



Hazardous Materials Technician Certification

Skill #15.7 Chlorine "A" Kit – Valve Seat

Maximum Time Allowed: **15 min.**

INSTRUCTIONS TO THE CANDIDATE

Given a simulated leaking Chlorine "A" cylinder and working as a team of two, the candidate dressed in Level "A" personal protective equipment will safely control the leak using the proper sequence of steps and necessary equipment from the Chlorine "A" Kit provided.

CANDIDATE PERFORMANCE

| | 1 st Attempt | | 2 nd Attempt | |
|---|-------------------------|----|-------------------------|----|
| | Yes | No | Yes | No |
| ◆ Candidate has informed the evaluator that they have been trained in this skill. | | | | |
| Entry and all control operations are conducted as a team and performed in a safe manner, approaching from up hill and up wind. Avoids down wind positions and contact with product when possible. | | | | |
| If more than one cylinder is in the location, attempt to locate the leaking cylinder by visible chlorine vapor or by using vapor from an aqua ammonia (ammonium hydroxide) squeeze bottle to create a visible reaction (vapor cloud). | | | | |
| If the container is connected to piping/process unit, close valves that connect the cylinder to the process and turn off the process after consulting with the process operator/owner (verbalize contacting the operator/owner before turning systems off). | | | | |
| Observes any conditions that would indicate reactivity with container or other product | | | | |
| Remove valve protective housing from cylinder if in place. | | | | |
| Positions cylinder so the valve is in the uppermost position. | | | | |
| Safely pin-points the location of the leak in the container. Detects the presence and location of non-visible leak using aqua ammonia vapor. | | | | |
| <i>If the Valve Seat is leaking the team should perform the following steps:</i> | | | | |
| Option A: If the cylinder is disconnected from the process and can be reconnected, reconnect and gently open and close the valve stem to dislodge foreign matter from the seat, using the valve handle or Wrench 200A. | | | | |
| Option B: If the cylinder cannot be reconnected to a process, apply outlet cap and gasket | | | | |
| Option A: Disconnect the cylinder from the process and apply outlet cap and gasket with using Wrench 200A. | | | | |
| <i>If leak persist, applies Device 1 (Hood Assembly) as follows:</i> | | | | |
| Prepare Base Assembly to insure proper position and stability of base segments. | | | | |
| Secures Ramp between two base segments. | | | | |
| Rolls upright cylinder up Ramp and centers into position on Base Assembly. | | | | |
| Cleans loose or uneven paint from shoulder of cylinder using Scraper. | | | | |
| Inspects and places gasket on Hood. | | | | |
| Insures Vent Valve is secure in the Hood and the Vent Valve is uncapped and open. | | | | |
| Adjust Cap Screws in Yoke so that the points of the screws extend only slightly below the Yoke. | | | | |
| Places Yoke in position on top of Hood, with screws positioned in the dimples on the Hood. Insure Chains are straight and not twisted. Hook Chains over ears of Yoke using appropriate link to avoid slack in Chains. | | | | |
| Hand tighten Cap Screws using even and equal force. Closes Vent Valve slowly and checks for leaks. | | | | |
| If leak persists, opens Vent Valve and uses Wrench to further tighten Cap Screws until leak is | | | | |



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| controlled. | | | | |
| ◆ Avoids over tightening Cap Screws and damaging gasket. | | | | |
| ◆ Checks foot ring on bottom of cylinder as tension is added to the assembly to chains are not breaking the ring. | | | | |
| ◆ Closes Vent Valve and checks for leakage using ammonium hydroxide vapor and tighten the set screw further if necessary. | | | | |
| ◆ Secure the cylinder. | | | | |
| Total steps candidate must complete to pass: | 17 | Total | | |

◆ **Critical Step** - Failure on this step mandates failure on the entire objective!

Candidates Name _____

1st Evaluator Signature _____ Date _____

2nd Evaluator Signature _____ Date _____

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|---|
| Skill #15.7 Chlorine "A" Kit – Valve Seat |
| Objective(s): 7.1.2.2(3)(c), 7.4.3.(1)(g) and 7.4.3.(2)(a)(b) NFPA 472 Standard 2008 Edition |
| <u>INSTRUCTIONS TO THE MONITOR/EVALUATOR</u> |
| <ol style="list-style-type: none"> 1. The candidate must indicate that they have been instructed how to perform this skill. A negative answer is an immediate failure. No second attempt is allowed. This step doesn't count for the total number of steps the candidate must complete. 2. Evaluator or support staff shall assemble the Chlorine "A" cylinder prop, air supply for simulating cylinder leaks, and a complete Chlorine "A" Emergency Repair Kit. 3. PPE should be Level A protective gear 4. Evaluator shall prepare the prop/air supply to simulate the appropriate leak. 5. The evaluator and all personnel in the immediate area must wear eye protection. Hearing protection may be necessary with specific props/leaks and operating pressures. 6. The proctor must provide the candidate with the following equipment: <ol style="list-style-type: none"> a. Chlorine A Kit. |
| Proctor/Candidate Comments |
| I was informed of the task steps missed that resulted in the failure of this skill and the OSU-FST re-test policies. |
| _____ Candidate Signature |
| _____ Date |