

# Equipment List

## Automotive Technologies Automotive Collision Repair - Option B

### GENERAL SHOP EQUIPMENT

Air Blow Guns - OSHA Standard  
Air System - Air Compressor  
Air Hoses - with quick release couplings  
Air Lines  
Regulator  
Water Extractors  
Air Transformer/Regulators  
Corrosion Protection Application Equipment  
Creepers  
Exhaust Fans  
Fender Stands  
Grounded Extension Cords  
Heat Lamp  
Jack Stands  
Overhead Ventilation - for welding area  
Oxy-acetylene Torch Set  
Portable Floodlights  
Powered Vehicle Mover (recommended)  
Service Jacks  
Shop Brooms  
Dust Pans  
Floor Squeegee  
Floor Mop and Bucket  
Storage Cabinets  
Trash Cans in accordance with local, state, and federal regulations  
Trouble/Work Lights - fluorescent preferred  
Work Benches – steel top with vice  
Work Stands – portable

### SPECIAL SAFETY ITEMS

(All equipment must meet or exceed federal, state, and local regulations.)

Bloodborn Pathogen Kit  
\*Ear Protection - for students, instructors, and visitors  
Eye Wash Basin  
Eye Wash Station, portable (saline)  
Fire Blankets and Case  
Fire Extinguishers - by type as required  
First Aid Kit

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### **Career Preparation**

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Flammable Material Storage Locker - meeting fire and building codes  
Hazardous Spill Response Kit  
OSHA "Right to Know" Compliance Kit  
Protective Gloves and Clothing - for handling paint and related chemicals  
Respiratory Protection Equipment – as required by OSHA  
Safety Cans - for solvents, rags, etc.  
\*Safety Glasses, Clear and Tinted Face Shields, and Goggles - for students, instructors, and visitors  
\*Safety Shoes - as required  
Safety Shower - as required  
Vacuum System - for air sanders (recommended)  
Welding Blankets  
Welding Shields  
Welding Respirator  
\* = Personal Student Items

## **HAND TOOLS**

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

### **COMMON HAND TOOLS**

Adjustable Wrenches - 6" and 12"  
Allen Wrench Set - Standard (.050" - 3/8")  
Allen Wrench Set - Metric (2mm - 7mm)  
Anti-freeze Drain Pan  
Battery Post Cleaner  
Battery Terminal Pliers  
Battery Terminal Puller  
Brake Spoon  
Chisels:  
    Cape 5/16"  
    Cold 3/8", 3/4"  
Combination Wrenches:  
    Standard (1/4" - 1")  
    Metric (7mm - 19mm)  
    Crowfoot Wrench Set - Metric  
    Crowfoot Wrench Set - Standard  
    DMM (Digital Multimeter)  
    Drill Motors - 3/8" and 1/2" variable speed, reversible  
Feeler Gauge (Blade Type):  
    .002" - .040"  
    .006mm - .070mm  
Flare Nut (tubing) Wrenches:  
    Standard 3/8" - 3/4"  
    Metric 10mm - 17mm

Flashlight and batteries

Hack Saw and blades

Hammers:

- 16 oz. Ball Peen

- Brass

- Dead Blow Mallet

- Plastic Tip

- Sledge

- Soft Faced

- Rubber Mallet

Ignition Wrench Set - Standard and Metric

Impact Wrenches - 3/8" and 1/2"

Inspection Mirror

Jumper Wire Set (with various adapters)

Oil Drain/Storage Pan

Oil Filter Wrenches

Pickup Tool - magnetic and claw type

Pliers:

- Combination

- Hose Clamp

- Locking Jaw

- Needle Nose

- Side Cutting

- Slip Joint (Water Pump)

- Snap Ring Plier Set - internal and external

Power Reciprocating Saw and blades

Punches:

- Center

- Brass Drift

- Pin 1/8", 3/16", 1/4", 5/16"

- Taper 3/8", 1/2", 5/8"

Screwdriver - Blade Type:

- Stubby

- 6", 9", 12"

- Offset

Screwdrivers - Phillips:

- Stubby #1, #2

- 6" #1, #2

- 12" #3

- Offset #2

Screwdrivers - Posidrive Set #1, #2, #3, #4

Screwdrivers -

- Torx® Set:

- T-8, T-10, T-15, T-20, T-25,

- T-27, T-30, T-40, T-50, T-55

Torx® External Set:

E-4, E-5, E-6, E-8,  
E-10, E-12, E-14, E16

Torx® Tamper Proof Set:

T8, T19, T15, T20, T27,  
T30, T40, T45, T50, T55

Screw Extractor Set

Screw Starter:

Phillips  
Standard

Socket Set - 1/4" Drive:

1/4" - 1/2" Standard Depth  
1/4" - 1/2" Deep  
6mm - 12mm Standard Depth  
6mm - 12mm Deep  
Flex/Universal Type - Standard and Metric  
1/4" Universal Joint  
3", 6" Extensions  
Ratchet

Socket Set - 3/8" Drive:

5/16" - 3/4" Standard Depth (6 point)  
3/8" - 3/4" Deep (6 point)  
9mm - 19mm Standard Depth  
9mm - 19mm Deep  
3", 6", 12", 18" Extensions  
Flexhead Ratchet  
Impact Sockets - 3/8" - 3/4" Standard  
Impact Sockets - 10mm - 19mm  
Impact Driver  
Ratchet  
Speed Handle  
Universal Joint

Socket Set - 1/2" Drive:

7/16" - 1 1/8" Standard Depth  
7/16" - 1 1/8" Deep  
10mm - 25mm Standard Depth  
10mm - 25mm Deep  
5", 10" Extensions  
Flex Handle (Breaker Bar)  
Impact Sockets Standard 7/16" - 1 1/8"  
Impact Sockets 12mm - 32mm  
Impact Driver  
Ratchet

Torque Wrenches (Sound/Click and Impulse Type):

3/8" Drive lb. in. (30 - 250)  
3/8" Drive lb. ft. (5 - 75)  
1/2" Drive lb. ft. (50 - 250)

## MISCELLANEOUS TOOLS

Assorted Welding Vice Grips  
Caulking Gun (pneumatic type)  
C-clamps - assorted  
Files - for steel and aluminum  
Hole Saw Set - 1/2" to 2"  
Lug Wrench  
Oil Can (Pump Type)  
Pry Bar Set  
Putty Knife  
Rivet Guns - heavy duty blind and large for 3/16" and 1/4"  
Sanding Tools - assorted  
Scrapers  
Scratch Awl  
Tap and Die Sets - Standard and Metric  
Tape Measure - Standard and Metric  
Tin Snips  
Tire Pressure Gauge  
Tire Inflator  
Twist Drill Sets:  
    Standard - 1/64" - 1/4" by 1/16" and Metric Equivalent Standard - 1/4" - 1/2" by 1/16" and Metric Equivalent  
Wire Brushes - hand and powered  
Special Removing and Releasing Tools:  
    Door handle removing tool Door hinge spring and pin remover Miscellaneous interior and exterior trim removing tools Reveal moulding tools Spring lock coupler tool set Stationary glass removal tools  
    Windshield wiper removing tool

## BODY WORKING TOOLS

Assorted files - for metal and plastic finishing, including:  
    Air Files  
    Body Files  
    Body Filler Shaping Files (Cheese Grater/Shredder)  
    Hand Sanding Pads  
    Metal Files  
    Sanding Blocks (short and long)  
    Sanding Boards (short and long)  
Body Hammers:  
    Cross Chisel  
    Door skin Hammer  
    General Purpose Pick  
    Large Face Finishing  
    Long Pick  
    Short Utility Pick  
    Shrinking

Dollies:

- Bumping File
- Dinging Spoon
- Door skin Dolly
- Fender Dolly
- Inside Heavy Duty Spoon
- Inside High Crown
- Inside Medium Crown
- Spoon Dolly (“Dolly on a stick”)
- Toe Dolly
- Universal Dolly

Filler Spreaders and Applicators - assorted types and sizes

Picks - assorted

Punches and Chisels - assorted:

- Air Chisel Set - various bits
- Center Punch
- Flat Chisels - 1/4" - 3/4"
- Long Center Punch
- Long Flat Chisels - 1/4" - 3/4"
- Long Pin Punches - 1/16" - 3/8"
- Long Tapered Punches - 3/8" - 5/8"
- Pin Punches - 1/16" - 3/8"
- Punch/Chisel Holder
- Round Nose Cape Chisel
- Saws with Metal Blades
- Short Tapered Punches
- Starter Punches - 1/16" - 3/8"

## **SPECIALTY TOOLS AND EQUIPMENT**

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 or to the program. No specific type or brand names are identified because they will vary in each local situation.

## **STRUCTURAL ANALYSIS AND DAMAGE REPAIR**

Everything listed under Non-Structural Analysis and Damage Repair plus:

- Frame/Unibody Straightening Equipment -
  - Bench/rack or floor-mounted system with multiple pull capacity
  - Self-centering Gauges
  - Universal Measuring System with minimum capability to measure 2/3rds of the total vehicle using:
    - 3 self-centering gauges, 1 tram gauge, and a strut tower measurement capability to simultaneously measure length, height, and width, **OR** incorporating a mechanical (to include strut tower gauge assembly), laser, or computerized measuring system.
  - Tram Gauges

## NON-STRUCTURAL ANALYSIS AND DAMAGE REPAIR

Abrasive Cut-off Tool and Discs  
Abrasive Disc Shaper  
Anchoring System  
Car Lift (capable of totally lifting the vehicle)  
MIG Welders and accessories  
Plasma Cutting Torch (recommended)  
Portable Hydraulic Ram - with attachments  
Pressure Washer  
Portable Power Tools -  
    Abrasive Blaster and appropriate personal safety equipment  
    Die Grinder - with attachments  
    Grinders  
    Metal Shears  
    Nibbler  
    Sanders  
Pulling and Holding Equipment Set - to include:  
    Body Clamps  
    Cable or Chain Ratchet  
    Sill Clamps  
Slide Hammer - complete with attachments  
Stationary Power Tools -  
    Bench Grinder  
    Drill Press (recommended)  
Step Ladder  
Structural Adhesive Guns (dispenser) – two component  
Vacuum Cleaner  
Welding Safety Equipment - to include:  
    Aprons  
    Face Shields  
    Gloves  
    Goggles  
    Helmets  
    Jackets  
    Respirators  
    Safety Glasses  
    Assorted Welding Vise-grips  
    Stud Welding Gun Kit  
    Welding Blanket  
    And all appropriate safety equipment  
Weld-on Pulling Tool and Attachments

## **MECHANICAL AND ELECTRICAL COMPONENTS**

Refrigerant Recovery System for R12 and 134a  
Air-conditioning gauges, leak detector, and vacuum pump  
Ball-joint Fork  
Battery Charger - with boost capability  
Brake Bleeder - vacuum assisted  
Chassis Lubricator  
Connector Pick Tool Set  
Cooling System Pressure Tester  
Crane/Hoist - portable, 2-ton capacity  
Gear Puller Set - heavy duty with attachments  
Headlamp Aiming Equipment  
Heat Gun  
Hydraulic Press - with adapters  
Pitman Arm Puller  
Soldering Gun/Iron  
Spring/Strut Compressor Tool  
Spring Compressor  
Tie Rod Puller  
Wheel Alignment System (4-wheel)  
Wire and Terminal Repair Kit

## **PLASTICS AND ADHESIVES**

Plastic Welder  
Die Grinding Tool Set  
Disc Grinder - 3"  
Heat Gun  
Structural Adhesives Guns (dispenser) - two-component

## **PAINTING AND REFINISHING**

Air Cap Test Gauge  
Air Sanders  
Color-matching Light System  
Dry Film Thickness Gauge with a + or - of 1/10th of a mil thickness capabilities  
Enclosed Paint Spray Booth to comply with local, state and federal regulation (downdraft booth recommended)  
Hand Sanding Pads  
Hazardous Material Spill Kit  
Masking Equipment –  
    Car Covers Paper and Tape Dispenser Wheel Covers  
Paint Mixing Bank with Measuring Equipment  
Paint Shaker  
Paint Storage Room/Locker in accordance with local, state, and federal regulations

Personal Safety Equipment (painting gloves, suits, hoods, respirators, etc.)  
Portable Paint Curing Equipment (infrared)  
Prep Station - (recommended)  
Sanding Blocks (short and long)  
Sanding Sponges  
Spray Guns -  
    HVLV/LVLP (high volume low pressure/low volume low pressure)  
    Spray gun cleaning equipment in accordance with local, state, and federal regulations  
    (Enclosed recommended) Squeegees (assorted sizes)  
Supplied Air Respirator (SAR)  
Variable Speed Buffer/Polisher  
Waste disposal/recycle program in accordance with local, state, and federal regulations

### **ADDITIONAL FACILITY REQUIREMENTS**

The facilities should meet all applicable safety standards and an emergency plan should be in place and posted in all classrooms and lab/shops areas.

A regular facilities maintenance program should be used to assure facilities are suitable when required for instruction.

The classroom(s), lab/shop, and support area(s) should be kept clean and orderly.

An area separate from the shop should be available and convenient for the instructor(s) use as an office.

A classroom convenient to, but separate from, the lab/shop area must be available for instruction and other non-lab/shop activities.

Storage areas for tools, parts, supplies, and automobiles should be sufficient to support the activities outlined in the program goals and performance objectives. Security should be provided to prevent pilferage and vandalism.

Restrooms, clean-up areas, and lockers should be provided for both male and female students and should be convenient to the instructional area.

An adequate exhaust fume removal system should be in place and operational. When appropriate, heating and cooling systems should be used to provide sufficient comfort for learning.

A first aid kit should be in place and comply with local regulations.