

## Heavy Duty Equipment Technician NOA (2004) Subtask to Unit Comparison

NOA Subtask		Manitoba Unit(s)
<b>Task 1 - Uses tools and equipment.</b>		
1.01	Uses hand tools, power tools and equipment.	A2 Equipment Access / Transport and Related Procedures
1.02	Uses measuring and testing devices.	D1 Engine Systems and Repair Procedures
1.03	Uses hoisting and lifting equipment.	A2 Equipment Access / Transport and Related Procedures D1 Engine Systems and Repair Procedures
1.04	Uses welding equipment.	C1 Welding (Oxyacetylene) C2 Welding (Electric/Arc/MIG)
1.05	Uses cutting equipment.	C1 Welding (Oxyacetylene) C2 Welding (Electric/Arc/MIG)
1.06	Uses heating / cooling equipment.	C1 Welding (Oxyacetylene)
1.07	Uses cleaning equipment and agents.	C1 Welding (Oxyacetylene) D1 Engine Systems and Repair Procedures
<b>Task 2 - Performs maintenance and inspections.</b>		
2.01	Maintains fuels, lubricants and coolants.	D1 Engine Systems and Repair Procedures E2 Hydraulic Transmissions, Retarders and Torque Converters E3 Differentials, Drive Axles, Final Drives and Clutch Steering Systems
2.02	Services fasteners, sealing devices, adhesives and gaskets.	D1 Engine Systems and Repair Procedures
2.03	Services hoses, tubing and fittings.	D1 Engine Systems and Repair Procedures
2.04	Services bearings and seals.	D1 Engine Systems and Repair Procedures
2.05	Services safety features.	A1 Safety, WHMIS & Preventative Maintenance
2.06	Performs scheduled maintenance procedures.	D1 Engine Systems and Repair Procedures F2 Tracks, Frames and Undercarriages; Ground Engaging Tools, Booms and Attachments H2 Manual/Hydraulic Steering Systems; Steering Linkage and Geometry
2.07	Performs operational checkout.	D1 Engine Systems and Repair Procedures
2.08	Performs return-to-service check.	D1 Engine Systems and Repair Procedures
<b>Task 3 - Analyses and processes information.</b>		
3.01	Diagnoses operational faults.	D1 Engine Systems and Repair Procedures B2 Customer and Interpersonal Relations
3.02	Accesses service information.	B1 Basic Computer Skills and Information Retrieval B2 Customer and Interpersonal Relations
3.03	Abides by regulations and standards.	A1 Safety, WHMIS & Preventative Maintenance
3.04	Prepares / completes service-related documents.	B1 Basic Computer Skills and Information Retrieval B2 Customer and Interpersonal Relations
<b>Task 4 - Diagnoses engines and engine support systems.</b>		
4.01	Diagnoses engine performance.	D1 Engine Systems and Repair Procedures
4.02	Diagnoses basic engines.	D1 Engine Systems and Repair Procedures
4.03	Diagnoses lubrication systems.	D1 Engine Systems and Repair Procedures
4.04	Diagnoses cooling systems.	D1 Engine Systems and Repair Procedures
4.05	Diagnoses intake and exhaust systems.	D1 Engine Systems and Repair Procedures

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<b>Task 5 - Repairs engines and engine support systems.</b>		
5.01	Repairs basic engines.	A2 Equipment Access / Transport and Related Procedures D1 Engine Systems and Repair Procedures
5.02	Repairs lubrication systems.	D1 Engine Systems and Repair Procedures
5.03	Repairs cooling systems.	D1 Engine Systems and Repair Procedures
5.04	Repairs intake and exhaust systems.	D1 Engine Systems and Repair Procedures
<b>Task 6 - Diagnoses hydraulic and pneumatic systems.</b>		
6.01	Diagnoses hydraulic systems	G1 Hydraulics and Hydrostatic Drives
6.02	Diagnoses hydrostatic systems	G1 Hydraulics and Hydrostatic Drives
6.03	Diagnoses pneumatic systems	H1 Brake Fundamentals & Components
<b>Task 7 - Repairs hydraulic and pneumatic systems.</b>		
7.01	Repairs hydraulic systems	G1 Hydraulics and Hydrostatic Drives
7.02	Repairs hydrostatic systems	G1 Hydraulics and Hydrostatic Drives
7.03	Repairs pneumatic systems	H1 Brake Fundamentals & Components
7.04	Verifies repair of hydraulic, hydrostatic and pneumatic systems.	G2 Hydraulic Components, Testing and Diagnosis H1 Brake Fundamentals & Components
<b>Task 8 - Diagnoses drive trains.</b>		
8.01	Diagnoses clutch systems.	E1 Standard Transmission Systems; Drivelines, Transfer Cases and PTOs
8.02	Diagnoses torque converters, fluid couplers and retarders.	E2 Hydraulic Transmissions, Retarders and Torque Converters
8.03	Diagnoses driveline systems.	E1 Standard Transmission Systems; Drivelines, Transfer Cases and PTOs
8.04	Diagnoses transmission and transfer case systems.	E1 Standard Transmission Systems; Drivelines, Transfer Cases and PTOs
8.05	Diagnoses axle and differential systems.	E3 Differentials, Drive Axles, Final Drives and Clutch Steering Systems
8.06	Diagnoses final drive systems.	E3 Differentials, Drive Axles, Final Drives and Clutch Steering Systems
<b>Task 9 - Repairs drive trains.</b>		
9.01	Repairs clutch systems.	E1 Standard Transmission Systems; Drivelines, Transfer Cases and PTOs
9.02	Repairs driveline systems.	E1 Standard Transmission Systems; Drivelines, Transfer Cases and PTOs E2 Hydraulic Transmissions, Retarders and Torque Converters
9.03	Repairs driveline systems.	E1 Standard Transmission Systems; Drivelines, Transfer Cases and PTOs
9.04	Repairs transmission and transfer case systems.	E1 Standard Transmission Systems; Drivelines, Transfer Cases and PTOs E2 Hydraulic Transmissions, Retarders and Torque Converters
9.05	Repairs axle and differential systems.	E3 Differentials, Drive Axles, Final Drives and Clutch Steering Systems
9.06	Repairs final drive systems.	E1 Standard Transmission Systems; Drivelines, Transfer Cases and PTOs E3 Differentials, Drive Axles, Final Drives and Clutch Steering Systems
9.07	Verifies repair of drive train system.	E1 Standard Transmission Systems; Drivelines, Transfer Cases and PTOs E3 Differentials, Drive Axles, Final Drives and Clutch Steering Systems

<b>NOA Subtask</b>		<b>Manitoba Unit(s)</b>
<b>Task 10 - Diagnoses steering, suspension and brake systems.</b>		
10.01	Diagnoses steering systems.	H2 Manual/Hydraulic Steering Systems; Steering Linkage and Geometry
10.02	Diagnoses suspension systems.	H2 Manual/Hydraulic Steering Systems; Steering Linkage and Geometry
10.03	Diagnoses braking systems.	H1 Brake Fundamentals and Components
10.04	Diagnoses wheel assemblies.	F1 Tires and Wheel Assemblies
10.05	Diagnoses undercarriage systems.	F2 Tracks, Frames and Undercarriages; Ground Engaging Tools, Booms and Attachments
<b>Task 11 - Repairs steering, suspension and brake systems.</b>		
11.01	Repairs steering systems.	H2 Manual/Hydraulic Steering Systems; Steering Linkage and Geometry
11.02	Repairs suspension systems.	H2 Manual/Hydraulic Steering Systems; Steering Linkage and Geometry
11.03	Repairs braking systems.	H1 Brake Fundamentals and Components
11.04	Repairs wheel assemblies.	F1 Tires and Wheel Assemblies
11.05	Repairs undercarriage.	F2 Tracks, Frames and Undercarriages; Ground Engaging Tools, Booms and Attachments
11.06	Verifies repairs of steering, suspension and/or braking system.	H1 Brake Fundamentals and Components
		H2 Manual/Hydraulic Steering Systems; Steering Linkage and Geometry
<b>Task 12 - Diagnoses electrical and electronic systems.</b>		
12.01	Diagnoses electrical systems.	I1 Electrical Fundamentals
		I2 Electronic Components, Body Electrical and Warning Safety Systems
		I3 Starting and Charging Systems
		J1 Standard and Electronic Ignition Tuneup
12.02	Diagnoses electronic systems.	I2 Electronic Components, Body Electrical and Warning Safety Systems
		J1 Standard and Electronic Ignition Tuneup
<b>Task 13 - Repairs electrical and electronic systems.</b>		
13.01	Repairs electrical systems.	I1 Electrical Fundamentals
		I2 Electronic Components, Body Electrical and Warning Safety Systems
		I3 Starting and Charging Systems
		J1 Standard and Electronic Ignition Tuneup
13.02	Repairs electronic systems.	I2 Electronic Components, Body Electrical and Warning Safety Systems
		I3 Starting and Charging Systems
		J1 Standard and Electronic Ignition Tuneup
13.03	Verifies repairs of electrical and electronic system.	I1 Electrical Fundamentals
		I2 Electronic Components, Body Electrical and Warning Safety Systems
		J1 Standard and Electronic Ignition Tuneup
<b>Task 14 - Diagnoses and repairs HVAC systems.</b>		
14.01	Diagnoses heating systems.	F3 HVAC
14.02	Repairs heating systems.	F3 HVAC
14.03	Verifies repair of heating systems.	F3 HVAC
14.04	Diagnoses ventilation systems.	F3 HVAC
14.05	Repairs ventilation systems.	F3 HVAC
14.06	Verifies repair of ventilation systems.	F3 HVAC
14.07	Diagnoses air conditioning systems.	F3 HVAC
14.08	Repairs air conditioning systems.	F3 HVAC

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14.09	Verifies repair of air conditioning systems.	F3 HVAC
<b>Task 15 - Services structural components.</b>		
15.01	Diagnoses structural components.	F2 Tracks, Frames and Undercarriages; Ground Engaging Tools, Booms and Attachments H2 Manual/Hydraulic Steering Systems; Steering Linkage and Geometry
15.02	Performs mechanical repairs on structural components.	F2 Tracks, Frames and Undercarriages; Ground Engaging Tools, Booms and Attachments H2 Manual/Hydraulic Steering Systems; Steering Linkage and Geometry
15.03	Verifies mechanical repair of structural components.	F2 Tracks, Frames and Undercarriages; Ground Engaging Tools, Booms and Attachments H2 Manual/Hydraulic Steering Systems; Steering Linkage and Geometry
<b>Task 16 - Services operator station.</b>		
16.01	Diagnoses operator station components.	A1 Safety, WHMIS and Preventative Maintenance
16.02	Repairs operator station components.	A1 Safety, WHMIS and Preventative Maintenance
16.03	Verifies repair of operator station components.	A1 Safety, WHMIS and Preventative Maintenance
<b>Task 17 – Installs, diagnoses and repairs attachments and accessories.</b>		
17.01	Installs attachments.	F2 Tracks, Frames and Undercarriages; Ground Engaging Tools, Booms and Attachments
17.02	Diagnoses attachments.	F2 Tracks, Frames and Undercarriages; Ground Engaging Tools, Booms and Attachments
17.03	Repairs attachments.	F2 Tracks, Frames and Undercarriages; Ground Engaging Tools, Booms and Attachments
17.04	Verifies repair of attachments.	F2 Tracks, Frames and Undercarriages; Ground Engaging Tools, Booms and Attachments
17.05	Installs accessories.	F2 Tracks, Frames and Undercarriages; Ground Engaging Tools, Booms and Attachments
17.06	Diagnoses accessories.	F2 Tracks, Frames and Undercarriages; Ground Engaging Tools, Booms and Attachments
17.07	Repairs accessories.	F2 Tracks, Frames and Undercarriages; Ground Engaging Tools, Booms and Attachments
17.08	Verifies repair of accessories.	F2 Tracks, Frames and Undercarriages; Ground Engaging Tools, Booms and Attachments