

Heavy Duty Equipment Technician NOA (2014) Subtask to Unit Comparison

NOA Subtask		Manitoba Unit(s)
Task 1 – Uses and maintains tools and equipment.		
1.01	Maintains tools and equipment.	A3 Tools and Equipment
1.02	Uses hoisting and lifting equipment.	A3 Tools and Equipment A8 Hoisting and Lifting
1.03	Operates access equipment.	A2 Trade Safety Awareness A3 Tools and Equipment
1.04	Uses personal protective equipment (PPE) and safety equipment.	A2 Trade Safety Awareness
Task 2 – Performs general maintenance and inspections.		
2.01	Maintains fluids.	A9 Basic Hydraulic Systems B3 Engines and Engine Support Systems I C5 Hydraulics Service and Repair
2.02	Services fasteners, sealing devices, adhesives and gaskets.	A3 Tools and Equipment
2.03	Services hoses, tubing, piping and fittings.	A9 Basic Hydraulic Systems
2.04	Services bearings and seals.	A3 Tools and Equipment
2.05	Services safety features.	A3 Tools and Equipment A10 Frames, Suspensions and Structural Components
2.06	Performs scheduled maintenance procedures.	A4 Trade Communications, Documents and Computer Skills
2.07	Identifies operational faults.	A7 Braking Systems and Wheel-End Safety B2 Starting and Charging Systems C1 Engines and Engine Support Systems II: Combustion Science/Emission Controls C2 Engines and Engine Support Systems III: Diesel Fuel Systems C4 HVAC and Environmental Controls II C5 Hydraulics Service and Repair C6 Powertrains II: Heavy Duty Transmissions D2 Electronics II: Automated Machine Control D3 Hydraulic Testing and Diagnostics D4 Hydrostatic Testing and Diagnostics
2.08	Performs operational check-out.	A7 Braking Systems and Wheel-End Safety B2 Starting and Charging Systems C1 Engines and Engine Support Systems II: Combustion Science/Emission Controls C2 Engines and Engine Support Systems III: Diesel Fuel Systems C4 HVAC and Environmental Controls II C5 Hydraulics Service and Repair C6 Powertrains II: Heavy Duty Transmissions D2 Electronics II: Automated Machine Control D3 Hydraulic Testing and Diagnostics D4 Hydrostatic Testing and Diagnostics
Task 3 – Organizes work.		
3.01	Uses documentation and reference materials.	A1 Learning About Work A4 Trade Communications, Documents and Computer Skills D1 Journeyperson Trainer

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3.02	Completes documentation.	A4 Trade Communications, Documents and Computer Skills
3.03	Communicates with others.	A1 Learning About Work A4 Trade Communications, Documents and Computer Skills D1 Journeyperson Trainer
3.04	Prepares job action plan.	A4 Trade Communications, Documents and Computer Skills
3.05	Maintains safe work environment.	A2 Trade Safety Awareness
Task 4 – Performs routine trade activities.		
4.01	Heats materials.	A12 Welding I
4.02	Cools materials.	A12 Welding I
4.03	Cuts materials.	A12 Welding I
4.04	Welds materials.	A12 Welding I B1 Welding II
4.05	Cleans parts and materials.	A3 Tools and Equipment
Task 5 – Diagnoses engines and engine support systems.		
5.01	Diagnoses base engine.	A5 Engine Principles
5.02	Diagnoses lubrication systems.	B3 Engines and Engine Support Systems I
5.03	Diagnoses cooling systems.	B3 Engines and Engine Support Systems I
5.04	Diagnoses intake and exhaust systems.	B3 Engines and Engine Support Systems I
5.05	Diagnoses fuel systems.	C2 Engines and Engine Support Systems III: Diesel Fuel Systems
5.06	Diagnoses engine control systems.	C2 Engines and Engine Support Systems III: Diesel Fuel Systems C7 Spark Ignition Systems D2 Electronics II: Automated Machine Control
5.07	Diagnoses emission control systems.	C1 Engines and Engine Support Systems II: Combustion Science/Emission Controls
Task 6 – Repairs engines and engine support systems.		
6.01	Repairs base engines.	B3 Engines and Engine Support Systems I
6.02	Repairs lubrication systems.	B3 Engines and Engine Support Systems I
6.03	Repairs cooling systems.	B3 Engines and Engine Support Systems I
6.04	Repairs intake and exhaust systems.	B3 Engines and Engine Support Systems I
6.05	Repairs fuel systems.	C2 Engines and Engine Support Systems III: Diesel Fuel Systems
6.06	Repairs engine control systems.	C2 Engines and Engine Support Systems III: Diesel Fuel Systems D2 Electronics II: Automated Machine Control
6.07	Repairs emission control systems.	C1 Engines and Engine Support Systems II: Combustion Science/Emission Controls
Task 7 – Diagnoses hydraulic, hydrostatic and pneumatic systems.		
7.01	Diagnoses hydraulic systems.	A9 Basic Hydraulic Systems C3 Alternate Fuels D3 Hydraulic Testing and Diagnostics
7.02	Diagnoses hydrostatic systems.	A9 Basic Hydraulic Systems C4 HVAC and Environmental Controls II D4 Hydrostatic Testing and Diagnostics
7.03	Diagnoses pneumatic systems.	A7 Braking Systems and Wheel-End Safety
Task 8 – Repairs hydraulic, hydrostatic and pneumatic systems.		
8.01	Repairs hydraulic systems.	A9 Basic Hydraulic Systems C3 Alternate Fuels D3 Hydraulic Testing and Diagnostics
8.02	Repairs hydrostatic systems.	A9 Basic Hydraulic Systems C4 HVAC and Environmental Controls II D4 Hydrostatic Testing and Diagnostics
8.03	Repairs pneumatic systems.	A7 Braking Systems and Wheel-End Safety

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Task 9 – Diagnoses drivetrain systems.		
9.01	Diagnoses clutch systems.	B4 Powertrain Fundamentals C6 Powertrains II: Heavy Duty Transmissions
9.02	Diagnoses torque converters, fluid couplers and retarders.	C6 Powertrains II: Heavy Duty Transmissions
9.03	Diagnoses driveline systems.	B4 Powertrain Fundamentals B6 Differentials, Drive Axles and Tracks C6 Powertrains II: Heavy Duty Transmissions
9.04	Diagnoses transmission and transfer case systems.	B4 Powertrain Fundamentals
9.05	Diagnoses axle and differential systems.	B6 Differentials, Drive Axles and Tracks
9.06	Diagnoses final drive systems.	B6 Differentials, Drive Axles and Tracks
Task 10 – Repairs drivetrain systems.		
10.01	Repairs clutch systems.	B4 Powertrain Fundamentals C6 Powertrains II: Heavy Duty Transmissions
10.02	Repairs torque converters, fluid couplers and retarders.	C6 Powertrains II: Heavy Duty Transmissions
10.03	Repairs driveline systems.	B4 Powertrain Fundamentals B6 Differentials, Drive Axles and Tracks C6 Powertrains II: Heavy Duty Transmissions
10.04	Repairs transmission and transfer case systems.	B4 Powertrain Fundamentals C4 HVAC and Environmental Controls II
10.05	Repairs axle and differential systems.	B6 Differentials, Drive Axles and Tracks
10.06	Repairs final drive systems.	B6 Differentials, Drive Axles and Tracks
Task 11 – Diagnoses steering, suspension, brake systems, wheel assemblies and undercarriage.		
11.01	Diagnoses steering systems.	B7 Steering Systems
11.02	Diagnoses suspension systems.	A10 Frames, Suspensions and Structural Components
11.03	Diagnoses brake systems.	A7 Braking Systems and Wheel-End Safety
11.04	Diagnoses wheel assemblies.	A7 Braking Systems and Wheel-End Safety
11.05	Diagnoses undercarriage systems.	A7 Braking Systems and Wheel-End Safety
Task 12 – Repairs steering, suspension, brake systems, wheel assemblies and undercarriage.		
12.01	Repairs steering systems.	B7 Steering Systems
12.02	Repairs suspension systems.	A10 Frames, Suspensions and Structural Components
12.03	Repairs brake systems.	A7 Braking Systems and Wheel-End Safety
12.04	Repairs wheel assemblies.	A7 Braking Systems and Wheel-End Safety
12.05	Repairs undercarriage systems.	A10 Frames, Suspensions and Structural Components
Task 13 – Diagnoses electrical systems.		
13.01	Diagnoses starting/charging systems and batteries.	B2 Starting and Charging Systems
13.02	Diagnoses electrical components, motors and accessories.	A6 Electrical Fundamentals B2 Starting and Charging Systems
Task 14 – Repairs electrical systems.		
14.01	Repairs starting/charging systems and batteries.	A6 Electrical Fundamentals
14.02	Repairs electrical components, motors and accessories.	B2 Starting and Charging Systems
Task 15 – Diagnoses electronic vehicle management systems.		
15.01	Reads diagnostic trouble codes (DTCs).	D2 Electronics II: Automated Machine Control
15.02	Monitors parameters.	B5 Electronics I: Fundamentals D2 Electronics II: Automated Machine Control
15.03	Interprets test results.	B5 Electronics I: Fundamentals

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		D2 Electronics II: Automated Machine Control
15.04	Tests system circuitry and components.	B2 Starting and Charging Systems B5 Electronics I: Fundamentals D2 Electronics II: Automated Machine Control
Task 16 – Repairs electronic vehicle management systems.		
16.01	Updates component software.	D2 Electronics II: Automated Machine Control
16.02	Repairs components.	D2 Electronics II: Automated Machine Control
Task 17 – Diagnoses environmental control systems.		
17.01	Diagnoses heating systems.	A11 HVAC and Environmental Controls I
17.02	Diagnoses ventilation and filtration systems.	C4 HVAC and Environmental Controls II
17.03	Diagnoses air conditioning systems.	C4 HVAC and Environmental Controls II
17.04	Diagnoses sound suppression systems.	A10 Frames, Suspensions and Structural Components D5 Cabs and Protective Structures
Task 18 – Repairs environmental control systems.		
18.01	Repairs heating systems.	C4 HVAC and Environmental Controls II
18.02	Repairs ventilation and filtration systems.	C4 HVAC and Environmental Controls II
18.03	Repairs air conditioning systems.	C4 HVAC and Environmental Controls II
18.04	Repairs sound suppression systems.	A10 Frames, Suspensions and Structural Components D5 Cabs and Protective Structures
Task 19 – Diagnoses structural components, accessories and attachments.		
19.01	Diagnoses structural components.	A10 Frames, Suspensions and Structural Components
19.02	Diagnoses operator station components.	A10 Frames, Suspensions and Structural Components D5 Cabs and Protective Structures
19.03	Diagnoses attachments and accessories.	D6 Material Handling and Ground Engaging Tools
Task 20 – Repairs structural components, accessories and attachments.		
20.01	Performs mechanical repairs on structural components.	A10 Frames, Suspensions and Structural Components A12 Welding I B1 Welding II
20.02	Repairs operator station components.	A10 Frames, Suspensions and Structural Components A12 Welding I B1 Welding II D5 Cabs and Protective Structures
20.03	Repairs attachments and accessories.	A12 Welding I B1 Welding II D6 Material Handling and Ground Engaging Tools
20.04	Installs attachments and accessories.	D6 Material Handling and Ground Engaging Tools