

TOOLS AND EQUIPMENT

Local employer needs and the availability of funds are key factors for determining each program's structure and operation. The Program Standards recognize that not all programs have the same needs, nor do all programs teach 100 % of the tasks. Therefore, the basic philosophy for the tools and equipment requirement is as follows: for all tasks which are taught in the program, the training should be as thorough as possible with the tools and equipment necessary for those tasks. In other words, if a program does not teach a particular task, the tool from the tool list associated with that task is not required (unless of course it is required for a task that is taught in another area).

The tool lists are organized into three basic categories: Hand Tools, General Lab/Shop Equipment, and Specialty Tools and Equipment. The specialty tools section is further separated into the eight truck categories. When referring to the tools and equipment list, please note the following:

- A. The organization of the tool list is not intended to dictate how a program organizes its tool crib or student tool sets (i.e., which tools should be in a student set, if utilized, and which should be in the tool crib or shop area).
- B. Quantities for each tool or piece of equipment are determined by the program needs; however, sufficient quantities to provide quality instruction should be on hand.
- C. For Specialty Tools and Equipment, the program need only have those tools for the areas being accredited.
- D. Programs may meet the equipment requirements by borrowing special equipment or providing for off-site instruction (e.g., in a dealership or independent repair shop). Use of borrowed or off-site equipment must be appropriately documented.
- E. No specific brand names for tools and equipment are specified or required.
- F. Although the Program Standards recommend that programs encourage their students to begin to build their own individual tools sets prior to entry into the industry, there is no requirement to do so. NOTE: Industry surveys indicate that most (90%) employers require that a candidate for employment provide his/her own basic hand tool set in order to be hired as an entry-level truck technician.

HAND TOOLS

(Contained in individual sets or the tool crib in sufficient quantities to permit efficient instruction)

Battery Stud-to-Post or Charging/Test Adapter		Starter (3/16" - 3/8")	
Chisels:		Taper	
Cold 5/8", 3/4"		Scraper - 1" Wide or Larger	
Chisel Holder		Screwdriver - Blade Type:	
Combination Wrenches:		1", 6", 9", and 12"	
Standard (3/8" - 1") (up to 1 1/4" optional)		Offset	
Metric (6mm - 19mm) (up to 24mm optional)		Screwdriver - Phillips:	
Digital Multimeter (DMM) - Minimum 10 Meg Ohm Impedance		1" #2	
Eye Protection - Safety Glasses (side panels) and Goggles (per OSHA Requirements)		6" #1, #2	
Files and handles:		12" #3	
Coarse 12"		Socket Set - 1/4" Drive:	
Fine 12"		3/16" - 1/2" Standard Depth	
Half Round 12"		3/16" - 1/2" Deep	
Flare Nut Wrench Set:		4mm - 13mm Standard Depth	
3/8" - 3/4"		4mm - 13mm Deep	
7mm - 19mm		Extensions - Short, Medium, and Long	
Flashlight/Inspection Light		Ratchet Handle	
Hack Saw		Universal Joint	
Hammers:		Socket Set - 3/8" Drive:	
16 oz. Ball Peen		3/8" - 3/4" Standard Depth (12 point) (Impact or Chrome)	
24 oz. Ball Peen		3/8" - 3/4" Deep (6-point) (Impact or Chrome)	
Soft Face		10mm - 19mm Standard Depth (6-point) (Impact or Chrome)	
Hearing Protection (per OSHA Requirements)		10mm - 19mm Deep (6-point) (Impact or Chrome)	
Hex Key Wrench Sets:		Socket Set - 1/2" Drive:	
Standard (.050" - 3/8") (7/16" - 1/2" optional)		1/2" - 1 1/8" Standard Depth (Impact or Chrome)	
Metric (2mm - 12mm)		1/2" - 1 1/8" Deep (Impact or Chrome)	
Inspection Mirror		13mm - 32mm Standard Depth (Impact or Chrome)	
Machinists/Mechanics Steel Rule		13mm - 32mm Deep (Impact or Chrome)	
Magnetic Pickup Tool		Breaker Bar	
Pliers:		Extensions - Short, Medium, and Long	
Adjustable		Ratchet Handle	
Electrical - Crimper/Stripper		Universal Joint	
Locking		Tape Measure - 25'	
Needle Nose		Tire Pressure Gauge (Truck)	
Side Cutters		Tire Tread Depth Gauge	
Slip Joint		Tool Box	
Punches:		Wire Brush	
Aligning			
Center			
Brass			
Pin (3/16" - 3/8")			

GENERAL LAB/SHOP EQUIPMENT

The tools and equipment on this list are used in general lab/shop work but are not generally considered to be individually owned hand tools. A well-equipped, accredited program should have all of these general tools and equipment readily available and in sufficient quantity to provide quality instruction. A few items on this General Lab/Shop Equipment list are specifically needed for programs accredited at the Truck Service Technology (TST) level and/or the Master Truck Service Technology (MTST) level. Those are indicated by the appropriate acronym.

Adjustable Wrenches (up to 18")	Filter Wrenches - Small, Medium, and Large
Air Blow Gun – Rubber Tip (per OSHA requirements)	Funnels
A/C Condenser/Radiator Fin Comb Set	Gear Oil Dispenser
Back Support Belt	Grease Gun
Belt Tension Gauge	Grinder (Bench or Pedestal)
Belt Wear Gauge	Hammers:
Bushing Driver Set	48 oz. Ball Peen
C-Clamps	24 oz. Brass
Cleaning Tank (per OSHA and Local Requirements)	12 lb. Hand Sledge
Clutch Adjusting Tools	Heat Gun
Combination Wrench Sets:	Hydraulic Press - 20 Ton Minimum (TST and MTST Programs)
Standard 3/8" - 1 1/2"	Impact Driver Set (Manual/Hand)
Metric 6 mm - 32 mm	Impact Wrenches:
Standard Offset 3/8" - 3/4"	1/2" Drive (Air or Electric) with Impact Sockets
Metric Offset 7 mm - 15 mm	3/4" Drive (Air or Electric) with Impact Sockets
Coolant Conditioner Test Kit (Test Strips)	1" Drive with Impact Sockets (TST and MTST Programs)
Cooling System Pressure Tester and Adapters	Impact Universal Joints - 3/8", 1/2"
Creepers	Jacks - Bottle-style, Air Jack, Frame Jack, etc.
Diagnostic Information Platform - PC with appropriate software and/or internet access for reading electronic service information	Lifting Chains (MST and TMST Programs)
Dial Indicator Set - Magnetic Base	Lifting Eyes (MST and TMST Programs)
Digital or Dial Caliper - Standard and Metric	Micrometers:
Drain Pans	Outside - Standard (0" - 6")
Drills:	Outside - Metric (0 mm - 150 mm)
3/8" variable speed, reversible	Inside - Standard (0" - 6')
1/2" variable speed, reversible	Depth - Standard (0" - 6")
Drill Bit Set: 1/16" - 1/2"	Pipe Wrenches (Up to 18" or 24")
Electronic Service Tool - PC or Data Scan Tool with Appropriate Software	Pliers:
Extractor Set (Broken Bolt)	Snap Ring - Internal
Face Shields	Snap Ring – External
Feeler gauges - Blade Type:	Portable Crane/Engine Hoist - 2 Ton Minimum (TMST Programs)
0.005" - 0.050"	Pressure Gauge Set (MST and TMST Programs):
0.005 mm - 0.070 mm	0-300 psi

Brass Feeler Gauge		0-150 psi	
Puller Sets (MST and TMST Programs):			
Two-Jaw			
Three-Jaw			
Refractometer (Antifreeze/Battery)			
Safety (Jack) Stands - Minimum 6 Ton			
Seal Puller			
Socket Sets:			
3/4" Drive Set			
Axle Nut Sockets			
Crow's Feet (Standard and Metric)			
Hex Key Drivers (Standard 3/16" - 3/4" and Metric 4mm - 19mm)			
Torx ® Drive T15 - T55			
Torx ® Drive E4 - E18			
Wheel Fastener Socket Set			
Soldering Gun			
Stop Watch			
Tap and Die Sets (Standard and Metric)			
Thermometer - Hand-held Infrared			
Thread Chaser Set			
Tire Cage (TMST Programs)			
Tire Gauge - Master (For Tire Gauge Calibration Checks)			
Tire Inflator Chuck - Truck			
Tire Pressure Gauge - Truck			
Torch Set: Oxy-Acetylene			
Torque Angle Gauge (MST and TMST Programs)			
Torque Multiplier with Adapters (MST and TMST Programs) (Optional)			
Torque Wrenches:			
1/4" Drive (0 - 150 lb. in.)			
3/8" Drive (0 - 100 lb. ft.)			
1/2" Drive (0 - 250 lb. ft.)			
3/4" Drive (up to 600 lb. ft.)			
Tubing Cutter/Flaring Set			
Valve Core Replacement Tool - Tire			
Wheel Chocks			
Wheel Dolly (MST and TMST Programs)			
Wheel Weight Tool			

**SPECIALTY TOOLS AND EQUIPMENT
WITHIN EACH ACCREDITATION CATEGORY**

This section covers the tools and equipment a lab/shop should have for training in any given specialty area. This equipment is specialized and it must be available in the lab/shop. No specific type or brand names are identified because they will vary in each local situation.

For all tasks which are taught in the program, the training should be as thorough as possible with the tools and equipment necessary for those tasks. In other words, if a program does not teach a particular task, the tool from the tool list associated with that task is not required.

INSPECTION, MAINTENANCE, AND MINOR REPAIR

DIESEL ENGINES	ELECTRICAL/ELECTRONIC SYSTEMS
Diesel Exhaust Fluid (DEF) Refractometer	Battery Charger (AGM/Gel Compatible)
Fuel System/Air Induction System Dust Cover Cap Set	Battery Terminal Adapters
Soft Jaw Vise or Adapters	Die Type Terminal Crimper (optional)
	Graphing Multimeter (GMM), Oscilloscope, or Digital Multimeter (DMM) with scope capability
SUSPENSION & STEERING	Inductive (Clamp-on) Ammeter
Fifth Wheel Test Pin	Jumper Cable Set (Heavy-Duty)
Tape Measure (50')	Low AMP Automatic Charger or equivalent device to maintain shop batteries
Tire Square	Starting, Charging, and Battery System Tester
	Terminal Repair Kits
BRAKES	Test Lead Kit
Bearing Packer (optional)	
Brake Bleeder	
Brake Fluid Tester or Test Strips	
Brake Lining Thickness Gauge	
Brake Rotor (Disc) Micrometer	
Drum Brake Gauge	
Method for removing asbestos contamination (Parts Cleaner) meeting EPA Standards	
Seal Installers	
Slack Adjuster Installation Index Tool (Templates)	
Trailer Electrical Cord Tester	
HEATING, VENTILATION, AND AIR CONDITIONING	
Gloves	
Thermometer	

TRUCK SERVICE TECHNOLOGY

DIESEL ENGINES	BRAKES	
Ball/Small Hole Gauges	Air Pressure Gauge Set	
Cooling System Vacuum Fill Equipment	Bearing Packer (optional)	
Dial Bore Gauge or Telescoping Gauges	Bearing Race Installer	
Diesel Exhaust Fluid (DEF) Refractometer	Brake Bleeder	
Engine Stands	Brake Fluid Tester or Test Strips	
Fan Hub Wrenches	Brake Lining Thickness Gauge	
Fuel System/Air Induction System Dust Cover Cap Set	Brake Rotor (Disc) Micrometer	
Injector Removal Tool(s)	Brake Spring Tool	
Liner Installer (universal)	Disc Caliper Tool for Compressing Caliper Pistons	
Liner Puller (universal)	Drum Brake Gauge	
Precision Straight Edge	Method for removing asbestos contamination (Parts Cleaner) meeting EPA Standards	
Protrusion Gauge (Cylinder Liner Height)	Seal Installers	
Ring Compressor	Slack Adjuster Installation Index Tool (Templates)	
Ring Expander(s)		
Rod Bolt Protectors	DRIVE TRAIN	
Soft Jaw Vise or Adapters	3/4" Drive Pinion Nut Sockets	
Valve Spring Compressor	Aligning Studs - 3/8", 1/2", & 5/8"	
Vibration Damper Puller	Axle Shaft Removal Tool	
	Blind Hole/Pilot Bearing Puller	
SUSPENSION & STEERING	Clutch Adjusting Tools (Pull Type)	
Air Hammer with Chisels	Clutch Disc Aligning Tools	
Ball Joint Separator	Clutch Jack and/or Transmission Jack Attachments	
Fifth Wheel Test Pin	Protractor (Angle Gauge)	
Pitman Arm Puller	Transmission Jack	
Power Steering Analyzer	U-Joint Puller	
Tape Measure (50')	Yoke Puller	
Tire Square		
	HEATING, VENTILATION, AND AIR CONDITIONING	
ELECTRICAL/ELECTRONIC SYSTEMS	A/C Leak Detection Tool (Halogen or UV Dye)	
Battery Charger (AGM/Gel Compatible)	Gloves	
Battery Terminal Adapters		
Die Type Terminal Crimper (optional)		
Graphing Multimeter (GMM), Oscilloscope, or Digital Multimeter (DMM) with scope capability		
Inductive (Clamp-on) Ammeter		
Jumper Cable Set (Heavy-Duty)		
Low AMP Automatic Charger or equivalent device to maintain shop batteries		
Starting, Charging, and Battery System Tester		
Test Lead Kit		
Terminal Repair Kits		

MASTER TRUCK SERVICE TECHNOLOGY

DIESEL ENGINES	BRAKES
Ball/Small Hole Gauges	Air Pressure Gauge Set
Charge Air Cooler Tester	Bearing Packer (optional)
Cooling System Vacuum Fill Equipment	Bearing Race Installer
Diagnostic Smoke Machine (Optional)	Brake Bleeder
Dial Bore Gauge or Telescoping Gauges	Brake Fluid Tester or Test Strips
Diesel Exhaust Fluid (DEF) Refractometer	Brake Lining Thickness Gauge
Engine Stands	Brake Rotor (Disc) Micrometer
Fan Hub Wrenches	Brake Spring Tool
Fuel System/Air Induction System Dust Cover Cap Set	Disc Caliper Tool for Compressing Caliper Pistons
Injector Removal Tool(s)	Drum Brake Gauge
Liner Installer (universal)	Method for removing asbestos contamination (Parts Cleaner) meeting EPA Standards
Liner Puller (universal)	Seal Installers
Manometer - (Water) or Magnehelic Gauge (optional)	Slack Adjuster Installation Index Tool (Templates)
Precision Straight Edge	Trailer Electrical Cord Tester
Protrusion Gauge (Cylinder Liner Height)	
Ring Compressor	ELECTRICAL/ELECTRONIC SYSTEMS
Rod Bolt Protectors	Battery Charger (AGM/Gel Compatible)
Soft Jaw Vise or Adapters	Battery Terminal Adapters
Valve Spring Compressor	Die Type Terminal Crimper (optional)
Vibration Damper Puller	Graphing Multimeter (GMM), Oscilloscope, or Digital Multimeter (DMM) with scope capability
	Inductive (Clamp-on) Ammeter
SUSPENSION & STEERING	Jumper Cable Set (Heavy-Duty)
Air Hammer with Chisels	Low AMP Automatic Charger or equivalent device to maintain shop batteries
Alignment Equipment: Minimum to perform tasks (including tandem alignment)	Starting, Charging, and Battery System Tester
Ball Joint Separator	Test Lead Kit
Fifth Wheel Test Pin	Terminal Repair Kits
Pitman Arm Puller	
Power Steering Analyzer	DRIVE TRAIN
Tire Square	3/4" Drive Pinion Nut Sockets
	Aligning Studs - 3/8", 1/2", & 5/8"
HYDRAULICS	Axle Shaft Removal Tool
Fittings and adapters for specific applications	Blind Hole/Pilot Bearing Puller
Hose Crimper Tool and Pump (either air over hydraulic or hand pump)-(optional)	Clutch Adjusting Tools (Pull Type)
1000 PSI Liquid Filled or Electronic Gauge and Hose Assembly	Clutch Disc Aligning Tools
5000 PSI Liquid Filled or Electronic Gauge and Hose Assembly	Clutch Jack and/or Transmission Jack Attachments
Pressure/Flow Meter	Protractor (Angle Gauge)
Thermometer (up to 250 degrees) Standard or Infrared	

HEATING, VENTILATION, AND AIR CONDITIONING	
A/C Compressor Clutch Removal & Installation Tools	
A/C Leak Detection Tool (Halogen or UV Dye)	
A/C Manifold Gauge Set*	
A/C Recovery/Recharging and/or Recycling Station*	
A/C Refrigerant Identifier	
Gloves	
Heater Hose Clamp-Off Tool	
Measuring Cup	
Micron Meter (Electronic Vacuum Gauge) – (optional)	
Orifice Tube Remover	
Portable Vacuum Pump (may be included with Recovery/Recycling/Recharging Station)	
Spring Lock Coupler Removers	
Thermometer	
Valve Core (Shrader Type) Replacement Tool	
* Meeting EPA Regulations and SAE “J” Standards	