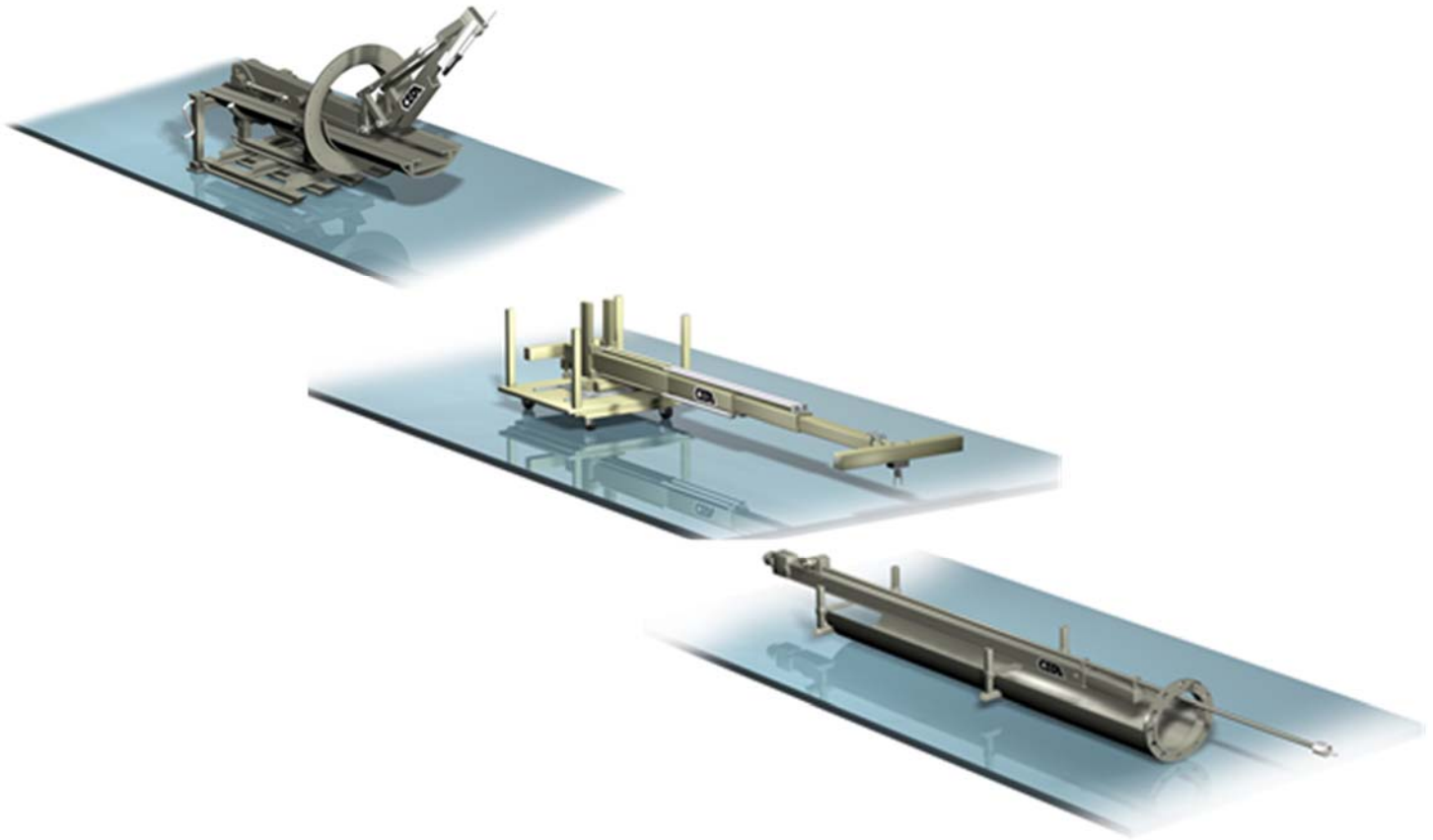




MN-PV-CIS-043

Automated Tools Competency Manual

MN-PV-CIS-043 – Automated Tools Competency Manual
Rev 3

Updated: January 10, 2023

This document and the information contained herein are of a confidential nature and remain the exclusive property of CEDA. Reproduction, use or disclosure without written permission is not permitted.



Table of Contents

<u>Table of Contents</u>	1
<u>Training Expectations Letter</u>	2
<u>Aknowledgement</u>	3
<u>Objective</u>	4
<u>General Overview</u>	6
<u>Equipment Overview</u>	8
<u>Safety Considerations</u>	15
<u>Operational Guidelines</u>	16
<u>Maintenance</u>	19
<u>Troubleshoot Steamer</u>	19
<u>Technical Quiz</u>	21
<u>Practical Assessment</u>	23



Training Expectation Letter

It is required that this document is completed prior to the Employee starting training on Automated Tools. This document will serve as formal record that all parties have reviewed and understand the expectations for training on the Automated Tools.

Trainee Name:

Date of Discussion:

Expectations of Supervisor/Leader

- Ensuring trainee has scheduled time for training.
- Ensure trainee has reviewed and understand the technical documentation
- Ensure trainee has been provided a demonstration on equipment operation
- Verify field competency sign offs once completed
- Ensure trainee is working with a competent mentor until they are competent themselves
- Provide support for the assessor, mentor, trainer and trainee whenever possible.
- Ensure training documentation is sent to CEDA Training Department

Expectations of Trainer, Mentor, assessor

- Must be qualified in the position for which he/she is training.
- Educate and support trainee with technical review package.
- Ensure trainee has been provided a demonstration on equipment operation
- Review trainee's technical knowledge and verify acceptable understanding
- Educate and support trainee with field tasks identified in the competency check sheet
- Verify trainee has the ability to perform tasks identified in the competency check sheet
- Communicate to Supervisor that the technical review and field competency is complete

Expectations of Trainee

- Complete all prerequisites outlined within the training program.
- Understand the training process outlined in this document.
- Understanding systems and spending time in the field.
- Ensure all lessons and tasks are signed off by the appropriate personnel as indicated on the training documents.
- Inform Supervisor/Leader on progress of training through face to face meetings.
- Will utilize all the materials provided to ensure a comprehensive training program is followed.
- Provide feedback on the training process and any updates that are required to the training material.
- Inform Supervisor/Leader of any training barriers that may exist during the training process.

Training Expectation Acceptance Agreement

I, _____ understand the expectations of me as a trainee as outlined in this document

(Operator Name)

Operator\Trainee

Name

Signature

Date (MM\DD\YY)

Supervisor/Leader

Name

Signature

Date (MM\DD\YY)



Acknowledgement

This manual has been developed using information and knowledge obtained from manufacturer's documentation and input from experienced Operators. Additionally, this manual has been validated by numerous Subject Matter Experts at CEDA. We welcome any comments or suggestions pertaining to this manual and its contents.

Many thanks to those who have demonstrated a clear dedication to CEDA and our values by participating in the creation of this program.





Objective

Welcome to CEDA Automated Tools Training Process

This program is designed to provide you with the training necessary to carry out your job in a manner that safeguards yourself, those around you and our environment. Upon Completion of this Module you will be able to:

Automated Tools Competency Manual

- 43.01 Describe M3, Mini M3, M2 and Chunky Tools
- 43.02 Operate M3/ Mini M3 Tool
- 43.03 Operate M2 Tool
- 43.04 Operate Chunky Tool
- 43.05 Maintain/ Troubleshoot Automated Tools

Employee(s) will demonstrate knowledge & skill in the proper application of equipment through practical application.

Instructions

All material must be completed in the order presented to ensure that prerequisites are met.

Employees will demonstrate knowledge and skill in the proper application of equipment through practical demonstration and application.

NOTE: All forms and procedures included are those required by CEDA. Work must be performed in accordance with these standards. On Client work sites, there may be additional standards and modified work procedures that will also have to be met.

Description: This is a knowledge and practical skill that requires written material to be reviewed along with the completion of an on-the-job demonstration prior to the test being written.

Whenever possible, the on-the-job demonstration should be completed at a job site or the shop under controlled conditions.

Arrange a time with your Mentor/Supervisor/Trainer to complete the On-the-Job Demonstration, where you will observe the proper operation of the Steamer unit and its components.

Assessment of Competency: Successful completion of this competency requires:

- A score of 100% on the written examination.
- A successful demonstration by trainee requiring a sign-off from Trainer.



Prerequisites

- CEDA Orientation
- CEDA Introduction to High Pressure Water Blasting
- Specific work location Orientation

Below is a list of the learning resources that are included and others you must obtain the most recent version from your Supervisor.

- High Pressure Code of Practice
- CEDA Safe Work Procedures
- Site specific documentation
- Job Hazard Analysis for the work
- CEDA FLHA
- Other CEDA procedures and practices that pertain to the job being completed

NOTE: All forms and procedures included are those required by CEDA. Work must be performed in accordance with these standards and can be found in CEDA Health, Safety and Environment Management System (HSEMS) or be requested from your Leader. On Client work sites, there may be additional standards and modified work procedures that will also have to be met.

Renewal Period

The entire Module must be redone after:

- Leaving the employ of CEDA for a 6-month period,
- Leaving the Automated Tools operation for a period of 6 months,
- As deemed required by CEDA.

General Overview

Federal & Provincial Legislation

All work must be completed in accordance with applicable Municipal, Provincial, & Federal Acts & Regulations, including but not limited to:

Transportation of Dangerous Goods (TDG)

- Vehicle must be DOT Approved and be equipped with appropriate safety devices
- DOT approved vehicles will have sticker on side of unit
- Operator must place appropriate placards on side of vehicle
- Operator must prepare bill of lading prior to transporting materials

The Workplaces Hazardous Materials Information System (WHMIS)

- All CEDA field employees working with or around equipment will have WHMIS and TDG training prior to starting work.

Occupational Health & Safety (OH&S)

Seat Belts

Anytime a vehicle (CEDA owned or personal) is being operated during business hours for business use, or on CEDA property, the occupants must be wearing seatbelts.



Personal Protective Equipment (PPE)

To operate the automated tools, employees must have and utilize the following personal protective equipment (PPE):

- CSA Certified Hard Hat with Face Shield
- CSA Certified Safety Boots (Boot Grips when required)
- Fire Retardant Coveralls
- Hearing Protection (plugs or muffs)
- Approved Gloves for the Site/Task
- Safety Glasses with Side Shields.
- Rain Gear as Required



Workplace Organization

CEDA's goal is to reduce waste (time, energy and materials) by maintaining an orderly and clean workplace, including our trucks and equipment. We ask that you take pride in the equipment you operate; treat it as if it were your own. A clean and organized vehicle/workspace is a safer vehicle/workspace. There are many ways to eliminate waste:

Allocation & Utilization of Resources: Have the right people and equipment in the right place, at the right time. Use equipment and resources on tasks and activities that are required and add value to our business.

Improve Productivity: Eliminate redundant or unnecessary steps/tasks without negative impact to the safety or quality of our products and services.

Use of Materials: Ensure equipment is stocked with required supplies (filter bags, duct tape etc.) before leaving for jobsite – replace the materials you have used during the shift to ensure that the next crew is adequately stocked. Use the correct materials in the quantities required to do the job safely & correctly.

Preventative Maintenance: Tools and equipment should be assessed as per the performance maintenance schedule to ensure safe operation. Regular maintenance will reduce costly breakdowns in the field.

There are steps we can take to improve our current state and move towards a more productive, organized and safe work environment. Improving workplace organization will reduce costs, improve morale and create a safer work environment. The following steps outline how best to achieve an organized workplace:

Sort, organize and eliminate unnecessary items from the workplace to eliminate clutter. Keep only essential items.

- Tools and equipment that are not utilized for day-to-day operations should be repurposed within the organization or discarded.
- Garbage or loose items should be removed or properly stored.

Prioritize tools, parts and materials based on usage and keep them in easily-accessible places.

- A place for everything and everything in its place.

Create storage areas that are easy to access and clearly laid out:

- Tools and equipment should be stored clean and ready for use.
- Storage areas and stored items should be properly identified using signage, labels or a visual outline.

Set clear standards for workplace organization:

- Hold yourself and others accountable for keeping the work areas clean and safe. Make workplace organization a standard work rule in your area.
- Clean general work areas and equipment after each shift.



- Put clean tools away in the proper place.
- Note any spills, leaks or other messes – clean and report if equipment requires maintenance
- Inspect the area(s) regularly and immediately record and correct any infractions. Handle deviations from work rules in a timely manner.
- Review processes and procedures regularly and adjust as required.

Equipment Overview

43.01 M3, MINI M3, M2 AND CHUNKY TOOLS

CEDA performs coker cleaning that consists of cleaning coke build-up on the top and down through the shed trays and around dip legs up to the anti-coking baffle.

The operation utilizes the following tools:

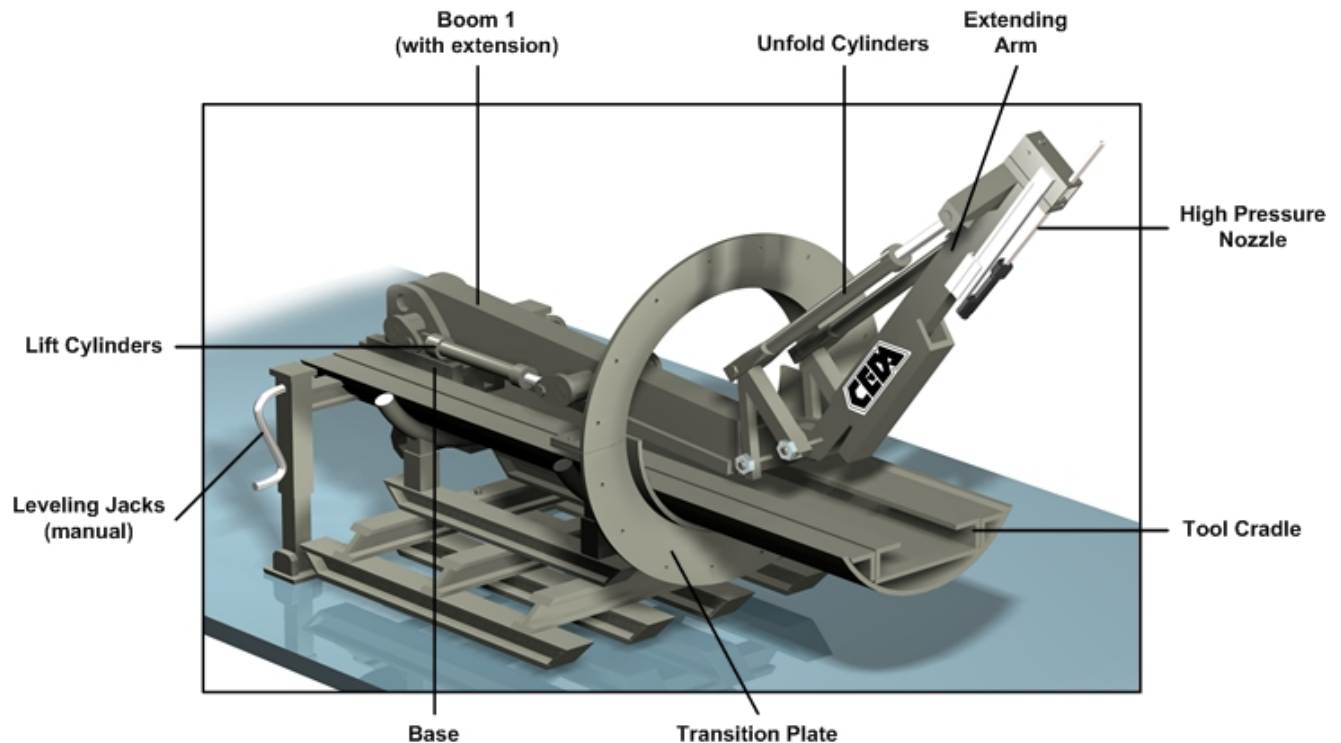
- M3 Tool
- Mini M3 Tool
- M2 Tool, and
- Chunky Tool.

The operation takes approximately 24 – 36 hours to complete and requires the use of four people. Two people must remain at the top of the coker; one of whom is controlling the remote control panel while the other two are running the pumps.

The environment the operation is performed under includes reduced to no visibility and excessive noise. Therefore the personnel must remain in constant contact with one another through the use of hand signals and radio communication.

M3 and Mini M3 Tool

The M3 and Mini M3 Tool are used specifically for cleaning coke build-up around dip legs, up to the anti-coking baffle. Both tools are designed identically only the Mini M3 is a smaller version allowing for cleaning in smaller cokers.

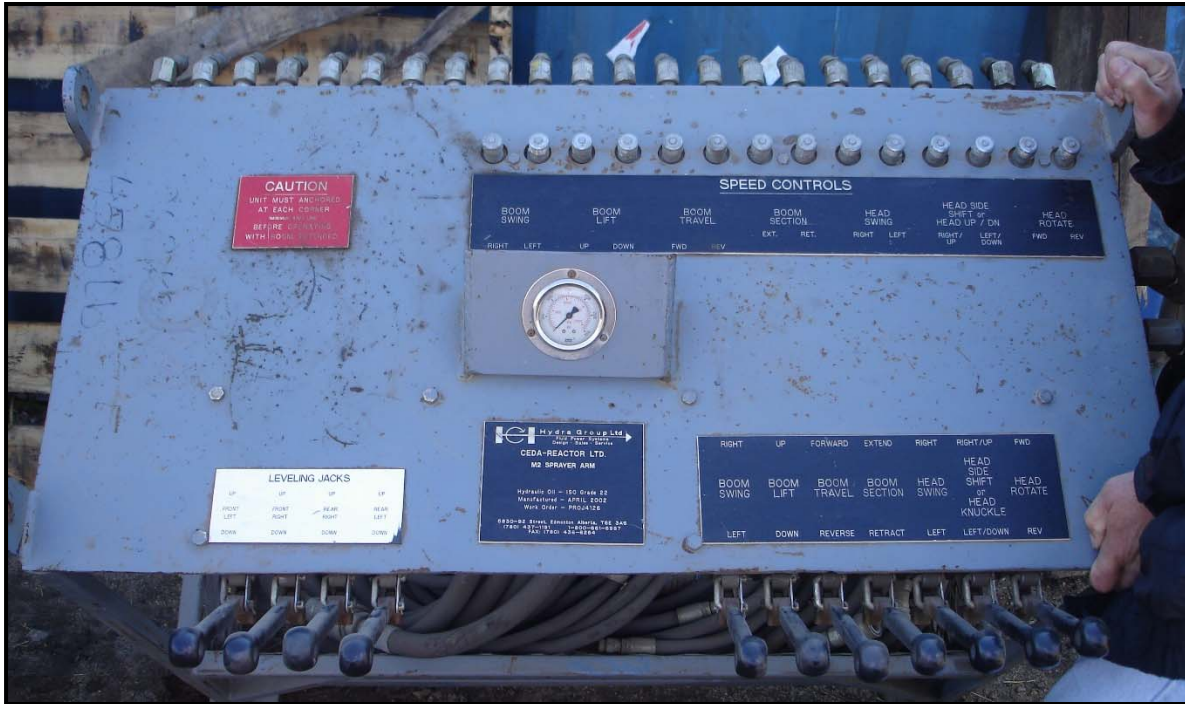


The M3 Tool has a reach of 53 feet while the Mini M3 reaches 25 ft utilizing 1,200 horsepower at 10,000 psi, with a flow rate of 200 gallons/ minute. The M3 Tool weighs 14,600 pounds and requires 400 or 600-volt power. Both tools are hydraulically operated using a control panel and hydraulic power pump (see below).

The M3 and Mini M3 have a base that travels 8 feet 6 inches with an extension boom of 72 inches. The transition plate is a permanent fixture and fits a 96" manway. It is bolted directly to the manway to keep the tool in place. The tool cradle offers support with the option of removing it. The extending arm rotates 180° and folds flush to the boom for entry and removal of the tool. The extending arm holds the high pressure nozzle that rotates 360°.

M3/ Mini M3 Control Panel

The control panel below is used for the M3 and Mini M3. It controls all aspects of the tools as well as monitors the hydraulic pressure (see pressure gauge in middle of panel). The pressure gauge must maintain a maximum pressure of 2,500 psi. Speed is controlled using the dials located on the upper right corner. Operation of the boom and leveling jacks is used by moving the levers located on the bottom left and right corners of the panel. Leveling jacks are used during setup only. 22 hydraulic hoses are used during the operation and are hooked up from the top of the control panel to the tool itself. All hoses are numbered for easy setup. The operator must also ensure the input/ output hoses are connected.



An Emergency Dump Valve must be hooked up prior to job commencement.



Hydraulic Power Pump

Electric hydraulic pumps are used to provide power to the M3, Mini M3 and M2 Tools. The pump has hose storage on the top of the cart and consists of the following components:

- Electric motor
- Sight glass
- Input/ output connections.

The electric motor provides power to the hydraulic pump. Proper rotation of the electric motor must be accomplished prior to starting a job and can be seen by removing the plastic cover or can be confirmed by ensuring the correct pressure is obtained on the hydraulic pressure gauge.

The sight glass is located on the right side of the pump and indicates the hydraulic temperature and fluid level. The input/ output connections are located on the right side of the hydraulic power pump. The operator must hook up hydraulic hoses to these connections.



Electric Motor



Sight Glass

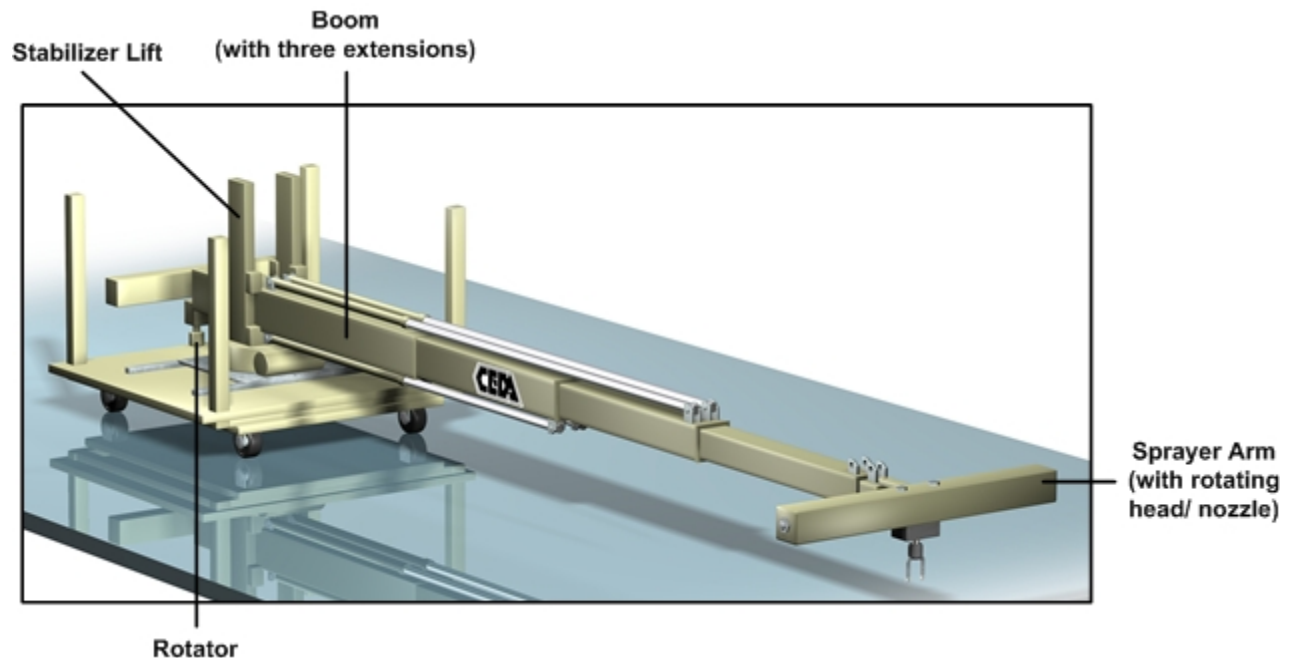


Input/ Output



M2 Tool

The M2 Tool is used to clean coke build-up on the top of and down through the shed trays of the coker. It has a telescopic reach of 27 ft. and uses up to 1,200 hp at 10,000 psi with a flow rate of up to 200 gpm. The M2 Tool uses the same electric hydraulic pump as described previously to provide power.



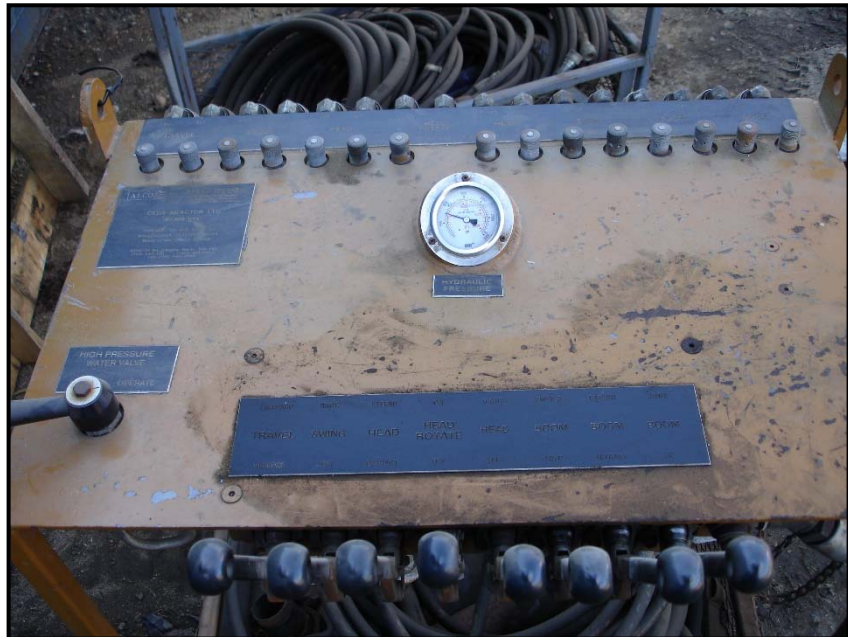
A close-up of the rotating head/ nozzle is seen in the picture to the right. This nozzle rotates 360° and moves back and forth along the sprayer arm.





M2 Control Panel

The M2 control panel controls all aspects of the tool as well as monitors the hydraulic pressure (see pressure gauge in middle of panel). The pressure gauge must maintain a maximum pressure of 2,500 psi. Speed is controlled using the dials located on the top of the panel. Operation of the boom is used by moving the levers located on the bottom of the panel. 16 hydraulic hoses are used during the operation and are hooked up from the top of the control panel to the tool itself. All hoses are numbered for easy setup.



Located on the bottom left corner of the panel is the Emergency Dump Valve. When the tool is in operation the dump valve lever must be placed to Operate and in the case of an emergency turn the lever to Dump.

The input/ output connections are located on the right side of the panel and the operator must hook up the hydraulic hoses to these connections.

The pressure controls are found underneath on the left side of the panel and used to control the boom.



Emergency Dump Valve



Input/ Output



Pressure Controls

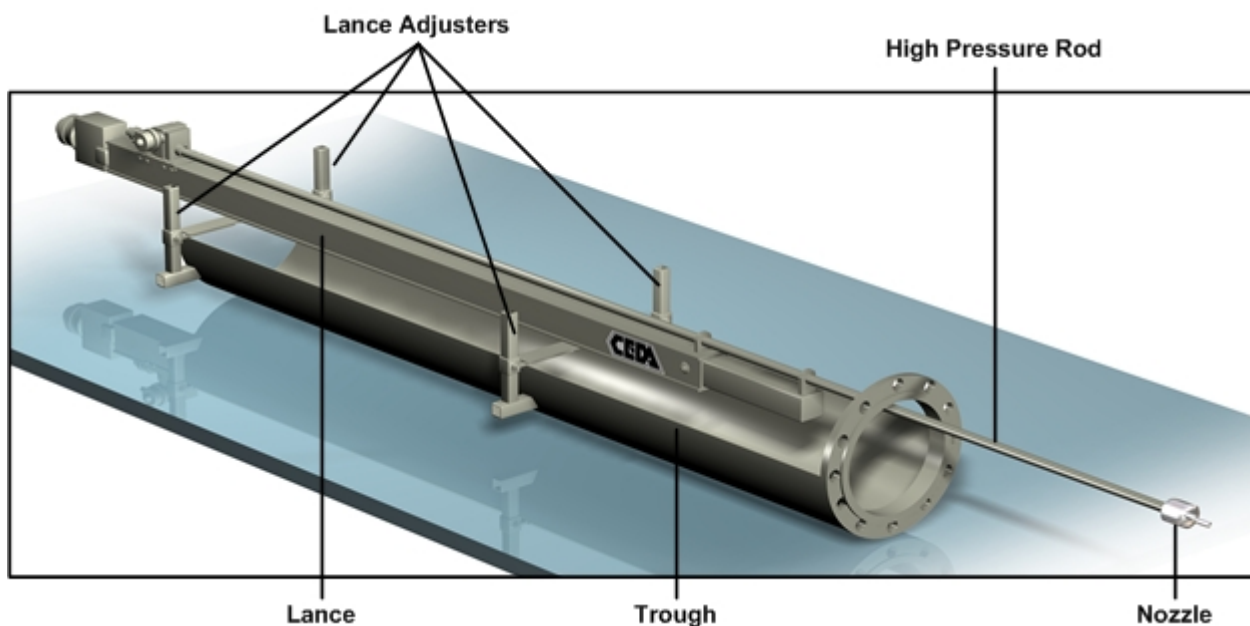


Chunky Tool

Since removing coke from the bottom of a coker is a long and painstaking process, CEDA uses the Chunky Tool to remove coke from the bottom of the coker. It is an air operated tool that is bolted to the bottom manway and breaks up large pieces of coke that have fallen to the bottom.

The Chunky Tool is made up of a drill system and trough and runs off 600 hp and 100 gpm. The drill system has an arm that extends and retracts with a nozzle that rotates. When the coke breaks up it travels through the trough to the chunky pit where it is then disposed of.

Always ensure the rotation of the lance is clockwise to prevent lance from becoming unscrewed.



Chunky Control Panel

The Chunky control panel (as seen on the right) controls all aspects of the tool. An air pressure gauge is located on the panel and should maintain a maximum pressure of 100 – 150 psi. Other lever controls located on the panel include nozzle rotation, and forward/reverse movement of the lance and nozzle.

A dump valve is also hooked up as seen underneath the control panel on the picture below.



Emergency Dump Valve



Documentation Requirements

Documentation required to operate this equipment includes the FLRA, Pre-Job Form, any on-site permits and the CEDA Safe Work procedure. It is important to remember that all forms/ documentation should be completed accurately and in full, as well as, reviewed with every member of the team. For more on documentation speak with your Supervisor.

Personnel Safety and Hazard Precautions

There are many potential hazards associated with performing the decoking operation. They include the following:

- Eye and skin contact
- Working with high pressure
- Congested and confined work area
- Inhalation of dangerous vapors
- Poor visibility
- Slip, trip and fall hazards
- Unauthorized personnel in area
- Overhead lifting and/ or moving equipment
- Vessel temperature
- Back blast
- Removal of pressurized de-coking tool
- Emergency evacuation
- Harmful gases (CO, H₂S, LEL and O₂)
- Extreme heat
- Burns
- Equipment isolations
- Open manway
- Weight of tool
- De-coking tool not secured
- Communication
- Accidental activation system

To reduce the risk of injury from these hazards, every worker must wear personal protective equipment. The PPE requirements are as follows:

- Hard hat
- Approved safety glasses with side shields
- Full face shield
- Hearing protection
- Approved footwear
- Nomex coveralls
- Full body harness (when working in the manway)
- Rain gear (if required)
- Rubber gloves (if required).

Along with wearing PPE, other considerations are to ensure:

- the vessel is gas tested by the client
- pump pressure does not exceed 10,000 psi
- personnel stand clear of lifting radius
- all equipment is inspected prior to use
- scaffolding is erected and tagged with a green safe scaffolding tag
- all personnel are familiar with the emergency assembly area and emergency meeting points
- radio communication between panel operator and spotter
- the robotic deslagger is positioned and installed properly, and
- all personnel are properly trained.



Operate M3/ Mini Tool

Below is the **Decoking Using the M3/ Mini M3 Decoking tool and Four (4) High Volume High Pressure Pumps Procedure** for operating both the M3 and Mini M3 Tool. Note the procedure steps may vary depending on site specific requirements.

ACTION	NOTES
1. OBTAIN all permits and review with all personnel involved.	
2. CONDUCT Tool Box Talk.	
3. REVIEW procedure with all personnel.	
4. CONDUCT a Field Level Risk Assessment with all personnel.	
5. POSITION equipment...	<i>... using a crane and riggers. ... using a spotter. ... spotter must wear a reflective vest.</i>
6. RIG IN hoses and SECURE to each level of structure...	<i>... in a safe manner.</i>
7. COVER hose crossing walkways.	
8. INSTALL whip checks at each connection.	
9. FLAG and TAG work area...	<i>... placing warning signs at each access point.</i>
10. SECURE de-coking tool....	<i>... ensuring all other manways are secure with steel covers.</i>
11. HOOK UP power on 400 or 600 volt system...	<i>... ensuring proper hydraulic pump rotation.</i>
12. OPEN water supply line...	<i>... and flush before installing nozzle.</i>
13. START UP unit...	<i>... using radio contact. ... up to desired pressure – do not exceed 10,000 psi.</i>
14. WALK lines to check for leaks and damage...	<i>... once desired pressure is obtained.</i>
15. SHUT DOWN...	<i>... to repair or replace equipment.</i>
16. MOVE de-coking tool...	<i>... as required by operator (visual must be had when moving tool).. ... until job is complete.</i>
17. SHUT DOWN unit...	<i>... as instructed by de-coking operator.</i>
18. REDUCE pressure, IDLE down and DISENGAGE pump....	<i>... leaving water supply on to maintain flow through the system.</i>



ACTION	NOTES
19. INSPECT cleaning...	<i>... client.</i>
20. DISCONNECT and RIG OUT system...	<i>... upon client approval.</i>
21. REMOVE de-coking tool...	<i>... by trained riggers only.</i>
22. CLEAN area...	<i>... prior to leaving.</i>
23. SIGN OFF all permits and EXIT area.	

Operate M2 Tool

Below is the **Decoking Using the M2 Decoking tool and Four (4) High Volume High Pressure Pumps Procedure**. Note the procedure steps may vary depending on site specific requirements.

ACTION	NOTES
1. OBTAIN all permits and review with all personnel involved.	
2. CONDUCT Tool Box Talk.	
3. REVIEW procedure with all personnel.	
4. CONDUCT a Field Level Risk Assessment with all personnel.	
5. POSITION equipment...	<i>... using a spotter. ... spotter must wear a reflective vest.</i>
6. RIG IN hoses and SECURE to each level of structure...	<i>... in a safe manner.</i>
7. COVER hose crossing walkways.	
8. INSTALL whip checks at each connection.	
9. FLAG and TAG work area...	<i>... placing warning signs at each access point.</i>
10. SECURE de-coking tool.	
11. HOOK UP power on 400 or 600 volt system...	<i>... ensuring proper hydraulic pump rotation.</i>
12. OPEN water supply line...	<i>... and flush before installing nozzle.</i>
13. START UP unit...	<i>... using radio contact. ... up to desired pressure – do not exceed 10,000 psi.</i>
14. WALK lines to check for leaks and damage...	<i>... once desired pressure is obtained.</i>
15. SHUT DOWN...	<i>... to repair or replace equipment.</i>
16. MOVE de-coking tool...	<i>... as required by operator. ... until job is complete.</i>



17. SHUT DOWN unit...	<i>... as instructed by de-coking operator.</i>
18. REDUCE pressure, IDLE down and DISENGAGE pump....	<i>... leaving water supply on to maintain flow through the system.</i>
19. INSPECT cleaning...	<i>... client.</i>
20. DISCONNECT and RIG OUT system...	<i>... upon client approval.</i>
21. REMOVE de-coking tool...	<i>... by trained riggers only.</i>
22. CLEAN area...	<i>... prior to leaving.</i>
23. SIGN OFF all permits and EXIT area.	

Operate Chunky Tool Procedure

ACTION	NOTES
1. OBTAIN all permits and review with all personnel involved.	
2. CONDUCT Tool Box Talk.	
3. REVIEW procedure with all personnel.	
4. CONDUCT a Field Level Risk Assessment with all personnel.	
5. POSITION equipment...	<i>... using a spotter. ... spotter must wear a reflective vest.</i>
6. FLAG and TAG work area...	<i>... placing warning signs at each access point.</i>
7. RIG IN hoses and SECURE to each level of structure....	<i>... in a safe manner.</i>
8. INSTALL whip checks at each connection.	
9. SECURE de-coking tool.	
10. RIG IN air lines from control panel to Chunky Tool.	
11. HOOK UP air supply to control panel.	
12. OPEN water supply line...	<i>... and flush before installing nozzle.</i>
13. START UP unit...	<i>... up to desired pressure – do not exceed 10,000 psi.</i>
14. SHUT DOWN...	<i>... to repair or replace equipment. ... do not attempt repairs when system is under pressure.</i>
15. MOVE de-coking tool...	<i>... as required by operator. ... until job is complete.</i>
16. DISENGAGE pump and SHUT DOWN system.	
17. CLEAN area...	<i>... prior to leaving.</i>



18. SIGN OFF all permits and EXIT area.	
---	--

Maintenance

As with any equipment used regularly, all automated tool components must receive the appropriate preventative maintenance in order to properly operate. It is important to perform the required maintenance for routine operation.

Part/Device	Required Maintenance	Frequency
M3/ Mini M3 Tool		
All welds	Mag particle inspection	Yearly
Tracks	Check gear drives	Every Job
Cylinders	Grease	Every Job
Hoses and Fittings (Hydraulic and Air)	Check for cuts and abrasions	Every Job
M2 Tool		
Pump and hoses	Glycol during winter operations	Oct. 1 - May 15
Hoses and Fittings (Hydraulic and Air)	Check for cuts and abrasions	Every Job
Chunky Tool		
Air Motors	Put oil in oiler	As Required
Hoses and Fittings (Hydraulic and Air)	Check for cuts and abrasions	Every Job

Troubleshoot

To efficiently operate automated tools, the operator must be aware of the common failures that might prevent smooth operation. The following is a list of common problems encountered.

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION(S)
No hydraulic pressure	Wrong motor rotation	Electrician to rewire.
	Relieve valve stuck	Clean/ replace valve.
No function	Needle valve closed	Open needle valve.
	Loose hose connection	Check connections.

M3 Spare Parts List

There are instances where parts will break or need replacing. Always bring spare parts for every job. Spare parts* must include the following:

- lift and unfold cylinders
- hydraulic hoses and fittings; and



- high pressure swivels.

* As per Spare Parts list.



Multiple Choice Questions (Technical Quiz)

Complete the following test, and have it graded by your assessor. If any questions are answered incorrectly, your assessor will explain what the correct answer is, and why it is correct. Once you understand the correct answer, both the assessor and students initials are required to indicate that mentoring or coaching has taken place.

Question	Assessor's Initials	Student's Initials
1. The M3 tool must be bolted to the manway. a. True b. False		
2. Radio communication must be used by all tool operators. a. True b. False		
3. Proper rotation of the electric hydraulic motor can be confirmed by: a. ensuring proper pressure is obtained on the pressure gauge. b. proper rotation on the electric motor. c. visual observation. d. both A and B		
4. Hydraulic hoses can be hooked up to any fitting. a. True b. False		
5. High pressure and hydraulics must be shut off when the tool is unattended. a. True b. False		
6. The M3 arm can be adjusted while the tool is running. a. True b. False		
7. The chunky tool does not need to be bolted to the manway. a. True b. False		
8. All three tools must have an emergency dump valve hooked up. a. True b. False		
9. Rotation of the chunky lance must be clockwise to prevent the nozzle from unscrewing. a. True b. False		
10. Sufficient air pressure (100 – 150) must be maintained on the control panel of the chunky tool. a. True b. False		
11. The M2 tool must be fastened to the work deck. a. True b. False		
12. The maximum pressure on the M2 Tool is 15,000 psi. a. True b. False		
13. Cranes are to be used to lift and position all tools. a. True b. False		



14.	Plant electrical power must be determined prior to job commencement (400 or 600 volt). a. True b. False		
15.	Air tool oil has to be put in the oil reservoir of the control panel on the chunky tool. a. True b. False		
16.	The high pressure hoses do not need to be flushed. a. True b. False		
17.	No hydraulic pressure could indicate: a. the needle valve is closed. b. a loose hose connection. c. the wrong motor rotation. d. None of the above		
18.	If the needle valve is closed no function will occur. a. True b. False		
19.	Spare parts must always be taken to a job. a. True b. False		
20.	All hydraulic and air hoses need to be checked for cuts and abrasions every month. a. True b. False		



Practical Assessment – Automated Tools Operations

This form is to be filled out by the assessor as they observe the student successfully demonstrate these items in order to be deemed competent.

Assessment Check List

Section 1			
The following items must be identified and their purpose, inspection requirements, and preventative maintenance must be explained. Failure to successfully explain inspection and maintenance requirements does not constitute a FAIL, but will require a mentorship agreement to bring the employees level of knowledge to an acceptable level.			
M3/ Mini M3 Tool Components		YES	NO
1	Control Panel		
2	Lift Cylinders		
3	Unfold Cylinders		
4	Tool Cradle		
5	Boom		
6	Extending Arm		
7	Nozzle/ Swivel		
8	Transition Plate		
9	Base		
M2 Tool Components			
1	Sprayer Arm		
2	Nozzle/ Swivel		
3	Rotator		
4	Control Panel		
5	Stabilizers		
Chunky Tool Components			
1	Lance		
2	High Pressure Rod		



3	Nozzle		
4	Trough		
5	Control Panel		
6	Lance Adjusters		

Section 2

The following tasks must be completed in the prescribed sequence. Any exceptions must be noted in the comments section with justification. Assessor will check YES column if the item was actioned satisfactorily, or circle the number in the NO column if it was not. If enough demerits are accumulated to warrant a fail, or employee performs an unsafe or dangerous action, the assessment may be terminated immediately. If necessary, all near-miss/incident reporting requirements must be met.

**Copies of the completed Daily Inspection, FLHA and Procedure must be attached to the assessment.*

M3/ Mini Tool Operation

TASK		YES	NO
1	Obtain all permits and review with all personnel involved.		
2	Conduct Tool Box Talk.		
3	Review procedure with all personnel.		
4	Conduct a Field Level Risk Assessment with all personnel.		
5	Position equipment.		
6	Rig in hoses and secure to each level of structure.		
7	Cover hose crossing walkways.		
8	Install whip checks at each connection.		
9	Flag and tag work area.		
10	Secure de-coking tool.		
11	Ensure all other manways are secure with steel covers.		
12	Hook up power on 400 to 600 volt system.		
13	Open water supply line.		
14	Start up unit ensuring pressure does not exceed 10,000 psi.		
15	Walk lines to check for leaks and damage.		
16	Shut down.		
17	Move de-coking tool.		
18	Shut down unit.		



19	Reduce pressure, idle down and disengage pump.		
20	Inform client the job is ready for inspection.		
21	Disconnect and rig out system upon client approval.		
22	Remove de-coking tool.		
23	Clean area.		
24	Sign off all permits and exit area.		
M2 Tool Operation			
1	Obtain all permits and review with all personnel involved.		
2	Conduct Tool Box Talk.		
3	Review procedure with all personnel.		
4	Conduct a Field Level Risk Assessment with all personnel.		
5	Position equipment.		
6	Rig in hoses and secure to each level of structure.		
7	Cover hose crossing walkways.		
8	Install whip checks at each connection.		
9	Flag and tag work area.		
10	Secure de-coking tool.		
11	Hook up power on 400 or 600 volt system.		
12	Open water supply line.		
13	Start up unit ensuring pressure does not exceed 10,000 psi.		
14	Walk lines to check for leaks and damage.		
15	Shut down.		
16	Move de-coking tool.		
17	Shut down unit.		
18	Reduce pressure, idle down and disengage pump.		
19	Inform client the job is ready for inspection.		
20	Disconnect and rig out system upon client approval.		
21	Remove de-coking tool.		
22	Clean area.		
23	Sign off all permits and exit area.		
Chunky Tool Operation			
1	Obtain all permits and review with all personnel involved.		
2	Conduct Tool Box Talk.		
3	Review procedure with all personnel.		
4	Conduct a Field Level Risk Assessment with all personnel.		
5	Position equipment.		
6	Flag and tag work area.		
7	Rig in hoses and secure to each level of structure.		
8	Install whip checks at each connection.		
9	Secure de-coking tool.		



10	RIG IN air lines from control panel to Chunky Tool.		
11	Hook up air supply to control panel.		
12	Open water supply line and flush hoses before installing nozzle.		
13	Start up unit.		
14	Shut down to repair or replace equipment.		
15	Move de-coking tool.		
16	Disengage pump and shut down system.		
17	Clean area		
18	Sign off all permits and exit area.		



Assessment Sign Off

All boxes must be completed before signing an employee competent.

- ☐ Expectation Letter Signed
- ☐ Minimum 100 hours of on the job training completed
- ☐ On the Job Practical Assessment Completed by an approved Assessor
- ☐ Has reviewed and understands the operator manuals
- ☐ Reviewed and understands Procedures and Safety Documentation
- ☐ Technical review and Knowledge Exam complete
- ☐ Training documentation sent to CEDA Training Department

Assessor

I, _____ have taken the below named employee through this Assessment, and he/she has successfully demonstrated competence in the areas identified.

Signature Date

Student

I, _____ have completed this competency, including the on-job demonstration, practical assessment and multiple-choice questions. I understand the information presented and agree to follow all of the rules and procedures set out by CEDA.

Signature Date



Revision Log

Revision Date	Section Affected	Changes Made
January 10, 2023	All	Updated Template, multiple changes throughout.



Training Change Request Form

Date: _____

Location: _____

Name: _____

Contact information: _____

Email/Phone number

Description

Please use the back of this sheet to make additional comments.

Section Name: _____

Page Number: _____

Description of Problem/ Suggested Resolution:
