

STORED PRESSURE, HAND PORTABLE WATER BASED AGENT FIRE EXTINGUISHER FOR CLASS A AND LITHIUM BATTERY FIRES

MODEL: AVD 6L (*)



Owner's SERVICE MANUAL
No. ZX-UL-SM006 Rev.2
(*) AVD is AQUEOUS VERMICULITE DISPERSION

INSTALLATION, OPERATING & SERVICING INSTRUCTIONS

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

When installation, inspection or maintenance is required, it should be performed by certified 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. Victory strongly recommends that the maintenance of portable fire extinguishers be done by a trained professional – your local authorized Victory Distributor.

Victory Corporation makes original factory parts available to ensure proper maintenance – <u>USE OF SUBSTITUTE PARTS RELEASES VICTORY OF ITS WARRANTY OBLIGATIONS.</u> Victory 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. Only spare parts listed in appendix A should be used. <u>DO NOT SUBSTITUTE.</u>



WARNING

Do not use this extinguisher on class C fires involving energized electrical equipment, class D fires or flammable materials that react with water. Protect extinguisher from freezing. Never include Calcium Chloride within AVD content

RECHARGE FIRE EXTINGUISHERS IMMEDIATELY AFTER ANY USE

VICTORY CORPORATION DOES NOT SERVICE, MAINTAIN OR RECHARGE FIRE EXTINGUISHERS. THIS MANUAL IS PUBLISHED AS A GUIDE TO ASSIST QUALIFIED SERVICE PERSONNEL IN THE INSPECTION, MAINTENANCE AND RECHARGE OF VICTORY FIRE EXTINGUISHERS ONLY. NO INSTRUCTION MANUAL CAN ANTICIPATE ALL POSSIBLE MALFUNCTIONS THAT MAY BE ENCOUNTERED IN THE SERVICE OF FIRE EXTINGUISHERS. DUE TO THE POSSIBILITY THAT PRIOR SERVICE PERFORMED ON THIS EQUIPMENT MAY HAVE BEEN IMPROPERLY DONE, IT IS EXTREMELY IMPORTANT THAT ALL WARNINGS, CAUTIONS AND NOTES IN THIS MANUAL BE CAREFULLY OBSERVED. FAILURE TO HEED THESE INSTRUCTIONS COULD RESULT IN SERIOUS INJURY.

VICTORY ASSUMES NO LIABILITY FOR SERVICE, MAINTENANCE OR RECHARGE OF FIRE EXTINGUISHERS BY PUBLISHING THIS MANUAL.

REFERENCES IN THIS MANUAL:

NFPA 10 Standard for Portable Fire Extinguishers

2022 Edition

AVAILABLE FROM:

National Fire Protection Association 1 Batterymarch Pk. P.O Box 9101

Quincy, MA. 02169-7471

www.nfpa.org

CGA C-1 Methods for Hydrostatic

Testing of Compressed Gas

Cylinders

Compressed Gas Assoc., Inc.

4221 Walney Road., 5th floor Chantilly, VA. 20151-2923

www.cganet.com

CGA C-6 Standard For Visual Inspection

of Steel Compressed Gas Cylinders

Victory Fire & Gas Inc.

1713 Lewis Street, Bay City,

MI. 48706. Office - 989.322.0856.

E-Mail: <u>info@victoryfiregas.com</u>, http://www.victoryfiregas.com



IMPORTANT AVD HANDLING INSTRUCTIONS

Critical Points

AVD is a highly refined, aqueous, mineral dispersion and hence its quality will be spoilt by:

- a) Soluble salts, including those naturally present in mains water, will destabilize the dispersion causing the mineral particles to flocculate even if not visually obvious.
- b) Allowing the water to evaporate, for example by leaving the lid off the container, may lead to dry film forming; this will potentially lead to blocked extinguisher filter / nozzles preventing discharge of the AVD agent.
- c) Contamination, especially large particles, from dirty equipment or holding vessels may cause blockage of the filters preventing discharge of the AVD agent.
- d) Contamination could lead to microbial growth including under anaerobic conditions.

For cleaning and transferring

- a) Only use demineralized water (deionized or distilled) water for cleaning valves, siphon tubes, hose assemblies or flushing cylinders.
- b) Ensure all equipment is spotlessly clean.
- c) Store AVD in its delivery container with lid on until required for refilling extinguishers.

Handling AVD

All equipment, including pumps and transfer lines should be spotlessly clean; it is advisable to have dedicated equipment for handling AVD. Cleaning should be with demineralized water only and, if possible, thoroughly dried. As an absolute minimum the transfer lines should be flushed with AVD, and the cleaning charge discarded.

- a) Visually inspect the AVD for settling, thickening, microbial growth, etc.
- b) Agitate the AVD, for example with an air lance to ensure homogeneity.
- c) Ideally check viscosity is within specification.
- d) Use only spotlessly clean transfer lines and vessels.

Refilling AVD

- a) Empty AVD into a clean holding container and flush the extinguisher with demineralized water, emptying the contents into same container.
- b) Thoroughly clean and dry the extinguisher body paying particular attention to the points above.
- c) Perform extinguisher maintenance.
- d) Charge the extinguisher with correct amount of AVD just prior to reassembly.
- e) Pressurize only with nitrogen. Do not use carbon dioxide.

Post Service AVD

- a) Recycling of AVD for use in extinguishers is not recommended.
- b) Dispose of used AVD in line with local and federal regulations.



INSTALLATION

Your layout and particular hazards dictate the placement of fire extinguishers. NFPA-10 requires that hand portable extinguishers with a gross weight less than 40 lbs. be hung with the top of the extinguisher **not more** than 5 ft. (1.53 m) above the floor. Extinguishers having a gross weight greater than 40 lbs. (18.14 kg) should be installed so that the top of the extinguisher is **not more** than 3 1/2 ft. (1.07m) above the floor. Extinguishers should be mounted in a clean and dry location, accessible to possible fire hazards and preferably near an exit. **Never install the extinguisher in a location where a potential hazard would prevent easy access.**

Use the mounting bracket supplied with extinguisher or an approved Victory vehicle bracket if needed. Secure to a solid surface using the appropriate fixings for the surface (not supplied) to firmly hold the bracket in place.

The operational temperature range for this extinguisher is +40°F to +120°F (+4°C to +49°C) [please see the nameplate on your extinguisher]. The extinguisher should be adequately protected if temperatures outside of this range are anticipated. Keep the extinguisher clean and free from dirt, ice, chemicals, and any contaminants that 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 over time and make the extinguisher ineffective). Never throw an extinguisher into a fire because rapid heat buildup could cause pressure expansion and exceed the limitations of the cylinder.

SERVICE TOOLS

Victory recommend that only the correct tools, weighing scales and pressurizing adaptors are utilized for service and recharge to ensure correct assembly and filling (See appendix B for detail). Victory recommended tightening torque values should be followed. **DO NOT OVERTIGHTEN** or **CROSS THREAD** any threaded connections.

SAFETY

Victory recommend the appropriate personal protective equipment (PPE) is used as described in the Safety Data Sheet (SDS) available on the Victory website. Observe instructions for disposal of any agent in accordance with SDS.

HOW TO USE

WARNING

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

Failure to start back at a sufficient distance from front edge of the fire or use of an inadequate sweeping technique of the agent stream could splash and / or scatter burning materials.



- 1. Remove the extinguisher from its hanger or bracket.
- 2. Pull and remove the ring (safety) pin, breaking the visual tamper seal.
- 3. Using the extinguisher carrying handle, transport the unit to a safe position upwind of the fire.
- 4. Remove the nozzle from the retainer and while keeping the extinguisher in a vertical position, aim the nozzle at the base of the fire.
- 5. Approach fire from upwind, minimum of 8 feet of the front edge of the fire.
- 6. Starting back from this distance, squeeze the operating lever fully to initiate the agent discharge.
- 7. Apply the AVD agent discharge in a gentle sweeping manner, being careful not to scatter the fuel. Operators can advance closer as control of the fire is gained; however, they should avoid stepping into the fuel or fire area.
- 8. When the fire is out, standby if practical, until the burning media has cooled to ensure extinguishment.
- 9. Evacuate and ventilate the area immediately after extinguishing the fire. The fumes and smoke from any fire may be hazardous and can be deadly.
- 10. Ensure the burning media is properly removed and disposed of in accordance with any local handling requirement.

REMEMBER STEPS. P.A.S.S. PULL AIM SQUEEZE SWEEP

AFTER USE INSTRUCTIONS NOTE

- 1. Fire extinguishers should always be recharged immediately after any use.
- 2. Invert extinguisher, then while securing and pointing the nozzle in a safe direction, squeeze the operating lever valve to clear hose and release all remaining pressure from the extinguisher.
- 3. Notify responsible person that extinguisher was used, so that the extinguisher can be immediately recharged, or a replacement obtained.

WARNING

- a. Before attempting to disassemble, be sure the extinguisher is completely depressurized. To
 depressurize hold the extinguisher in an inverted position and slowly squeeze the discharge
 handle and lever. See trouble shooting section for more details.
- 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 valve while charging an extinguisher. Do not stand in front of the valve if a shield is not available.
- d. Check and calibrate regulator gauge at frequent intervals. The regulator gauge should be used to determine when the intended charging pressure has been reached. Do not use the extinguisher gauge for this purpose.
- e. Never leave an extinguisher connected to a regulator of a high-pressure source for an extended period. A defective regulator could cause the cylinder to rupture due to excessive pressure.

CAUTION

Discharge time and effective range of the agent throw varies according to model – see the specification literature for your extinguisher.



INSPECTING THE EXTINGUISHER

The inspection procedures outlined below may not be sufficient for every jurisdiction or location and should be used in conjunction with the NFPA 10 Standard for Portable Fire Extinguishers, 2022 Edition.

This extinguisher should be inspected at regular intervals (monthly or more often if circumstances dictate) to ensure that it is ready for use. Inspection is a "quick check" that a fire extinguisher is available and is in good operating condition with no damage or corrosion. It is intended to give reasonable assurance that the fire extinguisher is fully charged with no loss of pressure (pointer in green zone), tamper seal is unbroken and no obstructions in hose or nozzle. This is done by verifying that it is in its designated place, that it has not been actuated or tampered with, and that there is no obvious physical damage or condition to prevent its operation.

WARNING

For safety purposes, if an extinguisher shows signs of corrosion or mechanical damage, it shall be subjected to a hydrostatic pressure test or replaced.

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. Visibility of extinguisher or means of indicating the extinguisher location.
- 3. Pressure gauge reading or indicator in the operable range or position.
- 4. Fullness determined by weighing or hefting.
- 5. Operating instructions on nameplate and facing outward.
- 6. Safety seals and tamper indicators not broken or missing.
- 7. Examination for obvious physical damage, corrosion, leakage, or clogged nozzle.
- 8. Date and initial the inspection tag or record in accordance with NFPA-10 or local requirements.

MAINTENANCE

[NFPA-10] At least once a year or more frequently if circumstances require, maintenance should be performed. Maintenance is a "thorough check" of the extinguisher. It is intended to give maximum assurance that the 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, servicing & recharging shall be performed by trained and certified persons having available



the appropriate servicing manual, the proper types of tools, recharge materials, lubricants, and Victory replacement parts.

Extinguishers taken out of service for maintenance or recharge shall be replaced by spare extinguishers of the same type and at least an equal rating.

<u>MAINTENANCE – SERVICE PROCEDURE</u>

FIRE EXTINGUISHERS SHALL BE SUBJECT TO MAINTENANCE AT INTERVALS OF NOT MORE THAN ONE YEAR, AT TIME OF HYDROSTATIC TEST OR WHEN SPECIFICALLY INDICATED BY AN INSPECTION DISCREPANCY. MAINTENANCE EXAMINATION WILL IDENTIFY THE NEED FOR REPLACEMENT, REPAIR AND IF HYDROSTATIC TESTING IS REQUIRED.

WARNING

Before servicing check the extinguisher is correctly pressurized.

This procedure is best accomplished with the extinguisher in an upright position and on a level surface.

- 1. Ensure the extinguisher is installed in proper location and that it is readily accessible. (AVD extinguishers are approved for temperature ranges between +40° F to +120° F and need to be protected from freezing.
- 2. Remove extinguisher from hanger or bracket whilst ensuring all mounting hardware is properly installed, secure and in good operating condition. Check for damage or corrosion, abrasion, dents, or weld damage or use of substitute parts. If any damage is found, hydrostatically test in accordance with instructions in CGA C-1 and C-6 and NFPA 10.
 - **NOTE:** Only factory replacement parts are approved for use on Victory fire extinguishers.
- 3. Clean extinguisher to remove dirt, grease, or foreign material. Check to make sure that the instruction nameplate is securely attached and legible.
 - <u>NOTE</u>: When cleaning, avoid use of solvents around the pressure gauge. They could seriously damage the plastic gauge face.
- 4. 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. Any extinguisher not falling within the tolerance limits shall be properly recharged.
- 5. Check the date of manufacture stamped on the extinguisher cylinder, dome or shown on nameplate. The cylinder must be hydrostatically tested every five years to the test pressure indicated on the nameplate. Never place an extinguisher back into service if the hydro test is overdue. Always complete hydro test and if acceptable return to service. Always refill with Victory AVD agent after successfully completing the hydro test following the instructions on refill pack.
- 6. Visually inspect the pressure gauge:
 - a. If bent, damaged or improper gauge, depressurize and replace.
 - b. If pressure is low, check for leaks and immediately correct any defects before pressurizing.
 - c. If over pressurized (overcharged), depressurize the extinguisher and follow recharge instructions.



- 7. Check ring (safety pin) for freedom of movement. Replace if bent or if removal appears difficult.
- 8. Inspect 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 proper Victory part(s).
- 9. Remove hose assembly and visually inspect inside valve body. Inspect nozzle and the hose assembly for damage replace, as necessary. Blow air through hose assembly to ensure passage is clear of foreign material or obstruction.
- 10. 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.
- 11. Install hose assembly, firmly tighten, and twist hose material clockwise (will twist within ferrule) to ensure nozzle orifice is horizontal. This will ensure the fan pattern is horizontal when the extinguisher is used. Finally place hose inside loop on the strap.
- 12. Install a new tamper seal and record service data on the extinguisher inspection tag.
- 13. Replace the extinguisher on the wall hanger or in the vehicle bracket making sure that it fits the bracket properly and the bracket is securely attached replace the bracket if necessary.

COMPLETE MAINTENANCE – FIVE YEAR TEARDOWN / HYDROTESTING

[NFPA-10] Every five years, stored pressure AVD extinguishers require a five-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 five-year requirement shall begin from that date.

NOTE: Some states have legislation which requires "Complete Maintenance" on an annual basis. Please contact your local Victory Distributor to see if these requirements apply to you.

- 1. Discharge extinguishers to release pressure and AVD agent. Make sure that the extinguisher is completely empty and depressurized. To depressurize hold the extinguisher in an inverted position and slowly squeeze the discharge handle and lever. See trouble shooting section for more details.
- 2. Clean extinguisher to remove dirt, grease, or foreign material. Check to make sure that the instruction nameplate is securely fastened and legible. Inspect the cylinder for corrosion, abrasion, dents, or weld damage or use of substitute parts. 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. Any distortion or leakage of the cylinder shall be cause for rejection.

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

- 3. Inspect the extinguisher for damaged, missing or substitute parts.
 - **NOTE**: Only factory replacement parts are approved for use on Victory fire extinguishers.
- 4. Check the date of manufacture on the extinguisher label (nameplate or cylinder). The cylinder must be hydrostatically (proof pressure) tested every five years to the test pressure indicated on the



- nameplate. Any distortion or leakage of the cylinder shall be cause for rejection. Never place an extinguisher back into service if the hydro test is overdue. Always complete hydro test and if acceptable return to service.
- 5. Visually inspect the pressure gauge if bent, damaged or improper type or pressure replace with the proper Victory pressure gauge (see Parts List).
- 6. Check ring (safety) pin for freedom of movement. Replace if bent or if removal appears difficult.
- 7. Inspect 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 proper Victory parts.
- 8. Remove hose assembly and visually inspect threads on hose coupling, hose for damage, and replace, as necessary. Blow air through nozzle and hose to ensure passage is clear of foreign material or obstructions. See recharging procedure step 10 for hose cleaning if the unit has been used.
- 9. Inspect the valve assembly for corrosion or damage to hose thread connection. Replace valve assembly or component parts, as necessary.
- 10. Remove and disassemble valve assembly by removing dip tube, spring, and valve stem assembly. See recharging procedure step 2 for valve cleaning if the unit has been used. Install a new valve stem and collar O-ring after lightly lubricating with Visilox V- 711.(Do not lubricate valve stem seal.)
- 11. Complete steps 3 through 15 of Recharge Procedure.

RECHARGE

WARNING

- a. Before attempting to disassemble, be sure the extinguisher is completely depressurized. To depressurize hold the extinguisher in an inverted position and slowly squeeze the discharge handle and lever. See trouble shooting section for more details.
- 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 25 psi above the operating pressure.
- e. Check and calibrate regulator gauge at frequent intervals. The regulator gauge should 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. A defective regulator could cause the cylinder to rupture due to excessive pressure.



RECHARGING PROCEDURE

RECHARGING is the replacement of the extinguishing agent and the propellant gas.

- 1. Perform steps 1 through 10 of the "Complete Maintenance (Five Year Teardown)" section.
- 2. Rinse inside of valve and siphon tube and all passages with demineralized water. Blow the valve out with nitrogen or air. Clean all parts of the disassembled valve with a soft bristle brush or soft cloth. Inspect the collar O-ring, valve stem, spring, and dip tube assembly, and replace parts if worn or damaged. Ensure the siphon tube screen between siphon tube and coupling is not blocked, damaged or any AVD residue is present. Ensure the handle and lever move freely. Lubricate the collar O-ring and small O-ring on the valve stem with Visilox V-711 (do not lubricate the valve stem seal).
- 3. Reassemble the valve assembly, ensuring siphon tube is firmly tightened securely and set aside. Squeeze and release handle and lever to ensure freedom of movement and stem returns freely.
- 4. Remove any AVD agent remaining in the cylinder. Rinse the cylinder thoroughly with demineralized or deionized water until no residual AVD is present.
- 5. Inspect the cylinder interior following CGA Visual Inspection Standard C-6.
- 6. Ensure overfill tube correctly fully inserted into threaded neck. Then, using an accurate scale, fill cylinder with the correct amount of AVD agent specified on the label (nameplate). Do not reuse agent from extinguisher. Always use new refill when recharging. When filled correctly within the weight limits stated on the nameplate, the liquid level should not enter the overfill tube.

<u>CAUTION</u>: Filling by eye alone could cause potentially dangerous overfilling – always use a scale.

- 7. Carefully center the dip tube and install valve assembly aligning center of gauge with center of nameplate. Ensure the O seal seats correctly. Firmly hand tight collar onto the cylinder (max force 20-30 Nm / 15-22 ft lbs.) to hold valve firmly in place. Attach the charging adapter hand tight into the valve assembly thread.
- 8. With the extinguisher properly secured in an upright position, connect your nitrogen pressurizing line with a quick connect to the charging adapter. Depress the extinguisher operating lever and pressurize extinguisher to the proper operating pressure. When the desired pressure has been reached, release the lever. Shut off nitrogen supply and remove the quick connect.
- 9. Check extinguisher for leaks by applying detecting fluid or a solution of soapy water to the charging adapter orifice, around the collar O-ring sealing area, cylinder welds and gauge. Remove the charging adapter. Blow nitrogen or air into the interior of the valve assembly to remove any remaining leak detecting fluid. Wipe the exterior of extinguisher to remove any remaining residue.
- 10. The hose assembly should be checked for blockage or damage, especially if the extinguisher has been used. Check by blowing air through hose assembly from threaded coupling end ensuring air passes through nozzle. If the extinguisher has been used, then rinsing the hose and nozzle with demineralized water is required. If the AVD agent cannot be removed, then a new complete hose assembly will be required. Install hose assembly, firmly tighten, and twist hose material clockwise (will twist within ferrule) to ensure nozzle orifice is horizontal. This will ensure the fan pattern is horizontal when the extinguisher is used. Finally place hose inside a loop on the strap.



- 11. Install ring pin through handle, lever and valve with ring facing the front of the extinguisher (gauge side).
- 12. Install new tamper seal wrapping through loop and around levers to secure ring pin. Do not over stress tamper seal.
- 13. Weigh assembled extinguisher and confirm that the total weight is within the allowable tolerances indicated in the Maintenance section of the nameplate (label).
- 14. After completing the maintenance examination, properly tag, label, and record the procedure in accordance with NFPA-10 and any local requirements.
- 15. Replace the extinguisher on the wall hanger or in the vehicle bracket making sure that it fits the bracket properly and the bracket is securely attached replace the bracket if necessary.

TROUBLESHOOTING GUIDE

WARNING

To avoid risk of injury or death, should any audible pressure leak be observed during disassembly of the extinguisher, then technicians should stop service activities and wait until all residual pressure is released.

LEAKAGE

Determine the source of a leak before the extinguisher is depressurized. The extinguisher must be completely depressurized before any attempt is made to de-valve it and correct a leakage problem.

DEPRESSURIZE

Hold the extinguisher in an inverted position and slowly squeeze the discharge handle. Some AVD agent remaining in the dip tube will be expelled so care should be taken in the area being used for depressurizing. Thoroughly clean all valve parts after depressurization and valve removal in accordance with instructions.

	PROBLEM	CORRECTIVE ACTION	
1	Leak at collar O-ring	De-pressurize. Remove valve assembly, remove, and discard	
		O-ring, clean collar, and lube lightly with Visilox V-711.	
		Clean O-ring groove on valve and install new collar O-ring.	
		Lubricate with Visilox V-711.	
2	Leak through valve	De-pressurize. Check valve stem seating area for scratches or	
		foreign matter. Clean the seating area with a toothbrush and	
		soft cloth. Install new valve stem assembly.	
3	Valve outlet thread or port obstructed or	De-pressurize. Flush clean with water or empty and recharge.	
	dirty	If still blocked replace valve assembly with new.	
4	Leak around gauge	De-pressurize, remove valve. Remove gauge, clean threads,	
		and reinstall using Teflon tape on the gauge threads.	



5	Defective or damaged gauge	De-pressurize and replace. Install the correct Victory pressure		
		gauge using Teflon tape on the gauge threads.		
6	Pressure gauge reads outside green zone	Check ambient temperature correlation. De-pressurize and		
		recharge or replace		
7	Gauge operating pressure differs from	De-pressurize and replace. Install the correct Victory pressure		
	label	gauge using Teflon tape on the gauge threads.		
8	Gauge does not indicate compatibility	De-pressurize and replace. Install the correct Victory pressure		
	with agent	gauge using Teflon tape on the gauge threads.		
9	Gauge does not indicate compatible with	De-pressurize and replace. Install the correct Victory pressure		
	brass	gauge using Teflon tape on the gauge threads.		
10	Defective cylinder	Contact Victory if under warranty, otherwise mark		
		"REJECTED" and remove from service or return to owner.		
11	Extinguisher suspected of freezing	Empty, closely examine & hydrostatic re-test. Recharge or		
		replace as necessary		
12	Wall hook / bracket loose or damaged	Secure, repair or replace		
13	Bent pull pin, corroded, damaged	Replace		
14	Lever or handle loose	De-pressurize and replace if possible or replace with new valve		
		assembly		
15	Damaged hose, worn, cracked, or	Replace		
	corroded			
16	Nameplate instructions illegible	Replace		
17	Agent cylinder damaged or corroded	Inspect and hydrostatic re-test or dispose of in accordance with		
		NFPA-10		
18	Noise noticeable from within cylinder	De-pressurize and internally examine for broken siphon tube or		
		foreign object		
19	Total Charge weight of extinguisher	De-pressurize and recharge		
	different to tolerances on nameplate			
20	Hose strap damaged or missing	Replace		
21	Nozzle or hose or coupling obstructed	Flush clear with demineralized or deionized water and blow		
		dry. If still obstructed, replace		
22	Hose O-ring missing, cracked or damaged	Replace and lightly lubricate.		
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LIMITED WARRANTY

Victory warrants its fire extinguishers ("Products") to be free from defects in material and workmanship for a period of six (6) years from the date of manufacture. Victory's responsibility for defects in material or workmanship are limited to repair or replacement of the products for the original retail purchaser ("Consumer") only. This limited warranty does not cover defects resulting from modification, abuse, accident, alteration, misuse, exposure to corrosive conditions, or improper installation or maintenance. No warranty is provided for products or components that have been subject to normal wear and tear,



misuse, improper installation, incompatible chemicals/materials, corrosion; that have not been used for their intended purpose; or that have not been installed, maintained, modified, or repaired in accordance with applicable standards of the National Fire Protection Association and/or the standards of any other authorities having Jurisdiction. Materials found by seller to be defective shall be either repaired or replaced, at seller's sole option. Seller neither assumes, nor authorizes any person to assume for it, any other obligation in connection with the sale of products or parts of products. Seller shall not be responsible for system design errors, or inaccurate or incomplete information supplied by buyer or buyer's representatives. This limited warranty sets forth the exclusive remedy for claims based on failure of or defect in products, materials, or components, whether the claim is made in contract, tort, strict liability, or any other legal theory. This warranty will apply to the full extent permitted by law. The invalidity, in whole or part, of any portion of this warranty will not affect the remainder. Victory is not responsible for the installation or the maintenance of the products.

Defective products for which a valid claim has been made shall be returned to Victory's facility for repair or replacement (or to other repair facilities pursuant to Victory's prior written authorization), and transportation costs to such locations shall be paid by consumer.

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AVD EXTINGUISHER LIMITED WARRANTY

DISCLAIMER: The following disclaimer is for all Victory Fire and Gas Inc products including, but not limited to portable fire extinguishers, fire extinguishing agent and apparatus. Victory Fire and Gas Inc does not accept responsibility or warrant performance for part used Victory Fire and Gas Inc extinguishers or for those damaged by inappropriate storage or handling (please see user instructions for recommended practice). Handheld fire extinguishers are for first response (initial low ferocity) firefighting and are not suited for large or deep-seated fires. Victory Fire and Gas Inc does not accept responsibility for loss or damage to property or human life when Victory Fire and Gas Inc products are used and we do not give guarantee, or warranty, or suggest, or imply that the Victory Fire and Gas Inc products will extinguish all fires, regardless of fire type or origin. We only confirm that AVD Fire agent has been 3rd party performance tested against a set of performance criteria relating to Lithium Battery fires. Further information relating to this testing can be found on the website www.victoryfiregas.com or contact Victory Fire and Gas Inc directly on info@victoryfiregas.com Victory Fire and Gas Inc shall have no liability for any damage caused by the customer's failure to observe guidelines set out in the product user instructions. This does not affect the customer's statutory rights.

REFERENCES IN THIS MANUAL:

AVAILABLE FROM:

NFPA 10 Standard for Portable Fire Extinguishers

2022 Edition

National Fire Protection Association 1 Batterymarch Pk. P.O Box 9101

Quincy, MA. 02169-7471

www.nfpa.org

CGA C-1 Methods for Hydrostatic

Testing of Compressed Gas

Cylinders

Compressed Gas Assoc., Inc. 4221 Walney Road., 5th floor

Chantilly, VA. 20151-2923

www.cganet.com

CGA C-6 Standard For Visual Inspection

of Steel Compressed Gas Cylinders



APPENDIX A

VICTORY FIRE SPARE PARTS

AVD Model AVD6L



No.	Product Code	Description		
1	0714025	Seal		
2	0202118	Lever		
3	0204029	Rivet ϕ 4×25. 5mm		
4	0204057	Rivet ϕ 4×24. 5mm		
5	0203089	Carry Handle		
6	020504045	Valve Body		
7	070200010	Bracket		
8	070200007	Bracket		
9	0715038	Screw		
10	0715037	Hanging Loop		
11	020601096	O Ring φ 12.42× φ 1.78		
12	30290368	Hose Assembly		
13	30420050	Safety Pin		
14	0210001 Chain/Tether			
15	30120102 Pressure Gauge			
16	0220148	Valve Stem Assembly		
17	020603009	O Ring φ 33.63 × φ 3.53		
18	020701040	Spring		
19	0234004	Ring Nut		
20	020603012	O Ring φ 18.77× φ 1.78		
21	30410073	Tube Holder		
22	30240021	Filter Assembly		
23	30310337	Dip Tube		
24	2012029	Anti-overfill Tube		
25	200302001249 Cylinder			
26	071118	Strap		
27	071007	Hose Catch		
28	1A1401199	AVD Refill		



APPENDIX B

Equipment Type	Where Used	Comments
Adjustable Wrench or 19mm open ended wrench	Hose Assembly to valve	Recommended torque 5Nm (44 in lbs.)
Adjustable Wrench or 7/8" open ended wrench	Siphon Tube Assembly to valve	Recommended torque 8Nm (71 in lbs.)
11mm (7/16") open ended wrench	Pressure Gauge to valve	Recommended torque 5-12Nm (44-106 in lbs.) with sealant/ glue
Scales	Filling cylinders with AVD	Recommended accuracy +/- 2.5% or better
Pressurizing / recharging adaptors	See table below for application	
Regulated Gauge	Pressurizing	Use regulated gauge set when pressurizing the extinguisher. NOTE: Do not set pressure on regulator more than 25 psi above working pressure shown on the gauge
Hand / Wrench	Valve collar to cylinder	Recommended torque 20-30Nm (15-22 ft lbs.)
Lubricant	Neck to valve seal and blow by O seal on stem	Recommended lubricant Visilox V-711

Item	Product Code	Application	Thread to valve	Thread to gas supply	Photo
1	10010127	2.5LB dry Chemical	3/8-24UNF Male	1/4-18 NPT Female	2.5LB
2	10010128	5LB dry Chemical	1/2-20UNF Male	1/4-18 NPT Female	5LB
3	10010129	10/20 LB dry Chemical & 6L/ 2.5-Gal liquid based	5/8-18UNF Male	1/4-18 NPT Female	2.5GAL/6L 10/20LB
4	10010162	10/20 LB dry Chemical & 6L/2.5-Gal liquid based	5/8-18UNF Male	1/8-27 NPT Female	AD24
5	10010201	1/4 – 18NPT Schrader Type Valve	1/4-18NPT Male	8V1 Male	
6	2005051	10/20 LB dry Chemical & 6L/2.5-Gal liquid based	5/8-18UNF Male	8V1	

CHANGE HISTORY

Date	Revision	Change Details
12/31/2022	1	FIRST RELEASE
03/09/2023	2	WARRANTY SECTION