



Recommended Track Combat Vehicle Driver Mechanical Knowledge Test

(answers on
page 34.)

This test requires that four track vehicles be displayed. They must be the type on which the student has been instructed. Each is given a station number, with each station counting 25 points.

At each station, an instructor gives the student a questionnaire and requires that the component, service, or check be pointed out or explained. Each student's score is recorded at the station on an individual scoresheet carried by the student on a station scoresheet. A score of 80 percent is satisfactory. Failure to pass this test disqualifies the student for licensing until he completes retraining on the mechanics of the vehicle.

Station 1 — *Track and Suspension System: Component Identification and Functioning* (25 points)

1. Describe the check for serviceability of a shock absorber. (5 points)
2. What is the first thing to do in checking track tension? (5 points)
3. What check can be made to determine whether or not a torsion bar is serviceable? (5 points)
4. What may happen if the track tension is too tight? (5 points)
5. How can you determine if a track block is dead? (5 points)

Station 2 — *Engine Compartment Services* (25 points)

1. Demonstrate the methods for checking all oil levels in the engine compartment. (10 points)
2. Point out the air cleaners. When are they serviced? (5 points)
3. What checks does the driver make on linkages? (10 points)

Station 3 — *Driving Compartment: Precautions and Checks* (25 points)

1. How long may the starter be continuously operated if the engine fails to start? (5 points)
2. At what speed is the engine operated during warmup? (5 points)
3. Name five safety precautions in starting the engine. (5 points)
4. What checks are made at the instrument panel as soon as the engine starts? (5 points)
5. Name five safety checks that should be made before moving the vehicle. (5 points)

Station 4 — *General Vehicle Information* (25 points)

1. How does the crew check the fire extinguishers? (5 points)
2. What two precautions must be followed during refueling? (5 points)
3. How are the infrared lights checked? (5 points)
4. How is the blackout light turned on? (5 points)
5. When are during-operation maintenance services performed? (5 points)

Suggested Solutions for Station 1

1. For piston-type shock absorbers compare the temperature of the shock absorber with the temperature of the hull after about five minutes of operation over bumpy terrain. Shake the shock to determine if mounts are secure. For rotary-type shock absorbers: Check oil level indicators and check for obvious leakage.
2. Bring the vehicle to a coasting stop on level hardstand.
3. Attempt to pry up the roadwheel with a 5-foot bar. If the wheel moves up, the torsion bar or mountings are defective.
4. The vehicle will be sluggish due to loss of power. Excessive wear will occur to the engine, sprockets, and track connectors.
5. The dead track block will cause a dip or a "V" to occur in an otherwise straight track.

Suggested Solutions for Station 2

1. All dipsticks should be read correctly.
2. Air cleaners are inspected daily and serviced as needed.
3. Fuel system, steering, shifting, and braking linkages are checked for security of mounting, freedom of movement, and presence of locking devices or lacing wire.

1. The starting motor should never be operated continuously for more than 15 seconds.
2. A fast idle at the rpms prescribed in the vehicle technical manual.
3. Brakes on, selector or shift lever in neutral, personnel clear of exhaust, fire extinguishers serviceable, and radio off.
4. All instruments functioning properly and warning lights out.
5. Seat adjusted correctly and locked securely, brakes operating properly, steering controls normal, all personnel clear of the vehicle, and crew alert for movement.

Suggested Solutions for Station 4

1. Check that seals are intact, lines are secure, and operating handles are clear.
2. The fuel nozzle must be grounded against the filler neck, and the portable fire extinguisher must be manned.
3. Hold the hand in front of the lamp. If the light is on, heat will be felt.
4. Release the mechanical safety lock, then move the main switch to *BLACKOUT DRIVE*. Turn the *BOD* switch to the *IR* position. (To see through the infrared periscope, the *IR* receiver switch on the instrument panel must be turned on.)
5. During-operation maintenance services are performed whenever the crew has an opportunity to dismount.