

STATS Training Course / Content (Vehicle Equipment Mechanic)

3rd Class Mechanic

1) Electrical (3rd Class)

Electrical Theory

Ohm's Law

Electricity and Magnetism

Electrical System Nomenclature

Series / Parallel Circuits

Schematic Reading and Electrical Symbols

Meters / Digital Multimeters

Counts / Resolution / Reading

Voltage Drop

Battery Configurations - 12 / 24 Volt Systems

Battery Testing and Service

Circuit Diagnosis / Harness Repair

Wire Stripping and Crimping Techniques

Starting and Charging Systems - Operation, Diagnosis and Repair

Relays - Operation and Diagnostics

Intro to Allen-Bradley Multiplex Electrical Systems and Ladder Logic

2) Chassis / Pneumatics / Brake Reline (3rd Class)

Introduction to Bus Lifts / Operation and Safety

Tire Service / Tire Record Change Card

Introduction to Air Brakes

Valve Identification / Air Dryers / Basic Schematic Reading

Automatic Brake Adjuster Operation / Troubleshooting and Service

Brake Reline / Foundation Brake Identification and R&R

Air Systems / Troubleshooting

Suspension System Familiarization

Axle Identification and Service

Wheel Seal Service / Bearing Replacement and Adjustment

R&R Carrier / Axle Shaft Thrust Adjustment

Intro to ABS/ATC

3) Wheel Chair Lift (3rd Class)

ADA Requirements

Hydraulic Principles / Operation / Components

Lift-U Theory of Operation

Preventive Maintenance / Lubrication

Maintenance Procedures / Adjustments

Bypass Operation

4) Doors (3rd Class)	Vapor Differential Door Engine / Theory of Operation
	Closing, Open, Open Cushion Speed Adjustment Procedures
	Door Panel Replacement / Adjustments
	Entrance and Exit Door Micro Switches / Adjustments
5) Engine (3rd Class)	Diesel Engine Theory
	Fuel System Basics
	Lubrication System
	Cooling System
	Air System
	Oil and Filter Service
6) Transmission (3rd Class)	Basic Operational Theory
	Torque Converter Operation
	Planetary Gear Operation
	Fluid and Filter Service
7) HVAC (3rd Class)	Introduction to Bus Climate Control System
	Basic System Operation
	Identify System Components
	Safe Refrigerant Handling and Hazards
	EPA 609 Certification
	Heater and Defroster System Operation
8) Welding (1st, 2nd, 3rd Class)	3rd Class (Five Day Class)
	Oxy Acetylene
	Welding Safety / Basic Metallurgy / Bus Applications
	Cutting / Heating / Brazing / Soldering / Silver Soldering
2nd Class (Four Day Class)	Plasma Arc Cutting
	Mig Welding
1st Class (Three Day Class)	Mig Welding Different Base Metals / Different Joint Designs / Out of Position
	Stick Welding
9) Preventive Maintenance Inspections	PM Inspection Cards / A, B, Super A
	Perform Major and Minor Inspections on SEPTA's Current Fleet of Buses
	Replace Fluids
	Make Repairs