



# High Pressure Pump Machinist IC

Practical workbook  
Participant

## Introduction

You use this practical workbook at the company to work on your practical experience. An important part of the training for the profession High Pressure Pump Machinist Industrial Cleaning (IC).

The entire training consists of the following parts:

- Obtaining the mandatory certificates
- Obtaining the recommended certificates
- **Carrying out the practical assignments and gaining practical experience**
- Completing the module with a final assessment

In the overview you can see all the requirements that belong to High Pressure Pump Machinist IC. The indicated certificates have been established as standard by the Orsima sector. In individual cases, it is possible for companies to deviate from this in a substantiated manner.

You will also see which career opportunities there are within the Industrial Cleaning sector.

<b>High Pressure Pump Machinist IC</b>
<b>Core tasks</b>
1. Preparing cleaning activities 2. Performing cleaning activities 3. Functional leadership 4. Driving the vehicle
<b>Legal professional requirements</b>
Rijbewijs C met Code 95 > 3,5 ton Rijbewijs BE
<b>Industrial requirements (mandatory)</b>
Basisveiligheid VCA SIR Adembescherming AB-B SIR Hogedruk Operator - Machinist (HDO-M)
<b>Industrial requirements (recommended)</b>
VOL VCA Cursus Begeleiden (Orsima) BHV Gasmeten Verplaatsen van lasten (ABvL) Werken als buitenwacht (mangatwacht) Rijbewijs E bij C
<b>Language requirements Dutch or English as a native language</b>
'Listening' level 3 'Conversations' level 3 'Reading' level 3 'Writing' level 2
<b>Language requirements Dutch or English as a second language</b>
'Listening' level 2 'Conversations' level 2 'Reading' level 2 'Writing' level 2
<b>Growth opportunities</b>
Allround Machinist IC Assistent Supervisor IC (Assistent) Site Manager

### Description of the levels:

1. Is able to understand and use simple messages.
2. Is able to understand frequently used expressions, can communicate on everyday issues.

3. *Is able to understand key points from clear standard texts on familiar topics. Can express himself orally in most common situations. Can describe experiences, events and opinions.*
4. *Is able to understand the main idea of a complex text. Can express himself fluently and carry on a conversation without difficulty. Can write texts, can give an opinion and can argue.*
5. *Is able to understand long and difficult texts and can express himself fluently and spontaneously. Can use the language flexibly and effectively and can produce detailed texts.*

For legal professional requirements Driving license C with Code 95 is mandatory if the high pressure pump is installed in the truck. If a high pressure pump is used in a trailer, the legal BE Driving License is sufficient.

### Get started with practice

This workbook contains practical assignments with which you can practice your skills. You carry out these assignments at your workplace.

During the training you will have the support of your practical supervisor. He will help you to make progress and you can consult him if you have any questions.

You can expect the practical supervisor to:

- Support you all times
- Help you with making a study plan
- Answer your questions and consult with you
- Provides instruction on how to carry out practical assignments
- Assess assignments and indicate points for improvement
- Indicate when you are ready to take the final test

Each assignment you have completed must be signed off by your practical supervisor. You start with the introductory assignment.

## Introductory assignment

What does the profession of High Pressure Pump Machinist IC look like?

In this chapter the profession of the High Pressure Pump Machinist IC is described.

### 1. Read the text about the profession carefully.

#### **What does the High Pressure Pump Machinist IC do?**

The High Pressure Pump Machinist is a professional who works for companies in Industrial Cleaning. The Operator drives the vehicle and operates the high pressure pump. He sets up equipment and can carry out all common activities independently.

The Machinist works on the client's site with a team that can change daily. He handles the equipment carefully and instructs the team about the work to be performed. He directs employees involved and monitors their safety. He can also act as a supervisor for young/new colleagues. The Machinist is ultimately responsible for the cleaning work to be performed and completes the High Pressure Checklist.

When driving, the Machinist is expected to participate in traffic in a professional manner and that his vehicle is suitable for the transport of the load. He takes care of the freight documents.

The Machinist prepares the installation on his vehicle and ensures that tools are correctly connected. He is responsible for setting/balancing the equipment, operating the high pressure pump and performing the cleaning work. He can be assisted in the work by the High Pressure Operator. The cleaning can take place internally, for example in tanks. Cleaning can also be done externally.

The Machinist is environmentally conscious and economical with materials and equipment. He monitors safety and communicates easily with colleagues and other stakeholders. The Machinist knows and applies the procedures and safety regulations. He is constantly vigilant and immediately calls for help if there are problems or if he sees problems coming that he cannot solve himself.

If the High Pressure Pump Machinist does not have direct visual contact with the Operator, an extra Operator will be used as an emergency stop man.

As a High Pressure Pump Machinist you can be flexibly deployed at multiple workplaces and you have adaptability. You can deal with changes in the cleaning process.

### **What do you need to do the job well?**

To do your job well, it is important that you:

- Obtained driving license 'Rijbewijs C' (when working with a truck of more than 3.5 tons)
- Obtained 'Code 95' (when working with a truck of more than 3.5 tons)
- Has a 'chauffeurskaart' (due to digital tachograph, when driving a truck of more than 3.5 tons)
- Obtained driving license 'Rijbewijs BE' obtained (when working with a high-pressure pump in a trailer)
- Can understand and speak Dutch and/or English.
- Obtained 'Basisveiligheid VCA' certificate.
- Obtained 'SIR Adembescherming AB-B' certificate.
- Obtained 'SIR Hogedruk Operator - Machinist (HDO-M)' certificate.
- Are at least 18 years old.
- Can be responsible for the work as a work permit holder.
- Have been working as a High Pressure Operator for at least six months.
- Has at least 120 hours of experience (e.g. to be shown via the 'chauffeurskaart').

The industry also advises you to complete the following training:

- Certificate 'VOL VCA'
- Orsima's Course: 'Begeleiden'
- 'BHV' certificate
- Certificate 'Gasmeten'
- Certificate 'Verplaatsen van Lasten (ABvL)'
- 'Werken als buitenwacht' (manhole guard)

- Driving license 'Rijbewijs E bij C'

In the profession of High Pressure Pump Machinist IC you perform cleaning work. You are dealing with:

- Preparing for the cleaning activities
- Performing the cleaning activities
- Functional leadership
- Driving the vehicle

When performing the work:

- Always check whether all employees can work safely.
- Always consider the guidelines, procedures and safety regulations.
- Are you continuously vigilant for unexpected disruptions and call for help if you cannot solve it yourself.

Collect contact information\*

[2. Fill in the contact details.](#)

### **Personal information**

First name:

Last name:

Date of birth:

### **Company data**

Company name:

Name of practical supervisor:

Phone number / Email address:

*\* This information is only used to support the execution of the module and to be able to issue a certificate as proof of passing this module.*

[Create a step-by-step plan](#)

To become an experienced High Pressure Pump Machinist IC, you have to perform the work a number of times. This way you gain more and more work experience in the work and you know increasingly well what to do at what time.

Before you start work you will receive an instruction from the practical supervisor. When you have performed the work, the practical supervisor will give you feedback. This way you will learn step by step to perform the work independently and well.

The step-by-step plan helps to consciously take learning steps. The mentor or company draws up the step-by-step plan. The practical supervisor will help you with the implementation of the step-by-step plan. You perform each practical assignment at least three times. The practical supervisor will indicate when it is sufficient.

There are a total of 13 different assignments.

- Assignment 1. Set up spraying location.
- Assignment 2. Set up spraying location at height.
- Assignment 3. High pressure unit line-up for Tank Cleaning Head (TCH).
- Assignment 4. High pressure unit line-up for Lance Tube Cleaner (LTC).
- Assignment 5. High pressure unit line-up for flex hose.
- Assignment 6. High pressure unit line-up for spray gun.
- Assignment 7. High pressure unit line-up for two spray guns.
- Assignment 8. High pressure unit line-up for Bundle Cleaner.
- Assignment 9. High-pressure unit line-up for bundle cleaner with fixed frame.
- Assignment 10. High-pressure unit line-up for cleaning tank walls.
- Assignment 11. Carry out day-to-day inspection and minor maintenance.
- Assignment 12. Carry out daily inspection.
- Assignment 13. Driving the vehicle

**3. Complete the step-by-step plan part 1.**

- Determine a week in which you will start.
- Think about how many assignments you will do in one week.
- Agree with the practical supervisor when he assesses and gives feedback

<b>Step-by-step plan part 1 – Name: .....</b>				
<b>Schedule Date/week</b>	<b>Assignment</b>	<b>Done yes/no</b>	<b>Assessed yes/no</b>	<b>Sufficient yes/no</b>
	First time 1. Set up spraying location.			
	First time 2. Set up spraying location at height.			
	First time 3. High pressure unit line-up for Tank Cleaning Head (TCH).			
	First time 4. High pressure unit line-up for Lance Tube Cleaner (LTC).			
	First time 5. High pressure unit line-up for flex hose.			
	First time 6. High pressure unit line-up for spray gun.			
	First time 7. High pressure unit line-up for two spray guns.			
	First time 8. High pressure unit line-up for Bundle Cleaner.			

	First time 9. High-pressure unit line-up for bundle cleaner with fixed frame.			
	First time 10. High-pressure unit line-up for cleaning tank walls.			
	First time 11. Carry out day-to-day inspection and minor maintenance.			
	First time 12. Carry out daily inspection			
	First time 13. Driving the vehicle			
	Feedback/assessment moment			
<b>Schedule Date/week</b>	<b>Assignment</b>	<b>Done yes/no</b>	<b>Assessed yes/no</b>	<b>Sufficient yes/no</b>
	Second time 1. Set up spraying location.			
	Second time 2. Set up spraying location at height.			
	Second time 3. High pressure unit line-up for Tank Cleaning Head (TCH).			
	Second time 4. High pressure unit line-up for Lance Tube Cleaner (LTC).			
	Second time 5. High pressure unit line-up for flex hose.			
	Second time 6. High pressure unit line-up for spray gun.			
	Second time 7. High pressure unit line-up for two spray guns.			
	Second time 8. High pressure unit line-up for Bundle Cleaner.			
	Second time 9. High-pressure unit line-up for bundle cleaner with fixed frame.			



	Second time 10. High-pressure unit line-up for cleaning tank walls.			
	Second time 11. Carry out day-to-day inspection and minor maintenance.			
	Second time 12. Carry out daily inspection			
	Second time 13. Driving the vehicle			
	Feedback/assessment moment			
<b>Schedule Date/week</b>	<b>Assignment</b>	<b>Done yes/no</b>	<b>Assessed yes/no</b>	<b>Sufficient yes/no</b>
	Third time 1. Set up spraying location.			
	Third time 2. Set up spraying location at height.			
	Third time 3. High pressure unit line-up for Tank Cleaning Head (TCH).			
	Third time 4. High pressure unit line-up for Lance Tube Cleaner (LTC).			
	Third time 5. High pressure unit line-up for flex hose.			
	Third time 6. High pressure unit line-up for spray gun.			
	Third time 7. High pressure unit line-up for two spray guns.			
	Third time 8. High pressure unit line-up for Bundle Cleaner.			
	Third time 9. High-pressure unit line-up for bundle cleaner with fixed frame.			
	Third time 10. High-pressure unit line-up for cleaning tank walls.			



	Third time 11. Carry out day-to-day inspection and minor maintenance.			
	Third time 12. Carry out daily inspection			
	Third time 13. Driving the vehicle			
	Feedback/assessment moment			

Also make a step-by-step plan for the mandatory certificates.

- How long does the training take?
- When can you start the training?
- How much time do you need to prepare for the exam?
- When can you take the exam?

#### 4. Complete the step-by-step plan part 2.

<b>Step-by-step plan part 2 – Name: .....</b>			
<b>Schedule Date/week</b>	<b>Rijbewijs C met Code 95 (&gt; 3,5 ton)</b>	<b>Done yes/no</b>	<b>Sufficient yes/no</b>
	Training started		
	Education completed		
	Exam done		
<b>Schedule Date/week</b>	<b>Rijbewijs BE</b>	<b>Done yes/no</b>	<b>Sufficient yes/no</b>
	Training started		
	Education completed		
	Exam done		
<b>Schedule Date/week</b>	<b>Basisveiligheid VCA</b>	<b>Done yes/no</b>	<b>Sufficient yes/no</b>
	Training started		
	Education completed		
	Exam done		
<b>Schedule Date/week</b>	<b>SIR Adembescherming AB-B</b>	<b>Done yes/no</b>	<b>Sufficient yes/no</b>
	Training started		
	Education completed		
	Exam done		
<b>Schedule Date/week</b>	<b>SIR Hogedruk Operator - Machinist (HDO-M)</b>	<b>Done yes/no</b>	<b>Sufficient yes/no</b>
	Training started		
	Education completed		

	Exam done		
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And of course you can also include one or more recommended certificates in the step-by-step plan.

- How long does the training take?
- When can you start the training?
- How much time do you need to prepare for the exam?
- When can you take the exam?

### 5. Complete the step-by-step plan part 3.

<b>Step-by-step plan part 3 – Name: .....</b>			
<b>Schedule Date/week</b>	<b>VOL VCA</b>	<b>Done yes/no</b>	<b>Sufficient yes/no</b>
	Training started		
	Education completed		
	Exam done		
<b>Schedule Date/week</b>	<b>Begeleiden (Orsima)</b>	<b>Done yes/no</b>	<b>Sufficient yes/no</b>
	Training started		
	Education completed		
	Exam done		
<b>Schedule Date/week</b>	<b>BHV</b>	<b>Done yes/no</b>	<b>Sufficient yes/no</b>
	Training started		
	Education completed		
	Exam done		
<b>Schedule Date/week</b>	<b>Gasmeten</b>	<b>Done yes/no</b>	<b>Sufficient yes/no</b>
	Training started		
	Education completed		
	Exam done		
<b>Schedule Date/week</b>	<b>Verplaatsen van Lasten ( ABvL )</b>	<b>Done yes/no</b>	<b>Sufficient yes/no</b>
	Training started		
	Education completed		
	Exam done		
<b>Schedule Date/week</b>	<b>Werken als buitenwacht (mangatwacht)</b>	<b>Done yes/no</b>	<b>Sufficient yes/no</b>
	Training started		
	Education completed		
	Exam done		

Schedule Date/week	Rijbewijs E bij C	Done yes/no	Sufficient yes/no
	Training started		
	Education completed		
	Exam done		

## Assignment 1. Set up spraying location

### Description

You set up the spraying location to be able to safely perform high-pressure cleaning work. You make a choice for the safest working method and choose which tools you use. You assess whether the barriers and markings have been applied correctly. You also check whether the hoses are safely routed to the spraying location and cannot be damaged. You make sure that the work does not damage the objects to be cleaned. If there is no direct visual contact with the Machinist, there is an extra emergency stop man. The Machinist completes the high-pressure checklist, you check the checklist. You wear full safety equipment within the barriers.

### Preparation

You decide which materials and tools you need for the work. You base your choices on the Work Permit and/or Task-Risk Analysis (TRA).

1. You choose the safest working method and collect the materials and tools.

Check:

- √ Parts to be cleaned and the nature of the contamination determined
- √ Working method chosen with decision diagram
- √ Resources chosen
- √ Special risks stated in TRA via toolbox or on Work Permit
- √ Personal protective equipment
- √ Safety precautions fitted

2. You check whether the work location is safe to operate.

Check:

- √ Checklist completed by Machinist checked
- √ Own safety
- √ Other people's safety
- √ Hazardous goods safety

### Performance

You set up the spraying location.

1. You drop off the spraying location.

Check:

- √ Markings applied
- √ Deposits applied
- √ Hoses laid down safely (prevent tripping hazard)

- √ Make a layout: contaminated parts, cleaning area, cleaned parts
- √ Ensure that the floor remains stiff

## 2. You follow the instructions and regulations

### Check:

- √ You ground the high-pressure pump
- √ You secure the parts to be cleaned
- √ You work meticulously
- √ You work at a good pace
- √ You perform the cleaning

### Completion

You check whether the work has been done properly.

## 1. You check the parts and working environment.

### Check:

- √ Parts are clean and labeled
- √ Work environment is clean

## 2. You tidy up the workplace.

### Check:

- √ Spray location clean
- √ Cleaned up all resources

## Assignment 2. Set up spraying location at height

### Description

You set up the spraying location on a platform and not on the ground floor. You want to carry out high-pressure cleaning work here safely. You make a choice for the safest working method and choose which tools you use. You base your choices on the Work Permit and/or TRA.

You assess whether the barriers and markings have been applied correctly. You look at how you can raise the hoses and how you can protect them against accidental falls. You make sure that there are as few disruptions as possible on through routes. You do not compromise on safety. If there is no visual contact with the Machinist, a second High Pressure Pump Operator is required as an emergency stop man.

### Preparation

You consider which materials and tools you need for the job. You base your information on the Work Permit and/or the TRA. You make sure that the working method and working pressure do not damage the surface to be cleaned. If there is no direct visual contact with the Machinist, there is an extra emergency stop man. The Machinist fills in the high-pressure checklist, you check the checklist.

You wear full safety equipment within the barriers.

1. You choose the working method and the equipment that you need for cleaning the contamination. Then you collect the materials and tools.

Check:

- √ Workplace is designated by the client
- √ Work method tailored to work permit and/or TRA
- √ PPE tailored to work permit and/or TRA
- √ Resources and materials collected

2. You check whether the location where you are going to work is safe.

Check:

- √ Checklist completed by the Machinist
- √ Safety precautions fitted
- √ Ground the high pressure pump
- √ Own safety
- √ Other people's safety
- √ Materials secured against falling when working at height
- √ Set-up or grid floors covered
- √ If necessary: extra emergency stop man available

#### Performance

You set up the spraying location and take into account the wind direction and the deposits below. You ensure that spray water is collected.

1. You drop off the spraying location.

Check:

- √ Markings applied
- √ Deposits applied
- √ Hoses safely notified
- √ Do not expose people to falling spray water/pollution
- √ Spray water can be collected

2. You follow the instructions and regulations

Check:

- √ You work meticulously
- √ You work at a good pace
- √ You carry out the cleaning work

#### Completion

You check whether the work has been done properly. You ask the client to perform an inspection (camera inspection or measurements).

1. You check the installation.

Check:

- √ Visual inspection has been performed
- √ Inspection has been carried out by the client
- √ All materials are clean and free of product

2. You check the vehicle

Check:

- √ Check on inventory of the vehicle
- √ Leave workplace clean

### Assignment 3. High pressure unit line-up for Tank Cleaning Head (TCH).



Image 1 Examples of a Tank Cleaning Head (TCK)

#### Description

You line up a Tank Cleaning Head (TCH) based on the information from the Work Permit, confined space permit and TRA. You look at the nature of the pollution and the local situation. You choose the right nozzles based on the pump specifications.

When cordoning off the area, pay attention to the exit of water jets at manholes and open nozzles. You look at the cleaning result after the first cleaning and further adjust the rotation speed of the TCH. You make sure that the work does not damage the objects to be cleaned. The Machinist completes the high-pressure checklist, you check the checklist. You wear full safety equipment within the barriers.

#### Preparation

You prepare the line up and use the information from the Work Permit, the confined space permit and the TRA.

1. You choose the right materials on the basis of the tables.

Check:

- √ Materials chosen and checked
- √ Check nozzles (not worn, equal diameter)
- √ Check work situation:
  - Apply TCH using a lance
  - Hanging from the HP hose
  - Lift from below with steel cable or chain
- √ Personal protective equipment

2. You check whether the location where you are going to work is safe.

Check:

- √ Check High Pressure Checklist completed by the Machinist
- √ Ground the high-pressure pump

- √ Secure materials against falling
- √ Secure / close off openings where water can escape
- √ Own safety
- √ Other people's safety (preventing people in the area from coming into contact with spray water)

#### Performance

You connect the tools and ensure that the TCH high-pressure pump is switched off.

1. You connect the tools.

Check:

- √ TCH high-pressure pump is switched off during movements
- √ Control 3D operation of the TCH
- √ Move TCH every 10-15 minutes depending on rotation speed

2. You follow the instructions and regulations

Check:

- √ Carry out gas measurement in a confined space (every time before entering the confined space)
- √ You work meticulously
- √ You work at a good pace
- √ You carry out the cleaning work

#### Completion

You check whether the cleaning work has been carried out properly.

1. You check the cleaned equipment

Check:

- √ Visual inspection performed
- √ Inspection carried out by the client (possibly with a measurement)
- √ Cleaning work performed properly

2. You tidy up the workplace.

Check:

- √ When aligning, secure the material against falling
- √ Finally, remove the earthing
- √ Contents Inventory High Pressure Pump
- √ Leave work environment clean

## Assignment 4. Line up high pressure unit for LTC

#### Description

You can safely adjust the LTC (Lance Tube Cleaner) for safe operation. You choose the right hoses and nozzles based on the diameter of the tubes. You make sure that there is no danger if a pipe is blocked. You verify that the hose end cap is attached in the right place. Finally, make sure that the correct deflector blocks are mounted. You make sure that the



work does not damage the objects to be cleaned. If there is no direct visual contact with the Machinist, there need to be an extra emergency stop man. The Machinist completes the high-pressure checklist, you check the checklist.  
You wear full safety equipment within the barriers.

#### Preparation

You prepare the line up and use the information from the Work Permit and the TRA.

1. You choose and check the right materials.

Check:

- √ Working method aligned with work instruction and/or TRA
- √ PPE aligned with work instruction and/or TRA
- √ Materials chosen
- √ Check and apply LTC fasteners at approved mounting points.

2. You check whether the location where you are going to work is safe.

Check:

- √ Checking the High Pressure Checklist Completed by the Machinist
- √ Ground the high-pressure pump
- √ Define the working area according to regulations
- √ Own safety
- √ Other people's safety

#### Performance

You correctly adjust the LTC safely and carry out the cleaning work according to instructions.

1. You adjust the hoses and fittings

Check:

- √ Place oil mister in air supply for the hydraulic drive and check the oil level
- √ Place the right deflector blocks appropriate to the diameter of the High Pressure Hose.
- √ Adjust hydraulic motor speed according to contamination
- √ Adjust brake pads so that the nozzle cannot shoot out of the tubes.
- √ Nozzles connected
- √ Hoses connected
- √ Endstop confirmed

2. You follow the instructions and regulations during the cleaning work

Check:

- √ Clean tube plates with a high-pressure gun and first part of tubes
- √ All tubes cleaned
- √ Extra emergency stop man if there is no direct visual contact with the Machinist
- √ You work meticulously and prevent people from being exposed to spray water
- √ You work at a good pace

## Completion

You check whether the work has been done properly and clean up.

### 1. You check the work done

Check:

- √ Visual inspection of the cleaning
- √ Inspection performed by client

### 2. You clean and tidy up the material.

Check:

- √ Control residual contamination of LTC and materials
- √ Parts LTC inventoried
- √ High-pressure pump inventoried
- √ Leave the environment clean

## Assignment 5. High pressure unit line-up for flex hose.

### Description

You use a manual flex hose for cleaning work. You follow the decision tree when choosing and preparing the resources. You will consult the client in advance and draw up a TRA. You choose the right deflector for the flex hose and you install the deflector correctly. You make sure that the work does not damage the objects to be cleaned. If there is no direct visual contact with the Machinist, there need to be an extra emergency stop man. The Machinist completes the high-pressure checklist, you check the checklist. You wear full safety equipment within the barriers.

### Preparation

You prepare the use of the flex hose.

### 1. You choose the right materials.

Check:

- √ Choose resources according to decision tree and TRA
- √ Prepare resources according to decision tree and TRA
- √ Correct High Pressure flex hose and nozzle, considering:
  - Pipe diameter
  - Nature of contamination
  - Reaction Forces
- √ Deflector installed
- √ Correct deflector blocks fitted
- √ Personal protective equipment according to work permit and TRA

### 2. You check whether the location where you are going to work is safe.

Check:

- √ Define the working area according to regulations
- √ Ground the high-pressure pump
- √ Checking the high pressure checklist completed by the Machinist

- √ Own safety
- √ Other people's safety

#### Performance

You carry out the cleaning work according to instructions.

##### 1. You clean the equipment.

Check:

- √ environment clean
- √ Avoid tripping and slipping hazards
- √ End stop confirmed

##### 2. You follow the instructions and regulations for cleaning work

Check:

- √ All tubes cleaned
- √ Extra emergency stop officer if there is no direct visual contact with the Machinist
- √ You work meticulously and prevent people from being exposed to spray water
- √ You work at a good pace

#### Completion

You check whether the work has been done properly and clean up.

##### 1. You check the work done

Check:

- √ Visual inspection of the cleaning
- √ Inspection performed by client

##### 2. You clean and tidy up the material.

Check:

- √ High pressure pump inventoried.
- √ Leave the environment clean.

## Assignment 6. High pressure unit line-up for spray gun.

#### Description

You clean manually using a spray gun. You choose the right nozzle and consider the nature of the contamination and a safe reaction force. You make sure that the work does not damage the objects to be cleaned. If there is no direct visual contact with the Machinist, there need to be an extra emergency stop man. The Machinist completes the high pressure checklist.

You wear full safety equipment inside the deposit.

#### Preparation

You prepare to line up the high pressure unit.

1. You choose the right materials.

Check:

- √ Materials chosen
- √ Install correct spray gun cover
- √ Personal protective equipment

2. You check whether the location where you are going to work is safe.

Check:

- √ Define the working area according to regulations
- √ Ground the high-pressure pump
- √ Check the high-pressure checklist completed by the Machinist
- √ Own safety
- √ Other people's safety

### Performance

You line-up the high-pressure unit and carry out the cleaning work.

1. You prepare the spray gun.

Check:

- √ Reaction force is in accordance with type of contamination

2. You follow the instructions and regulations when performing the cleaning work

Check:

- √ Extra emergency stop man if there is no direct visual contact with the Machinist
- √ Secure the spray gun when work is interrupted
- √ You work meticulously
- √ You work at a good pace

### Completion

You check whether the work has been done properly and clean up.

1. You control the work

Check:

- √ Visually check work
- √ Inspection by client.

2. You clean up the environment.

Check:

- √ Aligning high-pressure pump
- √ Inventory high-pressure pump
- √ Leave the environment clean.

## Assignment 7. High pressure unit line-up for two spray guns.

### Description

You clean manually using a spray gun. Two sprayers work at the same time during the cleaning work. The Machinist sets up the spraying guns, you line up the spray gun. You assess the level and nature of the pollution and choose the correct working pressure. You will install the right spray gun cover.

You make sure that the work does not damage the objects to be cleaned.

You create a safe working space, where the sprayers cannot touch each other. You wear full safety equipment within the barriers. You also create a safe working space for the emergency stop man(s). Every Operator has its own emergency stop man if there is no direct view of the Machinist. The Machinist completes the high pressure checklist.

### Preparation

You prepare the line up of the high pressure unit.

1. You choose the right materials.

Check:

- √ Materials chosen
- √ Fitting correct spray gun cover
- √ Personal protective equipment

2. You check whether the location where you are going to work is safe.

Check:

- √ Define the working area according to regulations
- √ Ground the high-pressure pump
- √ Check the high-pressure checklist completed by the Machinist
- √ Own safety
- √ Other people's safety

### Performance

You line up the high-pressure unit and carry out the cleaning work.

1. You prepare the spray gun.

Check:

- √ Reaction force is in accordance with type of contamination

2. You follow the instructions when performing the cleaning

Check:

- √ Extra emergency stop man if there is no direct visual contact with the Machinist
- √ Secure the spray gun when work is interrupted
- √ You work meticulously
- √ You work at a good pace

### Completion

You check whether the work has been done properly and clean up.

## 1. You check the work

### Check:

- √ Visually check work
- √ Inspection by client.

## 2. You clean up the environment.

### Check:

- √ Aligning high-pressure pump
- √ Inventory high-pressure pump
- √ Leave the environment clean.

## Assignment 8. High pressure unit line-up for Bundle Cleaner



*Image 2 Example of a bundle cleaning spray site*

### Description

You clean internally at a spray site with a bundle cleaning machine. The bundles are on rollers, which you can use to rotate the bundles. You place the rollers in line with the bundling machine and secure them. You ensure a safe working environment and wear full safety equipment. You assess the degree and nature of the contamination and choose the correct nozzles and working pressure. You make sure that the work does not damage the objects to be cleaned. You ensure that the bundles cannot roll away or fall. You base your choices on the work instruction and/or TRA. If there is no direct eye contact with the Machinist, there is an extra emergency stop man.



Image 3 Example of inside bundle cleaner

## Preparation

You set up the work environment.

1. You choose the right materials.

Check:

- √ Materials chosen
- √ Placing rollers
- √ Personal protective equipment

2. You check whether the location where you are going to work is safe.

Check:

- √ Define the working area according to regulations
- √ Be able to perform lifting operations safely
- √ Ground the high-pressure pump
- √ Check high pressure checklist completed by the Machinist
- √ Own safety
- √ Other people's safety

## Performance

You line-up the high-pressure unit and carry out the cleaning work.

1. You line up the bundle cleaning machine.

Check:

- √ Reaction force is in accordance with type of contamination
- √ Check correct choice of nozzles

2. You follow the instructions when performing the cleaning

Check:

- √ Extra emergency stop officer if there is no direct visual contact with the Machinist
- √ You work meticulously
- √ You work at a good pace

## Completion

You check whether the work has been done properly and clean up.



### 1. You check the work

#### Check:

- √ Visually check work
- √ Inspection by client.

### 2. You clean up the environment.

#### Check:

- √ Aligning and cleaning machines
- √ Inventory high-pressure pump
- √ Leave the environment clean.

## Assignment 9. High-pressure unit line-up for bundle cleaner with fixed frame.

### Description

You clean with a bundle cleaning machine with a fixed frame that you place in front of the bundle (eg a TLE). This allows you to mount several flex hoses on the bundle cleaner. You choose the nozzles and working pressure in accordance with the nature of the contamination. You also pay attention to the diameter of the tubes. You make sure that the work does not damage the objects to be cleaned. You provide a safe workplace.

You mount the correct deflector blocks on the flex hoses and make the oil mister ready for use. You base your choices on the work instruction and the TRA. If there is no direct eye contact with the Machinist, provide an extra emergency stop man.

### Preparation

You set up the work environment.

### 1. You choose the right materials.

#### Check:

- √ Materials chosen
- √ Correct deflector blocks mounted on flex hoses
- √ Oil mister installed
- √ Personal protective equipment

### 2. You check whether the location where you are going to work is safe.

#### Check:

- √ Define the working area according to regulations
- √ Ground the high-pressure pump
- √ Check high pressure checklist completed by the Machinist
- √ Own safety
- √ Other people's safety

### Performance

You line-up the high-pressure unit and carry out the cleaning work.

## 1. You pre-clean.

### Check:

- √ Reaction force is in accordance with nature of contamination
- √ Check correct choice of nozzles
- √ Pre-cleaning tubes with a high-pressure spray gun
- √ Adjust deflector blocks for the first tubes

## 2. You follow the instructions and regulations when performing the cleaning work

### Check:

- √ Extra emergency stop man if there is no direct visual contact with the Machinist
- √ You work meticulously
- √ You work at a good pace

## Completion

You check whether the work has been done properly and clean up.

## 1. You check the work

### Check:

- √ Visually check work
- √ Inspection by client.

## 2. You clean up the environment.

### Check:

- √ Aligning, cleaning, and inventory machines
- √ Aligning and inventory high-pressure pump
- √ Leave the environment clean.

## Assignment 10. High-pressure unit line-up for cleaning tank walls.

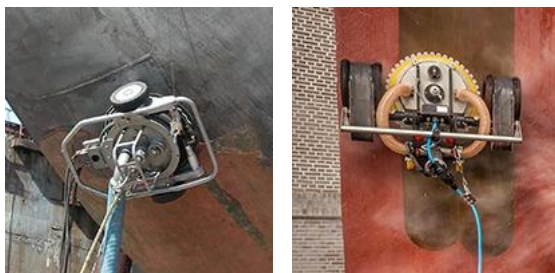


Image 4 Examples of spider jets

## Description

You clean a tank wall with a spiderjet or crawler. The operation of this equipment can be different: magnetic, aspirated through a vacuum hose, with extraction or without extraction. You also work with different working pressure and pump delivery, depending on the type and nature of the contamination.

You set the spiderjet by choosing the right nozzles and pay attention to the pump specifications.

You also provide fall protection and make sure that cables and hoses cannot bend during work. You ensure a safe workplace and ensure that the work does not damage the objects to be cleaned. You base your choice on the work instruction and TRA. If there is no direct eye contact with the Machinist, provide an extra emergency stop man.

#### Preparation

You set up the work environment.

1. You choose the right materials.

Check:

- √ Materials chosen
- √ Personal protective equipment

2. You check whether the location where you are going to work is safe.

Check:

- √ Define the working area according to regulations
- √ Ground the high-pressure pump
- √ Check high pressure checklist completed by the Machinist
- √ Own safety
- √ Other people's safety

#### Performance

You line-up the high-pressure unit and carry out the cleaning work.

1. You line up the high pressure unit.

Check:

- √ Check correct choice of nozzles and number
- √ Correct working pressure determined
- √ Fall protection installed according to regulations
- √ Hoses and cables securely attached

2. You follow the instructions and regulations when performing the cleaning work

Check:

- √ Extra emergency stop man if there is no direct visual contact with the Machinist
- √ Overlap jobs to prevent spillover pollution
- √ Inaccessible places cleaned in a different way
- √ You work meticulously
- √ You work at a good pace

#### Completion

You check whether the work has been done properly and clean up.

1. You control the work

Check:

- √ Visually check work
- √ Inspection by client.

2. You clean up the environment.

Check:

- √ Aligning, cleaning and inventory machines
- √ Aligning and inventory high-pressure pump
- √ Leave the environment clean.

## Assignment 11. Carry out day-to-day inspection and minor maintenance.

Description

You carry out the day-to-day inspection on the high-pressure truck. The check consist: checking the liquid levels, changing the cooling water and cleaning the high-pressure truck.

Preparation

You prepare the minor maintenance.

1. You assess which minor maintenance must be performed.

Check:

- √ Determine minor maintenance
- √ Tools and Materials
- √ Personal protective equipment

2. You check whether the location where you are going to work is safe.

Check:

- √ Own safety
- √ Other people's safety
- √ Hazardous goods safety

Performance

You carry out minor maintenance.

1. Carry out minor maintenance under the supervision of the Machinist

Check:

- √ Check fluid levels
- √ Change cooling water
- √ Cleaning high pressure truck

2. You follow the instructions and regulations

Check:

- √ You work meticulously
- √ You work at a good pace

Completion

You clean up the workplace and dispose of the waste safely.

1. You clean up the dirt.

Check:

- √ Sort residual waste by type.
- √ Dispose of residual waste in an environmentally conscious and safe way.

2. You clean the materials and tools

Check:

- √ Cleaning materials and tools
- √ Cleaning PPE
- √ Storing materials and tools

## Assignment 12. Carry out daily inspection

### Description

You perform a daily inspection of the high-pressure vehicle to determine whether everything is in order and whether you can use the vehicle and installation safely. You check the operation of the emergency stops. You also perform a visual inspection of the hoses and accessories. You check that the vehicle controls are working properly. Finally, you look at the inventory list. The semi-annual and annual inspection is performed by the High Pressure Inspector (HDK).

### Preparation

You prepare the daily inspection.

1. You will assess which materials and tools you need.

Check:

- √ Inventory list
- √ Daily Inspection Checklist
- √ Tools and Materials
- √ Personal protective equipment

2. You check whether the location where you are going to work is safe.

Check:

- √ High-pressure truck check cleaned
- √ Own safety
- √ Other people's safety

### Performance

You carry out the daily inspection

1. Carry out inspection

Check:

- √ Correct operation of emergency stop
- √ Visual inspection hoses and accessories
- √ Controls and Signals

- √ Check inventory list

## 2. You follow the instructions and regulations

Check:

- √ You work meticulously
- √ You work at a good pace

### Completion

You clean up the workplace and dispose of the waste safely.

## 1. You clean up the dirt.

Check:

- √ Sort residual waste by type.
- √ Dispose of residual waste in an environmentally conscious and safe way.

## 2. You clean the materials and tools

Check:

- √ Cleaning materials and tools
- √ Cleaning PPE
- √ Storing materials and tools

## Assignment 13. Driving the vehicle

### Description

You drive the High Pressure Truck on public roads. You have the correct vehicle documents. There is a file in the cabin with the correct certificates and user manuals. You do the checks at the entrance to the site and you do the checks when you leave the location. After you have finished the work you ensure that the equipment is clean before you return the vehicle to the home location.

### Preparation

Preparation before driving.

## 1. You check the documents.

Check:

- √ Vehicle documents
- √ File with certificates and user manuals

## 2. You check the vehicle.

Check:

- √ Check high pressure pump fuel level
- √ Unit operation

### Performance

You drive the vehicle to the work location.

1. Drive to the site where the cleaning work needs to be done.

Check:

- √ Check/report at the gate

2. You follow the instructions and regulations

Check:

- √ You work meticulously
- √ You work at a good pace

3. You check the installation.

- √ Carry out checks
- √ Report details

### Completion

You bring the equipment back to the home location

1. You clean the equipment.

Check:

- √ Clean up cabin.
- √ Cleaning the exterior of the vehicle.

2. You take the vehicle to the home location.

Check:

- √ Car is refueled
- √ Existing material is secured
- √ Car is ready for next use

## Final assessment High Pressure Pump Machinist IC

The last step to complete the practical skills is taking the final test.

In this test you show that you are skilled to work in practice as a High Pressure Pump Machinist IC.

You will discuss with your practical supervisor when you can take the final test.

On the day of the final test you will receive an assignment from the practical supervisor that you will carry out.

The practical supervisor and sometimes another assessor look at how you do this. They will assess your work on the following points:

Core task 1: Preparing cleaning activities			
1.1 Collecting required material, tools and equipment	I	G	N
Ensures that materials and tools are collected. <ul style="list-style-type: none"><li>• Collects and interprets relevant information</li><li>• Determines the resources and people required to carry out the work</li><li>• Knows the possible uses of materials and resources</li><li>• Sets goals and priorities</li></ul>			



Checks that the necessary materials are ready for use. <ul style="list-style-type: none"> <li>Indicates to others the risks of unsafe situations</li> <li>Checks own PPE</li> <li>Organizes the work of colleagues</li> </ul>			
<b>1.2 Preparing equipment and connecting aids</b>	I	G	N
Prepare the equipment for use <ul style="list-style-type: none"> <li>Works according to safety procedures regulations and work instructions</li> <li>Connect tools correctly</li> <li>Works accurately</li> </ul>			
Performs a check. <ul style="list-style-type: none"> <li>Determines when deviations or faults must be reported</li> <li>Asks for necessary information</li> <li>Sends a message briefly and clearly</li> </ul>			
Checks the security of the location <ul style="list-style-type: none"> <li>Identifies and reports an unsafe situation</li> <li>Clearly indicates what can and cannot be done</li> <li>Holds colleagues accountable</li> </ul>			
<b>Core task 2: Performing cleaning activities</b>			
<b>2.1 Performs cleaning work</b>	I	G	N
Performs the cleaning work optimally <ul style="list-style-type: none"> <li>Works meticulously and at a good pace</li> <li>Monitors the progress and results of the work process</li> <li>Works in accordance with regulations for safety, working conditions and the environment</li> </ul>			
Use the equipment correctly <ul style="list-style-type: none"> <li>Works according to procedures and regulations</li> <li>Instructs colleagues to act being mindful of quality</li> <li>Makes responsible use of the equipment</li> </ul>			
<b>2.2 Disposes (hazardous) substances</b>	I	G	N
Disposes of the residues according to regulations. <ul style="list-style-type: none"> <li>Disposes of waste/residual material in accordance with regulations</li> <li>Appeals to others for unsafe and/or non-environmentally conscious behaviour</li> <li>Makes suggestions in non-environmentally conscious actions</li> </ul>			
<b>2.3 Completion of work</b>	I	G	N
Cleans up the used materials and tools. <ul style="list-style-type: none"> <li>Cleans used tools after use</li> <li>Checks whether tools are still functioning properly</li> <li>Checks if materials are not exhausted</li> <li>Safely stores materials and resources</li> </ul>			
<b>2.4 Minor maintenance and remedying (minor) faults</b>	I	G	N
Performs daily maintenance on equipment and tools <ul style="list-style-type: none"> <li>Detects equipment-related deviations</li> <li>Consults the manual</li> </ul>			

<ul style="list-style-type: none"> <li>Performs daily maintenance of materials and resources according to company standards</li> </ul>			
Performs daily maintenance on equipment <ul style="list-style-type: none"> <li>Checks the safety devices on the equipment</li> <li>Plans easy minor maintenance</li> <li>Ensures that maintenance work is carried out</li> </ul>			
<b>Core task 3: Functional leadership</b>			
<b>3.1 Provides instruction and guidance</b>	I	G	N
Instructs employees about the work to be performed. <ul style="list-style-type: none"> <li>Defines assignments for employees</li> <li>Involves employees in the organization of the work process</li> <li>Provides employees with the necessary information</li> </ul>			
Supports employees at work. <ul style="list-style-type: none"> <li>Clearly states what is expected of employees</li> <li>Takes into account the qualities of employees when distributing the work</li> <li>Creates working conditions with optimally functioning employees</li> </ul>			
<b>3.2 Checks and resolves issues</b>	I	G	N
Checks the work of employees. <ul style="list-style-type: none"> <li>Monitors the progress of the work and sets priorities</li> <li>Holds employees accountable for their responsibility</li> <li>Takes differences between employees into account when dealing with them</li> </ul>			
Provides feedback on the outcome of checks. <ul style="list-style-type: none"> <li>Signals tensions and acts accordingly.</li> <li>Discusses problems and looks for solutions</li> </ul>			
<b>Core Task 4: Driving the vehicle</b>			
<b>4.1 Preparation before driving</b>	I	G	N
Fit for driving <ul style="list-style-type: none"> <li>Guards his health</li> <li>Is free of substances that affect driving ability</li> </ul>			
Performing checks correctly <ul style="list-style-type: none"> <li>Performs the roadworthiness check before departure</li> <li>Checks whether the correct vehicle documents are present</li> <li>Checks whether the correct cargo documents are present</li> </ul>			
<b>4.2 Drive to work location</b>	I	G	N
Performs the ride safely and efficiently <ul style="list-style-type: none"> <li>Respects traffic rules</li> <li>Anticipates weather and traffic conditions</li> <li>Adopts an energy-efficient driving style</li> </ul>			
Load has been unloaded in the right place and safely <ul style="list-style-type: none"> <li>Arrives at the destination at the agreed time</li> <li>Unloads the load according to instructions at the unloading point</li> <li>Handles the administration</li> </ul>			

4.3 Acts in case of incidents	I	G	N
The incident has been handled successfully <ul style="list-style-type: none"> <li>• Engages the right emergency services</li> <li>• Informs supervisor about the incident</li> <li>• Takes measures to ensure safety and limit damage</li> </ul>			
I: Insufficient G: Good N: Not observed  Total assessment final test: Pass / Fail*			