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TCO 363: Assignment 4

Instructional goal: Learner will replace the oil	Given a vehicle (CN), the learner will be able to perform an oil change (B). The learner should be able to do this with no technical problems afterwards.	Upon completion of the oil change process, did you check that each subordinate skill assessment was completed?
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I will assume that I am giving the learner a written test because for my project a live demonstration would be best but not a feasible option. Directly below is the skill group from the subordinate skills analysis and the terminal objectives. Below this table is Assignment 4 with the assessment item.

Skill	Terminal Objectives
A	If car is on an unlevel surface (CN), learner will park car on level surface (B). The learner should be able to determine if the car has any possibility of rolling (CR).
B	Given the need of an oil change (CN), the learner will drain the oil from the engine (B) until all the oil capacity has been emptied (CR).
C	When it is time to remove the oil filter (CN), the learner will identify the oil filter and remove it from the car (B) without dripping oil on the engine (CR).
D	Once the oil has been drained from the engine (CN), the learner will reinstall the oil filter and drain plug (B) with 100% efficiency (CR).
E	If the drain plug and filter have been installed (CN), the learner will be able to fill the engine with oil (B) without spilling oil on the engine (CR).
F	Given the need to drive the car (CN), the learner will be able to check the engine oil level (B) and determine if the need to add more oil is necessary with 100% accuracy (CR)

Skill	Objective	Bloom's Taxonomy	Assessment Item
1.1, 1.2	Given a driveable vehicle (CN), the learners will be able to park the car in a safe place (B) at 100% accuracy (CR).	Psychomotor, Intellectual Skill	Describe the location of the parked car. Multiple choice question showing cars parked in precarious positions with only one in the
1.3, 1.4	When the need to access the engine compartment (CN), the learner will engage the hood release mechanism and lift the hood (B) with 100% accuracy (CR).	Psychomotor	Are there more than one mechanisms that must be released before the hood can be lifted?
2.1	Given that the learner cannot slide under the car (CN), the learner will locate the appropriate jack points and jack the car up (B) to a level that is high enough for the learner to fit underneath the car (CR).	Psychomotor, Intellectual Skill	A rating scale or performance checklist would be best for this part. For the purpose of this assessment, where are the jack points on your car?
2.2	Given that the car is lifted appropriately (CN), the learner will place an oil drain pan underneath the engine (B) at an appropriate location (CR).	Psychomotor	What would be the best location for oil drain pan?
2.3, 2.4	Given the appropriate time (CN), the learner will lie underneath the engine and locate the drain plug and determine the size of the wrench required to turn the plug (B) with 100% accuracy (CR).	Psychomotor	Is the wrench a metric or US style? In general, is the plug a left-hand drive or right-hand drive
2.5, 2.6, 3.1	Once the learner is located underneath the car (CN), the learner will remove the oil drain plug, drain the oil, and remove the oil filter (B) until 100% oil capacity has been drained (CR).	Psychomotor	Why is it important to remove the oil drain plug before the oil filter?
3.2	Given the oil drain plug and oil filter has been removed (CN), the learner will place these parts on the oil drain pan (B). The drain plug and filter should remain here until it is time to replace them.	Psychomotor	Why is it important to place the drain plug and filter on the drain pan?
4.1	Given that the oil has completely drained (CN), the learner will be able to lubricate the rubber seal of the new oil filter (B) until the seal is completely oiled (CR).	Psychomotor	Should you lubricate the seal with the old oil or new oil?
4.2, 4.3, 4.4	Given that the oil has completely drained (CN), the learner will install the oil drain plug and new oil filter (B) until the two are torqued to the correct specifications (CR).	Psychomotor	Why should this objective be completed prior to refilling the engine with new oil?
4.5	Given that the filter and plug has been installed (CN), the learner will remove the drain pan and lower the car with the jack (B) until the car has been completely lowered (CR).	Psychomotor	What are some possible problems with not lowering the car after finishing the oil change?
5.1	Given the car has been lowered (CN), the learner will use the owner's manual to determine the engine oil capacity (B) without using the internet or other source (CR).	Intellectual Skill	If an owner's manual is not available, what other sources could the engine oil capacity be found?
5.2, 5.3, 5.4	Given the learner has established the oil capacity (CN), the learner will locate the engine oil cap, fill the engine with oil, and replace the cap (B). Success for this objective requires that the learner has realized the need for a funnel and has spilled no more than 0.25 quarts (CR).	Psychomotor	What information might be important for the engine oil cap provide the "mechanic"?

6.1, 6.2, 6.3, 6.4	Given the engine has been filled with oil (CN), the learner will determine if enough oil has been poured into the engine using the oil dipstick (B). Learner will do this until the oil dipstick reads "full" (CR).	Intellectual Skill	Why is it necessary to wipe the dipstick clean and reinserting it?
6.5	Given the engine oil level is not reading "full" (CN), the learner will pour more oil into the engine (B). Learner will do this until the oil dipstick reads "full" (CR).	Psychomotor	If you keep pouring oil and the dipstick never reads "full" what might you have forgotten to do in earlier step?