

COMPETENCY-BASED OCCUPATIONAL FRAMEWORK FOR REGISTERED APPRENTICESHIP

Transit Bus Technician

ONET Code: 49-3031.00

RAPIDS Code: 2073CB

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Work Process Schedule

Job Functions and Competencies

WORK PROCESS SCHEDULE		ONET Code: 49-3031	
Transit Bus Technician		RAPIDS Code: 2073CB	
JOB TITLE:			
LEVEL:		SPECIALIZATION:	
STACKABLE PROGRAM <input type="checkbox"/> yes <input type="checkbox"/> no			
BASE OCCUPATION NAME:			
Company Contact: Name			
Address:		Phone	Email
Apprenticeship Type:		Prerequisites	
<input type="checkbox"/> Competency-Based <input type="checkbox"/> Time-Based <input type="checkbox"/> Hybrid			
JOB FUNCTION 1: Demonstrates mastery of fundamental skills			
Competencies	Core or Optional	RTI	OJT
A. Follows safe procedures	Core		
B. Correctly applies hand tools, power tools, and fasteners	Core		
C. Demonstrates basic rigging and hoisting ability	Core		
D. Demonstrates ability to apply basic industrial mathematics	Core		
E. Demonstrates basic mechanical ability	Core		
F. Demonstrates basic hydraulic and pneumatic ability	Core		
G. Demonstrates basic electrical and electronic ability	Core		
H. Demonstrates basic welding precautions	Core		

I. Demonstrates basic vehicle towing	Core		
JOB FUNCTION 2: Maintains and repairs low voltage electrical and electronic systems			
Competencies	Core or Optional	RTI	OJT
A. Follows safe procedures	Core		
B. Performs general electrical/electronic diagnosis	Core		
C. Performs battery diagnosis and repair	Core		
D. Performs starting system diagnosis and repair	Core		
E. Performs charging system diagnosis and repair	Core		
F. Performs lighting systems diagnosis and repair	Core		
G. Performs gauge and warning device diagnosis and repair	Core		
H. Diagnoses and repairs related electrical/electronic systems	Core		
I. Maintains, diagnoses, and repairs data communications systems (CAN, J1939, J 1708, etc.)	Core		
J. Maintains, diagnoses, and repairs multiplex systems	Core		
K. Maintains, diagnoses, and repairs fire suppression/detection systems	Core		
L. Maintains, diagnoses, and repairs (electronic) signage systems	Core		
M. Maintains, diagnoses, and repairs fare collection equipment	Core		
N. Maintains, diagnoses, and repairs radio communications systems	Core		
O. Maintains, diagnoses, and repairs automatic stop announcement systems	Core		
P. Maintains, diagnoses, and repairs video surveillance equipment	Optional		
Q. Maintains, diagnoses, and repairs automatic passenger counters	Optional		
R. Maintains, diagnoses, and repairs wireless communication systems	Optional		
JOB FUNCTION 3: Maintains and repairs brake and air systems			

Competencies	Core or Optional	RTI	OJT
A. Follows safe procedures	Core		
B. Maintains, diagnoses, and repairs air supply and service systems	Core		
C. Maintains, diagnoses, and repairs mechanical/foundation disc and drum brakes	Core		
D. Maintains, diagnoses, and repairs parking brakes	Core		
E. Maintains, diagnoses, and repairs wheel bearings	Core		
JOB FUNCTION 4: Maintains, diagnoses, and repairs propulsion systems			
Competencies	Core or Optional	RTI	OJT
A. Follows safe procedures	Core		
B. Maintains, diagnoses, and repairs internal combustion (IC) bus engines (note: applies generally to diesel, CNG and gasoline engines – see unique competencies below for each propulsion type)	Core		
C. Maintains, diagnoses, and repairs items specific to diesel engines	Core		
D. Maintains, diagnoses, and repairs items specific to gasoline engines	Optional		
E. Maintains, diagnoses, and repairs items specific to CNG engines and related systems	Optional		
F. Maintains, diagnoses, and repairs items specific to hybrid propulsion systems	Optional		
G. Maintains, diagnoses, and repairs items specific to electric propulsion systems	Optional		
H. Maintains, diagnoses, and repairs items specific to fuel cell propulsion systems	Optional		
I. Overhaul of engine	Optional		
JOB FUNCTION 5: Maintains, diagnoses, and repairs automatic transmissions and drivetrains			
Competencies	Core or Optional	RTI	OJT
A. Follows safe procedures	Core		

B. Maintains, diagnoses, and repairs automatic transmissions	Core		
C. Maintains, diagnoses, and repairs drive shafts and universal joints	Core		
D. Maintains, diagnoses, and repairs drive axles	Core		
E. Overhaul of transmission	Optional		
JOB FUNCTION 6: Maintains, diagnoses, and repairs steering and suspension systems			
Competencies	Core or Optional	RTI	OJT
A. Follows safe procedures	Core		
B. Maintains, diagnoses, and repairs steering systems	Core		
C. Maintains, diagnoses, and repairs independent front suspensions	Core		
D. Maintains, diagnoses, and repairs straight/I-beam axles	Core		
E. Maintains, diagnoses, and repairs rear suspensions	Core		
F. Diagnoses, adjusts, and repairs wheel alignment	Core		
G. Maintains, diagnoses, and repairs wheels and tires	Core		
JOB FUNCTION 7: Maintains, diagnoses, and repairs heating, ventilation and air conditioning (HVAC) systems			
Competencies	Core or Optional	RTI	OJT
A. Follows safe procedures	Core		
B. Performs basic HVAC system verifications and testing	Core		
C. Maintains, diagnoses, and repairs a/c system and related components	Core		
D. Maintains, diagnoses, and repairs heating and engine cooling systems	Core		
E. Maintains, diagnoses, and repairs HVAC operating systems and related controls	Core		
JOB FUNCTION 8: Maintains, diagnoses, and repairs body and chassis equipment and systems			
Competencies	Core or Optional	RTI	OJT
A. Follows safe procedures	Core		

B. Maintains, diagnoses, and repairs operator and passenger seating	Core		
C. Maintains, diagnoses, and repairs stanchions, grab rails and modesty panels	Core		
D. Maintains, diagnoses, and repairs windows	Core		
E. Maintains, diagnoses, and repairs door systems	Core		
F. Maintains, diagnoses, and repairs flooring, paneling and roof hatches	Core		
G. Maintains, diagnoses, and repairs wheelchair lifts, ramps and restraints	Core		
H. Maintains, diagnoses, and repairs passenger signaling (stop request) systems	Core		
I. Inspects and repairs frame/chassis members	Core		
J. Welding	Optional		
K. Collision repair and paint refinishing	Optional		
JOB FUNCTION 9: Conducts preventive maintenance inspections			
Competencies	Core or Optional	RTI	OJT
A. Follows safe procedures	Core		
B. Inspects engine systems	Core		
C. Inspects body interior and exterior	Core		
D. Inspects electrical/electronic systems	Core		
E. Inspects frame and chassis	Core		
F. Conducts road test	Core		
JOB FUNCTION 10: Maintains, diagnoses, and repairs articulated bus systems			
Competencies	Core or Optional	RTI	OJT
A. Follows safe procedures	Optional		
B. Maintains, diagnoses, and repairs mechanical components of the articulation joint	Optional		
C. Maintains, diagnoses, and repairs hydraulic components of the articulation joint	Optional		

D. Maintains, diagnoses, and repairs the electronic control system	Optional		
E. Maintains, diagnoses, and repairs articulation bellows	Optional		

Specialization

Type of Specialization: _____

JOB FUNCTION 1:		
Competencies	RTI	OJT
JOB FUNCTION 2:		
Competencies	RTI	OJT
JOB FUNCTION 3:		
Competencies	RTI	OJT

Related Technical Instruction Plan

COURSE NAME	Course Number
	Hours
LEARNING OBJECTIVES	
COURSE NAME	Course Number
	Hours
LEARNING OBJECTIVES	
COURSE NAME	Course Number
	Hours
LEARNING OBJECTIVES	
COURSE NAME	Course Number
	Hours

LEARNING OBJECTIVES

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COURSE NAME

Course Number

Hours

LEARNING OBJECTIVES

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