12	4SCRESP010	Spark Screen	1
13	4ROD-ST000	Stir Rod	1
15	4HOSEFL716	Flex Hose S/S 96"	1
16	4PLENSP110C	Plenum Special Assembly	1
17	4COVEAI010	Air Port Cover	1
18	4AIRP-036C	Air Port 2-1/4"	1
19	4COVEBL010	Blower Cover	1
21	0KIT-SA110	Saf-Start Kit	1
23*	4LOCKCO010	Cord Lock (Not Shown)	1



REPLACEMENT PARTS

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Part #	Description
0KIT-SP110	Spare Parts Kit (For 110V)
0KIT-SP120	Spare Parts Kit (For 220V)
4SCRESP010	Spark Screen
0KIT-MO010	Replacement Motor (For 110v Version)
0KIT-MO020	Replacement Motor (For 220v Version)
0KIT-AI820	Air Port Kit
4FILTHO010	Filter Holder
0KIT-FI072	Filter Kit
4KEEPFI010	Filter Keeper
4AIRP-020	Air Port 1-1/4"
4BRACSW000	Switch Bracket
4DEFLSP010	Spark Deflector Assembly
4COVECA010C	Cover Cap
0KIT-SN010	Snap Button Kit
4CHAIDO010	Double Loop Chain
4GRATSM000C	Grate Complete (Optional)

WARNING: Unit must be disconnected from power source before performing any maintenance.

REMOVING MOTORS

1. Place air supply on flat surface with the motor side facing up. Remove motor cover.
2. Unscrew nuts holding switch in place and drop switch back through mounting hole into air supply interior.
3. Remove screws holding motor mounting plate in place on air supply. Remove motor assembly, which consists of the motor plate, two motors, switch and wiring.
4. Remove long screw from motor plate that supports motor cover. To do so, hold nut on screw with needle-nose pliers or 3/8-inch open wrench. Loosen screw with screwdriver and turn nut off screw with fingers. Remove screw from motor plate and attach nut to screw.

AIR FILTERS

Check conditions frequently of air filters located on motors.

1. Remove motor cover on back of air supply by removing wing nut.
2. Pry retaining harness off pegs and lift out filter.
3. Clean air filter by using the unit's air hose. Hold clean side of filter to the air hose and blow dirt away. Replace if blocked or damaged.

EXTERNAL SPARK SCREEN

1. Tap center of screen to remove encrusted ash.
2. To replace spark screen, remove three screws holding screen housing to top of lid and remove inner parts.

INTERNAL SPARK DEFLECTOR

The deflector is held in position by tabs on two of its legs that trap the inner edge of the drum lid and a cotter pin that attaches the third leg to the drum lid. To remove the deflector, pry points of cotter pin up straight, hold them together with pliers and tap pin down through the deflector leg. Pull pin free with pliers.

When not in use, SmartAsh should be covered and stored indoors. Insert stir rod through porthole in drum. Store chain in accessories tray.

Load drum at burning site rather than wheel a loaded drum to the site.

PROBLEM	PROBABLE CAUSE	SOLUTION
Excessive smoke	Poor start	Remove lid. If fire is smoldering or burning weakly, restart with newspaper on top of load.
	Unsuitable or wet material	Remove or dump material. Restart with proper, dry load.
	Too much free oil has leaked from sorbents	Stop burn and add new absorbent materials to soak up excess oil.
Lid leaks	Clamps loose or not properly seated	Re-seat clamps and tighten.
	Bent drum lip	If severe, replace drum. If bent only on the underside, rotate drum so clamps fasten on the unbent section. Drum should be replaced at earliest convenience.
	Lid warped from exposure to excessive temperatures	Leaking area can usually be sealed by a Vise Grip welding clamp Model 9R or equivalent available in hardware stores. Drum should be replaced at earliest convenience.
Weak air flow	Clogged air filters.	Clean or replace air filters. See Page 19 for instructions.
	Air control not working properly	Check air control latch for proper operation.
	Motor failure	Remove motor cover, filter harness and filter to expose motor. If power is on and motor does not turn, it will have to be replaced.
Saf-Start disengages with power supply switched on	Circuit overload	Reduce the number of items on the circuit or use another outlet on a different circuit. Reduce the length of the extension cord.
Lid sticks on drum	Drum is out of round.	Pull upward on one lid handle while tapping side of drum immediately below with hammer. Proceed to next handle and repeat until lid pulls free. To correct drum condition, see "Selecting Drum."
Unit does not start.	Saf-Start has not been engaged.	Engage Saf-Start. See Page 11 for instructions.

Absorbents

1. Cellulose-base type: Good, clean burn resulting in very little ash.
2. Cotton: Good, clean burn as long as moisture content is low.
3. Polypropylene & Cotton Mix: Since this material is water-repellant, moisture content is not a problem. **WARNING: Some states only allow 20% by volume of poly products to be incinerated.**
4. Corn Cobs: Good burn as long as it is not overly saturated with fluid.
5. Sawdust
6. Peat Moss: Hot, clean burn when it absorbs diesel or oil.

When burning these materials, it is helpful to line the drum with clean, dry absorbents. This will catch any fluids that leach out during operation of the unit. Always load the drum 2/3 full and add a proper amount (6-10 pages) of newspaper to start the incineration process. Light the newspaper, re-install the lid and then adjust air flow to the RUN position. The SmartAsh will incinerate approximately 50 pounds per hour. The burn time of the unit will depend on the absorbent type and volume loaded in the drum.

Hydrocarbons

1. All Types of Crude Oils: Extremely hot, clean burn when mixed with cellulose, cotton, poly cotton mix or peat moss absorbents. This can cause the lid assembly and drum to glow red from the extreme heat. Do not be alarmed, as this is common with these types of fuels.
2. Used Motor and Waste Oils: Hot, clean burn when mixed with cellulose, cotton or poly cotton mix absorbents.
3. Transmission and Hydraulic Oils: Clean burn when mixed with cellulose, cotton or poly cotton mix.
4. Lubricating Greases: Best burn when mixed with cellulose, corn cobs or sawdust. The operator must thoroughly mix the absorbent with the grease. The bottom of the drum should be lined with clean, dry absorbents to catch any liquids formed while the unit is in operation.
5. Diesel Fuel #1, Diesel Fuel #2 and Kerosene: Very hot, clean burn when mixed with cellulose, cotton, poly cotton mix or peat moss absorbents.
6. Jet Fuels: These fuels burn with similar characteristics as diesel fuels and kerosene and should be handled in the same manner.

The above fuels must be absorbed in a burnable type of absorbent. Materials to be incinerated must have a flash point higher than 100 degrees Fahrenheit (38 degrees Celsius). These fuels will burn very hot and typically very clean, depending on the type and amount of absorbent used. To reduce the chance of smoking, the absorbent must not be overly saturated with fuels. To ensure a clean burn, work with the ratio of one pound of absorbent for each pound of fluid.

Filters
<ol style="list-style-type: none">1. <u>Spin-on and Cartridge Oil Filters from Cars Trucks, and Heavy Equipment:</u> Requires a fuel source to properly incinerate. Burning is best achieved by burning with a load of used oily absorbents or wood products. These products burn very hot and will achieve the best results. After the burn is complete, the steel canister is all that remains. It should be recycled or disposed of in a landfill.2. <u>Air Filters of All Types:</u> Burn good because most of these are paper-based and can sustain a flame on their own. All that is required to start and sustain the burn process is an ample supply of newspapers.3. <u>Poly & Fiberglass Ventilation Filters:</u> Incineration is similar to the above listing. The only difference is in the ash created from burning fiberglass filter. It will be fist-sized clumps instead of a powder.4. <u>Natural Gas Pipeline Filters (Glycol Filters):</u> Burns very hot. The fibers in this type of filter are impregnated with natural gas. All that is required to start and sustain the incineration process is an ample supply of newspapers.
Paper Products (An optional Document Burner is available for large amounts.)
<ol style="list-style-type: none">1. <u>Newspapers:</u> Burn best when shredded. This allows for more air flow.2. <u>Office Waste:</u> Burns good since there is always ample paper in the waste to start the burn process.3. <u>Cardboard:</u> Burns very hot and fast. Newspapers are helpful in starting the incineration process.4. <u>Fast Food Paper Waste:</u> For proper burn, material must be dry. Once dry, the lighting of the waste is all that is required to start the incineration process.5. <u>Computer Paper and Sensitive Documents:</u> Burns good when stacked in the drum with no obstructions. The air flow in the drum picks up each individual paper and burns it completely.
Wood Products
<ol style="list-style-type: none">1. <u>Sawdust:</u> Burns good and will incinerate on its own. The addition of diesel fuel or waste oil will speed up the burn process and eliminate the need for disposal.2. <u>Construction Site Scrap and Shipping Pallets:</u> Burns very good. All that is required to start the incineration process is a small amount of oil or diesel (no gasoline or paint thinner) and some newspaper. This will create a fast start with little smoke.3. <u>Tree Limbs & Leaves:</u> When burning, these items should be mixed if possible. The leaves will ensure the proper incineration of the tree limbs. Any yard waste material to be burned should be dried because of the high moisture content. Lighting of the leaves is all that is required to start the incineration process.

Miscellaneous

1. Clothing
2. Gloves
3. Oily Rags
4. Packaging Materials

These kinds of materials will burn very good. Moisture content must be low to ensure proper incineration. To start the process, it is necessary to add and light an amount of cardboard and newspapers to the top of the materials.

Plastics

This unit will incinerate a variety of plastics. An oily absorbent and plenty of newspapers will be required to start the actual incineration of the plastic. The plastic will melt down to a molten state, and then it will burn very hot. Although the unit will incinerate plastics with no smoke, emissions are often not acceptable with individual states' air quality standards. **WARNING: Plastics should not be incinerated without approval from your state officials.**

Use of Liquid Oils/Diesel Fuels/Fuel Oils (An optional OilAway attachment is available for large amounts.)

Successful testing has been completed for disposing of free oils containing no absorbent materials. Although care in loading the drum is needed, it is an alternative to mixing absorbent with the oil for disposal in SmartAsh.

A maximum of 20 gallons of liquid per load is recommended. Some small pieces of wood material are required for the disposing of oils in this manner. Four to five pieces of 2"x4" material 6" in length is sufficient. The wood pieces are put into the unit and allowed to float on the oil and act as a wick to support the flame. The unit is ignited in the same fashion as other materials being disposed of in the unit.

CAUTION: Do not overload the drum (20-gallon maximum)! If the drum is overloaded during the incineration process, the oil will become hot and boil over, causing severe damage to the unit components.



Elastec (“Seller”) warrants this product against defects in material and workmanship under normal use and service for a period of six months.

However, Seller’s liability hereunder is limited to making good by replacement or repair without charge to Buyer any such defects as arise within the period of six months from dispatch of the articles (with the exceptions listed below), provided always that Seller is notified of those defects in writing within 14 days of their discovery and that the defective parts, where reasonable, are promptly sent carriage paid to Seller’s premises. Such liability shall not extend to such faults as are caused by ordinary wear and tear, incorrect handling of the articles or their defective maintenance or storage. Seller’s obligation under this warranty is limited solely to repairing or replacing parts that in its judgment are defective in material and/or workmanship.

The guarantee contained in the clause above shall constitute Seller’s sole liability for latent and other defects and is in full exclusion of any warranty or liability whatsoever implied of common law, statute or otherwise as to the quality of the goods, their fitness for any particular purpose, their merchantability or otherwise, and Seller shall not be liable for the consequential loss, injury or damage of any nature whatsoever arising out of or in connection with the supply of the articles

Limitation:

Elastec is not liable for expenses incurred in repairs or alterations made outside its factories or licensed dealer locations without prior authorization, nor shall it be responsible for the performance of this product to which any revisions or alterations have been made by others.

Items not covered by Elastec warranty:

- Products that have been subjected to alteration, modification, neglect or repairs.
- Products no longer owned by the original purchasers.
- Products suffering shipping or freight damage, normal wear, accident, improper maintenance or improper protection in storage.
- Rental costs, return transportation cost of product to Seller's place of business or phone communications.
- Any repeat or shop comeback repairs resulting from poor service work, improper diagnosis or testing. Replacement of parts as a trial and error method of diagnosis will not be considered for warranty.
- Replacement parts other than those sold or supplied by Elastec, Inc.
- Natural calamities such as fire, flood, etc.
- In the case of components or accessories that have been supplied to Buyer's design, Seller shall be under no liability to replace or repair defects arising therefrom.
- Any damage caused by failure to immediately correct a known or suspected problem.

The guarantee contained in the clause above shall constitute the seller's sole liability for latent and other defects and is in full exclusion of any warranty or liability whatsoever implied of common law, statute or otherwise as to the quality of the goods, their fitness for any particular purpose, their merchantability or otherwise, and the seller shall not be liable for the consequential loss, injury or damage of any nature whatsoever arising out of or in connection with the supply of the articles.