

Industrial Technology:
Automotive Technology
Crosswalk to AZ Math Standards

East Valley



Tech Prep
Consortium

Industrial Technology: Automotive Technology

Crosswalk to AZ Math Standards

	Automotive Competencies		AZ Mathematics Standards
3.0	Diagnose brake drum system. 3.1 Inspect and measure brake drums.	1M-P2 2M-P5	Construct, interpret and demonstrate meaning for real numbers and absolute value in problem-solving situations. PO 3 Design and conduct a statistical experiment to study a problem and interpret and communicate the outcomes. PO 4
4.0 5.0 6.0	Repair brake drum system. 4.2 Mount brake drum on lathe & machine breaking surface. Diagnose disc brake system. 5.5 Inspect rotor; measure rotor with a dial indicator and a micrometer. Repair disc brake system. 6.6 Clean rotor; measure rotor with a dial indicator and a micrometer.	3M-P9 5M-P3	Determine maximum and minimum points of a graph and interpret results in problem situations. PO 3 Develop and analyze algorithms. PO 1 PO 2 PO 3
7.0	Diagnose power assist units. 7.1 Test pedal free travel.	5M-P3	Develop and analyze algorithms. PO 1 PO 2 PO 3

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	Automotive Competencies		AZ Mathematics Standards
16.0	<p>Diagnose general engine performance.</p> <p>16.1 Inspect and calibrate infrared analyzer.</p> <p>16.3 Obtain exhaust emissions readings.</p> <p>16.4 Diagnose engine mechanical, ignition, fuel, or emissions control problems using an infrared exhaust analyzer; determine needed repairs.</p> <p>16.7 Perform analytic/diagnostic procedures on vehicle with on-board or self-diagnostic computer systems; determine needed repairs.</p>		
17.0	<p>Diagnose electronic ignition system components.</p> <p>17.2 Inspect electronic ignition system pickup sensor or triggering devices.</p>	2M-P1	<p>Construct and draw inferences including measures of central tendency, from charts, tables, graphs and data plots that summarize data from real-world situations.</p> <p>PO 1 PO 3</p>
20.0	<p>Repair/replace/adjust distributorless electronic ignition system components.</p> <p>20.2 Repair/replace/adjust electronic ignition system pickup sensor or triggering devices.</p> <p>20.3 Repair/replace/adjust electronic ignition system control unit (module).</p>		

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21.0	<p>Diagnose drivability problems related to fuel delivery systems.</p> <p>21.1 Inspect fuel tank, fuel filter, fuel pump and fuel cap.</p> <p>21.2 Check fuel for contaminants.</p> <p>21.3 Test oxygen sensor.</p>		
22.0	<p>Diagnose non-drivability problems related to fuel delivery systems.</p> <p>22.2 Check fuel for contaminants.</p> <p>22.3 Follow and check path of fuel during delivery for leaks.</p>	2M-P1	<p>Construct and draw inferences including measures of central tendency, from charts, tables, graphs and data plots that summarize data from real-world situations.</p> <p>PO 1 PO 3 PO 6</p>
25.0	<p>Diagnose engine spark control system.</p> <p>25.2 Verify correct valve timing; determine needed adjustments.</p> <p>25.3 Inspect electrical/electronic components and circuits of spark control system.</p>		
35.0	<p>Diagnose steering columns and linkage systems.</p> <p>35.2 Inspect steering shaft, universal joints, flexible couplings, collapsible columns, and steering wheel.</p>	<p>2M-P1</p> <p>3M-P6</p>	<p>Construct and draw inferences including measures of central tendency, from charts, tables, graphs and data plots that summarize data from real-world situations.</p> <p>PO 1 PO 3 PO 6</p> <p>Perform mathematical operations on expressions and matrices, and solve equations and inequalities.</p>

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		5M-P3	PO 10 Develop and analyze algorithms. PO 1 PO 2 PO 3
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41.0	<p>Diagnose suspension systems.</p> <p>41.11 Inspect rear wheel drive axle assembly for bending, warpage, and misalignment.</p> <p>41.15 Inspect Macpherson strut coil spring and insulators.</p> <p>41.17 Inspect rear Macpherson strut coil spring and insulators.</p>	2M-P1	<p>Construct and draw inferences including measures of central tendency, from charts, tables, graphs and data plots that summarize data from real-world situations.</p> <p>PO 1 PO 3</p>