

OWNER'S SERVICE MANUAL

INSTALLATION, OPERATING & SERVICING INSTRUCTIONS



MANUAL PN 05616

**HIGH PERFORMANCE DRY CHEMICAL
PORTABLE EXTINGUISHERS**

GALVANIZED & Z-SERIES 6KG, 20 & 30 LB.

All fire extinguishers shall be installed, inspected and maintained in accordance with the National Fire Protection Association standard titled "Portable Fire Extinguishers", NFPA 10 or the national Fire Code of Canada and the requirements of local authorities having jurisdiction.

When maintenance is indicated, it shall be performed by trained persons having proper equipment. Fire extinguishers are pressure vessels and must be treated with respect and handled with care. They are mechanical devices and require periodic maintenance to be sure that they are ready to operate properly and safely. Amerex strongly recommends that the maintenance of portable fire extinguishers be done by a trained professional – your local authorized Amerex Distributor.

Amerex Corporation makes original factory parts available to insure proper maintenance – USE OF SUBSTITUTE PARTS RELEASES AMEREX OF ITS WARRANTY OBLIGATIONS. Amerex parts have machined surfaces and threads that are manufactured to exacting tolerances. o-rings, hoses, nozzles, and all metal parts meet precise specifications and are subjected to multiple in-house inspections and tests for acceptability. There are substitute parts available that may be incorrectly labeled as UL component parts, some are advertised as Amerex type. None of these meet UL requirements and all of them voids the Amerex extinguisher warranty and UL listing. **DO NOT SUBSTITUTE.**

RECHARGE FIRE EXTINGUISHERS IMMEDIATELY AFTER ANY USE

REFERENCES IN THIS MAUNUAL:

NFPA 10 Portable Fire Extinguishers

CGA C-1 Methods for Pressure Testing Compressed Gas Cylinders

CGA C-6 Standard for Visual Inspection of Steel Compressed Gas Cylinders.

National Fire Code of Canada

AVAILABLE FROM:

National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471

Compressed Gas Association, 14501 George Carter Way, Chantilly, VA 20151-2923

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National Research Council Canada, 1200 Montreal Road, Ottawa, ON K1A 0R6 Canada

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THIS MANUAL IS ATTACHED TO EVERY NEW EXTINGUISHER SHIPPED FROM THE FACTORY. IT CONTAINS VALUABLE INFORMATION WHICH shall BE STUDIED BY EVERYONE WHO WILL USE OR SERVICE THE EXTINGUISHER. THE MANUAL shall BE STORED IN A CONVENIENT LOCATION FOR EASY REFERENCE.

INTRODUCTION

The Amerex High Performance, stored pressure 13.2 (6kg), 20 lb. (9 kg) and 30 lb. (13.6 kg) dry chemical fire extinguishers have been designed and manufactured to accommodate the rigorous needs of environmental extremes and heavy industrial use. The finest materials, workmanship and finishes have been utilized, backed by several years of development and field testing to insure many years to trouble free fire protection.

These extinguishers operate at a 240 psi (1655 kPa) pressure and are intended for use by trained fire fighters. The higher discharge velocity and superior range necessary for quick extinguishment of many industrial fire hazards dictates formal training for development of proper fire fighting techniques and a feel for the most effective use of the extinguisher.

All sizes feature a large, durable stainless steel operating lever and carrying handle, large brass, chrome plated operating valve, and a large pressure gauge with gauge guard. The stored pressure design allows easy upright, squeeze grip operation, assures a constant, instant state of readiness, and minimizes operating parts and cuts down on maintenance costs. Amerex is confident in the superior features of these products and have extended our warranty to 12 years to prove it.

INSPECTING THE EXTINGUISHER

This extinguisher shall be inspected at regular intervals (monthly or more often if circumstances dictate) to insure that it is ready for use. Inspection is a “quick check” that a fire extinguisher is available and is in operating condition. It is intended to give reasonable assurance that the fire extinguisher is fully charged. This is done by verifying that it is in its designated place, that it has not been actuated or tempered with, and that there is no obvious physical damage or condition to prevent its operation.

PREPARING YOUR NEW EXTINGUISHER FOR USE

1. Examine the extinguisher for evidence of shipping damage. Notify the delivering carrier immediately if any damage is discovered.
2. Check to insure that the hose connection to the operating valve is tight.
3. The pull pin shall be installed in the operating valve and the tamper seal intact.
4. This extinguisher is shipped from the factory fully charged. Visually inspect the pressure gauge – the pressure shall be in the green zone (240 psi \pm approx. 10 psi range). The most accurate method to determine if the extinguisher is filled with the proper amount of chemical is to weigh the unit. The gross weight is indicated on the nameplate (label).

NOTE: Slight pressure variances in the gauge reading may be found if the extinguisher has been subjected to extremes of heat or cold. High temperatures can cause high gauge readings and low temperatures, low readings. When in doubt, condition the extinguisher to 70°F (21°C) for several hours to obtain more accurate pressure gauge readings.

5. Record the date the unit is being placed into service on the inspection tag and attach it to the extinguisher.

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INSTALLATION

Your plant layout and particular hazards dictate the placement of fire extinguishers. Do not place this extinguisher close to a potential fire hazard. Amerex recommends location no less than a 50 foot distance from a potential hazard while leaving an unobstructed access. Avoid placing it in an extremely hot or cold place. The operational temperature range for this extinguisher is -65° to +120°F (-54° to +49°C). The extinguisher shall be adequately protected if temperatures outside of this range are anticipated. Keep the extinguisher clean and free from dirt, ice, chemicals and any contaminants which may interfere with its proper operation. Do not functionally test this fire extinguisher. (Testing or any use may cause the extinguisher to gradually lose pressure and become ineffective.)

OPERATION

NOTE: Persons expected to use this extinguisher shall be trained in initiating its operation and in the proper fire fighting technique. Familiarize all personnel with this information before an emergency occurs.

1. Remove extinguisher from wall hanger or vehicle bracket.
2. Hold the extinguisher upright, twist and pull the pull pin, snapping the tamper seal.
3. Stand back 15 feet from the fire and aim the nozzle at base of flames nearest you.
4. Sweep side to side across the base of the fire and past both edges. Progressively follow up until the fire is extinguished. Work the fire away from you while being alert for flashbacks. Move closer as the fire is extinguished but not so close as to scatter or splash the burning materials.
5. When the fire is out, stand by and watch for possible reignition. Evacuate and ventilate the area immediately after extinguishing the fire. The fumes and smoke from any fire may be hazardous and can be deadly.

**DISCHARGE TIME – VARIES ACCORDING TO THE MODEL
EFFECTIVE RANGE OF AGENT THROW- 40-50 feet.**

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PERIODIC INSPECTION PROCEDURES (Monthly or more often if circumstances dictate)

NFPA 10 Periodic inspection of fire extinguishers shall include a check of at least the following items:

1. Location in designated place.
2. No obstruction to access or visibility.
3. Pressure gauge reading or indicator in the operable range or position.
4. Operating instructions on nameplate and facing outward.
5. Tamper seal not broken or missing.
6. Examination for obvious physical damage, corrosion, leakage, or clogged nozzle.
7. Determine fullness by weighing.

MAINTENANCE

NFPA 10 At least once a year or more frequently if circumstances require, maintenance shall be performed. Maintenance is a "thorough check" of the extinguisher. It is intended to give maximum assurance that a fire extinguisher will operate effectively and safely. It includes a thorough examination for physical damage or condition to prevent its operation and any necessary repair or replacement. It will normally reveal if hydrostatic testing or internal maintenance is required.

MAINTENANCE – SERVICE PROCEDURE

1. Clean extinguisher to remove dirt, grease or foreign material. Check to make sure that the instruction nameplate is securely fastened and legible. Inspect the cylinders for corrosion, abrasion, dents or weld damage. If any damage is found, hydrostatically test to factory test pressure 720 psi (4964 kPa), using the proof pressure method, in accordance with instructions in C-6 and NFPA 10. See proper method of depressurizing and reclaiming chemical in Recharge procedures.

NOTE: WHEN CLEANING, AVOID USE OF SOLVENTS AROUND THE PRESSURE GAUGE. THEY COULD SERIOUSLY DAMAGE THE PLASTIC GAUGEFACE.

2. Inspect the extinguisher for damaged, missing or substitute parts. Only factory replacement parts are approved for use on Amerex fire extinguishers.
3. Weigh the extinguisher and compare with weight printed in the "Maintenance" section on the nameplate (label). Recharge extinguisher if weight is not within indicated allowable tolerances.
4. Check the date of manufacture printed on the extinguisher label (nameplate) or inside the bottom lip of the cylinder. The agent cylinder must be hydrostatically tested every 12 years to the test pressure indicated on the nameplate [720 psi (4964 kPa)].
5. Visually inspect the pressure gauge:
6. Check pull pin for freedom of movement. Replace if bent or if removal appears difficult.
7. Inspect the discharge lever for any dirt or corrosion which might impair freedom of movement. Inspect carrying handle for proper installation. If lever, handle or rivets are damaged replace with factory replacement parts.
 - a. If bent, damaged or improper gauge, depressurize and replace.
 - b. If pressure is low, check for leaks.
 - c. If over pressurized (overcharged), depressurize the extinguisher and follow recharge instructions.

8. Remove hose and horn assembly and visually inspect inside valve body. Chemical in the valve body may indicate that the extinguisher has been partially discharged and shall therefore be recharged. Inspect the hose and horn assembly for damage and replace if necessary. Blow air through the hose and horn to insure passage is clear of foreign material.
9. Inspect the valve assembly for corrosion or damage to hose thread connection. Replace valve assembly or component parts as necessary following the proper depressurization and recharge procedures. If valve removal is necessary, complete all steps in the Recharge Procedure.
10. Install hose and horn assembly.
11. Record service data on the extinguisher inspection tag.
12. If the extinguisher has been moved to perform service, replace it on the wall hanger or in the vehicle bracket making sure it fits the bracket properly. Replace the bracket if necessary.

COMPLETE MAINTENANCE – SIX YEAR TEARDOWN

NFPA 10 Every six years, stored pressure extinguishers that require a 12 year hydrostatic test shall be emptied and subjected to the applicable maintenance procedures. When the applicable maintenance procedures are performed during periodic recharging or hydrostatic testing, the six year requirement shall begin from that date.

NOTE: Some states have legislation which requires "Complete Maintenance" on an annual basis. Please contact your local Amerex Distributor to see if these requirements apply to you. NFPA 10 requires that a "verification of service" external collar tag be installed on the extinguisher whenever a Six Year Maintenance is performed. The "verification of service" tag can only be installed if the operating valve has been removed.

1. Discharge chemical and pressure into a "closed" dry chemical recovery system (several are commercially available). **Make sure that the extinguisher is completely empty and depressurized.**
2. Clean extinguisher to remove dirt, grease or foreign material. Check to make sure that the instruction

NOTE: A "closed recovery system" is designed to prevent loss of the chemical "fines". Loss of the "fines" could result in reduced extinguisher efficiency.

nameplate is securely fastened and legible. Inspect the cylinder for corrosion, abrasion, dents or weld damage. If any of these conditions are found and you doubt the integrity of the cylinder, hydrostatically test to factory test pressure marked on the nameplate (label), using the proof pressure method, in accordance with CGA C-1 and NFPA 10.

3. Inspect the extinguisher for damaged, missing or substitute parts. Only factory replacement parts are

NOTE: When cleaning, avoid use of solvents around the pressure gauge. They could seriously damage the plastic gauge face.

approved for use on Amerex fire extinguishers.

4. Check the date of manufacture on the extinguisher label (nameplate). Cylinder must be hydrostatically (proof pressure) tested every 12 years to the test pressure indicated on the nameplate (720 psi [4964 kPa]).
5. Visually inspect the pressure gauge – if bent, damaged or improper gauge replace with the proper Amerex pressure gauge (see Parts List).
6. Check pull pin for freedom of movement. Replace if bent or if removal appears difficult.
7. **Verify that no pressure remains in the extinguisher.** (Operating valve and nozzle shutoff in open position and there is no discharge).
8. Inspect the discharge lever for any dirt or corrosion which might impair freedom of movement. Inspect carrying handle for proper installation. If lever, handle or rivets are damaged replace with factory replacement parts.

9. Remove hose and horn assembly and visually inspect inside valve body. Chemical in the valve body may indicate that the extinguisher has been partially discharged and shall therefore be recharged. Inspect the hose and horn assembly for damage and replace if necessary. Blow air through the hose and horn to insure passage is clear of foreign material.
10. Disassemble valve assembly by removing downtube, spring and valve stem assembly. Remove collar o-ring from valve
11. Complete steps 2 through 13 of Recharge Procedure.

RECHARGE

WARNING:

- a. **Before attempting to disassemble, be sure the extinguisher is completely depressurized.**
- b. **Never have any part of your body over the extinguisher while removing the valve assembly.**
- c. **Use a protective shield between you and the pressure gauge while charging an extinguisher. Do not stand in front of the gauge if a shield is not available.**
- d. **Use a regulated pressurizing source of dry nitrogen only with a minimum dew point of minus 70°F (minus 57°C). Set the regulator to no more than 265 psi (1827 kPa).**
- e. **Check and calibrate regulator gauge at frequent intervals. The regulator gauge shall be used to determine when the intended charging pressure has been reached. Do not use the extinguisher gauge for this purpose.**
- f. **Never leave an extinguisher connected to a regulator of a high pressure source for an extended period of time. A defective regulator could cause the cylinder to rupture due to excessive pressure.**
- g. **Do not mix types of dry chemicals in extinguishers, recharge or recovery systems. Mixing ABC (acidic base) with Regular, Purple-K, Super-K or Monnex (alkaline base) dry chemicals may result in a chemical reaction capable of developing a dangerous pressure buildup.**

RECHARGING PROCEDURE

1. Perform steps 1 through 12 of the "Complete Maintenance (Six Year Teardown)" section.
2. Thoroughly clean all parts of the disassembled valve with a soft bristle brush or soft cloth. Blow the valve out with air or nitrogen. Inspect the spring and downtube assembly, and replace parts if worn or damaged. Replace the valve stem and collar o-ring. Lubricate the collar o-ring and small o-ring on the valve stem with V-711 (do not lubricate the valve stem seal).
3. Reassemble the valve assembly, including downtube and set aside.
4. Remove any chemical remaining in the cylinder and check the condition. Properly dispose of any chemical that is contaminated or caked.
5. Inspect the cylinder interior following CGA Visual Inspection Standard C-6.
6. Using an accurate scale, fill cylinder with the correct amount and type of dry chemical specified on the label (nameplate). Use Amerex chemical which has been kept free of moisture and contamination. See Warning (g) – **DO NOT MIX TYPES OF CHEMICALS.**
7. Clean cylinder collar o-ring seat and collar threads with a small brush and then wipe off surfaces with a clean cloth to remove dust. Lightly brush the collar o-ring seat with V-711.
8. Carefully center the downtube and install valve assembly hand tight to the cylinder (the bottom of the valve body shall touch the top of the cylinder collar). Attach the nitrogen charging adapter to the male hose connector. Valve installation can be made easier by tapping the sidewall of the cylinder with a rubber mallet as the downtube is eased into the cylinder.
9. With the extinguisher properly secured in an upright position, connect your nitrogen pressurizing line with a quick connect to the nitrogen charging adapter. Pressurize extinguisher with dry nitrogen to 240 psi. Nitrogen supply regulator shall be set to no more than 265 psi. This will insure proper aeration of the chemical.
10. Check extinguisher for leaks by applying detecting fluid or a solution of soapy water to the nitrogen charging adapter orifice, around the collar o-ring sealing area, cylinder welds and gauge. Remove the pressurizing adapter.

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11. Install pull pin and tamper seal. Attach new recharge tag.
12. Weigh assembled extinguisher and confirm that the total weight is within the allowable tolerances indicated in the "Maintenance" section of the nameplate (label).

TROUBLESHOOTING GUIDE

WARNING: Before attempting to correct any leakage problem, be sure that the agent cylinder and hose are completely depressurized. Check to determine the source of a leak before the extinguisher is depressurized. Leakage repairs will require depressurization and removal of the valve assembly. Depressurize by discharging into a Closed Recovery System or inverting the extinguisher. After depressurizing the extinguisher and correcting the problem, it will be necessary to clean all valve parts thoroughly.

	PROBLEM	CORRECTIVE ACTION
1.	Leak at collar o-ring	Remove valve assembly, remove and discard o-ring, clean collar and lube lightly with V-711. Clean o-ring groove on valve and install new collar o-ring. Lubricate with V-
2.	Leak through valve	Check valve stem seating area for scratches or foreign matter. Clean seating area with a tooth brush and soft cloth. Install new
3.	Leak around gauge	Remove gauge*, clean threads and reinstall
4.	Defective gauge	Remove defective gauge* and install the proper Amerex pressure gauge (PN 05225 240 psi) using Teflon tape on the gauge
5.	Leak in the cylinder	Contact Amerex if under warranty, otherwise mark "REJECTED" and remove from service or return to owner.
	* Pressure gauge threads are coated with a special epoxy at the factory. For easy removal, soak the valve assembly in hot water (180°F) for two to four minutes. Remove gauge with a thin 7/16" open end wrench.	

FOR REPLACEMENT PARTS SEE THE AMEREX PORTABLE AND WHEELED PARTS BOOK PN 27277 AVAILABLE AT <http://www.amerex-fire.com> UNDER MANUALS OF THE RESOURCE SELECTION.