

MODULE MEC2140: TRANSMISSIONS/TRANSAXLES (continued)

Concept	Specific Learner Expectations	Notes
Identification/ Function (continued)	<p><i>The student should:</i></p> <ul style="list-style-type: none"> • for each gear, identify the path of power through transmission or transaxle and compare the gear ratio of each power routing as well as the direction of rotation. 	
Inspection/Report	<ul style="list-style-type: none"> • demonstrate how to: <ul style="list-style-type: none"> – check clutch pedal operation, travel and free play adjustment – remove clutch inspection cover and check for wear to the clutch disc and pressure plate, as well as other visually available parts – inspect clutch linkage for faults and/or wear – inspect shifting linkages for any undue looseness or signs of wear – check lubricant for level, type and recommended change interval – inspect mounts, braces and isolator cushions for wear fatigue or damage – inspect the assembly for leakage and note location and seal at fault – prepare a repair cost estimate, prior to commencement of repairs, as identified during inspection or servicing. 	
Identify/Analyze	<ul style="list-style-type: none"> • formulate probable causes for typical problems that develop with clutches: <ul style="list-style-type: none"> – grabbing – slipping – failing to release – noise when disengaged – noise when engaging • where possible, relate the hypothetical situation to a real vehicle condition 	Where possible, relate the hypothetical situation to a real vehicle condition.

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Concept	Specific Learner Expectations	Notes
Identify/Analyze (continued)	<p><i>The student should:</i></p> <ul style="list-style-type: none"> • formulate probable causes for typical problems that develop with manual gear boxes: <ul style="list-style-type: none"> – gears clashing – hard shifting – jumps out of gear – noises in specific gears – unable to engage gears – shifter noisy or loose – bearing noises. 	Where possible, relate the hypothetical situation to a real vehicle condition.
Inspect/Service and Repair	<ul style="list-style-type: none"> • perform the clutch repairs as identified and estimated to the teacher and agreed upon by the owner of the vehicle <p>AND/OR</p> <ul style="list-style-type: none"> • remove and reinstall a clutch disc, pressure plate assembly, pilot bearing and throw-out bearing; check each part to confirm the continued serviceability of the assembly and clean each part before reassembly. Adjust linkage to specified clearances • adjust clutch linkage for correct free play at pedal or, in the case of an automatic clutch adjuster, confirm the operation as being correct • follow through on agreed-upon transmission/transaxle repairs, identified and estimated to the teacher and the owner of the vehicle <p>AND/OR</p> <ul style="list-style-type: none"> • disassemble, inspect and reassemble a three- or four-speed manual transmission with external linkage and constant mesh gearing • replace manual transmission lubricant with specified type. 	<p>Does not imply a complete overhaul (refer to MEC3130 Automatic Transmissions).</p> <p>Does not imply a complete overhaul (refer to MEC3130 Automatic Transmissions).</p> <p>As per manufacturer's recommendations.</p>
Careers	<ul style="list-style-type: none"> • identify further education, working conditions and career opportunities. 	