### **Recommended Equipment List**

## Program: CIP#:

Automotive Technologies 47.0300.40

NOTE: The following items and descriptions are the recommended equipment guidelines for each **CTE Automotive Technologies** program. Please note that this list of recommended items does not necessarily need to be supported financially by Federal Perkins or State Priority funding sources. In many cases, local school district funds are used to purchase items on a regular basis (i.e. furniture, consumables, etc.) Further, please understand that this is not an exhaustive list. Local program and business needs may necessitate the purchase of additional equipment and software resources, as may the rapidly-changing nature of the industry-specific technologies used in the program.

Recommended Equipment and Software	
Item	Notes
Air Blow Gun (meeting OSHA requirements)	
Allen (Wrench or Socket) Set - Standard (.050" - 3/8")	
Allen (Wrench or Socket) Set - Metric (2mm - 8mm, 10mm, 12mm)	
Battery Terminal Pliers Battery Terminal Puller Chisels:	
Cape 5/16"	
Cold 3/8", 3/4"	
Chisel Holder Claw Type Pickup Tool Combination Wrenches:	
Standard (1/4" – 1 1/4")	
Metric (7mm - 24mm)	
Crowfoot Wrench Set - Metric	
Crowfoot Wrench Set – Standard	
Feeler Gauge (Blade Type)	
→ .002"	
→ .040"	
→ .006mm	
→ .070mm	
Files:	
$\rightarrow$ Coarse 6" and 12"	
$\rightarrow$ Fine 6" and 12"	
$\rightarrow$ Half Round 12"	
$\rightarrow$ Round 6" and 12"	
Flare Nut (tubing) Wrenches:	
$\rightarrow$ 3/8"	
$\rightarrow 3/4$ "	
→ 10mm	
→ 17mm	
Fused Jumper Wire Set (with various adapters)	
Hack Saw	
Hammers:	
$\rightarrow$ 16 oz. Ball Peen	
$\rightarrow$ Brass	
$\rightarrow$ Dead Blow Plastic Mallet	
$\rightarrow$ Plastic Tip	
→ Rubber Mallet Inspection Mirror Magnetic Pickup Tool Pliers:	
$\rightarrow$ Combination 6"	
$\rightarrow$ Hose Clamp $\rightarrow$ Locking Jaw	
$\rightarrow$ Needle Nose 6"	

### **Recommended Equipment List**

#### Program: CIP#:

Automotive Technologies 47.0300.40

NOTE: The following items and descriptions are the recommended equipment guidelines for each **CTE Automotive Technologies** program. Please note that this list of recommended items does not necessarily need to be supported financially by Federal Perkins or State Priority funding sources. In many cases, local school district funds are used to purchase items on a regular basis (i.e. furniture, consumables, etc.) Further, please understand that this is not an exhaustive list. Local program and business needs may necessitate the purchase of additional equipment and software resources, as may the rapidly-changing nature of the industry-specific technologies used in the program.

Recommended Equipment and Software	
Item	Notes
$\rightarrow$ Side Cutting	
$\rightarrow$ Slip Joint (Water Pump) Pry Bars:	
$\rightarrow$ Rolling Head	
→ Straight Punches:	
→ Center	
$\rightarrow$ Brass Drift	
→ Pin 1/8", 3/16", 1/4", 5/16 "	
→ Taper 3/8", 1/2", 5/8" Safety Glasses (meeting OSHA requirements) Scraper:	
$\rightarrow$ Carbon 1"	
$\rightarrow$ Gasket 1"	
Screwdriver - Blade Type:	
$\rightarrow$ Stubby	
→ 6", 9", 12"	
→ Offset	
Screwdriver - Phillips:	
$\rightarrow$ Stubby #1, #2	
$\rightarrow$ 6" #1, #2	
→ 12" #3	
$\rightarrow$ Offset #2	
$\rightarrow$ Screwdriver - Impact Driver Set	
Screw Starter:	
$\rightarrow$ Phillips	
$\rightarrow$ Standard	
Socket Set - 1/4" Drive:	
$\rightarrow$ 1/4" - 1/2" Standard Depth	
→ 1/4" - 1/2" Deep	
$\rightarrow$ 6mm - 12mm Standard Depth	
$\rightarrow$ 6mm - 12mm Deep	
Flex/Universal Type	
3", 6" Extensions Ratchet	
Socket Set - 3/8" Drive:	
$\rightarrow$ 5/16" - 3/4" Standard Depth (6 point)	
→ 3/8" - 3/4" Deep (6 point)	
$\rightarrow$ 10mm - 19mm Standard Depth	
$\rightarrow$ 10mm - 19mm Deep	
$\rightarrow$ 3", 5", 10" Extensions Flexhead Ratchet	
Spark Plug Sockets 5/8", 13/16"	
Speed Handle	
Universal Joint	
Flexible Socket Set 3/8" - 3/4" Flexible Socket Set 10mm - 19mm Socket Set - 1/2" Drive:	
$\rightarrow$ 7/16" - 1 1/8" Standard Depth	
→ 7/16" - 1 1/8" Deep	
· · · · · · · · · · · · · · · · · · ·	1

### **Recommended Equipment List**

## Program: CIP#:

Automotive Technologies 47.0300.40

NOTE: The following items and descriptions are the recommended equipment guidelines for each **CTE Automotive Technologies** program. Please note that this list of recommended items does not necessarily need to be supported financially by Federal Perkins or State Priority funding sources. In many cases, local school district funds are used to purchase items on a regular basis (i.e. furniture, consumables, etc.) Further, please understand that this is not an exhaustive list. Local program and business needs may necessitate the purchase of additional equipment and software resources, as may the rapidly-changing nature of the industry-specific technologies used in the program.

Item     Notes       → 10mm - 24mm Deep	Recommended Equipment and Software	
→ 10mm - 24mm Deep       → 3", 6", 12" Extensions       Flex Handle (Breaker Bar)       Ratchet       Spark Plug Feeler Gauge (Gap Tool)       Tape Measure - Standard and Metric       Tape Measure - Standard and Metric       Test Light (12V and self-powerdd)       Tire Pressure Gauge       Tire Pressure Gauge       Tire Pressure Gauge       Tire Tread Depth Gauge 500 bt. n.) → 3/8" Drive (5 - 75 lb. ft.)       → 38" Drive (10 - 250 lb. n.) → 3/8" Drive (5 - 75 lb. ft.)       → 1/2" Drive (50 - 250 lb. ft.) Torx®       Set (screwdrivers and/or sockets):       → 12" Drive (50 - 250 lb. ft.) Torx®       Set (screwdrivers and/or sockets):       → 7 a lb T-60 Wire       Air Charptessor and Hoses       Air Pressure Regulator       Air Compressor and Hoses       Air Pressure Regulator       Air Ratchet (38" drive)       Automotive Stathos (Screw Jacks)       Battery/Charger       Battery/Charger       Battery/Starte/Charging System Tester       Battery/Starte/Charging System Tester       Battery/Charging System Tester       Battery Charging System Tester       Battery/Charging System Tester and Adapters       Coolant Yester       Coolant Tester       Coolant Tester       Coolant Tester       Coolant Tester       Coolant Tes	$\rightarrow$ 10mm - 24mm Standard Depth	
→ 3°, 6°, 12° Extensions         Flex Handle (Breaker Bar)         Ratchet         Spark Plug Feeler Gauge (Gap Tool)         Tape Measure – Standard and Metric         Tape Measure – Standard and Metric         Tire Pressure Gauge         Tire Tread Depth Gauge         Tire Pressure Gauge (Gip Tool)         → 1/2* Drive (50 - 250 lb. ft.)         → 3/8° Drive (10 - 250 lb. ft.)         → 1/2* Drive (50 - 250 lb. ft.)         → 1/2* Drive (50 - 250 lb. ft.)         → 1/2* Drive (50 - 250 lb. ft.)         → 1-8 to 1-60 Wire         → 1 -8 to 1-60 Wire         Air Chisel Set (various bits)         Air Compressor and Hoses         Air Pressure Regulator         Air Ratchet (3/8° drive)         Automotive Stethoscope (electronic recommended)         Avie Stands (Jack Stands)         Ba		
Fiex Handle (Breaker Bar)         Ratchet         Spark Plug Feeler Gauge (Gap Tool)         Tape Measure – Standard and Metric         Test Light (122 van self-powered)         Tire Tread Depth Gauge         Torque Wrench:         → 3/8" Drive (10 - 250 lb. in.) → 3/8" Drive (5 - 75 lb. ft.)         → 1/2" Drive (10 - 250 lb. in.) → 3/8" Drive (5 - 75 lb. ft.)         → 1/2" Drive (50 - 250 lb. h.) Torx®         Set (screwdrivers and/or sockets):         → 1/2" Drive (50 - 250 lb. h.) Torx®         Air Chisel Set (various bits)         Air Chisel Set (various bits)         Air Charperssor and Hoses         Air Ratchet (3/8" drive)         Automotive Stethoscope (electronic recommended)         Avie Stands (Jack Stands)         Battery Charger         Battery Charger         Battery Conductance Tester (recommended)         Battery Charger         Battery Conductance Tester (recommended)         Battery Conductance Tester (recommended)         Coolant Zombustion Gase Detector (Recommended)         Coolant Tester         Coolant T		
Ratchet       Spark Plug Feeler Gauge (Gap Tool)         Tape Measure - Standard and Metric		
Tape Measure – Standard and Metric         Test Light (12V and self-powered)         Tire Pressure Gauge         Tire Pressure Gauge         Torque Wrench:         → 3/8° Drive (10 - 250 lb. in.) → 3/8° Drive (5 - 75 lb. ft.)         → 1/2° Drive (50 - 250 lb. ft.) Torx®         Set (screwdrivers and/or sockets):         → 1-8 to T-60 Wire         Air Chisel Set (various bits)         Air Chisel Set (various bits)         Air Compressor and Hoses         Air Compressor and Hoses         Air Compressor and Hoses         Air Ratchet (3/8° drive)         Automotive Stethoscope (electronic recommended)         Avke Stands (Jack Stands)         Akte Stands (Jack Stands)         Battery Conductance Tester (recommended)         Battery Conductance Tester (recommended)         Bearing Packer (hand operated)         Bearing Packer (hand operated)         Bearing System Tester         Battery Conductance Tester (Recommended)         Coolant/Combustin Gas Detector (Recommended)         Coolant Tester         Coolant Tester         Coolant Tester         Coolant Tester         Dial Indicator with Flex Arm and Clamp Base         Dial Indicator with Flex Arm and Clamp Base         Dial Indicator with Fl	Ratchet	
Tape Measure – Standard and Metric         Test Light (12V and self-powered)         Tire Pressure Gauge         Tire Pressure Gauge         Torque Wrench:         → 3/8° Drive (10 - 250 lb. in.) → 3/8° Drive (5 - 75 lb. ft.)         → 1/2° Drive (50 - 250 lb. ft.) Torx®         Set (screwdrivers and/or sockets):         → 1-8 to T-60 Wire         Air Chisel Set (various bits)         Air Chisel Set (various bits)         Air Compressor and Hoses         Air Compressor and Hoses         Air Compressor and Hoses         Air Ratchet (3/8° drive)         Automotive Stethoscope (electronic recommended)         Avke Stands (Jack Stands)         Akte Stands (Jack Stands)         Battery Conductance Tester (recommended)         Battery Conductance Tester (recommended)         Bearing Packer (hand operated)         Bearing Packer (hand operated)         Bearing System Tester         Battery Conductance Tester (Recommended)         Coolant/Combustin Gas Detector (Recommended)         Coolant Tester         Coolant Tester         Coolant Tester         Coolant Tester         Dial Indicator with Flex Arm and Clamp Base         Dial Indicator with Flex Arm and Clamp Base         Dial Indicator with Fl	Spark Plug Feeler Gauge (Gap Tool)	
Tire Pressure Gauge       Image: Tread Depth Gauge         Torque Wrench:       → 3/8" Drive (10 - 250 lb. in.) → 3/8" Drive (5 - 75 lb. ft.)         → 1/2" Drive (50 - 250 lb. ft.) Torx®       Stel (screwdrivers and/ro sockets):         → T-8 to T-60 Wire       Image: Torx®         → T-8 to T-60 Wire       Image: Torx®         Air Chisel Set (various bits)       Image: Torx®         Air Compressor and Hoses       Image: Torx®         Air Compressor and Hoses       Image: Torx®         Air Ratchet (38" drive)       Image: Torx®         Automotive Stethoscope (electronic recommended)       Image: Torx®         Avie Stands (Jack Stands)       Image: Torx®         Battery Charger       Battery Charging System Tester         Battery Charging System Tester       Image: Torx®         Battery Charging System Tester       Image: Torx®         Bench or Pedestal Grinder       Image: Torx®         Coolant/Combustion Gas Detector (Recommended)       Image: Torx®         Coolant Tester       Image: Torx®		
Tire Tread Depth Gauge         Torque Wrench:         → 3/8° Drive (10 - 250 lb. in.) → 3/8° Drive (5 - 75 lb. ft.)         → 1/2° Drive (50 - 250 lb. in.) → 3/8° Drive (5 - 75 lb. ft.)         Set (screwdrivers and/or sockets):         → T-8 to T-60 Wire         Air Chisal Set (various bits)         Air Ratchet (3/8° drive)         Automotive Stethoscope (electronic recommended)         Axle Stands (Jack Stands)         Avle Stands (Jack Stands)         Avle Stands (Jack Stands)         Battery/Starter/Charging System Tester         Battery/Onductance Tester (recommended)         Bearing Packer (hand operated)         Bench or Pedestal Grinder         Coolant/Combustion Gas Detector (Recommended)         Coolant/Combustion Gas Detector (Recommended)         Coolant System Pressure Tester and Adapters         Creeper       Creeper         Cylinder Leakage Tester       Digital Multimeter with various lead sets         Digital Multimeter with various lead sets       Digital Multimeter with various lead sets         Digital Multimeter with various lead sets       Digital Multimeter with various lead sets         Digital Multimeter with various lead sets       Digi	Test Light (12V and self-powered)	
Torque Wrench:         → 3/8" Drive (10 - 250 lb. ft.) → 3/8" Drive (5 - 75 lb. ft.)           → 1/2" Drive (50 - 250 lb. ft.) Torx®           Set (screwdrivers and/or sockets):           → 1/2" Drive (50 - 250 lb. ft.) Torx®           Air Chisel Set (various bits)           Air Chisel Set (various bits)           Air Compressor and Hoses           Air Pressure Regulator           Air Ratchet (3/8" drive)           Automotive Stethoscope (electronic recommended)           Avle Stands (Jack Stands)           Battery/Charging System Tester	Tire Pressure Gauge	
→ 3/8" Drive (10 - 250 lb. ft.) Tox®         → 1/2" Drive (50 - 250 lb. ft.) Tox®         Set (screwdrivers and/or sockets):         → T-8 to T-60 Wire         Air Chisel Set (various bits)         Air Ratchet (3/8" drive)         Automotive Stethoscope (electronic recommended)         Avie Stands (Jack Stands)         Avie Stands (Jack Stands)         Avie Stands (Jack Stands)         Battery Charger         Battery Charger         Battery Charger         Bearing Packer (hand operated)         Bearing Packer (hand operated)         Beart or Pedestal Grinder         Coolant Tester         Coolant Tester         Coolant Combustion Gas Detector (Recommended)         Coolant Combustion Gas Detector (Recommended)         Coolant Combustion Gas Detector (Recommended)         Coolant Tester         Coolant Tester         Coolant Combustion Gas Detector (Recommended)         Coolant Combu		
→ 1/2" Drive (50 - 250 lb. ft.) Torx®         Set (screwdrivers and/or sockets):         → T-8 to T-60 Wire         Air Chisel Set (various bits)         Air Compressor and Hoses         Air Pressure Regulator         Air Aratchet (3/8" drive)         Automotive Stethoscope (electronic recommended)         Avke Stands (Jack Stands)         Avke Support Stands (Screw Jacks)         Battery Charger         Bearing Packer (hand operated)         Bearing Packer (hand perated)         Coolant/Combustion Gas Detector (Recommended)         Coolant/Combustion Gas Detector (Recommen		
→ 1/2" Drive (50 - 250 lb. ft.) Torx®         Set (screwdrivers and/or sockets):         → T-8 to T-60 Wire         Air Chisel Set (various bits)         Air Compressor and Hoses         Air Pressure Regulator         Air Aratchet (3/8" drive)         Automotive Stethoscope (electronic recommended)         Avke Stands (Jack Stands)         Avke Support Stands (Screw Jacks)         Battery Charger         Bearing Packer (hand operated)         Bearing Packer (hand perated)         Coolant/Combustion Gas Detector (Recommended)         Coolant/Combustion Gas Detector (Recommen	$\rightarrow$ 3/8" Drive (10 - 250 lb. in.) $\rightarrow$ 3/8" Drive (5 - 75 lb. ft.)	
→ T-8 to T-60 Wire         Air Chisel Set (various bits)         Air Compressor and Hoses         Air Pressure Regulator         Air Ratchet (3/8' drive)         Automotive Stethoscope (electronic recommended)         Avke Stands (Jack Stands)         Axle Support Stands (Screw Jacks)         Battery Charger         Battery Charging System Tester         Battery Conductance Tester (recommended)         Bearing Packer (hand operated)         Bench or Pedestal Grinder         Coolant/Combustion Gas Detector (Recommended)         Coolant Tester         Coolant Tester         Coolant Tester         Creeper         Cylinder Leakage Tester         Dial Indicator with Flex Arm and Clamp Base         Digital Multimeter with various lead sets         Digital Multimeter peed, reversible Drill         - 1/2" variable speed, reversible Drill		
Air Chisel Set (various bits)         Air Compressor and Hoses         Air Pressure Regulator         Air Ratchet (3/8" drive)         Automotive Stethoscope (electronic recommended)         Axle Stands (Jack Stands)         Axle Stands (Crew Jacks)         Battery Charger         Battery Charger         Battery Conductance Tester (recommended)         Bearing Packer (hand operated)         Bearing Packer (hand operated)         Bearing Packer (hand operated)         Bench or Pedestal Grinder         Coolant /Combustion Gas Detector (Recommended)         Coolant Tester         Coolant Tester         Coolant Tester         Cinder Leakage Tester         Dial Indicator with Flex Arm and Clamp Base         Digital Multimeter with various lead sets         Digital Multimeter with various lead sets         Digital Storage Oscilloscope (DSO)         Drain Pans         Drill - 3/8" variable speed, reversible Drill         - 1/2" variable speed, reversible Drill	Set (screwdrivers and/or sockets):	
Air Compressor and Hoses       Image: Compressor and Hoses         Air Pressure Regulator       Image: Compression and Hoses         Air Ratchet (3/8" drive)       Image: Compression and Hoses         Automotive Stethoscope (electronic recommended)       Image: Compression and Hoses         Axle Stands (Jack Stands)       Image: Compression and Hoses         Axle Support Stands (Screw Jacks)       Image: Compression and Hoses         Battery/Starter/Charging System Tester       Image: Compression Gauge         Berch or Pedestal Grinder       Image: Compression Tester         Coolant/Combustion Gas Detector (Recommended)       Image: Compression Tester         Coolant/Combustion Gas Detector (Recommended)       Image: Compression Tester         Coolant Tester       Image: Compression Compression Tester and Adapters         Creeper       Image: Compression Compression Compression Gauge         Dial Indicator with Flex Arm and Clamp Base       Image: Compression	$\rightarrow$ T-8 to T-60 Wire	
Air Compressor and Hoses       Image: Compressor and Hoses         Air Pressure Regulator       Image: Compression and Hoses         Air Ratchet (3/8" drive)       Image: Compression and Hoses         Automotive Stethoscope (electronic recommended)       Image: Compression and Hoses         Axle Stands (Jack Stands)       Image: Compression and Hoses         Axle Support Stands (Screw Jacks)       Image: Compression and Hoses         Battery/Starter/Charging System Tester       Image: Compression Gauge         Berch or Pedestal Grinder       Image: Compression Tester         Coolant/Combustion Gas Detector (Recommended)       Image: Compression Tester         Coolant/Combustion Gas Detector (Recommended)       Image: Compression Tester         Coolant Tester       Image: Compression Compression Tester and Adapters         Creeper       Image: Compression Compression Compression Gauge         Dial Indicator with Flex Arm and Clamp Base       Image: Compression		
Air Pressure Regulator       Air Atchet (3/8" drive)         Automotive Stethoscope (electronic recommended)       Axie Stands (Jack Stands)         Axle Stands (Jack Stands)       Axie Stands (Screw Jacks)         Battery Charger       Battery/Starter/Charging System Tester         Battery Conductance Tester (recommended)       Bearing Packer (hand operated)         Bearing Packer (hand operated)       Bearing Packer (hand operated)         Belt Tension Gauge       Goolant/Combustion Gas Detector (Recommended)         Coolant/Combustion Gas Detector (Recommended)       Coolant Tester         Cooling System Pressure Tester and Adapters       Creeper         Cylinder Leakage Tester       Dial Indicator with Flex Arm and Clamp Base         Digital Storage Oscilloscope (DSO)       Drill - 3/8" variable speed, reversible Drill         - 1/2" variable speed, reversible Drill       - 1/2" variable speed, reversible	Air Chisel Set (various bits)	
Air Ratchet (3/8" drive)         Automotive Stethoscope (electronic recommended)         Axle Stands (Jack Stands)         Axle Stands (Jack Stands)         Axle Support Stands (Screw Jacks)         Battery Charger         Battery/Charging System Tester         Battery Conductance Tester (recommended)         Bearing Packer (hand operated)         Bench or Pedestal Grinder         Compression Tester         Coolant/Combustion Gas Detector (Recommended)         Coolant Tester         Coolant Tester         Cooling System Pressure Tester and Adapters         Creeper         Cylinder Leakage Tester         Dial Indicator with Flex Arm and Clamp Base         Digital Storage Oscilloscope (DSO)         Drain Pans         Diril - 3/8" variable speed, reversible Drill         - 1/2" variable speed, reversible Drill	Air Compressor and Hoses	
Automotive Stethoscope (electronic recommended)         Axle Stands (Jack Stands)         Axle Support Stands (Screw Jacks)         Battery Charger         Battery/Charging System Tester         Battery Conductance Tester (recommended)         Bearing Packer (hand operated)         Belt Tension Gauge         Bench or Pedestal Grinder         Coolant/Combustion Gas Detector (Recommended)         Coolant/Combustion Gas Detector (Recommended)         Cooling System Pressure Tester and Adapters         Creeper         Cylinder Leakage Tester         Dial Indicator with Flex Arm and Clamp Base         Digital Storage Oscilloscope (DSO)         Drain Pans         Dirain Pans         Drain Pans         Drain Pans         - 1/2' variable speed, reversible	Air Pressure Regulator	
Axle Stands (Jack Stands)         Axle Support Stands (Screw Jacks)         Battery Charger         Battery/Starter/Charging System Tester         Battery Conductance Tester (recommended)         Bearing Packer (hand operated)         Belt Tension Gauge         Bench or Pedestal Grinder         Compression Tester         Coolant/Combustion Gas Detector (Recommended)         Coolant Tester         Cooling System Pressure Tester and Adapters         Creeper         Cylinder Leakage Tester         Dial Indicator with Flex Arm and Clamp Base         Digital Multimeter with various lead sets         Digital Storage Oscilloscope (DSO)         Drain Pans         Drill - 3/8" variable speed, reversible Drill         - 1/2" variable speed, reversible	Air Ratchet (3/8" drive)	
Axle Support Stands (Screw Jacks)         Battery Charger         Battery/Starter/Charging System Tester         Battery Conductance Tester (recommended)         Bearing Packer (hand operated)         Belt Tension Gauge         Bench or Pedestal Grinder         Coolant/Combustion Gas Detector (Recommended)         Coolant/Combustion Gas Detector (Recommended)         Coolant Tester         Cooling System Pressure Tester and Adapters         Creeper         Cylinder Leakage Tester         Digital Multimeter with various lead sets         Digital Storage Oscilloscope (DSO)         Drain Pans         Drill - 3/8" variable speed, reversible Drill         - 1/2" variable speed, reversible	Automotive Stethoscope (electronic recommended)	
Battery Charger         Battery/Starter/Charging System Tester         Battery Conductance Tester (recommended)         Bearing Packer (hand operated)         Belt Tension Gauge         Bench or Pedestal Grinder         Coolant/Combustion Gas Detector (Recommended)         Coolant Tester         Cooling System Pressure Tester and Adapters         Creeper         Cylinder Leakage Tester         Digital Multimeter with various lead sets         Digital Storage Oscilloscope (DSO)         Drain Pans         Drill - 3/8" variable speed, reversible	Axle Stands (Jack Stands)	
Battery/Starter/Charging System Tester         Battery Conductance Tester (recommended)         Bearing Packer (hand operated)         Belt Tension Gauge         Bench or Pedestal Grinder         Compression Tester         Coolant/Combustion Gas Detector (Recommended)         Coolant Tester         Coolant Tester         Cooling System Pressure Tester and Adapters         Creeper         Cylinder Leakage Tester         Dial Indicator with Flex Arm and Clamp Base         Digital Multimeter with various lead sets         Digital Storage Oscilloscope (DSO)         Drain Pans         Drill - 3/8" variable speed, reversible Drill         - 1/2" variable speed, reversible	Axle Support Stands (Screw Jacks)	
Battery Conductance Tester (recommended)         Bearing Packer (hand operated)         Belt Tension Gauge         Bench or Pedestal Grinder         Compression Tester         Coolant/Combustion Gas Detector (Recommended)         Coolant Tester         Cooling System Pressure Tester and Adapters         Creeper         Cylinder Leakage Tester         Dial Indicator with Flex Arm and Clamp Base         Digital Multimeter with various lead sets         Digital Storage Oscilloscope (DSO)         Drain Pans         Drill - 3/8" variable speed, reversible Drill		
Bearing Packer (hand operated)         Belt Tension Gauge         Bench or Pedestal Grinder         Compression Tester         Coolant/Combustion Gas Detector (Recommended)         Coolant Tester         Cooling System Pressure Tester and Adapters         Creeper         Cylinder Leakage Tester         Dial Indicator with Flex Arm and Clamp Base         Digital Multimeter with various lead sets         Digital Storage Oscilloscope (DSO)         Drain Pans         Drill - 3/8" variable speed, reversible Drill         - 1/2" variable speed, reversible	Battery/Starter/Charging System Tester	
Belt Tension Gauge         Bench or Pedestal Grinder         Compression Tester         Coolant/Combustion Gas Detector (Recommended)         Coolant Tester         Cooling System Pressure Tester and Adapters         Creeper         Cylinder Leakage Tester         Dial Indicator with Flex Arm and Clamp Base         Digital Multimeter with various lead sets         Digital Storage Oscilloscope (DSO)         Drain Pans         Drill - 3/8" variable speed, reversible Drill         - 1/2" variable speed, reversible	Battery Conductance Tester (recommended)	
Bench or Pedestal Grinder       Compression Tester         Coolant/Combustion Gas Detector (Recommended)       Coolant Tester         Cooling System Pressure Tester and Adapters       Cooling System Pressure Tester and Adapters         Creeper       Cylinder Leakage Tester         Dial Indicator with Flex Arm and Clamp Base       Digital Multimeter with various lead sets         Digital Storage Oscilloscope (DSO)       Drain Pans         Drill - 3/8" variable speed, reversible Drill       - 1/2" variable speed, reversible	Bearing Packer (hand operated)	
Compression Tester       Coolant/Combustion Gas Detector (Recommended)         Coolant Tester       Cooling System Pressure Tester and Adapters         Cooling System Pressure Tester and Adapters       Cooling Cypinder Leakage Tester         Cylinder Leakage Tester       Dial Indicator with Flex Arm and Clamp Base         Digital Multimeter with various lead sets       Digital Storage Oscilloscope (DSO)         Drain Pans       Drill - 3/8" variable speed, reversible Drill         - 1/2" variable speed, reversible       Cooling Coolin	Belt Tension Gauge	
Coolant/Combustion Gas Detector (Recommended)         Coolant Tester         Cooling System Pressure Tester and Adapters         Creeper         Cylinder Leakage Tester         Dial Indicator with Flex Arm and Clamp Base         Digital Multimeter with various lead sets         Digital Storage Oscilloscope (DSO)         Drain Pans         Drill - 3/8" variable speed, reversible Drill         - 1/2" variable speed, reversible	Bench or Pedestal Grinder	
Coolant Tester		
Cooling System Pressure Tester and Adapters         Creeper         Cylinder Leakage Tester         Dial Indicator with Flex Arm and Clamp Base         Digital Multimeter with various lead sets         Digital Storage Oscilloscope (DSO)         Drain Pans         Drill - 3/8" variable speed, reversible Drill         - 1/2" variable speed, reversible		
Creeper       Cylinder Leakage Tester         Dial Indicator with Flex Arm and Clamp Base       Digital Indicator with Flex Arm and Clamp Base         Digital Multimeter with various lead sets       Digital Storage Oscilloscope (DSO)         Drain Pans       Drill - 3/8" variable speed, reversible Drill         - 1/2" variable speed, reversible       Comparison		
Cylinder Leakage Tester	Cooling System Pressure Tester and Adapters	
Dial Indicator with Flex Arm and Clamp Base         Digital Multimeter with various lead sets         Digital Storage Oscilloscope (DSO)         Drain Pans         Drill - 3/8" variable speed, reversible Drill         - 1/2" variable speed, reversible		
Digital Multimeter with various lead sets         Digital Storage Oscilloscope (DSO)         Drain Pans         Drill - 3/8" variable speed, reversible Drill         - 1/2" variable speed, reversible		
Digital Storage Oscilloscope (DSO)         Drain Pans         Drill - 3/8" variable speed, reversible Drill         - 1/2" variable speed, reversible		
Drain Pans		
Drill - 3/8" variable speed, reversible       Drill         - 1/2" variable speed, reversible	Digital Storage Oscilloscope (DSO)	
- 1/2" variable speed, reversible		
Electric Heat Gun		
	Electric Heat Gun	

### **Recommended Equipment List**

#### Program: CIP#:

Automotive Technologies 47.0300.40

NOTE: The following items and descriptions are the recommended equipment guidelines for each **CTE Automotive Technologies** program. Please note that this list of recommended items does not necessarily need to be supported financially by Federal Perkins or State Priority funding sources. In many cases, local school district funds are used to purchase items on a regular basis (i.e. furniture, consumables, etc.) Further, please understand that this is not an exhaustive list. Local program and business needs may necessitate the purchase of additional equipment and software resources, as may the rapidly-changing nature of the industry-specific technologies used in the program.

Recommended Equipment and Software	
Item	Notes
Engine Coolant Recovery Equipment or Recycler or Coolant Disposal Contract Service	
Extension Cords	
Fender Covers	
Floor Jack (1½ Ton Minimum)	
Graphing Multimeter (GMM) Hand	
Held Vacuum Pump	
Hoist(s)	
Hood Prop	
Hydraulic Press with adapters	
Impact Socket Sets - 3/8" Drive (Standard and Metric)	
Impact Sockets	
→ 1/2" Drive (7/16" - 1 1/8")	
$\rightarrow$ 1/2" Drive (12mm – 24mm)	
ightarrow 1/2" Drive Deep (30 mm, 32 mm, 36mm) Impact Wrench	
$\rightarrow$ 1/2" Drive	
ightarrow 3/8" Drive Jumper Cables	
Master Puller Set	
Micrometer (Depth)	
Micrometers - 0-1", 1-2", 2-3", 3-4", 4-5" (Outside Type)	
Oil Can - Pump Type	
Oil Filter Wrench	
Oxy-Acetylene Torch Set	
Parts Cleaning Tank and Gloves (non-solvent based cleanser suggested) Remote Starter	
Switch	
Scan Tool (OBDII w/CAN capability) or Personal Computer (PC) with equivalent Interface	
capability	
Screw Extractor Set	
Seat Covers	
Serpentine Belt Tensioner Tools	
Snap Ring Pliers Set - external	
Snap Ring Pliers Set - internal	
Soldering Gun	
Soldering Iron (Pencil Tip) Spark Plug Boot Puller	
Tap and Die Set	
$\rightarrow$ Standard	
$\rightarrow$ Metric	
Temperature Sensing Device	
Thread Repair Insert Kit	
Tire Inflator Chuck	
Trouble/Work Lights (Fluorescent Preferred)	
Tube Quick Disconnect Tool Set	

### **Recommended Equipment List**

## Program: CIP#:

Automotive Technologies 47.0300.40

NOTE: The following items and descriptions are the recommended equipment guidelines for each **CTE Automotive Technologies** program. Please note that this list of recommended items does not necessarily need to be supported financially by Federal Perkins or State Priority funding sources. In many cases, local school district funds are used to purchase items on a regular basis (i.e. furniture, consumables, etc.) Further, please understand that this is not an exhaustive list. Local program and business needs may necessitate the purchase of additional equipment and software resources, as may the rapidly-changing nature of the industry-specific technologies used in the program.

Item         Notes           Tubing Cutter/Faring Set (Double-lap and ISO) Twist Drill Set	Recommended Equipment and Software	
Tubing Bender         Internet           Tubing Cutter/Flaring Set (Double-lap and ISO) Twist Drill Set         Inter Voiet Leak Detection Device (Black Light)           Utra Voiet Leak Detection Device (Black Light)         Inter Voiet Leak Detection Device (Black Light)           UB Core Removing Tool Vernier Calipers         Inter Voiet Leak Detection Device (Black Light)           Inter Voiet Leak Detection Device (Black Light)         Inter Voiet Leak Detection Device (Black Light)           Voit Deviner Calipers         Inter Voiet Leak Detection Device (Black Light)           Inter Voiet Leak Detection Device (Black Light)         Inter Voiet Leak Detection Device Colos           Bort Installation Tool         Inter Voiet Device Set           Constant Velocity Joint (CV) Service Tools:         Inter Voiet Device Tools:           Boot Clamp Pilers or Cimping Ring         Inter Voiet Colos           Chassis Ear (recommended)         Inter Tie Rod End Tool           Pitman Arm Puller         Inter Tie Rod End Tool           Power Steering Presure Gauges (recommended)         Inter Tier Rod End Tool           Strus Spring Compressor Tool         Steering Column Special Tool Set (appropriate for teaching units being utilized)           Tire Rod Piller         Inter Rod Rod Supplies           Tire Mounting Machine (tim clamp type)         Inter Rod Rod Supplies           Tire Mounting Machine (tim Clamp type)         Inter Rod Ro		
Tubing Cutter/Faring Set (Double-lap and ISO) Twist Drill Set	Tubing Bender	
Ultra Violat Laak Detection Device (Black Light)         Used Oil Receptacle with extension neck and funnel         Valve Core Removing Tool Vernier Calipers         → 0 - 6"         → 0 - 6"         → 0 - 6"         > 0 - 125mm Wheel Chooks         Workbenches with vises         Ball Joint Press and other Special Tools         Brake Pedal Depressor         Bushing Driver Set         Coll Spring Compressor Tool         Constant Valocity Joint (CV) Service Tools:         Boot Clamp Piters or Crimping Ring         Chassis Ear (recommended)         Hand Grease Gun         Inner Tie Rod End Tool         Pitman Arm Puller         - Power Steering Pump Pulley Special Tool Set (appropriate for units being taught)         Power Steering Pressure Gauges (recommended)         Strut Spring Compressor Tool         Strut Spring Compressor Tool         Strut Spring Compressor Tool         Tire Patoling Tools and Supplies         Wheel Balancer 1 Feols and Range Drup System (Including alignment tools)         Wheel Alignment Equipment-4 wheel (including alignment tools)         Wheel Balancer + Piessure or Vacuum         Brake Died Red Range Core Stet         Brake Died Red Range Core Stet         Brake Diedenet, Pressure or Vacuum		
Used Oil Receptace with extension neck and funnel         Valve Core Removing Tool Vernier Calipers         → 0 - 125mm Wheel Chocks         Ball Joint Press and other Special Tools         Ball Joint Press and other Special Tools         Barke Pedal Depressor         Bushing Driver Set         Cont Spring Compressor Tool         Contant Velocity Joint (CV) Service Tools:         Boot Installation Tool         Boot Clamp Pilers or Chimping Ring         Chassis Ear (recommended)         Hand Grease Gun         Inner Tie Rod End Tool         Pitman Arm Puller         - Power Steering Pressure Gauges (recommended)         Shock Absorber Tools         Strut Spring Compressor Tool         Strut Spring Compressor Tool         Strut Spring Compressor Tool         Strue Machine (rin clamp type)         Tire Pacting Tool set (appropriate for teaching utilized)         Tire Ado Puller         Wheel Alignment Equipment-4 wheel (Including alignment tools)         Wheel Balance - Electronic Type         Wheel Balance - Electronic Type         Wheel B		
Valve Core Removing Tool Vernier Calipers		
→ 0 - 0°        0 - 125mm Wheel Chocks           → 0 - 125mm Wheel Chocks         Workbenches with vises           Ball Joint Press and other Special Tools         Bits           Brake Pedal Depressor         Bushing Driver Set           Coil Spring Compressor Tool         Coil Spring Compressor Tool           Constant Velocity Joint (CV) Service Tools:         Boot Installation Tool           Boot Installation Tool         Boot Clamp Pilers or Crimping Ring           Chassis Ear (recommended)		
Workbenches with vises       Ball Joint Press and other Special Tools         Ball Joint Press and other Special Tools       Bit Brake Pedal Depressor         Bushing Driver Set       Coll Spring Compressor Tool         Constant Velocity Joint (CV) Service Tools:       Coll Spring Compressor Tool         Boot Clamp Piters or Crimping Ring       Coll Spring Compressor Tool         Constant Velocity Joint (CV) Service Tools:       Coll Spring Compressor Tool         Boot Clamp Piters or Crimping Ring       Coll Spring Compressor Coll         Chassis Ear (recommended)       Hand Grease Gun         Inner Tie Rot End Tool       Pitman Arm Puller         Power Steering Pump Pulley Special Tool Set (appropriate for units being taught)          Power Steering Pump Pulley Special Tool Set (appropriate for units being taught)          Power Steering Pump Pulley Special Tool Set (appropriate for units being utilized)       Strut Spring Compressor Tool         Strut Spring Column Special Tool Set (appropriate for teaching units being utilized)       Tire Mounting Machine (rim clamp type)         Tire Mounting Machine (rim clamp type)       Tire Patching Tools and Supplies         Wheel Alignmert Equipment-4 wheel (including alignment tools)       Wheel Balance - Electronic Type         Wheel Balance - F Electronic Type       Electronic Type         Brake Dise Mortor System (TPMS) (servicing tools)       Bearin		
Bail Joint Press and other Special Tools       Image: Comparison of the system of the sy	$\rightarrow$ 0 - 125mm Wheel Chocks	
Brake Pedal Depressor       Image: Compressor Tool         Bushing Driver Set       Image: Compressor Tool         Coil Spring Compressor Tool       Image: Compressor Tool         Constant Velocity Joint (CV) Service Tools:       Image: Compressor Tool         Boot Itamp Pilers or Crimping Ring       Image: Compressor Tool         Chassis Ear (recommended)       Image: Compressor Tool         Hand Grease Gun       Image: Compressor Tool         Inner Tie Rod End Tool       Image: Compressor Tool         Power Steering Pressure Gauges (recommended)       Image: Compressor Tool         Steering Column Special Tool Set (appropriate for units being taught)       Image: Compressor Tool         Steering Column Special Tool Set (appropriate for teaching units being utilized)       Image: Compressor Tool         Steering Column Special Tool Set (appropriate for teaching units being utilized)       Image: Compressor Tool         Steering Column Special Tool Set (appropriate for teaching units being utilized)       Image: Compressor Tool         Tire Rothing Machine (rim clamp type)       Image: Compressor Tool         Tire Rothing Tools and Supplies       Image: Compressor Compressor Compressor         Wheel Alignment Equipment-4 wheel (including alignment tools)       Image: Compressor         Wheel Balancer - Electronic Type       Image: Compressor Compressor         Wheel Balancer - Pressure Monitor Sys	Workbenches with vises	
Brake Pedal Depressor       Image: Compressor Tool         Bushing Driver Set       Image: Compressor Tool         Coil Spring Compressor Tool       Image: Compressor Tool         Constant Velocity Joint (CV) Service Tools:       Image: Compressor Tool         Boot Itamp Pilers or Crimping Ring       Image: Compressor Tool         Chassis Ear (recommended)       Image: Compressor Tool         Hand Grease Gun       Image: Compressor Tool         Inner Tie Rod End Tool       Image: Compressor Tool         Power Steering Pressure Gauges (recommended)       Image: Compressor Tool         Steering Column Special Tool Set (appropriate for units being taught)       Image: Compressor Tool         Steering Column Special Tool Set (appropriate for teaching units being utilized)       Image: Compressor Tool         Steering Column Special Tool Set (appropriate for teaching units being utilized)       Image: Compressor Tool         Steering Column Special Tool Set (appropriate for teaching units being utilized)       Image: Compressor Tool         Tire Rothing Machine (rim clamp type)       Image: Compressor Tool         Tire Rothing Tools and Supplies       Image: Compressor Compressor Compressor         Wheel Alignment Equipment-4 wheel (including alignment tools)       Image: Compressor         Wheel Balancer - Electronic Type       Image: Compressor Compressor         Wheel Balancer - Pressure Monitor Sys	Ball Joint Press and other Special Tools	
Coil Spring Compressor Tool       Constant Velocity Joint (CV) Service Tools:         Boot Installation Tool       Boot Installation Tool         Boot Installation Tool       Chassis Ear (recommended)         Hand Grease Gun       Inner Tie Rod End Tool         Pitman Arm Puller		
Coil Spring Compressor Tool       Constant Velocity Joint (CV) Service Tools:         Boot Installation Tool       Boot Installation Tool         Boot Installation Tool       Chassis Ear (recommended)         Hand Grease Gun       Inner Tie Rod End Tool         Pitman Arm Puller	Bushing Driver Set	
Constant Velocity Joint (CV) Service Tools:	Coil Spring Compressor Tool	
Boot Clamp Pliers or Crimping Ring		
Chassis Ear (recommended)       Hand Grease Gun         Inner Tie Rod End Tool       P         Pitman Arm Puller       P         → Power Steering Pump Pulley Special Tool Set (appropriate for units being taught)       P         → Power Steering Pressure Gauges (recommended)       Shock Absorber Tools         Strut Spring Compressor Tool       Steering Column Special Tool Set (appropriate for teaching units being utilized)         Tire Rod Puller       Tire Mounting Machine (rim clamp type)         Tire Rod Puller       Steering Tool Supplies         Wheel Alignment Equipment-4 wheel (including alignment tools)       Wheel Balancer - Electronic Type         Wheel Balancer - Electronic Type       Stearing Seal and Race Driver Set         Brake Bleeder, Pressure or Vacuum       Brake Bleeder, Pressure or Vacuum         Brake Bleeder, Pressure or Vacuum       Brake Bleeder, Pressure or Vacuum         Brake Disc Micrometer and Calibration Equipment       Brake Bleeder, Pressure or Vacuum         Brake Bleeder, Pressure or Vacuum       Brake Lathe (bench with disc and drum service attachments)         Brake Disc Micrometer and Calibration Equipment       Brake Date (and Calibration Equipment         Brake Lathe (bench with disc and drum service attachments)       Brake Spring Remover/Installer         Brake Spring Pliers       Brake Spring Pliers       Brake Spring Pliers		
Hand Grease Gun       Inner Tie Rod End Tool         Pitman Arm Puller	Boot Clamp Pliers or Crimping Ring	
Inner Tie Rod End Tool         Pitman Arm Puller         → Power Steering Pump Pulley Special Tool Set (appropriate for units being taught)         → Power Steering Pressure Gauges (recommended)         Shock Absorber Tools         Strut Spring Compressor Tool         Steering Column Special Tool Set (appropriate for teaching units being utilized)         Tie Rod Puller         Tire Mounting Machine (rim clamp type)         Tire Patching Tools and Supplies         Wheel Alignment Equipment-4 wheel (including alignment tools)         Wheel Balancer - Electronic Type         Wheel Balancer - Electronic Type         Wheel Balancer - Steet		
Pitman Arm Puller	Hand Grease Gun	
→ Power Steering Pump Pulley Special Tool Set (appropriate for units being taught)     → Power Steering Pressure Gauges (recommended)     Shock Absorber Tools     Strut Spring Compressor Tool     Steering Column Special Tool Set (appropriate for teaching units being utilized)     Tie Rod Puller     Tire Mounting Machine (rim clamp type)     Tire Patching Tools and Supplies     Wheel Alignment Equipment-4 wheel (including alignment tools)     Wheel Balancer - Electronic Type     Wheel Weight Pliers     Tire Pressure Monitor System (TPMS) (servicing tools)     Bearing Seal and Race Driver Set     Brake Bleeder, Pressure or Vacuum     Brake Disc Micrometer     Brake Lathe (bench with disc and drum service attachments)     Brake Lathe (bench with disc and drum service attachments)     Brake Spring Remover/Installer     Brake Spring Remover/Installer	Inner Tie Rod End Tool	
→ Power Steering Pressure Gauges (recommended)           Shock Absorber Tools           Strut Spring Compressor Tool           Steering Column Special Tool Set (appropriate for teaching units being utilized)           Tie Rod Puller           Tire Mounting Machine (rim clamp type)           Tire Patching Tools and Supplies           Wheel Alignment Equipment-4 wheel (including alignment tools)           Wheel Balancer - Electronic Type           Wheel Weight Pliers           Tire Pressure Monitor System (TPMS) (servicing tools)           Bearing Seal and Race Driver Set           Brake Bleeder, Pressure or Vacuum           Brake Disc Micrometer           Brake Dury Micrometer and Calibration Equipment           Brake Lathe (bench with disc and drum service attachments)           Brake Lathe (on car)           Brake Spring Remover/Installer           Brake Spring Remover/Installer	Pitman Arm Puller	
Shock Absorber Tools         Strut Spring Compressor Tool         Steering Column Special Tool Set (appropriate for teaching units being utilized)         Tie Rod Puller         Tire Patching Tools and Supplies         Wheel Alignment Equipment-4 wheel (including alignment tools)         Wheel Balancer - Electronic Type         Wheel Weight Pliers         Tire Pressure Monitor System (TPMS) (servicing tools)         Bearing Seal and Race Driver Set         Brake Disc Micrometer         Brake Disc Micrometer and Calibration Equipment         Brake Lathe (bench with disc and drum service attachments)         Brake Shoe Adjusting Gauge         Brake Spring Remover/Installer         Brake Spring Pliers	ightarrow Power Steering Pump Pulley Special Tool Set (appropriate for units being taught)	
Strut Spring Compressor Tool       Steering Column Special Tool Set (appropriate for teaching units being utilized)         Tie Rod Puller       Tite Mounting Machine (rim clamp type)         Tire Patching Tools and Supplies       Wheel Alignment Equipment-4 wheel (including alignment tools)         Wheel Alignment Equipment-4 wheel (including alignment tools)       Wheel Balancer - Electronic Type         Wheel Balancer - Electronic Type       Wheel Weight Pliers         Tire Pressure Monitor System (TPMS) (servicing tools)       Eearing Seal and Race Driver Set         Brake Bleeder, Pressure or Vacuum       Brake Disc Micrometer         Brake Disc Micrometer       Eearing Seal and drum service attachments)         Brake Lathe (bench with disc and drum service attachments)       Brake Lathe (on car)         Brake Shoe Adjusting Gauge       Brake Spring Remover/Installer         Brake Spring Remover/Installer       Eense	→ Power Steering Pressure Gauges (recommended)	
Steering Column Special Tool Set (appropriate for teaching units being utilized)         Tie Rod Puller         Tire Mounting Machine (rim clamp type)         Tire Patching Tools and Supplies         Wheel Alignment Equipment-4 wheel (including alignment tools)         Wheel Balancer - Electronic Type         Wheel Weight Pliers         Tire Pressure Monitor System (TPMS) (servicing tools)         Bearing Seal and Race Driver Set         Brake Bleeder, Pressure or Vacuum         Brake Disc Micrometer         Brake Drum Micrometer and Calibration Equipment         Brake Drum Micrometer and Calibration Equipment         Brake Lathe (on car)         Brake Spring Remover/Installer         Brake Spring Pliers	Shock Absorber Tools	
Tie Rod Puller         Tire Mounting Machine (rim clamp type)         Tire Patching Tools and Supplies         Wheel Alignment Equipment-4 wheel (including alignment tools)         Wheel Balancer - Electronic Type         Wheel Weight Pliers         Tire Pressure Monitor System (TPMS) (servicing tools)         Bearing Seal and Race Driver Set         Brake Bleeder, Pressure or Vacuum         Brake Disc Micrometer and Calibration Equipment         Brake Drum Micrometer and Calibration Equipment         Brake Lathe (bench with disc and drum service attachments)         Brake Lathe (on car)         Brake Spring Remover/Installer         Brake Spring Pliers	Strut Spring Compressor Tool	
Tire Mounting Machine (rim clamp type)         Tire Patching Tools and Supplies         Wheel Alignment Equipment-4 wheel (including alignment tools)         Wheel Balancer - Electronic Type         Wheel Weight Pliers         Tire Pressure Monitor System (TPMS) (servicing tools)         Bearing Seal and Race Driver Set         Brake Bleeder, Pressure or Vacuum         Brake Disc Micrometer         Brake Drum Micrometer and Calibration Equipment         Brake Lathe (bench with disc and drum service attachments)         Brake Spring Remover/Installer         Brake Spring Pliers	Steering Column Special Tool Set (appropriate for teaching units being utilized)	
Tire Patching Tools and Supplies         Wheel Alignment Equipment-4 wheel (including alignment tools)         Wheel Balancer - Electronic Type         Wheel Weight Pliers         Tire Pressure Monitor System (TPMS) (servicing tools)         Bearing Seal and Race Driver Set         Brake Bleeder, Pressure or Vacuum         Brake Disc Micrometer         Brake Drum Micrometer and Calibration Equipment         Brake Lathe (bench with disc and drum service attachments)         Brake Shoe Adjusting Gauge         Brake Spring Remover/Installer         Brake Spring Pliers	Tie Rod Puller	
Wheel Alignment Equipment-4 wheel (including alignment tools)         Wheel Balancer - Electronic Type         Wheel Weight Pliers         Tire Pressure Monitor System (TPMS) (servicing tools)         Bearing Seal and Race Driver Set         Brake Bleeder, Pressure or Vacuum         Brake Disc Micrometer         Brake Drum Micrometer and Calibration Equipment         Brake Lathe (bench with disc and drum service attachments)         Brake Shoe Adjusting Gauge         Brake Spring Remover/Installer         Brake Spring Pliers	Tire Mounting Machine (rim clamp type)	
Wheel Balancer - Electronic Type         Wheel Weight Pliers         Tire Pressure Monitor System (TPMS) (servicing tools)         Bearing Seal and Race Driver Set         Brake Bleeder, Pressure or Vacuum         Brake Disc Micrometer         Brake Drum Micrometer and Calibration Equipment         Brake Lathe (bench with disc and drum service attachments)         Brake Lathe (on car)         Brake Shoe Adjusting Gauge         Brake Spring Remover/Installer         Brake Spring Pliers	Tire Patching Tools and Supplies	
Wheel Weight Pliers       Image: Constraint of the second se	Wheel Alignment Equipment-4 wheel (including alignment tools)	
Tire Pressure Monitor System (TPMS) (servicing tools)         Bearing Seal and Race Driver Set         Brake Bleeder, Pressure or Vacuum         Brake Disc Micrometer         Brake Drum Micrometer and Calibration Equipment         Brake Lathe (bench with disc and drum service attachments)         Brake Shoe Adjusting Gauge         Brake Spring Remover/Installer         Brake Spring Pliers	Wheel Balancer - Electronic Type	
Bearing Seal and Race Driver Set       Image: Seal and Race Driver Set         Brake Bleeder, Pressure or Vacuum       Image: Seal and Race Driver Set         Brake Disc Micrometer       Image: Seal and Calibration Equipment         Brake Drum Micrometer and Calibration Equipment       Image: Seal and Calibration Equipment         Brake Lathe (bench with disc and drum service attachments)       Image: Seal and Calibration Equipment         Brake Lathe (on car)       Image: Seal and Calibration Equipment         Brake Shoe Adjusting Gauge       Image: Seal and Calibration Equipment         Brake Spring Remover/Installer       Image: Seal and Calibration Equipment         Brake Spring Pliers       Image: Seal and Calibration Equipment	Wheel Weight Pliers	
Brake Bleeder, Pressure or Vacuum         Brake Disc Micrometer         Brake Drum Micrometer and Calibration Equipment         Brake Lathe (bench with disc and drum service attachments)         Brake Lathe (on car)         Brake Shoe Adjusting Gauge         Brake Spring Remover/Installer         Brake Spring Pliers		
Brake Disc Micrometer       Brake Disc Micrometer and Calibration Equipment         Brake Drum Micrometer and Calibration Equipment       Brake Lathe (bench with disc and drum service attachments)         Brake Lathe (on car)       Brake Shoe Adjusting Gauge         Brake Spring Remover/Installer       Brake Spring Pliers	Bearing Seal and Race Driver Set	
Brake Drum Micrometer and Calibration Equipment       Image: Calibration Equipment         Brake Lathe (bench with disc and drum service attachments)       Image: Calibration Equipment         Brake Lathe (on car)       Image: Calibration Equipment         Brake Shoe Adjusting Gauge       Image: Calibration Equipment         Brake Spring Remover/Installer       Image: Calibration Equipment         Brake Spring Pliers       Image: Calibration Equipment	Brake Bleeder, Pressure or Vacuum	
Brake Lathe (bench with disc and drum service attachments)       Brake Lathe (on car)         Brake Lathe (on car)       Brake Shoe Adjusting Gauge         Brake Spring Remover/Installer       Brake Spring Pliers	Brake Disc Micrometer	
Brake Lathe (on car)     Brake Shoe Adjusting Gauge       Brake Spring Remover/Installer     Brake Spring Pliers	Brake Drum Micrometer and Calibration Equipment	
Brake Shoe Adjusting Gauge       Brake Spring Remover/Installer       Brake Spring Pliers	Brake Lathe (bench with disc and drum service attachments)	
Brake Spring Remover/Installer Brake Spring Pliers	Brake Lathe (on car)	
Brake Spring Pliers		
	Brake Spring Remover/Installer	
Brake Spoon	Brake Spring Pliers	
	Brake Spoon	

### **Recommended Equipment List**

## Program: CIP#:

Automotive Technologies 47.0300.40

NOTE: The following items and descriptions are the recommended equipment guidelines for each **CTE Automotive Technologies** program. Please note that this list of recommended items does not necessarily need to be supported financially by Federal Perkins or State Priority funding sources. In many cases, local school district funds are used to purchase items on a regular basis (i.e. furniture, consumables, etc.) Further, please understand that this is not an exhaustive list. Local program and business needs may necessitate the purchase of additional equipment and software resources, as may the rapidly-changing nature of the industry-specific technologies used in the program.

Recommended Equipment and Software	
ltem	Notes
Piston Retraction Set	
A/C Compressor Clutch Service Tools	
A/C Service Port Adapter Set	
Dye Injector	
Hygrometer	
Leak Detector (SAE Standard)	
Manifold Gauge Set or equivalent (HFC-134a)	
Refrigerant Charging Station (HFC-134a) or equivalent	
Refrigerant Identification Equipment	
Refrigerant Recovery/Recycling Machine (HFC-134a)	
Thermometer	
Four or Five Gas Exhaust Analyzer (Five Gas Recommended)	
Fuel Injection Pressure Gauge Sets with Adapters	
Injector Pulse Tester	
Leak Detector (Smoke or Nitrogen)	
Logic Probe (suggested)	
Oxygen Sensor Socket	
Pinch-off Pliers	
Sending Unit Socket(s)	
Spark Plug Thread Tap	
Spark Tester	
Timing Advance Light	
Vacuum/Pressure Gauge	
Differential Setup Tools (appropriate for units being taught)	
Hydraulic Pressure Gauge Set	
Front Wheel Drive Engine Support Fixture	
Transaxle Removal and Installation Equipment	
Transmission Jack(s)	
Transmission/Transaxle Flushing Equipment (recommended)	
Transmission/Transaxle Holding Fixtures	
Transmission/Transaxle Special Tool Sets (appropriate for units being utilized)	
Axle Nut Socket Set (or equivalent)	
Clutch Alignment Set	
Clutch Pilot Bearing/Bushing Puller/Installer	
Differential Setup Tools (appropriate for units being taught)	
Front Wheel Drive Engine Support Fixture	
Rotating Torque Wrench (beam-type or equivalent)	
Transaxle Removal and Installation Equipment	
Special Tools for Transmissions/Transaxles (appropriate for units being taught)	
Transmission/Transaxle Holding Fixtures	
Transmission Jack(s) Universal Joint Tools	
Connector Pick Tool Set	

### **Recommended Equipment List**

#### Program: CIP#:

Automotive Technologies 47.0300.40

NOTE: The following items and descriptions are the recommended equipment guidelines for each **CTE Automotive Technologies** program. Please note that this list of recommended items does not necessarily need to be supported financially by Federal Perkins or State Priority funding sources. In many cases, local school district funds are used to purchase items on a regular basis (i.e. furniture, consumables, etc.) Further, please understand that this is not an exhaustive list. Local program and business needs may necessitate the purchase of additional equipment and software resources, as may the rapidly-changing nature of the industry-specific technologies used in the program.

Recommended Equipment and Software	
Item	Notes
Door Panel Trim Tool(s)	
Headlight Aimer or Screen	
Heat Gun (or equivalent for heat shrinking operations)	
Wire and Terminal Repair Kit	
Ball (Small Hole) Gauges	
Cam Bearing Driver Set (suggested)	
Camshaft Holding Tool (appropriate for units being taught)	
Cylinder Deglazer	
Dial Bore Indicator	
Antifreeze/Coolant Tester Engine Stands/Benches	
Inside Micrometer Set:	
→ 0 - 6"	
ightarrow 0 - 125mm Oil Pressure Gauge Outside Micrometer Set:	
$\rightarrow$ 0 - 6"	
→ 0 - 125mm	
Portable Crane - 1/2 Ton	
Ring Compressor	
Ring Expander	
Ring Groove Cleaner	
Straight Edge	
Telescopic Gauge Set	
Torque Angle Gauge	
Transaxle Removal and Installation Equipment	
V-Blocks	
Valve Spring Compressor	
Valve Spring Tester	