

Appendix A

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

This schedule is attached to and a part of these Standards for the above identified occupation.

1. TERM OF TRANSIT RAIL VEHICLE MAINTENANCE TECHNICIAN APPRENTICESHIP

The term of the apprenticeship shall be (42 months) with an OJL attainment of (5,400 hours) supplemented by the required hours of related instruction. (This example assumes a certain level of competency in reading. Reading classes will be added by transit agencies that are not able to find candidates with these qualifications within their labor market.)

2. RATIO OF APPRENTICES TO JOURNEYWORKERS

Ratio as covered in the local collective bargaining agreement (CBA).

3. APPRENTICES' WAGE SCHEDULE

Apprentices shall be paid a progressively increasing schedule of wages based on a percentage of the current journeyworker wage rate per the CBA.

Transit Rail Vehicle Maintenance Technician Apprenticeship Term:

**By Percentage of Journey-level Wage: SAMPLE
for a 42 month program and an hourly wage rate of \$28.80.**

(The hourly rate is a composite representative of the current state of the industry.
Local rates will be determined by the CBA.)

Time Period | Percentage of Journey-level | Apprentice

100 Level – Rail Vehicle Apprentice Technician

1 st six months	= 60%	= \$ 17.28
2 nd six months	= 65%	= \$ 18.72

200 Level – Rail Vehicle Technician

3 rd six months	= 70%	= \$ 20.16
4 th six months	= 75%	= \$ 21.60

300 Level – Rail Vehicle Master Technician

5 th six months	= 80%	= \$ 23.04
6 th six months	= 85%	= \$ 24.48
7 th six months	= 95%	= \$ 27.36

4. **SCHEDULE OF WORK EXPERIENCE**

National Joint Apprenticeship and Training Committee (NJATC) may modify the work processes to meet local needs prior to submitting these Standards to the appropriate Registration Agency for approval.

5. **SCHEDULE OF RELATED INSTRUCTION**

(All classes include practical application, diagnostics, and troubleshooting where applicable. Safety is a priority and will be integrated into all training.)

Classroom and on-the-job learning elements are described in Appendix A attachment 1.

**WORK PROCESS SCHEDULE AND RELATED INSTRUCTION OUTLINE
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Level 100 – Fundamental skills for transit railcar maintenance (diagnose, adjust, repair, or overhaul mass transit rail cars)

Classroom Hours of Instruction	Subject Area
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
992	TOTAL

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

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

Hours of Instruction		Subject Area
Classroom	On-the-Job	
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
264	2000	TOTAL

