

**WORK PROCESS SCHEDULE AND RELATED INSTRUCTION OUTLINE  
TRANSIT RAIL VEHICLE MAINTENANCE TECHNICIAN  
(Existing Title: Car Repairer (Railroad Equipment))  
O\*NET-SOC CODE: 49-3043.00 RAPIDS CODE: 0642R-HY**

**Level 100 – Fundamental skills for transit railcar maintenance (diagnose, adjust, repair, or overhaul mass transit rail cars)**

<b>Classroom Hours of Instruction</b>	<b>Subject Area</b>
24	Transit Orientation – History of Transit in the U.S. and local community. How transit is funded. Basic Regulatory agency information, federal and state. Orientation and background on the specific property.
16	Electrical and Job Safety: Demonstrate Knowledge of Job and Electrical Safety Practices
48	Tools and material handling
48	Basic mathematics
64	Introduction to electricity
24	Electrical meters
40	Wiring technologies and equipment
80	DC fundamentals
80	AC fundamentals
24	Basic hydraulic and pneumatic theory and applications
24	Basic mechanical theory and applications
160	AC motors, DC motors and generators
80	Introduction to electrical ladder drawings
80	AC circuit analysis
160	Semiconductor fundamentals
40	Digital fundamentals
<b>992</b>	<b>TOTAL</b>

**NOTE:** The 100 level is classroom training only, no on-the-job learning.

**WORK PROCESS SCHEDULE AND RELATED INSTRUCTION OUTLINE  
TRANSIT RAIL VEHICLE MAINTENANCE TECHNICIAN  
(Existing Title: Car Repairer (Railroad Equipment))  
O\*NET-SOC CODE: 49-3043.00 RAPIDS CODE: 0642R-HY**

**Level 200 - Vehicle theory of operation and standard maintenance of rail vehicles**

<b>Hours of Instruction</b>		<b>Subject Area</b>
<b>Classroom</b>	<b>On-the-Job</b>	
8	-	Vehicle theory of operation and overview of major systems – The contents of this class will vary by property according to the equipment and propulsion systems used at that location. May include Light Rail Vehicles, Heavy Rail, Commuter Rail and AC, DC catenary, third rail etc.
16	200	Couplers – Introduction and preventive maintenance
24	200	Trucks and axles – Introduction and preventive maintenance
24	300	Propulsion and dynamic braking – Introduction and preventive maintenance
16	60	Auxiliary inverters and batteries – Introduction and preventive maintenance
24	200	Friction brakes – Introduction and preventive maintenance
40	320	HVAC – Introduction and preventive maintenance
8	120	Current collection and distribution – Introduction and preventive maintenance
16	120	Car body – Introduction and preventive maintenance
24	80	Doors
16	120	Communications systems
24	160	Communications Based Train Control (CBTC, Automatic Train Protection (ATP), Automatic Train Operation (ATO))
24	120	Monitoring, diagnosing and troubleshooting overview
<b>264</b>	<b>2000</b>	<b>TOTAL</b>

