



SAFETY GUIDELINES AND RECOMMENDATIONS

CCI CHEMICAL CUTTER are safe tools when used according to procedure. However, like any oilfield pipe cutting device, when safety procedures and precautions are not followed the **CHEMICAL CUTTER CAN BECOME DANGEROUS**. Assembly and disassembly procedures are outlined in this manual. The instructions must be followed **WITHOUT EXCEPTION**.

1. It is compulsory to all personnel to be trained and certified in the safe use and handling of the CHEMICAL CUTTER prior to running the service. CCI qualified and experienced personnel provide the training for field operators through training classes given at training centers or the CCI facility.
2. Only CCI approved and tested safety equipment should be used when handling Chemical Cylinders and when the Cylinder(s) is/are part of the tool assembly while on the surface. This applies to the assembly and disassembly of the **CUTTER**. For every chemical cutter job, a minimum of two safety kits is required.
3. Standard explosives operating procedure must be followed (see field explosives control manual.)
4. Chemical cylinders should be inspected for leakage upon receiving from CCI and removal from shipping crate.
5. To prevent chemical cylinders from expiring, always use older cylinders before the newer ones.
6. Chemical cylinders and gas generator grain have an effective shelf life of five years from the date of manufacturing (refer to label on product for important dates).

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7. Cylinders should be stored in a safe and secured area at least 25 feet from any explosive material.
8. Chemical cutters should not be initiated when the chemical temperature is at or below 32° F (which is close to the freezing point temperature of Bromine Trifluoride). At that temperature, please refer to chart “Extreme Weather Conditions Operation.”
9. Cylinders must be inspected for leakage annually.
10. Do not mix loaded cylinders with empty cylinders. **Shipping plugs must be removed from empty cylinders prior to discarding.**
11. Chemical Cylinders must be handled with care. They should never be dropped, dragged, rolled, or slid even for a short distance. The Chemical Cylinders must be securely fastened during shipment so that they are not subjected to hard blows or jars that may damage the seals and allow chemical leakage.
12. Chemical cutters must never be transported completely assembled. The **igniter, gas grain and chemical cylinder(s)** must be assembled at well site only.
13. Shipping Plugs must not be removed from the Chemical Cylinder until immediately before final assembly at the well site.
14. A first aid kit must be readily available at the well site and must include at least burn ointment and eye wash. An ample supply of clean fresh water must also be available for flushing in case of emergency.
15. An aluminum Protective Sleeve must be used around the Severing Head for as long as the chemical cylinder is attached to it. The sleeve acts as a deflection shield for the chemical away from field personnel.



16. An aluminum protective sleeves must always be used over the Anchor Assembly when the tool is fully assembled to the line while on surface and when retrieving it from the well. The sleeve must remain on until the pressure is bled from the tool.
17. Bromine Trifluoride is not flammable but it can support combustion. Small fires may be controlled by carbon dioxide, dry chemical extinguisher or dry sand.
18. In case of a chemical spill, **dry clean sand, soda ash (sodium carbonate) or activated carbon may be used** over the spill to contain and neutralize the chemical.
29. **NEVER FIRE OR DISCHARGE THE CHEMICAL CUTTER ON SURFACE!**
20. Surface pressure can be applied while running chemical cutters, as long as the pressure is within the safe limit of the chemical cylinder rupture disc. **A safety factor of 3** is used to determine the maximum surface pressure. **NOTE: No Personnel should stand near the pressure control equipment when tool is being run in hole or coming back to surface.**

1 1/16" - 15/16" OD tools _____	Maximum surface pressure is 1700 PSI
1" - 1 1/4" OD tools _____	Maximum surface pressure is 2000 PSI
1 3/8" - 1 9/16" OD tools _____	Maximum surface pressure is 2500 PSI
1 11/16" - 7 1/2" OD tools _____	Maximum surface pressure is 3000 PSI

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