Lab - Starter Test

Students: 1. _____   Date: _____

2._____   Block:_____

3._____

Fill in each box with the appropriate information. Place checks (✔) where applicable.
Be sure to have Instructor's initials before moving on to the next step. Team members will
have to answer questions from the instructor to receive credit for this lab.

VEHICLE IDENTIFICATION			
Year:		Make:	
Model:		Mileage:	
VIN Number:			

SYSTEM INVESTIGATION	
1	In order for this test to provide accurate results, the battery must be fully charged and in good shape - it is a good idea to service the battery first, as well as make sure all connections are perfect.

PREPARATION

2	☐ **Check service manual for the correct specifications regarding your vehicle**	
	☐ Turn off ALL accessories	
	☐ Disconnect the ignition coil primary wires	┌─ **CAUTION** ─┐
	☐ Remove the fuel pump fuse on electric fuel pump equipped cars (most fuel injected engines)	**Batteries can be very dangerous.**
	☐ Position the **VAT 40** so that the gauges can be seen from the driver's seat	**Always wear eye protection, remove ALL jewellery and loose clothing.**
	☐ Ensure that the LOAD knob is "off"	**Loose battery cables can arc, igniting any present Hydrogen gasses from the battery.**
	☐ Connect the large Red (+) and Black (-) cables to the battery	**Always wash your hands with soap and water after handling a battery.**
	☐ Connect the Green cable around the positive battery cable, with the arrow pointing away from the battery	
	☐ Place the test selector knob to the STARTER TEST position (Green & Red Square)	

STOP!!   **INSTRUCTOR'S INITIALS:** [____]

3

☐   Record the battery voltage: _____

Crank the engine for NO MORE than 15 seconds

☐   Record the LOWEST voltage the battery reached (Green Scale): _____

☐   Record the HIGHEST current the starter drew (Red Scale): _____

Using the information below, did the starter system pass?   [yes] [no]

☞   Cranking voltage should stay above 9.6V

☞   Large V8 should stay below 250 amps

☞   Small V8 should stay below 200 amps

☞   6 cylinder should stay below 180 amps

☞   4 cylinder should stay below 150 amps

4

Assuming the starter drew more current than it should, what three parts of the starter would you check for faults?

1.

2.

3.

A starter does not always "engage" when the key is turned, instead it "spins" without turning the motor over. What is the likely cause?

STOP!!   **INSTRUCTOR'S INITIALS:**

Notes: