

**Curriculum**

**For**

**Heavy Vehicle Operator**  
(Six Months Duration)

**Code: VJ 94S001**

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# **Introduction Template**

## **Overall objective of course**

- (i) The learner will be able to work as a driver of commercial vehicles.
- (ii) Fulfill the job requirements for an employer.
- (iii) Facilitate new entrants to learn and enter the labor market.
- (iv) Improve the workmanship of existing workers.

## **Competencies gained after completion of course**

- To apply safety precautions.
- Select use and handle automotive hand tools; power tools workshop tools, safely and efficiently.
- Identify and service the vehicle up to some extent.
- Can safely drive the commercial vehicles.
- Can maintain all records of goods, passengers and vehicle.

## **Job opportunities available immediately and in the future**

- Pass out may be employed in following sectors.
- Heavy Duty Workshops
- Private fleets, logistic and public transports.
- Government departments
- Self-Business.

## **Trainee entry level**

- 5<sup>th</sup> to 8<sup>th</sup> grade

## **Minimum qualification of trainer**

- Diploma of Associate Engineer in (Auto & diesel / mechanical / Power tech.)

with five years' experience of managing/ handling heavy vehicle maintenance/ driving department.

### **Medium of Instruction i.e. language of instruction**

- English (preferably) / **Urdu** (general) / Local (Provincial) Language in Pakistan.

### **Sequence of the modules**

- As per program.

### **Timeframe of assessment (recommendation)**

- Preferably after each module, However Overall Assessment is made **After completion of Course**

## Overview about the program

Module Title and Aim	Learning Units	Theory <sup>1</sup> Days/hours	Workplac e <sup>2</sup> Days/hou rs	Timeframe of modules
<b>Module 1</b> <b>Health and safety rules</b> Aim: Adopt personal, tools, instruments, road, vehicle safety and first aid application.	1.1 Apply personal safety 1.2 Apply safety for tools & instruments 1.3 Apply vehicle safety rules 1.4 Apply road safety rules 1.5 Apply first aid	8	32	One week 40
<b>Module 2</b> <b>Operate tools and Instruments</b> Aim: Can be understand & physically operate the hand tools and power tools/ instruments.	2.1 Operate spanner kits 2.2 Operate torque wrenches 2.3 Operate screw kits 2.4 Operate hydraulic jack 2.5 Operate pneumatic guns 2.6 Operate air filling pipe	8	32	One week 40
<b>Module 3</b> <b>Operate Heavy vehicles</b> Aim: Know driving of truck, bus & trailer, their maintenance.	3.1 Drive Truck 3.2 Drive Bus 3.3 Drive Trailer 3.4 Tow disabled vehicle	96	384	Twelve weeks 480
<b>Module 4</b> <b>Communicate</b> Aim: Know communication oral & written with concern.	4.1 communicate with supervisor 4.2 communicate with peers 4.3 communicate with public 4.4 communicate with loaders	8	32	One week 40
<b>Module 5</b> <b>Maintain Records</b> Aim: Can maintain record of log book, goods, customers and vehicle history.	5.1 maintain vehicle log book 5.2 maintain record of transported goods 5.3 maintain customer record 5.4 maintain vehicle history record	8	32	One week 40

<sup>1</sup> Learning hours in training provider premises

<sup>2</sup> Training workshop, laboratory and on-the-job workplace

<b>Module 6</b> <b>Secure Cargo</b> Aim: Know safe handling of cargo.	6.1 secure cargo for transport 6.2 secure cargo for weather change (rain etc.)	8	32	One week 40
<b>Module 7</b> <b>Maintain Heavy vehicle</b> Aim: Understand service, cleaning & parking of vehicle & store tools/instruments	7.1 service heavy vehicle 7.2 place vehicle in garage 7.3 store tools/instruments 7.4 clean vehicle	24	96	Three weeks 120

## Curriculum Contents – (Teaching/Learning Guide)

### Module 1 Health and Safety rules

Objective of the Module: Adopt personal, tools, instruments, road, vehicle safety and first aid application.

Duration: 40 hours

Theory: 08hours

Practice: 32 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
1.1 Apply personal safety	Trainee should be able: To adopt safety measure during whole job	<b>Know:</b> personal safety rules  <b>Apply:</b> personal safety rules	05	PPE	Classroom/workshop
1.2 Apply safety for tools & instruments	To adopt safety measure during handling of tools and instruments	<b>Know:</b> safety rules for tools & instruments  <b>Apply:</b> safety rules for tools & instruments	10	-handbook For tools & instruments	Classroom/workshop
1.3 Apply vehicle safety rules	To adopt safety measure for vehicles	<b>Know:</b> safety rules before, during & after driving vehicle  <b>Apply:</b> safety rules before, during & after driving vehicle	10	-handbook/ manual	Classroom/workshop
1.4 Apply road safety rules	To adopt safety measure when driving vehicle on road	<b>Know:</b> road safety rules & laws  <b>Apply:</b> road safety rules & laws	10	-wall charts -handbook/ manual -CD/video	Classroom/workshop/ field
1.5 Apply first aid	Able to handle human injury or shocked	<b>Know:</b> first aid procedures  <b>Apply:</b> first aid procedures	05	First aid box (contains valid medicines & apparatus)	Classroom/workshop





## Module 2                      Operate tools and Instruments

Objective of the Module: Can be understand & physically operate the hand tools and power tools/ instruments.

Duration:                      40 hours    Theory: 08 hours    Practice: 32 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
2.1 Operate spanner kit	Identify and use the spanner set efficiently and safely	<p><b>Describe:</b></p> <ul style="list-style-type: none"> <li>-open end</li> <li>-box</li> <li>-combination</li> <li>-socket set</li> </ul> <p><b>Able to use:</b></p> <ul style="list-style-type: none"> <li>-open end</li> <li>-box</li> <li>-combination</li> <li>-socket set</li> </ul>	05	Complete tool box	classroom/workshop
2.2 Operate torque wrenches	Identify and use the torque wrench according to specification.	<p><b>Define:</b></p> <ul style="list-style-type: none"> <li>-torque</li> <li>-Identify toque wrench</li> </ul> <p><b>Able to use:</b></p> <ul style="list-style-type: none"> <li>-torque wrenches</li> </ul>	05	Different torque wrenches	Classroom/workshop
2.3 Operate screw kits	Identify and use the screw driver set efficiently and safely	<p><b>Identify:</b></p> <ul style="list-style-type: none"> <li>-flat</li> <li>-Philips</li> <li>-off-set</li> <li>-impact set</li> </ul> <p><b>Able to use:</b></p> <ul style="list-style-type: none"> <li>-flat</li> <li>-Philips</li> <li>-off-set</li> <li>-impact set</li> </ul>	05	Different screw driver set	workshop
2.4 Operate hydraulic jack	Identify and use the hydraulic jacks efficiently and safely	<p><b>Know</b> types &amp; uses of jacks, parts and operation of Hydraulic jack</p> <p><b>Able to use:</b></p> <ul style="list-style-type: none"> <li>-Hydraulic jack efficiently &amp; safely</li> </ul>	10	Different hydraulic jacks	Classroom/workshop
2.5 Operate pneumatic guns	Identify and use the pneumatic guns efficiently and safely	<p><b>Know</b> types &amp; uses of guns, parts and operation of pneumatic guns</p>	10	Different pneumatic guns.  compressed air	Classroom/workshop

		<b>Able to use:</b> -Pneumatic gun efficiently & safely		sources.	
2.6 Operate air filling pipe	Identify sources of compressed air & coupling	<b>Describe:</b> -Coupling & uncoupling -Types of pipe - safety  <b>Able to:</b> -couple & uncouple air lines	05	-flexible pipe -quick couplers	Classroom/workshop

### Module 3 Operate Heavy vehicles

Objective of the Module: Know driving of truck, bus & trailer, their maintenance.

Duration: 480 hours

Theory: 96 hours

Practice: 384 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
3.1 Drive Truck	<p>Trainee must be able to:</p> <p>1. Identify different parts of truck</p> <p>2. Drive truck</p> <p>3. Follow standard procedures in driving truck</p> <p>4. Manage different types of driving hazards</p> <p>5. Monitor irregular performance of the vehicle</p> <p>6. Perform minor vehicle maintenance</p>	<p><b>Know</b></p> <p>-Parts and functions of different parts of the truck. Inspecting Procedures.</p> <p>-Locations and functions of control parts.</p> <p>-Nature of functions and characteristics of truck parts</p> <p>-Operation of the truck.</p> <p>-Driving techniques.</p> <p>-Traffic regulations.</p> <p>-Procedure in loading and unloading truck.</p> <p>-To Avoid road hazards.</p> <p>-Road signs.</p> <p>-the Reporting procedure of accidents.</p> <p>-to Monitor and reporting vehicle malfunctions.</p> <p><b>Ability to Perform maintenance checkups.</b></p> <p>-to Use standard tools.</p>	140	<ul style="list-style-type: none"> <li>☒ Vehicle unit</li> <li>☒ Manufacturer's manual</li> <li>☒ Learning module</li> <li>☒ Video material</li> <li>☒ HTV regulation manual</li> <li>☒ HTV handbook</li> <li>☒ Communication device</li> <li>☒ Record book</li> <li>☒ Standard mechanical/ hydraulic tools</li> </ul>	Classroom/workshop/field

		-to Perform in or vehicle maintenance			
3.2 Drive Bus	<p>Trainee must be able to:</p> <p>1. Identify different parts of bus</p> <p>2. Drive bus</p> <p>3. Follow standard procedures in driving bus</p> <p>4. Manage different types of driving hazards</p> <p>5. Monitor irregular performance of the vehicle</p> <p>6. Perform minor vehicle</p>	<p><b>Know</b></p> <p>-Parts and functions of different parts of the bus.</p> <p>-Inspecting Procedures.</p> <p>-Locations and functions of control parts.</p> <p>-Nature of functions and characteristics of bus parts.</p> <p>-the Operation of the bus.</p> <p>-the Driving techniques.</p> <p>-the Traffic regulations.</p> <p>-the Procedure in loading and unloading passengers.</p> <p>-to Avoid road hazards.</p> <p>-road signs.</p> <p>-the Reporting procedure of accidents.</p> <p>-to Monitor and reporting vehicle malfunctions.</p> <p><b>Ability to Perform maintenance checkups.</b></p> <p>-to Use standard tools</p> <p>-to Perform minor vehicle maintenance.</p>	140	<input type="checkbox"/> Vehicle unit <input type="checkbox"/> Manufacturer's manual <input type="checkbox"/> Learning module <input type="checkbox"/> Video material <input type="checkbox"/> HTV regulation manual/handbook <input type="checkbox"/> Communication device <input type="checkbox"/> Record book <input type="checkbox"/> Standard mechanical/hydraulic tools	Classroom/workshop/field

	maintenance				
3.3 Drive Trailer	<p>1. Driving trailer safely</p> <p>2. Identify the parts of Air brakes &amp; their function</p> <p>3. Know coupling &amp; uncoupling of trailer &amp; inspection</p>	<p><b>Know</b></p> <p>Parts and functions of different parts of the Trailer.</p> <ul style="list-style-type: none"> <li>-Inspecting Procedures.</li> <li>-Locations and functions of control parts.</li> <li>-Nature of functions and characteristics of Trailer parts.</li> <li>-the Operation of the Trailer.</li> <li>-the Driving techniques.</li> <li>-the Traffic regulations.</li> <li>-the Procedure in loading and unloading.</li> <li>-to Avoid road hazards.</li> <li>road signs.</li> <li>-the Reporting procedure of accidents.</li> <li>-to Monitor and reporting vehicle malfunctions.</li> </ul> <p><b>Ability to Perform maintenance checkups</b></p> <ul style="list-style-type: none"> <li>-to Use standard tools.</li> <li>-to Perform minor vehicle maintenance.</li> <li>-to park, couple and uncouple trailer.</li> </ul>	140	<ul style="list-style-type: none"> <li>☒ Vehicle unit</li> <li>☒ Manufacturer's manual</li> <li>☒ Learning module</li> <li>☒ Video material</li> <li>☒ HTV regulation manual/handbook</li> <li>☒ Communication device</li> <li>☒ Record book</li> <li>☒ Standard mechanical tools</li> </ul>	Classroom/workshop/field

3.4 Tow disabled vehicle	<p>1 Prepare and respond to call</p> <p>2 Implement road safety procedures to commence hook-up</p> <p>3 Hook up disabled vehicle</p> <p>4 Unhook disabled vehicle</p>	<p><b>Know</b> the methods and procedure to tow disable vehicle. Personal, Vehicle &amp; road Safety rules.</p> <p><b>Able to:</b></p> <ul style="list-style-type: none"> <li>-keep equipment ready for use</li> <li>-choose right PPE.</li> <li>-park vehicle with safe road side.</li> <li>-take appropriate action.</li> <li>-decide correct method for towing.</li> <li>-ensure safety standards.</li> <li>-adopt defensive.</li> <li>-driving techniques.</li> <li>-adopt correct &amp; safe procedure to unhook.</li> <li>-place disable vehicle according to rules &amp; customer requirements.</li> </ul>	60	<ul style="list-style-type: none"> <li>☑ gloves</li> <li>☑ safety headwear and footwear</li> <li>☑ safety glasses</li> <li>☑ twoway radios</li> <li>☑ protective clothing</li> <li>☑ high visibility clothing</li> <li>☑ eye wash kit</li> <li>☑ emergency shutdown controls</li> <li>☑ evacuation controls</li> <li>☑ spill equipment</li> <li>- chain &amp; wire rope</li> <li>- wheel stopper</li> </ul>	Classroom/workshop/field
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## Module 4: Communicate

Objective of the Module: Know communication oral & written with concern.

Duration: 40 hours

Theory: 08 hours

Practice: 32 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
4.1 communicate with supervisor	Handle and communicate with supervisor	<b>Knowledge</b> of different approaches and strategies and communication	10		Classroom/workshop/field

		skills.  <b>Ability</b> to be effective and co-operative team members.			
4.2 communicate with peers	Communicate effectively and give instructions properly.	<b>Knowledge</b> of giving clear, concise instruction formulation of instruction, non-verbal communication.  <b>Ability</b> to communicate effectively and handle problems.	10	Role play seniors for problem solving activity	Classroom/ workshop/ field
4.3 communicate with public	Communicate Effectively With Customers	<b>Knowledge</b> of important and principles of good client service and good communication skills.  <b>Ability</b> to communicate with clients with well manners	10	List of effective speaking/Listening skills and strategies	Classroom/ Workshop/ field
4.4 communicate with loaders	Communicate effectively and give instructions properly.	<b>Knowledge</b> of giving clear, concise instruction formulation of instruction ,non-verbal communication  <b>Ability</b> to communicate effectively and handle problems.	10	Role play seniors for problem solving activity	Classroom/ workshop/ field

## Module 5: Maintain Record

Objective of the Module: Can maintain record of log book, goods, customers and vehicle history.

Duration:

40 hours

Theory: 08 hours

Practice: 32 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
5.1 maintain vehicle log book	<p>1. Vehicle records are maintained/ updated in accordance with workplace procedures.</p> <p>2. Pertinent documents are filed and stored safely.</p>	<p><b>know</b> the methods, types, procedure of writing log book.</p> <p><b>Able to:</b></p> <ul style="list-style-type: none"> <li>-calculate vehicle running expenses &amp; repair cost</li> <li>-prepare &amp; plan maintenance chart</li> <li>-different entries to be carried out</li> <li>-handle documents &amp; files in safe custody</li> </ul>	10	<ul style="list-style-type: none"> <li>-templates</li> <li>-log book</li> <li>-files</li> <li>-cupboard</li> <li>-rack</li> </ul>	Classroom/workshop
5.2 maintain record of transported goods	<p>1. Goods records are maintained/ updated in accordance with workplace procedures.</p> <p>2. Pertinent documents are filed and stored safely.</p>	<p><b>know</b> the methods, types, procedure of writing record book.</p> <p><b>Able to:</b></p> <ul style="list-style-type: none"> <li>-Maintain goods record</li> <li>-Record and file documents.</li> <li>keep documents &amp; files in safe custody</li> </ul>	10	<ul style="list-style-type: none"> <li>-files</li> <li>-cupboard</li> <li>-rack</li> </ul>	Classroom/workshop
5.3 maintain customer record	<p>1. Vehicle records are maintained/ updated in accordance with workplace procedures.</p> <p>2. Pertinent documents are filed and stored safely.</p>	<p>know the methods, types, procedure of writing record book.</p> <p><b>Able to record:</b></p> <ul style="list-style-type: none"> <li>-customer relationship</li> <li>-financial forecasting</li> <li>-annual complementary gifts</li> <li>-customer's</li> </ul>	10	<ul style="list-style-type: none"> <li>-files</li> <li>-cupboard</li> <li>-rack</li> </ul>	Classroom/workshop



		satisfaction comments			
5.4 maintain vehicle history record	<p>1. Vehicle's history records are maintained/ updated in accordance with workplace procedures.</p> <p>2. Pertinent documents are filed and stored safely.</p>	<p><b>know</b> the methods, types, procedure of writing record book.</p> <p><b>Able to:</b></p> <ul style="list-style-type: none"> <li>-Maintain vehicle record for repair &amp; maintenance</li> <li>-Record and file documents in safe custody.</li> </ul>	10	<ul style="list-style-type: none"> <li>-files</li> <li>-cupboard</li> <li>-rack</li> </ul>	Classroom/workshop

## Module 6: Secure Cargo

Objective of the Module: Know safe handling of cargo.

Duration:

40 hours

Theory: 8 hours

Practice: 32 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
6.1 secure cargo for transport	To know securing cargo, considering all aspects	<p><b>know:</b> procedure to transport securely cargo. Vehicle weight &amp; legal weight limits</p> <p><b>Able to:</b></p> <ul style="list-style-type: none"> <li>-Inspect cargo</li> <li>- weight and balance</li> <li>-perform blocking and bracing</li> </ul>	20		Classroom/workshop
6.2 secure cargo from weather change (rain etc.)	To know securing cargo, considering weather	<p><b>know</b> the methods adopted for securing cargo in different weather conditions</p> <p><b>Able to:</b></p> <ul style="list-style-type: none"> <li>-cover cargo as per requirement</li> <li>- tie down cargo</li> <li>-adopt safety rules</li> </ul>	20	<ul style="list-style-type: none"> <li>-rope</li> <li>-waterproof cover</li> </ul>	Classroom/workshop

## Module 7: Maintain Heavy Vehicle

Objective of the Module: Understand service, cleaning & parking of vehicle & store tools/instruments

Duration:

120 hours

Theory: 24 hours

Practice: 96 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
7.1 service heavy vehicle	<p>Minor routine checks are performed based on vehicle manufacturer's manual.</p> <p><b>BLOWAF</b>  <i>Battery</i>  <i>Light</i>  <i>Oil</i>  <i>Water</i>  <i>Air</i>  <i>Fuel</i></p>	<p><b>know</b> parts to be inspect regularly.                      -Parts of vehicle                      -systems of vehicle</p> <p><b>Able to:</b>                      -care and use of check-up tools / equipment.                      Adopt(BLOWAF) procedure in checking the vehicle                      -adopt health, safety rules and regulations                      -write service and maintenance reports</p>	80	<ul style="list-style-type: none"> <li>☑ Vehicle unit</li> <li>☑ Tire wrench</li> <li>☑ Mechanical pliers</li> <li>☑ Jack (hydraulic)</li> <li>☑ Pressure gauge/ lead pipe</li> <li>☑ Engine oil</li> <li>☑ Brake fluid</li> <li>☑ Distilled water</li> <li>☑ Fuse</li> <li>☑ Vehicle light bulbs</li> <li>☑ Eye goggles</li> <li>☑ Gloves</li> <li>☑ Apron</li> <li>☑ Vehicle service manual</li> </ul>	Classroom/ workshop
7.2 placing vehicle in garage	<ol style="list-style-type: none"> <li>1. Hose is disconnected from the tractor head.</li> <li>2. Landing gears are lowered and locked.</li> <li>3. Chokes are engaged on the trailer wheels (left and right).</li> </ol>	<p><b>Know</b> parking procedure, and rules for different places</p> <p><b>Able to:</b>                      - park vehicle properly                      - inspect vehicle                      -operate the landing gear                      -set the safety lock of the vehicle</p>	10	<ul style="list-style-type: none"> <li>☑ Vehicle unit</li> <li>☑ Vehicle manufacturer's manual</li> <li>☑ Learning modules</li> </ul>	Classroom/ workshop
7.3 store tools/instruments	<ol style="list-style-type: none"> <li>1. Tools and instruments are arranged and stored in their respective shelves/location.</li> <li>2. Corresponding labels are posted and visible.</li> <li>3. Tools are secured and logged in the</li> </ol>	<p><b>Know</b> the types of tools and equipment.                      -relevant technical information</p> <p>-principles of quality management</p> <p><b>Able to:</b>                      -store &amp; record tools/instruments as per nature of use.</p>	20	<ul style="list-style-type: none"> <li>☑ Tool cabinet</li> <li>☑ Appropriate tools and instruments</li> <li>☑ Tool room</li> <li>☑ Fire extinguishers</li> <li>☑ Tool kit</li> <li>☑ Log/record book</li> <li>☑ Labeling materials</li> </ul>	Classroom/ workshop

	record book.	-adopt safety Procedures. -perform labeling procedures.			
7.4 clean vehicle	Vehicle is cleaned as per prescribed procedures using appropriate cleaning supplies, tools/ equipment and according to occupational health and safety.	<b>know</b> the procedure, tools, equipment, materials & solvents use for cleaning  <b>Able to:</b> -adopt procedure in cleaning the vehicle. -handle cleaning tools and materials. -dispose wastes. -care and use of cleaning tools and equipment. -housekeeping.	10	<input type="checkbox"/> Vehicle unit <input type="checkbox"/> Air compressor <input type="checkbox"/> Vacuum pump <input type="checkbox"/> Pressure washer <input type="checkbox"/> Brush <input type="checkbox"/> Hose <input type="checkbox"/> Cleaning materials -Soap -Car shampoo -Clean water <input type="checkbox"/> Learning modules	workshop

# Assessment Template

## Module 1 (Health and Safety Rules)

Learning Units	Theory Days/hours	Workplace Days/hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
1.1 Apply personal safety	1	4	<b>state :</b> personal safety rules  <b>Apply:</b> personal safety rules	<input checked="" type="checkbox"/> Self-paced learning <input checked="" type="checkbox"/> Discussion <input checked="" type="checkbox"/> Demonstration <input checked="" type="checkbox"/> Individual practice	
1.2 Apply safety for tools & instruments	2	8	<b>state:</b> safety rules for tools & instruments  <b>Apply:</b> safety rules for tools & instruments	Do	
1.3 Apply vehicle safety rules	2	8	<b>state:</b> safety rules before, during & after driving vehicle  <b>Apply:</b> safety rules before, during & after driving vehicle	Do	
1.4 Apply road safety rules	2	8	<b>state:</b> road safety rules & laws  <b>Apply:</b> road safety rules & laws	Do	
1.5 Apply first aid	1	4	<b>state:</b> first aid procedures  <b>Apply:</b> first aid procedures	Do	

## Module 2 (Operate Tools and Instruments)

Learning Units	Theory Days/hours	Workplace Days/hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
2.1 Operate spanner kit	1	4	<p><b>Describe:</b></p> <ul style="list-style-type: none"> <li>-open end</li> <li>-box</li> <li>-combination</li> <li>-socket set</li> </ul> <p><b>Able to use:</b></p> <ul style="list-style-type: none"> <li>-open end</li> <li>-box</li> <li>-combination</li> <li>-socket set</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Self-paced learning</li> <li><input type="checkbox"/> Discussion</li> <li><input type="checkbox"/> Demonstration</li> <li><input type="checkbox"/> Individual practice</li> <li>- Direct observation</li> <li>-Shot answer/ Question</li> </ul>	
2.2 Operate torque wrenches	1	4	<p><b>Define:</b></p> <ul style="list-style-type: none"> <li>-torque</li> <li>-Identify torque wrench</li> </ul> <p><b>Able to use:</b></p> <ul style="list-style-type: none"> <li>-torque wrenches</li> </ul>	Do	
2.3 Operate screw kits	1	4	<p><b>Identify:</b></p> <ul style="list-style-type: none"> <li>-flat</li> <li>-Philips</li> <li>-off-set</li> <li>-impact set</li> </ul> <p><b>Able to use:</b></p> <ul style="list-style-type: none"> <li>-flat</li> <li>-Philips</li> <li>-off-set</li> <li>-impact set</li> </ul>	Do	
2.4 Operate hydraulic jack	2	8	<p><b>describetypes &amp; uses of jacks, parts and operation of Hydraulic jack</b></p> <p><b>Able to use:</b></p> <ul style="list-style-type: none"> <li>-Hydraulic jack efficiently &amp; safely</li> </ul>	Do	
2.5 Operate pneumatic guns	2	8	<p><b>Describe types &amp; uses of guns, parts and operation of pneumatic guns</b></p>	Do	

			<b>Able to use:</b> -Pneumatic gun efficiently & safely		
2.6 Operate air filling pipe	1	4	<b>Describe:</b> -Coupling & uncoupling -Types of pipe - safety  <b>Able to:</b> -couple & uncouple air lines	Do	

### Module 3(Operate Heavy Vehicles)

Learning Units	Theory Days/hours	Workplace Days/hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
3.1 Drive Truck	28	112	<p><b>state</b></p> <ul style="list-style-type: none"> <li>-Parts and functions of different parts of the truck.</li> <li>Inspecting Procedures.</li> <li>-Locations and functions of control parts.</li> <li>-Nature of functions and characteristics of truck parts</li> <li>-Operation of the truck.</li> <li>-Driving techniques.</li> <li>-Traffic regulations.</li> <li>-Procedure in loading and unloading truck.</li> <li>-To Avoid road hazards.</li> <li>-Road signs.</li>   <li>-the Reporting procedure of accidents.</li> <li>-to Monitor and reporting vehicle malfunctions.</li>   <li><b>Ability to Perform maintenance checkups.</b></li>   <li>-to Use standard tools.</li> <li>-to Perform minor vehicle maintenance</li> </ul>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Selfpaced learning</li> <li><input checked="" type="checkbox"/> Discussion</li> <li><input checked="" type="checkbox"/> Demonstration</li> <li><input checked="" type="checkbox"/> Individual practice</li> </ul>	



3.2 Drive Bus	28	112	<p><b>state</b></p> <ul style="list-style-type: none"> <li>-Parts and functions of different parts of the bus.</li> <li>-Inspecting Procedures.</li> <li>-Locations and functions of control parts.</li> <li>-Nature of functions and characteristics of bus parts.</li> <li>-the Operation of the bus.</li> <li>-the Driving techniques.</li> <li>-the Traffic regulations.</li> <li>-the Procedure in loading and unloading passengers.</li> <li>-to Avoid road hazards.</li> <li>-road signs.</li> <li>-the Reporting procedure of accidents.</li> <li>-to Monitor and reporting vehicle malfunctions.</li> </ul> <p><b>Ability to Perform maintenance checkups.</b></p> <ul style="list-style-type: none"> <li>-to Use standard tools</li> <li>-to Perform minor vehicle maintenance.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Selfpaced learning</li> <li><input type="checkbox"/> Discussion</li> <li><input type="checkbox"/> Demonstration</li> <li><input type="checkbox"/> Individual practice</li> </ul>	
3.3 Drive Trailer	28	112	<p><b>state</b></p> <ul style="list-style-type: none"> <li>Parts and functions of different parts of the Trailer.</li> <li>-Inspecting Procedures.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Selfpaced learning</li> <li><input type="checkbox"/> Discussion</li> <li><input type="checkbox"/> Demonstration</li> <li><input type="checkbox"/> Individual practice</li> </ul>	

			<ul style="list-style-type: none"> <li>-Locations and functions of control parts.</li> <li>-Nature of functions and characteristics of Trailer parts.</li> <li>-the Operation of the Trailer.</li> <li>-the Driving techniques.</li> <li>-the Traffic regulations.</li> <li>-the Procedure in loading and unloading.</li> <li>-to Avoid road hazards.</li> <li>road signs.</li> <li>-the Reporting procedure of accidents.</li> <li>-to Monitor and reporting vehicle malfunctions.</li> </ul> <p><b>Ability to Perform maintenance checkups</b></p> <ul style="list-style-type: none"> <li>-to Use standard tools.</li> <li>-to Perform minor vehicle maintenance.</li> </ul> <p>-to park, couple and uncouple trailer .</p>		
3.4 Tow disabled vehicle	12	48	<p><b>describe</b> the methods and procedure to tow disable vehicle. Personal, Vehicle &amp; road Safety rules.</p> <p><b>Able to:</b></p> <ul style="list-style-type: none"> <li>-keep equipment ready for use</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Self-paced learning</li> <li><input type="checkbox"/> Discussion</li> <li><input type="checkbox"/> Demonstration</li> <li><input type="checkbox"/> Individual practice</li> </ul>	

			<ul style="list-style-type: none"><li>-choose right PPE.</li><li>-park vehicle with safe road side.</li><li>-take appropriate action.</li><li>-decide correct method for towing.</li><li>-ensure safety standards.</li><li>-adopt defensive.</li><li>-driving techniques.</li><li>-adopt correct &amp; safe procedure to unhook.</li><li>-place disable vehicle according to rules &amp; customer requirements.</li></ul>		
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## Module 4: Communicate

Learning Units	Theory Days/hours	Workplace Days/hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
4.1 communicate with supervisor	2	8	-Knowledge of different approaches and strategies and communication skills. Ability to be effective and co-operative team members.	☑ Self-paced learning ☑ Discussion ☑ Demonstration ☑ Individual practice	
4.2 communicate with peers	2	8	-Knowledge of giving clear, concise instruction formulation of instruction, non-verbal communication. -Ability to communicate effectively and handle problems.	Do	
4.3 communicate with public	2	8	-Knowledge of important and principles of good client service and good communication skills. -Ability to communicate with clients with well manners	Do	
4.4 communicate with loaders	2	8	-Knowledge of giving clear, concise instruction formulation of instruction ,non-verbal	Do	

			communication -Ability to communicate effectively and handle problems.		
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## Module 5: Maintain Records

Learning Units	Theory Days/hours	Workplace Days/hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
5.1 maintain vehicle log book	2	8	<p><b>state</b> the methods, types, procedure of writing log book.</p> <p><b>Able to:</b></p> <ul style="list-style-type: none"> <li>-calculate vehicle running expenses &amp; repair cost</li> <li>-prepare &amp; plan maintenance chart</li> <li>-different entries to be carried out</li> </ul> <p>-handle documents &amp; files in safe custody</p>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Self-paced learning</li> <li><input checked="" type="checkbox"/> Discussion</li> <li><input checked="" type="checkbox"/> Demonstration</li> <li><input checked="" type="checkbox"/> Individual practice</li> </ul>	
5.2 maintain record of transported goods	2	8	<p><b>state</b> the methods, types, procedure of writing record book.</p> <p><b>Able to:</b></p> <ul style="list-style-type: none"> <li>-Maintain goods record</li> <li>-Record and file documents.</li> <li>keep documents &amp; files in safe custody</li> </ul>	Do	
5.3 maintain customer record	2	8	<p>know the methods, types, procedure of writing record book.</p> <p><b>Able to record:</b></p> <ul style="list-style-type: none"> <li>-customer relationship</li> <li>-financial forecasting</li> <li>-annual complementary gifts</li> <li>-customer's satisfaction comments</li> </ul>	Do	

5.4 maintain vehicle history record	2	8	<p><b>state</b> the methods, types, procedure of writing record book.</p> <p><b>Able to:</b>  -Maintain vehicle record for repair &amp; maintenance  -Record and file documents in safe custody.</p>	Do	

## Module 6: Secure Cargo

Learning Units	Theory Days/hours	Workplace Days/hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
6.1 secure cargo for transport	4	16	<p><b>state:</b> procedure to transport securely cargo. Vehicle weight &amp; legal weight limits</p> <p><b>Able to:</b> -Inspect cargo - weight and balance -perform blocking and bracing</p>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Self-paced learning</li> <li><input checked="" type="checkbox"/> Discussion</li> <li><input checked="" type="checkbox"/> Demonstration</li> <li><input checked="" type="checkbox"/> Individual practice</li> </ul>	
6.2 secure cargo for weather change (rain etc.)	4	16	<p><b>state</b> the methods adopted for securing cargo in different weather conditions</p> <p><b>Able to:</b> -cover cargo as per requirement - tie down cargo -adopt safety rules</p>	Do	



## Module 7: Maintain Heavy Vehicle

Learning Units	Theory Days/hours	Workplace Days/hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
7.1 service heavy vehicle	16	64	<p><b>State</b> parts to be inspect regularly.</p> <ul style="list-style-type: none"> <li>-Parts of vehicle</li> <li>-systems of vehicle</li> </ul> <p><b>Able to:</b></p> <ul style="list-style-type: none"> <li>-List down checking tools.</li> <li>-care and use of check-up tools / equipment.</li> <li>Adopt (BLOWAF) procedure in checking the vehicle</li> <li>-adopt health, safety rules and regulations</li> <li>-write service and maintenance reports</li> </ul>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Self-paced learning</li> <li><input checked="" type="checkbox"/> Discussion</li> <li><input checked="" type="checkbox"/> Demonstration</li> <li><input checked="" type="checkbox"/> Individual practice</li> <li>-Short answer/ Question.</li> <li>-Direct observation</li> </ul>	
7.2 place vehicle in garage	2	8	<p><b>state</b> parking procedure, and rules for different places</p> <p><b>Able to:</b></p> <ul style="list-style-type: none"> <li>- park vehicle properly</li> <li>- inspect vehicle</li> <li>-operate the landing gear</li> <li>-set the safety lock of the vehicle</li> </ul>	Do	
7.3 store tools/instruments	4	16	<p><b>describe</b> the types of tools and equipment.</p> <ul style="list-style-type: none"> <li>-relevant technical information</li> <li>-principles of quality</li> </ul>	Do	

			<p>management</p> <p><b>Able to:</b></p> <ul style="list-style-type: none"> <li>-store &amp; record tools/instruments as per nature of use.</li> <li>-adopt safety Procedures.</li> <li>-perform labeling procedures.</li> </ul>		
7.4 clean vehicle	2	8	<p><b>state</b> the procedure, tools, equipment, materials &amp; solvents use for cleaning</p> <p><b>Able to:</b></p> <ul style="list-style-type: none"> <li>-adopt procedure in cleaning the vehicle.</li> <li>-handle cleaning tools and materials.</li> <li>-dispose wastes.</li> <li>-care and use of cleaning tools and equipment.</li> <li>-housekeeping.</li> </ul>	Do	

## Supportive notes

### Assessment context

- These learning units may be assessed on the job, off the job or a combination of on and off the job demonstrated by an individual working alone. In some areas continuous assessment may be required to gauge the competency.
- Assessment of the practical skills must take place only after a period of supervised practice and repetitive experience. If work place conditions are not available, assessment is simulated and that the work place conditions are acceptable.
- The prescribed outcome must be achieved without direct supervision.
- Competency should be assessed within the context of the qualification being sought.

### Critical aspects

Assessment must confirm that the trainee is able to:

- 1: Apply the personal safety rules.
- 2: Apply safety rules when using tools & instruments.
- 3: Apply vehicle safety rules as recommended by manufacturer.
- 4: Apply road safety rules according to existing law.
- 5: carry out the exercises of applying first aid.
- 6: Select, handle and use hand tools, power tools & workshop tools safely and properly.
- 7: Identify & the function of different parts of truck/bus & trailer.
- 8: Know Inspection procedure of truck/bus & trailer.
- 9: Handle the control parts of truck/bus & trailer.
- 10: Operate/drive truck/bus & trailer.
- 11: Apply driving techniques & traffic regulations.
- 12: Know the loading & unloading procedure.
- 13: Identify road signs.
- 14: Avoid road hazards & report accidents.
- 15: Monitor & report vehicle malfunctions.

- 16: Perform checkup for maintenance.
- 17: Perform Minor vehicle maintenance.
- 18: Identify & function of Air brake parts.
- 19: Maintain parking & emergency brakes.
- 20: Know the procedures of coupling & uncoupling.
- 21: Know towing procedure for disabled vehicles.
- 22: Handle & communicate with supervisor, peer, public & loader.
- 23: Maintain record of log book, goods, customers & vehicle history.
- 24: Secure cargo.
- 25: Carry out the routine checks (BLOWAF).
- 26: Park vehicle in garage.
- 27: store & secure tools/instruments in order.

**Resources required for assessment**

Materials, tools, equipment and machines are also listed within the learning units.

## List of Tools, Machinery & Equipment

<b>Name of Trade</b>	<b>HEAVY VEHICLE OPERATOR</b>
<b>Duration</b>	<b>800 hrs.</b>

S.No.	Name of Item/ Equipment / Tools	Qty.
1.	• Set of box wrench	2
2.	• Set of socket wrench	2
3.	• Set of pliers	2
4.	• Set of screw driver	3
5.	• Wire strippers	2
6.	• Set of mechanic's hammer	2
7.	• Torque wrench	2
8.	• Tire wrench	2
9.	• Trouble light	2
10.	• Pressure gauge	2
11.	• Hydraulic jack/lift	2
12.	• Compressor	1
13.	• Air tank	1
14.	• Pressure washer	1
15.	• Vacuum pump	1
16.	• Multi-meter	2
17.	• Vacuum cleaner	1
18.	• Test light	2

## List of Consumable Supplies

<b>Name of Trade</b>	<b>HEAVY VEHICLE OPERATOR</b>
<b>Duration</b>	<b>800 hrs.</b>

S.No.	Name of Consumable Supplies
1.	• Cleaning materials
2.	• Engine oils
3.	• Grease
4.	• Distilled water
5.	• Fuse
6.	• Sealant /adhesive
7.	• Hydraulic oils/gear oil
8.	• Brake fluid
9.	• Suspension fluid
10.	• Antifreeze coolant
11.	• Gloves
12.	• Fuel
13.	• Kerosene oil
14.	• Emery Paper

### Training Material

1.	• Reference books
2.	• Manuals
3.	• Catalogues
4.	• Brochures
5.	• Modules
6.	• CDs
7.	• Multimedia/computer or laptop(Internet equipped)
8.	• Driving simulators

General Knowledge	Worker Trait
<ul style="list-style-type: none"> <li>• Knowledge of personal/tools/instruments/road/vehicle safety rules and First aid</li> </ul>	<ul style="list-style-type: none"> <li>• Physically fit &amp; strong</li> </ul>
<ul style="list-style-type: none"> <li>• Handling of hand/power tools and instruments</li> </ul>	<ul style="list-style-type: none"> <li>• Honest and trustworthy</li> </ul>
<ul style="list-style-type: none"> <li>• Couple and uncouple trailer</li> </ul>	<ul style="list-style-type: none"> <li>• Cooperation</li> </ul>
<ul style="list-style-type: none"> <li>• Connecting and disconnecting air &amp; electrical lines</li> </ul>	<ul style="list-style-type: none"> <li>• Avoid smoking &amp; drugs</li> </ul>
<ul style="list-style-type: none"> <li>• Types of terrain/roadways/weathers/night, best driving practice in such scenarios</li> </ul>	
<ul style="list-style-type: none"> <li>• Protective measures form inclement weather, pilferage and</li> </ul>	

damage	
• Knowledge of record keeping system	
• Client service & public interaction skills	
• Time management	
• Minor maintenance of vehicles	

## **SCHEME OF STUDIES**

### **Heavy Vehicle Operator**

<b>Sr #</b>	<b>Modules</b>	<b>Theory Hours</b>	<b>Practical Hours</b>	<b>Total Hours</b>
1	Module No. 1 Health & Safety Rules	8	32	40
2	Module No. 2 Operate tools and instruments	8	13	40
3	Module No. 3 Operate Heavy Vehicles	96	384	480
4	Module No. 4 Communicate	8	32	40
5	Module No. 5 Maintain Records	8	32	40
6	Module No. 6 Secure Cargo	8	32	40
7	Module No. 7 Maintain Heavy Vehicle	24	96	120
<b>TOTAL HOURS</b>		<b>160</b>	<b>640</b>	<b>800</b>