

# TRADE: AUTOMOTIVE SERVICE TECHNICIAN LEVEL / YEAR: ONE

## Apprenticeship Course Outline

(based on former ITAC curriculum)

| Module | A | USE SAFE WORK PRACTICES  |
|--------|---|--|
|        |   | Use safe and acceptable work habits  |
|        |   | Locate technical information   |
|        |   | Describe general shop administration and practices   |
|        |   | Identify basic hand tools  |
|        |   | Use power tools  |
|        |   | Maintain cutting tools   |
|        |   | Use measuring tools  |
|        |   | Use threading and thread service tools   |
|        |   | Use pipe, tubing, hose and belts   |
|        |   | Use shop equipment   |
| Module | B | CUT, BRAZE AND WELD  |
|        |   | Identify the gases, components and component handling procedures for oxy-fuel cutting and welding  |
|        |   | Assemble, test, light, adjust, shut-down and disassemble a portable oxyacetylene outfit            |
|        |   | Perform guided and free hand cuts on mild steel plate, found stock and angle iron and pierce holes |
|        |   | Weld mild steel plate in the flat position   |
|        |   | Braze-weld lap joints on mild steel plate  |
|        |   | Identify the components and operation of electric arc welding                                      |
|        |   | Weld mild steel with electric arc welders  |
| Module | C | SERVICE WHEELS, HUBS, TIRES AND BEARINGS   |
|        |   | Service wheels and bias, bias-belted and radial tires  |
|        |   | Service hubs and anti-friction bearings  |
| Module | D | SERVICE FRAMES AND SUSPENSION SYSTEMS  |
|        |   | Describe frames and frame service  |
|        |   | Service front and rear suspension systems  |
| Module | E | TEST AND SERVICE MANUAL AND POWER STEERING SYSTEMS   |
|        |   | Test and service manual and power steering systems   |
|        |   | Test and service steering linkage  |
|        |   | Perform wheel alignments   |
| Module | F | TEST AND SERVICE BRAKE SYSTEMS   |
|        |   | Describe the operation of brake systems  |
|        |   | Test and service drum and disc brake systems   |
|        |   | Service power brake systems  |
| Module | G | PERFORM ROUTINE MAINTENANCE AND DIAGNOSTICS  |
|        |   | Describe fluids and lubricants   |
|        |   | Perform routine maintenance procedures   |
|        |   | Describe the basic diagnostic process  |
|        |   | Install and adjust body components   |
| Module | O | TEST AND SERVICE ELECTRICAL SYSTEMS  |
|        |   | Test and service electrical circuits   |
|        |   | Test and service batteries   |

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LEVEL / YEAR: TWO**

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|                 |   |  |
|-----------------|---|--|
| <b>Module H</b> | <b>TEST AND SERVICE GASOLINE ENGINES</b>              |  |
|                 | Describe the operation of internal combustion engines |  |
|                 | Perform engine overhaul                               |  |
| <b>Module I</b> | <b>TEST AND SERVICE DIESEL ENGINES</b>                |  |
|                 | Describe the operation of a diesel engine             |  |
|                 | Test and service diesel engines                       |  |
| <b>Module J</b> | <b>TEST AND SERVICE COOLING SYSTEMS</b>               |  |
|                 | Test and service cooling systems                      |  |
| <b>Module K</b> | <b>TEST AND SERVICE EXHAUST SYSTEMS</b>               |  |
|                 | Test and service exhaust systems                      |  |
| <b>Module L</b> | <b>TEST AND SERVICE ENGINE LUBRICATION SYSTEMS</b>    |  |
|                 | Test and service engine lubrication systems           |  |
| <b>Module O</b> | <b>TEST AND SERVICE FUEL SYSTEMS</b>                  |  |
|                 | Test and service starter motors and circuits          |  |
|                 | Test and service A.C. charging systems                |  |
|                 | Test and service auxillary electrical systems         |  |
| <b>Module V</b> | <b>TEST AND SERVICE AIR CONDITIONING SYSTEMS</b>      |  |
|                 | Describe the principles of air conditioning           |  |
|                 | Test and service air conditioning systems             |  |

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|                 |   |  |
|-----------------|---|--|
| <b>Module O</b> | <b>TEST AND SERVICE FUEL SYSTEMS</b>                            |  |
|                 | Test and service standard and electronic ignition systems       |  |
| <b>Module P</b> | <b>TEST AND SERVICE FUEL SYSTEMS</b>                            |  |
|                 | Describe the composition of air and fossil fuels                |  |
|                 | Test and service fuel supply systems                            |  |
|                 | Test and service air intake systems                             |  |
|                 | Describe the construction and operation of carburetors          |  |
|                 | Test and service carburetors                                    |  |
|                 | Test and service gasoline fuel injections systems               |  |
|                 | Test and service automotive diesel fuel injection systems       |  |
|                 | Test and service turbochargers                                  |  |
|                 | Perform inspection on alternate fuel systems                    |  |
| <b>Module Q</b> | <b>TEST AND SERVICE EMISSION CONTROL SYSTEMS</b>                |  |
|                 | Understand air quality and the effects of automobile pollutants |  |
|                 | Test and service emission control systems                       |  |
| <b>Module R</b> | <b>TEST AND SERVICE ELECTRONIC ENGINE CONTROLS</b>              |  |
|                 | Test and service electronic engine controls                     |  |

# TRADE: AUTOMOTIVE SERVICE TECHNICIAN LEVEL / YEAR: FOUR

## Apprenticeship Course Outline

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|               |          |  |  |
|---------------|----------|--|--|
| <b>Module</b> | <b>M</b> | <b>TEST AND SERVICE DRIVE LINES</b>  |  |
|               |          | Test and service drives lines  |  |
| <b>Module</b> | <b>N</b> | <b>TEST AND SERVICE DRIVE AXLES AND DIFFERENTIALS</b>  |  |
|               |          | Test and service drive axles and differentials   |  |
| <b>Module</b> | <b>Q</b> | <b>TEST AND SERVICE EMISSION CONTROL SYSTEMS</b>   |  |
|               |          | Describe Airfare Program   |  |
| <b>Module</b> | <b>S</b> | <b>TEST AND SERVICE CLUTCHES, STANDARD TRANSMISSIONS,<br/>TRANSAXLES AND MANUAL OVERDRIVES</b> |  |
|               |          | Test and service clutches  |  |
|               |          | Describe the operation of standard transmissions, transaxles and manual overdrives             |  |
|               |          | Test and service, standard transmission, transaxles and manual overdrives                      |  |
| <b>Module</b> | <b>T</b> | <b>TEST AND SERVICE TRANSFER CASES</b>   |  |
|               |          | Test and Service transfer cases  |  |
| <b>Module</b> | <b>U</b> | <b>TEST AND SERVICE AUTOMATIC TRANSMISSIONS</b>  |  |
|               |          | Describe the operation of automatic transmissions  |  |
|               |          | Test and service automatic transmissions   |  |

Due to the redevelopment of apprenticeships in BC course outlines are subject to change without notice. These course outlines are intended for use as an interim guide in the transition period.