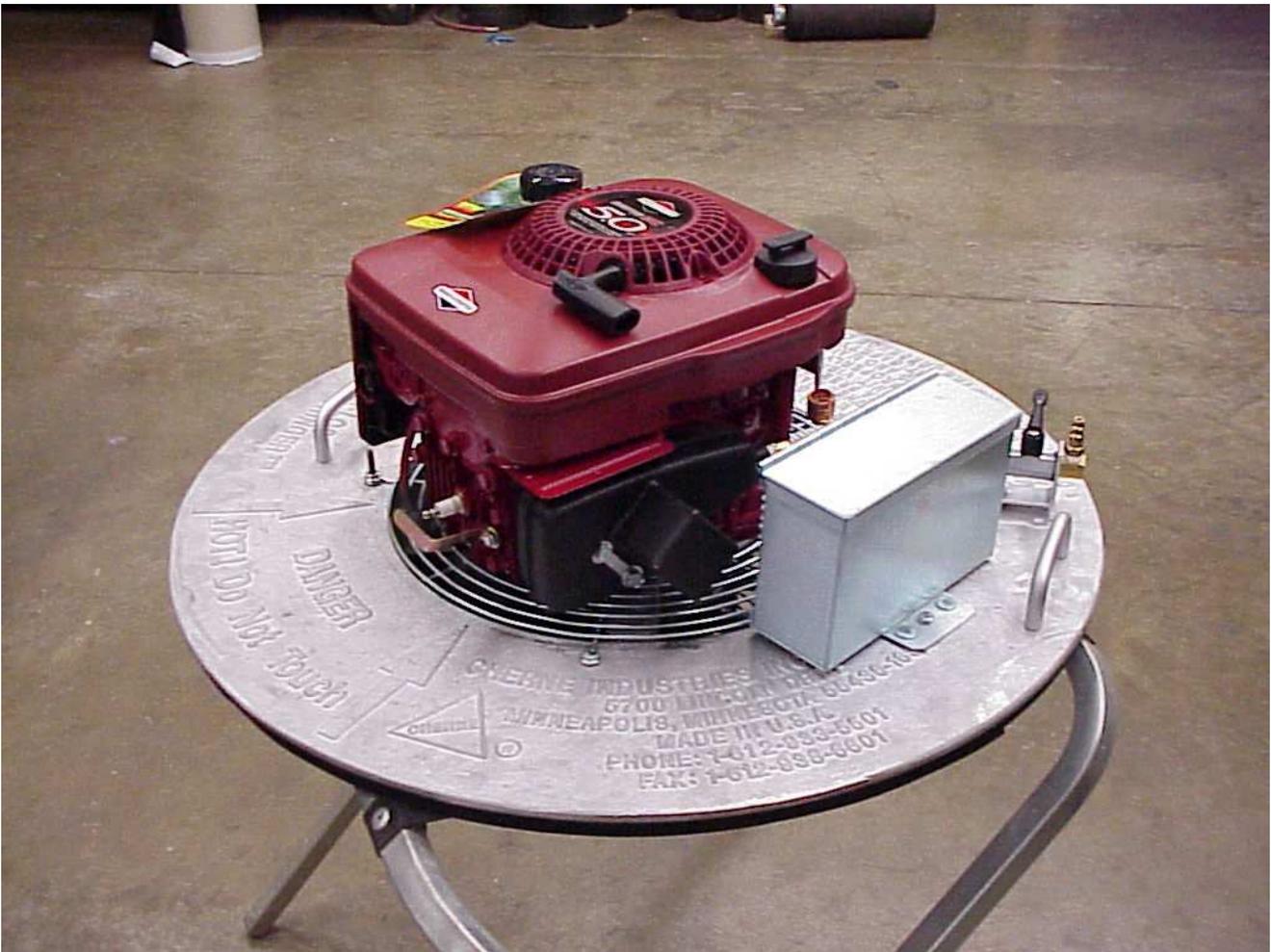


Cherne Smoke Fluid Conversion Kit (part #036-308)  
Cherne Smoke Fluid Blower (part #303-008)  
Instructions



CHERNE INDUSTRIES INCORPORATED  
5700 LINCOLN DRIVE  
MINNEAPOLIS, MN 55436-1695

1-800-THE-PLUG  
(1-800-843-7584)  
FAX: 1-800-843-7585  
[www.cherneind.com](http://www.cherneind.com)

These instructions are intended to assist in the conversion of a Cherne Smoker Blower (Part # 303-550) to a Smoke Fluid Blower, and to provide usage instructions for the Cherne Smoke Fluid Blower.

The Cherne Smoke Fluid Conversion Kit (#036-308) contains:

Item #	Part #	Qty	Description
1	036-318	1	INJECTOR
2	036-328	1	VALVE BRACKET
3	036-338	1	VALVE BRACKET EXTENSION
4	037-828	1	MUFFLER, WELDED
5	036-388	1	VALVE, BALL 1/8 FPT X 1/8 FPT
6	036-398	2FT	TUBING, COPPER
7	036-408	1	TUBE FITTING, 1/8, UNION
8	036-418	2	TUBE FITTING, 1/8 X 1/8 MPT
9	036-428	1	ELBOW, 90 STREET, 1/8 MPT X 1/4 FPT
10	036-448	1	MANUAL, SMOKE FLUID CONVERSION
11	035-838	1	BARCODE LABEL
12	036-488	1	FLUID TANK ASSEMBLY
13	251-623	1	NIPPLE, 1/4 QD X 1/4 MPT
14	000-361	1	BOLT, 1/4-20 X 1/2"
15	000-868	1	NUT, HEX, 1/4-20
16	118-974	1	WASHER, NEOPRENE
17	015-849	.013RL	TAPE-TEFLON
18	001-178	1	CARTON
19	097-438	1	CARTON

Items 1, 7 and one of item 8 comprise the injector assembly.

Items 2, 3, 5, one of item 8, 9, 13, 14, 15 and 16 comprise the valve assembly.

The Cherne Smoke Fluid Blower (#303-008) contain all of the above items except 18 and 19. In addition to the items shown above, it also contains one of part #303-550 (Cherne Smoke Blower w/manuals and oil).

## Converting a Cherne Smoke Blower for use with Cherne Smoke Fluid (part #'s 035-058 1 Gallon and 035-068 5 Gallon)

1. Before starting conversion, make sure the throttle lever and fuel supply knob are both in the off position.
2. Pull the spark plug wire off of the spark plug
3. Remove bolt securing smoke bomb box. Retain this bolt. Remove the box.
4. Remove the two bolts that secure the muffler guard to the engine. Remove the guard. One of the bolts also holds on the spark arrester. After removing the guard, make sure to re-install the spark arrester (see Figure 1).
5. Remove the two bolts that secure the muffler to the engine. Remove the muffler.
6. Install new muffler using new hardware.
7. Remove nut from stud that holds down the top guard (see Figure 2).
8. Mount valve assembly on stud using hole at the end of the valve bracket extension (see Figure 3). Replace nut.
9. Install injector assembly onto muffler. Use Teflon tape on the pipe fitting (see Figure 4).
10. Install coiled copper tubing. Put the end with the longer tail into the fitting on the valve assembly. Do not tighten yet (see Figure 5).
11. Put the end with the shorter tail into the fitting on the muffler. Tubing may have to be bent slightly for proper fit. Tighten fittings. Finished assembly should look like this (see Figure 6).
12. Make sure all fittings are tight.
13. Re-install smoke bomb box.
14. Re-install spark plug wire.

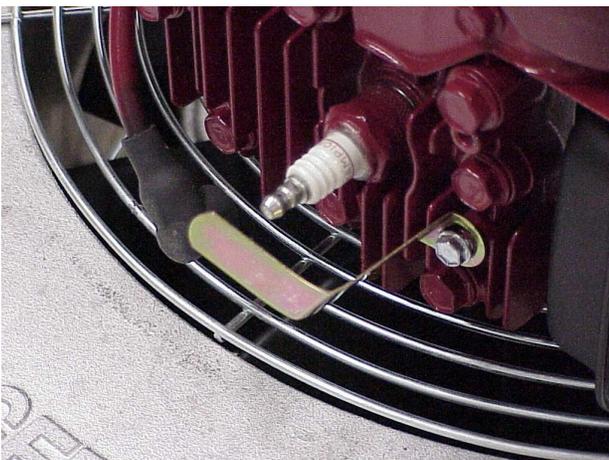


Figure 1



Figure 2

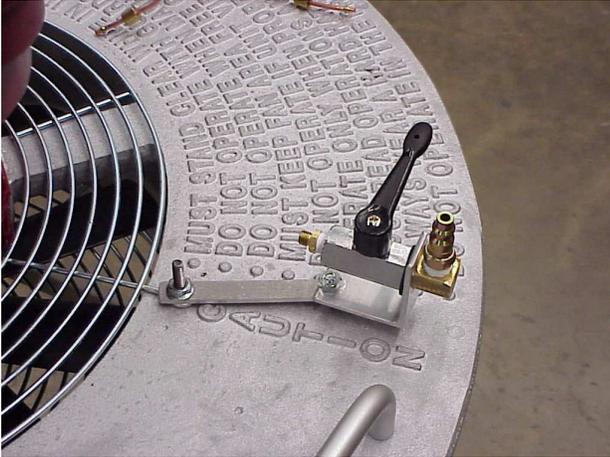


Figure 3

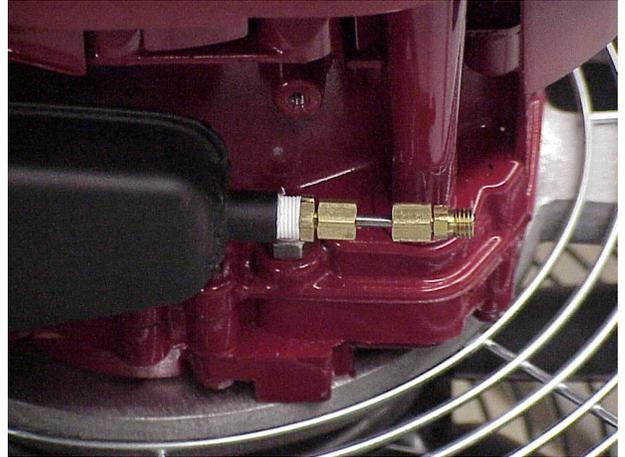


Figure 4

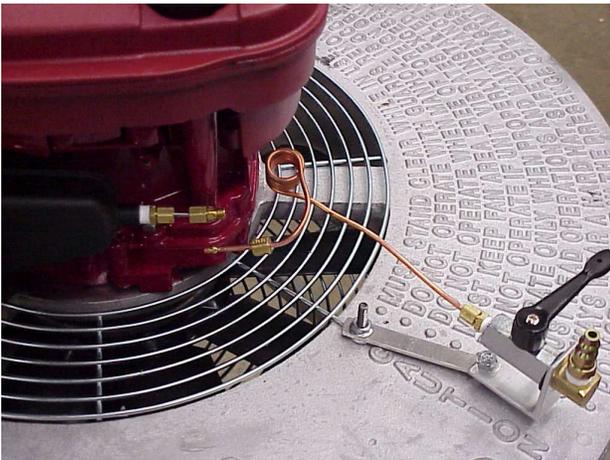


Figure 5

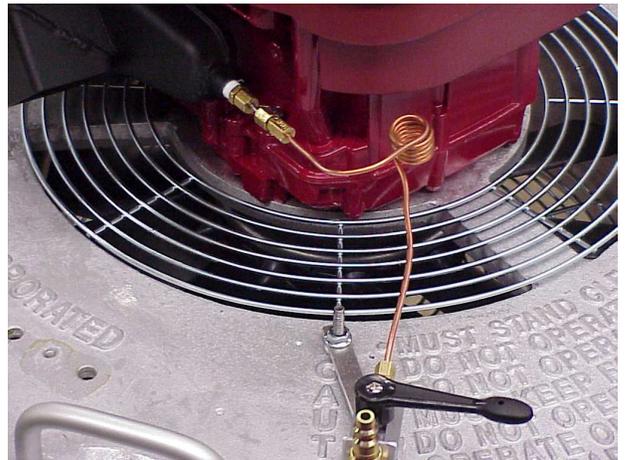


Figure 6

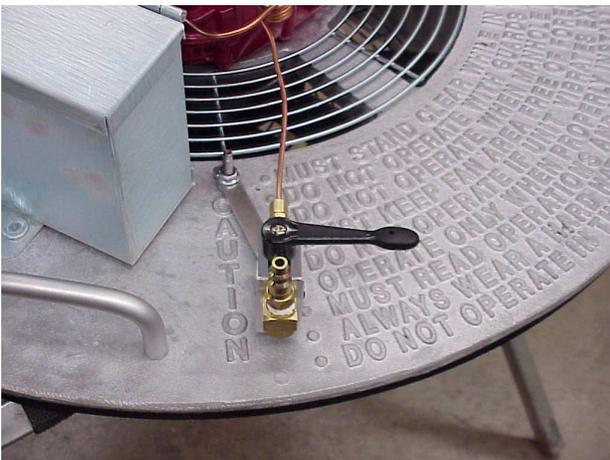


Figure 7

## INSTRUCTIONS FOR USING A CHERNE SMOKE FLUID BLOWER

### **Advance Notice**

Press releases to the news media (newspapers, radio and TV) will generate much public good will and support for a program that will improve the local sewerage system, and assure compliance with EPA regulations. Such releases should outline the place, as well as the problems that will be solved by having the smoke testing done.

Local fire and police departments should be advised daily of the areas being tested, on a street to street basis. Personnel handling telephone inquiries should be acquainted with the purposes of the smoke testing program, and be prepared to advise against unnecessary exposure to the smoke.

Proper advance notices are necessary and the responsibility of the agency or contractor performing the tests. Door to door notification within 24 hours before the tests is recommended. This prevents unethical occupants from covering up illegal drains, sump pumps, etc. before the tests. While giving advance notice discrete neighborhood inquiries can identify persons suffering from heart and/or lung diseases, such as emphysema, who should never be exposed to any smoke, including Cherne. Individuals with respiratory problems should be removed from the premises prior to the tests. Others, such as house confined invalids, sleeping shift workers and locked in animals should be identified and evacuated before the test.

The last page of this manual contains a form that conveys the necessary information to the residents of the affected area. This form, or one similar to it should be distributed to all of the residents of the affected area.

**Note:** The muffler on the Cherne Smoke Fluid Blower has been painted with a high temperature paint. The first few times the engine is run, the muffler will smoke as the paint on it cures. This is normal, and should stop after the engine has been run a few times.

1. Follow all instructions and recommendations listed in the instruction manual for the regular smoke blower (included).
2. Make sure the ball valve is in the off position (see Figure 7).
3. Open fluid tank and add 1-2 gallons of Cherne Smoke Fluid. Close tank and tighten.
4. Hook quick disconnect on the end of the tank hose to the nipple on the smoke blower valve assembly.
5. Pump handle on tank 5 to 10 times to build tank pressure.
6. Start smoke blower and place it on the manhole frame.
7. Let smoke blower run 3 or 4 minutes to get it up to operating temperature.
8. Slowly open ball valve until muffler starts emitting smoke.
9. Perform test.
10. After test has been done, close ball valve. Let smoke blower engine run at least two minutes after test has been completed and ball valve has been closed.
11. Turn off engine.
12. Release pressure in tank by pushing pump handle down and turning it clockwise to lock metal tab in slot on plastic barrel. Then slowly turn the locked pump handle counter-clockwise to release tank pressure.
13. Disconnect tank hose from the valve assembly.

**Note 1:** The more the ball valve is opened, the more smoke will be emitted. If the ball valve is opened all the way, this increases the potential for “blow through”. This “blow through” happens when there is too much fluid going into the muffler and some of it does not smoke. It blows through the muffler and into the manhole. To decrease the chances of this, only open the ball valve until the muffler starts to emit smoke.

**Note 2:** After the ball valve has been closed and the engine turned off, the muffler may continue to emit a small amount of smoke. This is normal. To minimize this, make sure to run the engine for at least 2 minutes after the ball valve has been closed.

## Trouble shooting

Problem	Solution
No smoke	No fluid in tank. Fill tank. No pressure in tank. Pressurize tank. Fluid injector clogged. Remove injector and clean.
Too little smoke	Too little fluid in tank. Fill tank. Too little pressure in tank. Pressurize tank. Ball valve not open enough. Adjust ball valve
Too much smoke	Too much pressure in tank. Release some Pressure from tank. Ball valve open to far. Adjust ball valve.
Muffler smokes after engine is stopped.	This is normal. To decrease the amount of time the muffler smokes after the engine has stopped, run the engine with the ball valve closed for at least two minutes before stopping engine.
The outside of the muffler smokes	This is caused by the hi-temp paint used on the muffler. This will stop after the first few uses.
Engine trouble shooting	See engine manual.

**Caution:** If the smoke blower runs out of gas while smoking, close the ball valve immediately. Before restarting the blower, pull the starter cord several times with the engine throttle in the off position. This will clear out any fluid build up in the muffler.

## LIMITED WARRANTY

Manufacturer warrants all products manufactured by it will be free from defects in material and Workmanship for one (1) year following the date of manufacture. If any of the goods are found to be defective, such goods will, at manufacturer's option be replaced or repaired at manufacturer's cost. The parties hereto expressly agree that buyer's sole and exclusive remedy against the manufacturer shall be for the repair or replacement of defective goods as provided herein. (The sole purpose of the stipulated exclusive remedy shall be to provide the buyer with free repair and replacement of defective goods in the manner provided herein. The exclusive remedy shall not be deemed to have failed of its essential purpose so long as the manufacturer is willing and able to repair or replace defective goods in the prescribed manner.) Goods which may be sold by manufacturer but are not manufactured by it are not warranted by manufacturer, but are sold only with the warranties, if any, of the original manufacturers thereof. (This warranty does not cover labor or other costs or expenses to remove or install any defective, repaired or replaced goods.) Manufacturer's warranty does not apply to any goods which have been subjected to misuse, mishandling, misapplication, neglect (including but not limited to use of unauthorized parts or attachments), or adjustment or repair performed by anyone other than manufacturer or one of manufacturer's authorized agents.

Any claim by buyer with reference to the goods sold hereunder shall be deemed waived by the buyer unless submitted in writing to manufacturer within the earlier of (1) thirty (30) days following the date buyer discovered or by reasonable inspection should have discovered, any claimed breach of the foregoing warranty, or (2) thirteen (13) months following the date of manufacture. Any cause of action for breach of the foregoing warranty shall be brought within one year from the date the alleged breach was discovered or should have been discovered, whichever comes first.

**LIMITATION OF LIABILITY.** Manufacturer's liability (whether under the theories of breach of contract or warranty, negligence, or strict liability) for its goods shall be limited to repairing or replacing parts found by the manufacturer to be defective, or at manufacturer's option, to refunding the purchase price of such goods or parts thereof.

**DISCLAIMER OF CONSEQUENTIAL DAMAGES.** In no event shall manufacturer be liable for consequential damages arising out of or in connection with this agreement, including without limitation breach of any obligation imposed on manufacturer hereunder or in connection herewith. Consequential damages for purposes hereof shall include, without limitation (including death) to any person, or loss of or damage to property (including without limitation property handled or processed by the use of goods). Buyer shall indemnify manufacturer against all liability, cost or expense which may be sustained by manufacturer on account of any such loss, damage or injury.

**DEFECTIVE PRODUCTS POLICY.** To obtain performance under this warranty, any product suspected of having a manufacturing defect in materials or workmanship at manufacturers request must be returned to CHERNE INDUSTRIES INCORPORATED, freight prepaid, for inspection. A returned goods authorization must be obtained before shipping any product back to CHERNE. Call 1-800-843-7584 and ask for customer service.

**CUSTOMER TRANSPORTATION REIMBURSEMENT.** Whenever CHERNE repairs or replaces a product at CHERNE'S expense CHERNE will reimburse the distributor by credit memo, the same surface freight amount it cost CHERNE to return the warranty items.

The foregoing warranty is in lieu of all other warranties express or implied, including those of merchantability or fitness for any purpose not expressly set forth herein. No affirmation of manufacturer, by words or action, other than as set forth in this language shall constitute a warranty.

# Advance Notice of Sewer Testing Form

Current Date \_\_\_\_\_

Date of Test \_\_\_\_\_

Location of test \_\_\_\_\_

City \_\_\_\_\_

County \_\_\_\_\_

State \_\_\_\_\_

Name of party performing test \_\_\_\_\_

Contact phone number of party performing test \_\_\_\_\_

Resident,

This notice is to inform you that the \_\_\_\_\_ of \_\_\_\_\_ OR  
City, county or state      name of city, county or state  
\_\_\_\_\_ will be testing sewer lines in your area on the above date. The tests will be  
contractor's name  
conducted using smoke. The smoke should not enter the premises unless a leak is present.

The presence of smoke in your home should be reported immediately to the personnel conducting the testing, or by calling \_\_\_\_\_  
Contact number for city, county, state or contractor

Please avoid any unnecessary exposure to the smoke. While relatively harmless, it may cause irritation to nasal passages. Any irritation will be temporary and should quickly disappear after exposure has ceased. Persons with heart and/or respiratory ailments should leave the home during the test. Be sure any house pets are provided proper ventilation or are removed from the home.

To minimize the chance of smoke entering your home, please pour water into all drains, including floor drains, prior to the date of the test.

Signed \_\_\_\_\_  
Contact at city, county, state or contractor