

MIL-C-62270(AT)
5 March 1984

MILITARY SPECIFICATION

CHASSIS, TANK: ARMORED VEHICLE,
BRIDGE LAUNCHER, M48A5

This specification is approved for use by the US Army Tank-Automotive Command, Department of the Army, and is available for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification covers one type of full-tracked tank chassis which with subsequent adaption mounts a 60 foot launched bridge. This specification is limited to the vehicular chassis of the launcher.

2. APPLICABLE DOCUMENTS

2.1 Government documents. Unless otherwise specified, the following specifications and standards of the issue listed in that issue of the Department of Defense Index of Specifications and Standards (DoDISS) specified in the solicitation form a part of this specification to the extent specified herein.

SPECIFICATIONS
FEDERAL

TT-E-527

- Enamel, Alkyd, Lusterless.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: US Army Tank-Automotive Command, ATTN: DRSTA-GSS, Warren, MI 48090, by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

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- | | |
|-------------|---|
| MIL-L-2104 | - Lubricating Oil, Internal Combustion Engine, Tactical Service. |
| MIL-E-52798 | - Enamel, Alkyd, Camouflage. |
| MIL-C-62279 | - Chassis, Tank, Armored Vehicle, Bridge Launcher, M60A1 & M48A5; Processing for Storage and Shipment of. |

STANDARDS
FEDERAL

- | | |
|-------------|-----------|
| FED-STD-595 | - Colors. |
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| MIL-STD-105 | - Sampling Procedures and Tables for Inspection by Attributes. |
| MIL-STD-130 | - Identification Marking of US Military Property. |
| MIL-STD-193 | - Painting Procedures Tactical Vehicles (Tracked and Wheeled). |
| MIL-STD-210 | - Climatic Extremes for Military Equipment. |
| MIL-STD-1474 | - Noise Limits for Army Materiel. |

2.1.2 Other Government documents, drawings, and publications. The following other Government documents, drawings, and publications form a part of this specification to the extent specified herein.

DRAWINGS
ARMY

- | | |
|----------|--|
| 8736997 | - Tank, Chassis, M48A5, Transporter, AVL Bridge. |
| 12257352 | - Production Lubrication Chart. |

(Copies of specifications, standards, drawings, and publications required by manufacturers in connection with specific acquisition functions should be obtained from the contracting activity, or as directed by the contracting officer.)

2.1.3 Order of precedence. In the event of a conflict between the text of this specification and the references cited herein, the text of this specification shall take precedence.

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3. REQUIREMENTS

3.1 First article. Unless otherwise specified (see 6.2), the contractor shall furnish chassis which shall be subjected to first article inspection (see 4.4 and 6.3). First article inspection samples, properly marked with identifying information shall be representative of the units to be furnished to the Government. All subsequent chassis delivered to the Government shall conform to these samples in all of their pertinent physical and performance attributes.

3.2 Operational profile. Profile shall consist of:

- a. 25 percent on paved roads, either concrete or asphalt or any combination of the two.
- b. 25 percent on gravel and dirt roads with at least 10 percent of this distance under mud conditions.
- c. 25 percent on level, cross-country.
- d. 25 percent on hilly, cross-country.

3.3 Materials. Materials shall be as specified herein and in referenced specifications, standards, and drawings. Material shall be free from defects that adversely affect performance or serviceability of the finished product (see 4.1.1 and 6.6).

3.3.1 Qualified products. The contractor shall be responsible for using parts and assemblies from Qualified Products Lists (QPLs) whenever available. Contractor inspection records shall specifically list all QPL items by number and date of the QPL, name of supplier, and part or drawing number(s). When parts and assemblies are approved as qualified products but not yet listed on the QPL, the contractor shall list the products by number and date of the approved document and name of supplier(s) (see 4.1.1).

3.3.2 Ozone resistance. When rubber components are required to be ozone resistant, the degree of resistance shall be as specified in applicable specifications or drawings (see 4.1.1).

3.4 Construction. Chassis components, subassemblies, and assemblies shall be fabricated into a complete chassis in accordance with Drawing 8736997 and applicable specifications and standards. All parts requiring identification shall be marked in accordance with MIL-STD-130 (see 4.6.1).

3.4.1 Shroud seal. The space between the upper metal surface of the engine shroud and the sealing surface of the top deck grille shall be not less than 0.82 nor more than 1.25 inches (see 4.6.1).

3.4.2 Welding repairs. Welding repairs of any type or class shall be made only when, and to the extent, specifically authorized by the acquisition activity (see 4.6.1).

3.4.3 Stowed equipment. The chassis shall be capable of stowing all on-vehicle equipment (OVE) items in the spaces provided (see 4.6.1).

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3.4.4 Electrical system. The chassis electrical system shall consist of the hull electrical subsystem as described below. The system shall be 24 volts direct current (Vdc), nominal (see 4.6.1).

3.4.4.1 Power plant electrical. The power plant electrical equipment shall consist of the following: sending units necessary to provide engine data in the form of electrical signals to the operator instrument panel, engine electrical disconnect to facilitate engine removal and replacement, an electrical starter motor capable of starting the engine, and an air-cooled generator (see 4.6.1).

3.4.4.2 Interior lighting. Each crew position shall contain a domelight to provide general illumination when required. The domelight shall contain provisions for adjusting light intensity and a blue filter for night vision adaption (see 4.6.1).

3.4.4.3 Auxiliary outlet. One outlet (24 Vdc nominal) shall be provided in the hull to mate with the OVE trouble light assembly. The auxiliary outlet circuit shall be protected with a 15 ampere, automatic reset, circuit breaker (see 4.6.1).

3.4.4.4 Engine manifold heater. The wiring for the engine manifold heater shall provide a switch-actuated chassis battery circuit to the engine. Operation of the pushbutton switch on the purge pump handle with the starter switch depressed, shall provide chassis battery voltage to pin "a" of the multiple connector at the engine electrical quick disconnect (see 4.6.1).

3.4.4.5 Communications system power supply. Provisions shall be made through a mating connector to supply power to the communications system from the hull electrical system (see 4.6.1).

3.4.5 Fluid systems.

3.4.5.1 Hydraulic system. Provisions shall be made to assure internal cleanliness of the (chassis) hydraulic system. Hydraulic lines and connections shall be free from leakage in excess of a seep (see 4.6.1 and 6.5.3).

3.4.5.2 Fuel system. Provisions shall be made to assure internal cleanliness of the fuel system prior to initial fueling. Fuel system shall be free from leaks (see 4.6.1).

3.4.5.3 Fuel tanks (rapid fill). Fuel tanks shall be capable of receiving 50 gallons of fuel per minute (see 4.6.1).

3.5 Performance. After being subjected to the break-in run and procedures of 3.5.17, the chassis, loaded to simulate an M48A5 vehicle weight of 104,000 pounds (lbs), shall perform as specified herein under all operating conditions (see 4.6.2).

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3.5.1 Power plant and power train. The power plant shall function throughout all gear and speed ranges without loss of lubricants or damage that may cause failure of the chassis. The power train and associated controls shall be capable of operation throughout all speed and steering ranges without binding of linkages, loss of lubricants, grabbing, chattering, or slippage when controls are applied to steer, stop, or hold chassis (see 4.6.3).

3.5.2 Environments. The chassis shall operate in an ambient air temperature of 115 degrees Fahrenheit ($^{\circ}$ F) to -25° F and with special equipment installed, at temperatures to -65° F. The chassis, when prepared for storage, shall withstand climatical extremes, as specified in MIL-STD-210 (plus 160° to minus 65° F), without deterioration of any component (see 4.6.4).

3.5.2.1 Cooling system. With the chassis operating in an ambient temperature of 115° F, the engine oil temperature shall not exceed 250° F at the heat exchanger outlet. The transmission oil temperature shall not exceed 300° F at the heat exchanger inlet. Temperature indicators on the driver panel shall remain in the green area (see 4.6.4.1).

3.5.2.2 Level road acceleration. The chassis shall accelerate from a standing start on level road a distance of 200 feet in not more than 13 seconds (see 4.6.5).

3.5.2.3 Level road speeds. The chassis shall operate at sustained speeds of 30 mph and 2.5 mph on level road without damage to the power plant and power train (see 4.6.6).

3.5.2.4 Level road drift. When traveling between 25 and 30 mph on a level road in a straight line, the chassis drift shall not exceed 3 feet in 100 feet without manual steer correction (see 4.6.7).

3.5.2.5 Level road stopping. The chassis traveling at 20 mph on a level road, shall stop within 60 feet from the point of brake application. Drift shall not exceed 4 feet. Steering correction is allowed (see 4.6.8).

3.5.2.6 Grades and slopes. The chassis shall ascend longitudinal grades of 60 percent in forward and reverse gear without stalling or damage to the power plant and power train. The chassis shall operate on right and left side slopes of 30 percent. During grade and slope operations, normal engine lubricating oil pressures shall be maintained (see 4.6.9).

3.5.2.6.1 Engine starting (grades and slopes). The engine shall restart in not more than 1 minute, after being stopped for 2 minutes, with the chassis parked on a 60 percent grade facing up or down grade. The engine shall restart in not more than 1 minute, after being stopped for 2 minutes, with the chassis parked on 30 percent side slopes with left or right side up-slope (see 4.6.9).

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3.5.2.6.2 Fuel supply (grades and slopes). During engine operation, the fuel system shall maintain fuel supply to the engine when ascending and descending 60 percent grades in forward and reverse gear and when the chassis is being operated on 30 percent side slopes with either side of chassis up slope (see 4.6.9).

3.5.2.6.3 Holding. With the chassis standing on a 60 percent grade, with service brakes applied, the chassis shall be held stationary when headed either up or down grade. With parking brake engaged and all other holding devices inoperative, the chassis shall be held stationary when headed either up or down grade (see 4.6.9).

3.5.2.6.4 Grade speeds. The chassis shall operate at a sustained speed of 10 mph while ascending a 10 percent grade and at 20 mph while ascending a 3 percent grade (see 4.6.9).

3.5.2.7 Shallow water fording. The chassis shall ford a level, hard-bottom body of water 48 inches in depth, including wave, without special equipment. With the chassis standing in water 48 inches in depth for 30 minutes, the accumulation of water shall be not more than two inches on the crew compartment hull floor measured in the center of the "V" (see 4.6.10).

3.5.2.7.1 Engine starting (shallow water). With the chassis standing for 30 minutes in water 48 inches in depth, the engine operating at 1,000 rpm for 15 minutes and stopped for 15 minutes, the engine shall restart in not more than 3 minutes. All accessories shall function satisfactorily during and after fording operations (see 4.6.10.1).

3.5.2.7.2 Lubricant contaminations. After fording operations, the water content of the transmission, engine, final drives, and suspension system lubricants shall be not more than 2 percent by volume (see 4.6.10.2).

3.5.2.8 Trench crossing. The chassis shall cross trenches 36 inches in depth and 102 inches in width without stalling or damage to suspension and other vehicle equipment (see 4.6.11).

3.5.2.9 Vertical obstacles. The chassis shall cross over vertical obstacles 36 inches in height while moving forward, without stalling or damage to the suspension and hull floor. The speed shall not exceed 5 mph (see 4.6.12).

3.5.2.10 Turning. The chassis shall turn 360° to the right and left in pivot and in neutral steer within a circle 35 feet in diameter (see 4.6.12).

3.5.2.11 Sealing. Except as specified in 3.5.2.7.2, all seals and sealer shall prevent the entrance of water and foreign matter under all operating conditions. Static seals shall provide an interference fit of sealing surfaces preventing the leakage of fluids intended to be contained by the seals. Dynamic seals shall prevent fluid leakage in the form of a drop (see 6.5.1) when the chassis is standing idle. Evidence of lubricant at seals specifically designed to allow exit of flushed lubricants shall be permitted (see 4.6.14).

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3.5.2.11.1 Escape hatch seal. The escape hatch seal shall prevent entrance of water into the crew compartment under all operating conditions (see 4.6.15).

3.5.3 Controls. When installed in accordance with applicable drawings, all electrical, mechanical, and hydraulic controls shall operate without malfunction throughout all ranges of operation under all chassis operating conditions (see 4.6.16).

3.5.4 Adjustment mechanisms. When installed and adjusted in accordance with applicable drawings, all adjustment mechanisms shall function properly and maintain adjustment settings during all chassis operating conditions (see 4.6.16).

3.5.5 Generator voltage. Generator voltage shall be regulated to not less than 25.8 Vdc and not more than 30.2 Vdc (see 4.6.17).

3.5.5.1 Generator blower motor. The generator blower motor shall be capable of delivering a constant flow of air through the generator. The electrical circuit for the blower shall contain a switch to allow shut-off during fording (see 4.6.17).

3.5.6 Air cleaner blower motors. Each air cleaner blower motor shall provide a flow of air through each blower outlet. The air cleaner blower motors shall be wired to preclude blower operation when the engine is not running (see 4.6.18).

3.5.7 Lights. All lights shall operate as specified on applicable drawings through all chassis operating conditions. All electrical contacts and connections shall maintain positive contact under all chassis operating conditions (see 4.6.19).

3.5.7.1 Driver night viewer power circuit. The voltage output at the driver night viewer connector shall be within 0.2 volt of the positive battery potential when operating into a one (1) ampere load (see 4.6.19).

3.5.8 Locking, unlocking and actuated mechanisms.

3.5.8.1 Hull drain valves. After unlocking the lever, the force required to operate the front drain valve lever shall not exceed 17 pounds at the hand grip to actuate the valve a minimum of 3/8-inch travel. After unlocking the lever, the force required to operate the rear drain valve lever shall not exceed 25 pounds at a point just below the knob to actuate the valve through a minimum of 11/16-inch travel (see 4.6.20).

3.5.8.2 Escape hatch release. The force required to operate the handle to release the escape hatch shall be 50 ± 10 pounds pull at a point 1/2-inch from the end of the handle (see 4.6.21).

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3.5.8.3 Operator and assistant operator seat. With the operator or assistant operator in seated position, the force required to actuate the fore and aft seat adjustment lever shall not exceed 12 pounds at the hand grip. With the seats vacated, the force required to actuate the seat vertical adjustment lever shall not exceed 14 pounds at the hand grip. The force required to trip the seat dumping lever shall not exceed 14 pounds at the hand grip. The seats shall be moveable forward, backward and vertically when the appropriate levers are actuated (see 4.6.22).

3.5.8.4 Fuel shutoff valve. The engine shall stop firing and rotating within a maximum of 30 seconds after the manual fuel shutoff valve is actuated to the "OFF" position (see 4.6.23).

3.5.9 Fire extinguisher. The fixed fire extinguisher system, when installed in accordance with applicable drawings, shall be readily accessible for operation internally or externally. Actuating the internal control shall simultaneously stop the supply of fuel to the engine and discharge the extinguisher. Actuating the external control shall discharge the extinguisher, but not stop the fuel supply to the engine. The effort required to discharge the system either internally or externally shall be not more than 55 pounds. A time delay of more than 6 seconds but less than 11 seconds shall occur on the first shot between actuation of the release mechanism and entrance of carbon dioxide (CO₂) into the engine compartment (see 4.6.24).

3.5.10 Personnel heater. The placement of the heater ignition switch in either "high" or "low" position run mode shall cause the blower motor to operate at low speed and the heater to ignite within 4 minutes. Subsequent to ignition, the placement of the heater switch in the "high" position run mode shall cause the blower motor to operate at high speed. The placement of the heater switch in the "off" position mode shall cause the burner to extinguish and the blower motor to shut off within 3.5 minutes (see 4.6.25).

3.5.11 Smoke discharging systems.

3.5.11.1 Engine smoke generator. The chassis shall discharge smoke from both exhaust pipes when the engine is running and the smoke generator switch is in the "ON" position (see 4.6.26).

3.5.11.2 Smoke grenade discharger circuits.

3.5.11.2.1 Arming. The power-on (ready) lamp in the grenade power box shall illuminate when the master battery switch and the grenade system power switch are both on (see 4.6.26.1.1).

3.5.11.2.2 Circuit voltage. Voltage at the smoke grenade discharger firing pins shown in figure 2 shall be as indicated in table I when the power-on firing pushbutton is actuated (see 4.6.26.1.2).

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TABLE I. Smoke grenade discharger firing pin voltage.

Firing pushbutton	Left side discharger firing pins	Right side discharger firing pins	Voltage
Right	1, 2, 5	3, 4, 6	Vehicle (Ref. 3.4.4)
Right	3, 4, 6	1, 2, 5	0 ± 0.5 Vdc
Left	3, 4, 6	1, 2, 5	Vehicle (Ref. 3.4.4)
Left	1, 2, 5	3, 4, 6	0 + 0.5 Vdc

3.5.12 Vibration and noise level.

3.5.12.1 Equipment operation. Equipment in operation shall not exceed the maximum acceptable noise levels specified in table II (see 4.6.27).

TABLE II. Maximum acceptable noise levels for military equipment (continuous noise).

Octave band center frequency (Hz)	Maximum acceptable noise level (db ref. 0.0002 microbar)
63	121
125	111
250	103
500	102
1000	100
2000	100
4000	100
8000	100

3.5.12.2 Operator protection. Noise hazard caution signs shall be posted in all crew stations. The signs shall be clearly visible to all personnel (see 4.6.27).

3.5.13 In-tank fuel pumps. Each pump shall be capable of producing a minimum pressure of 5 psig at the engine end of the fuel line disconnect under no-flow conditions (see 4.6.28).

3.5.14 Fuel return system. The fuel return selector valve shall divert fuel to the tanks as indicated by the pointer on top of the valve (see 4.6.29).

3.5.15 Air cleaner outlet system. The air cleaner outlet system (air cleaner to turbo charger) shall be air tight to the extent that when a vacuum of 25 to 30 inches of water is applied, the loss of vacuum shall be not more than 3 inches of water during a 3 minute period (see 4.6.30).

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3.5.16 Painting, marking, and data plates.

3.5.16.1 Painting. The exterior and interior of the chassis and all components that require painting shall be prepared and painted in accordance with MIL-STD-193. Chassis exterior paint shall be forest green camouflage, lusterless, alkyd enamel conforming to MIL-E-52798. The engine compartment paint shall be gloss white, matching color chip 17875 of FED-STD-595. The crew compartment paint shall be semigloss green, matching color chip 24533 of FED-STD-595. All sliding parts and operating contact surfaces shall be free from paint (see 4.6.31).

3.5.16.2 Marking. Marking and marking paint shall conform to TT-E-527. Marking paint shall be lusterless black, matching color chip 37038 of FED-STD-595 (see 4.6.31).

3.5.16.3 Identification and data plates. All plates shall be in accordance with applicable drawings (see 4.6.31).

3.5.17 Break-in run. The break-in run will include preliminary checks of suspension, controls, power plant, etc., and provide wear-in for final adjustments. The break-in run shall include the following activities and conditions (see 4.6.32):

- a. Preparation. Prior to the break-in run, except for equipment and component installations and servicing performed by the contractor as a final processing of the chassis for acceptance, the chassis shall be completely assembled and all adjustments completed. The chassis, including all applicable components requiring lubrication, shall be lubricated in accordance with production lubrication chart 12257352. Engine oil conforming to the applicable seasonal grade of MIL-L-2104 shall be used. Specific applications by grades or types for various expected seasonal temperature ranges shall be as specified. The fuel and water separator and primary fuel filter shall be bled of air by loosening each respective bleed plug and operating the in-tank fuel pump. After air is bled, tighten the bleed plugs.
- b. Oil pressure and temperature. Prior to the start of the break-in run, the engine shall be operated at 800 to 1200 rpm until lubricating oil is at operating pressure and temperature. If at any time during break-in run, the engine has been stopped for at least 30 minutes, the engine shall again be operated as above before continuing break-in run. Proper oil pressure and temperature shall be maintained during operation on level ground, 60 percent grades, and 30 percent side slopes.
- c. Operation and distance. Each chassis shall be given a break-in run for the distances specified in table III on smooth, level, hard-surfaced roads. The chassis shall be operated over the undulating section of road (see figure 1). During "A" and "B" divisions of the break-in run, the undulating section will be bypassed.

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- d. Reverse operation. After each division of the break-in run, the chassis shall be stopped, the engine allowed to idle for not less than 2 minutes, and then driven in reverse for a distance of not less than 50 feet at speeds between 2 and 7 miles per hour (mph).
- e. Condition after run. After completion of the break-in run, the engine shall idle between 700 and 750 rpm. Prior to the chassis being submitted to the Government for acceptance, all suspension wheel bearings shall be checked to determine if adjustments are correct and readjusted as required. There shall be no defects indicative of damaged components or maladjustments that may cause faulty chassis operation.

TABLE III. Speeds and distance for break-in run.

Division of run	Speed mph	Distance miles	Test conditions
A	0 to 10	10	Track (road)
B	11 to 15	15	Track (road)
C	16 to 20	10	Track (road)
D	21 to Max.	10	Track (road)

3.5.18 Workmanship. Workmanship shall be of a quality to assure that chassis and components are free from defects of a workmanship nature (see 4.6.33).

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order (see 6.2), the contractor is responsible for performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or purchase order, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

4.1.1 Materials and qualified products. The contractor records shall be reviewed to determine conformance to 3.3, 3.3.1, and 3.3.2.

4.1.2 Parts and components. Parts, components, and assemblies shall be inspected for conformance to requirements of drawings subordinate to 8736997 and applicable specifications and standards. When applicable, inspection shall also be in accordance with Supplementary Quality Assurance Provisions (SQAPs) or Quality Assurance Requirements (OARs).

4.1.3 Subjection to break-in run. To determine conformance to 3.5, each chassis shall be subjected to the break-in run prior to being subjected to its appropriate inspection, see 4.2.

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4.2 Classification of inspections. Classification of inspections shall be as follows:

- a. First article inspection (see 4.4).
- b. Quality conformance inspection (see 4.5).
 1. Examination (see 4.5.2).
 2. Acceptance tests (see 4.5.3).
 3. Control tests (see 4.5.5).
- c. Comparison test (see 4.5.6).

4.3 Inspection conditions. Unless otherwise specified (see 6.2), all inspections and inspection conditions shall be in accordance with 4.6 (inclusive).

4.4 First article inspection. First article inspections shall be performed on preproduction and initial production samples as specified herein. Approval of the first article sample by the Government shall not relieve the contractor of his obligation to supply chassis that are fully representative of those inspected as a first article sample. Any changes or deviation of the production unit from the first article sample shall be subject to the approval of the contracting officer.

4.4.1 Preproduction inspection. One preproduction chassis (see 3.1) shall be inspected at a location approved by the Government to determine conformance to requirements of this specification. Inspection shall consist of examination as specified in 4.5.2 and all tests specified herein.

4.4.1.1 Failure. Failure of the chassis to pass any examination or test, or defects in excess of acceptable quality levels (AQLs) specified, shall be cause for refusal to grant preproduction chassis approval.

4.4.2 Initial production inspection. On beginning production, three chassis shall undergo, and shall pass, initial production inspection (see 3.1). One chassis shall undergo first production inspection and the second and third chassis will be subjected to the initial production test.

4.4.2.1 First production chassis inspection.

4.4.2.1.1 In-process examination. During fabrication of the first production chassis, an in-process examination shall be conducted by representatives of TACOM product assurance directorate to evaluate conformance of materials and workmanship to specified requirements. Examination shall be made at the contractor or subcontractor facility prior to application of primer and paint. Processing and welding procedures, quality systems, and inspection records shall be evaluated during this examination.

4.4.2.1.2 Completed first production chassis contractor inspection. The first completed production chassis shall be road tested and inspected by the contractor, as specified in 4.5.5, to determine conformance to contract and specifications. After inspection, the contractor shall submit the chassis (and all inspection records and certifications) to the responsible Government inspection element at the contractor plant for preliminary examination.

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4.4.2.1.3 Preliminary examination. The responsible Government inspection element shall conduct a preliminary examination, as specified in 4.5.2, of the first completed production chassis.

4.4.2.1.4 Provisional inspection. Provisional inspection of the first completed production chassis shall be conducted jointly by representative of TACOM Products Assurance Directorate and the responsible Government inspection element. Contractor shall make available his inspection plan, records, and certifications pertinent to the chassis and components.

4.4.2.1.5 Repair of defects. Defects found as a result of the foregoing inspections, shall be corrected by the contractor at no cost to the Government. Failure of the contractor to promptly correct defects shall be cause for suspension of acceptance of the chassis until corrective action has been approved by the Government.

4.4.2.1.6 Chassis disposition. On completion of first production chassis inspection, the chassis shall remain at the manufacturing facility as a production sample and shall be the last chassis shipped on the contract. The chassis may be released sooner at the discretion of the Government. The contractor shall service and maintain the chassis during this period.

4.4.2.1.7 Final approval and acceptance. Final approval and acceptance of the first production chassis shall be withheld until the second and third chassis are accepted (see 4.4.3).

4.4.3 Second and third initial production chassis inspection. Two additional chassis (see 4.4.2) from the first month production or the first 20 produced, shall be subjected to the initial production test.

4.4.3.1 Initial production test. To determine conformance to section 3 (inclusive), the chassis shall be examined as specified in 4.5.2 and tested as specified in table IV. Subsequently, the chassis shall be tested as specified in 4.4.3.2. Tests shall be performed by the Government at a site approved by the Government and shall require no more than 120 days. Delays caused by chassis breakdown due to poor quality of workmanship or material or failure of the contractor to comply with specification or drawing requirements, shall not be the basis for adjustment of the contract performance dates, delivery schedule, or contract price. The contractor shall expeditiously furnish repair parts as required to support testing.

4.4.3.2 Test profile. The second test chassis shall be subjected to four repetitions of the 1,000 mile cycle contained in table IV for a total test mileage of 4,000 miles. The third test chassis shall be subjected to all tests specified herein and then to four repetitions of the 1,000 mile cycle contained in table IV.

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TABLE IV. One-thousand mile test cycle.

Course	Mileage and Speed 1/
Hard-surfaced roads	250
Gravel and dirt roads	250
Level cross-country	250
Hilly cross-country	250

1/ Speeds shall be varying up to the maximum safe speed in all applicable gear ranges depending on course and conditions.

4.4.3.3 Failure. Failure of the chassis attributable to a deficiency in workmanship or materials during or as a result of the test, shall be cause for rejection of the chassis. Further, the Government may refuse to continue acceptance of production chassis until evidence has been provided by the manufacturer that corrective action has been taken to eliminate the cause of the deficiency. Any deficiency found during or as a result of the test, shall be evidence that all chassis already accepted are similarly deficient, unless evidence satisfactory to the contracting officer is furnished by the contractor that they are not similarly deficient. Such deficiencies on all chassis shall be corrected by the contractor at no cost to the Government.

4.5 Quality conformance inspection.

4.5.1 Inspection provisions.

4.5.1.1 Lot size. An inspection lot shall consist of all chassis produced during an identifiable production period and submitted at one time for acceptance inspection. Production period shall not exceed 1 month.

4.5.1.2 Sampling for examination. For the purpose of visual, dimensional, and primary function examination, a representative sample shall be selected from each inspection lot in accordance with inspection level II of MIL-STD-105. Before sampling, the contractor shall 100 percent examine the first 10 vehicles to establish a process average (see 6.4) to allow normal sampling in accordance with MIL-STD-105.

4.5.1.3 Sampling for tests. All chassis of the lot shall be subjected to acceptance tests, (see 4.5.4).

4.5.2 Examinations. Visual, dimensional, and primary functional examination shall consist of examination of the chassis for conformance to applicable drawings and this specification. Examinations shall be performed against the classification of defects and with the acceptable quality levels (AQLs) specified in table V. Defects found during examinations shall be listed on the deficiency sheet for the chassis. The following constitutes a part of the classification of defects (see 6.6.3):

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- a. Any weep constitutes a minor defect.
- b. Any seep constitutes a minor defect.
- c. Any drip constitutes a major defect when the vehicle has been standing idle and the components are at ambient temperature.
- d. Any droplet that occurs at a static fit, metal to metal or gasket combination shall constitute a major defect.

TABLE V. Classification of defects.

Category	Defect	Method of examination
Major:	AQL 25 defects/100 units	
101	Engine: malfunction, leaks, mounting improper. <u>1/</u>	Visual and functional
102	Transmission: malfunction, leaks.	Visual and functional
103	Transfer gear differential steer and final drive units: malfunction, leaks.	Visual and functional
104	Fuel system components: malfunction, leaks. <u>1/</u>	Visual and functional
105	Cooling system components: malfunction, damage, leaks.	Visual and functional
106	Instrumentation, switches, warning, indicating and safety devices: malfunction, damage, calibration.	Visual and functional
107	Electrical system components circuits, and communication system: malfunction, lighting sequence improper. <u>2/</u>	Visual and functional
108	Suspension system components: adjustments, damage, leaks, clearance improper, misalignment.	Visual and functional
109	Tracks: damage, pad separation.	SIE <u>3/</u> Visual and functional
110	Hatch covers: fit improper, malfunction, leaks, damage, non-conformance.	SIE <u>3/</u> Visual and functional
111	Hydraulic components: malfunction, leaks, damage.	Visual and functional
112	Vision devices and receptacles: damage, malfunction.	Visual and functional
113	Covers, grilles, ducts, vents, panels, stowage boxes, seats, fenders, and hardware: malfunction, locking devices, damage.	Visual and functional
114	Controls: malfunction, clearance improper.	Visual and functional
115	Track drive sprockets and drive shafts: damage, clearance improper.	Visual and functional SIE <u>3/</u>

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TABLE V. Classification of defects. - Continued

Category	Defect	Method of examination
116	Adjustment mechanisms: malfunction, clearance improper.	Visual and functional
117	Hull: structural and welding defects.	Visual and functional
118	Towing pintle, lifting eyes, hooks and bracket: malfunction, defects.	Visual and functional
119	Seats, crash pads, and straps: damaged, seat control malfunction.	Visual
120	Fire extinguisher system control: seals missing, components damage.	Visual
121	Wire, tubing, or hoses: defective, damage.	Visual
122	Hydraulic control system: malfunction, damage droplets.	Visual and functional
123	Manual back-up hydraulic pump: damaged, malfunction, clearance improper.	Visual and functional
124	Control panel: malfunction, damage, improper indicators.	Visual and functional
125	Lubrication and lubricants: contamination.	Visual
Minor:	AQL 150 defects/100 units	
201	Engine: improper component assembly.	Visual and functional
202	Transmission: improper component assembly or installation.	Visual and functional
203	Transfer gear, differential steer and final drive units: improper component assembly or installation.	Visual and functional
204	Fuel system components: improper line clearance, assembly, or installation. <u>1/</u>	Visual and functional
205	Cooling system components: improper assembly or installation.	Visual and functional
206	Instrumentation, switches, warning, indicating safety devices: improper assembly or installation.	Visual and functional
207	Electrical system components, circuits, and communication system: improper assembly or installation. <u>2/</u>	Visual and functional
208	Suspension system components and adjustments: improper installation or assembly, bolt or nut torque.	Visual and functional SIE <u>3/</u>
209	Tracks: tension, installation or assembly including bolt torque damage.	Visual and SIE <u>3/</u>
210	Hatches, covers: improper assembly or installation.	Visual and functional

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TABLE V. Classification of defects. - Continued

Category	Defect	Method of examination
211	Hydraulic components: improper assembly or installation, fluid level and type.	Visual and functional
212	Vision devices and receptacles; improper assembly, installation, or clearance.	Visual and functional
213	Covers, grilles, ducts, vents, panels, stowage boxes, seats, fenders, and hardware: improper fits, adjustment, installation or defective welds, seals, adhesion, hardware or sheet metal.	Visual and functional
214	Controls: improper assembly, or installation.	Visual and SIE ^{3/}
215	Track drive sprockets and drive shafts: improper assembly, installation or bolt torque.	Visual and SIE ^{3/}
216	Adjustment mechanism: improper assembly, or installation.	Visual and functional
217	Towing pintle, lifting eyes, hooks and brackets: improper fit, installation assembly, or adhesion welding defects, damaged.	Visual and functional
218	Seats, crash pads, and straps: data card incomplete, improper assembly or installation, fit or adhesion, welding defects.	Visual and functional
219	Fire extinguisher system control: data card incomplete, improper assembly, installation coding or protection.	Visual
220	Wiring, tubing or hoses: defective, missing, improper installation, coding or protection.	Visual
221	Paint: application or color improper.	
222	Decals, marking data and instruction plates; missing, improper locatin or size, defective.	Visual
223	Lubrication and lubricants: improper application, types and levels.	Visual
224	Protective and anti-skid coatings: application materials and coverage improper.	Visual
225	Record forms, and publications: missing, properly processed or secured.	Visual
226	Manual backup, hydraulic pump: improper installation.	Visual and functional
227	Hydraulic control system: improper assembly, installation, fluid level, precharge pressure.	Visual and functional
228	Fasteners: improper assembly, torque.	Visual and functional
229		

1/ Fuel leaks constitute a special defect and will result in a total inspection of the lot for this defect.

2/ Filament failures are not to be classifeid as major or minor defects.

3/ SIE means Standard Inspection Equipment.

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4.5.2.1 Unclassified defects. Defects considered to be departures from good workmanship but having no bearing on function, safety, interchangeability, or life shall be noted in writing. Such defects recurring in five consecutive lots or 10 lots or more within a 30 day period, will be added to the minor classification of defects with no increase in AQL. A workmanship defect may be dropped from the minor classification of characteristics when five consecutive lots are found free from the defect.

4.5.2.2 Examination failure. If a vehicle fails to pass any examination specified herein, the Government shall stop acceptance until evidence has been provided by the contractor that corrective action has been taken.

4.5.3 Acceptance tests. To determine conformance to section 3 (inclusive), the contractor shall subject each chassis to the acceptance tests specified in table VI. After the tests, the chassis shall be examined for evidence of fuel or lubricant leakage or other defects. All defects found during tests shall be listed on the deficiency sheet for quality conformance (see 6.7).

4.5.4 Test failure. If a chassis fails to pass any acceptance test specified herein, the Government shall withhold acceptance of subsequent chassis until evidence has been provided by the contractor that corrective action has been taken.

4.5.5 Control tests.

4.5.5.1 Frequency. One of the first 10 chassis produced and thereafter one per month shall be selected at random by the Government, for control testing after break-in run.

4.5.5.2 Control test procedure. Chassis selected for control testing shall be loaded in accordance with 3.5 and shall be operated for a distance of not less than 5 miles. Subsequently, chassis shall be subjected to quality conformance examinations (see 4.5.2), acceptance tests (see 4.5.4), and control tests specified in table VI.

4.5.5.3 Failure. If a chassis fails to pass any control test specified herein, the Government shall withhold acceptance of subsequent chassis until evidence has been provided by the contractor that corrective action has been taken.

4.5.6 Comparison tests. The Government may select chassis at any time during the contract production period and subject them to the examinations specified in 4.6.2 and all tests specified in table VI to compare existing chassis quality with previous standards, and to reveal operation of the chassis in the field. These tests shall be conducted at Government laboratories or proving grounds designated by the contracting officer.

4.5.6.1 Chassis selection. Chassis selected for comparison testing shall have passed quality conformance examination and acceptance testing but shall not have been subjected to control testing. Chassis shall be loaded in accordance with 3.5.

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4.5.6.2 Test failure. Failure of any chassis tested to conform to any of the requirements specified in the contract or any major defects of a workmanship or materials nature occurring during or as a result of the test cycle may be considered cause for refusal to continue acceptance of chassis by the Government until objective action has been taken to eliminate the cause of failure. Any defect found during or as a result of the test, shall be prima facie evidence that chassis accepted subsequent to the accepted initial production test vehicle or previous acceptable comparison test, are similarly defective, unless evidence satisfactory to the contracting officer is furnished by the contractor that they are not similarly defective. Such defects on all chassis shall be corrected by the contractor at no cost to the Government.

TABLE VI. Classification and location of inspections and tests.

Title	Requirement	First article test <u>1/</u>	Acceptance test <u>2/</u>	Control test <u>2/</u>
Construction	3.4	4.6.1	4.6.1	4.6.1
Performance	3.5	4.6.2		4.6.2
Power plant and power train	3.5.1	4.6.3		4.6.3
Environments	3.5.2	4.6.4		
Cooling system	3.5.2.1	4.6.4.1		
Acceleration	3.5.2.2	4.6.5	4.6.5	4.6.5
Level road speeds	3.5.2.3	4.6.6	4.6.6	
Level road drift	3.5.2.4	4.6.7	4.6.7	
Level road stopping	3.5.2.5	4.6.8	4.6.8	
Grades and slopes	3.5.2.6	4.6.9	4.6.9	
Engine starting (grades and slopes)	3.5.2.6.1	4.6.9	4.6.9	
Fuel supply (grades and slopes)	3.5.2.6.2	4.6.9	4.6.9	
Holding	3.5.2.6.3	4.6.9	4.6.9	
Grade speeds	3.5.2.6.4	4.6.9	4.6.9	
Shallow water fording	3.5.2.7	4.6.10	4.6.10	
Engine starting (shallow water)	3.5.2.7.1	4.6.10.1	4.6.10.1	
Lubricant contamination	3.5.2.7.2	4.6.10.2	4.6.10.2	4.6.10.2
Trench crossing	3.5.2.8	4.6.11		4.6.11
Vertical obstacles	3.5.2.9	4.6.12		4.6.12
Turning	3.5.2.10	4.6.13	4.6.13	
Sealing	3.5.2.11	4.6.14		4.6.14
Escape hatch seal	3.5.2.11.1	4.6.15	4.6.15	
Controls	3.5.3	4.6.16	4.6.16	
Adjustment mechanism	3.5.4	4.6.16	4.6.16	
Generator voltage	3.5.5	4.6.17	4.6.17	
Generator blower motor	3.5.5.1	4.6.17	4.6.17	

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TABLE VI. Classification and location of inspections and tests. - Cont'd

Title	Requirement	First article test <u>1/</u>	Acceptance test <u>2/</u>	Control test <u>2/</u>
Air cleaner blower motor	3.5.6	4.6.18		4.6.18
Lights	3.5.7	4.6.19	4.6.19	
Driver night viewer power circuit	3.5.7.1	4.6.19		4.6.19
Locking, unlocking and actuated mechanisms	3.5.8			
Hull drain valves	3.5.8.1	4.6.20		4.6.20
Escape hatch release	3.5.8.2	4.6.21	4.6.21	
Operator and assistant operator seat	3.5.8.3	4.6.22	4.6.22	
Fuel shutoff valve	3.5.8.4	4.6.23		4.6.23
Fire extinguisher	3.5.9	4.6.24	4.6.24	
Personnel heater	3.5.10	4.6.25	4.6.25	
Smoke systems	3.5.11			
Engine smoke generator	3.5.11.1	4.6.26		4.6.26
Smoke grenade discharger	3.5.11.2			
Arming test	3.5.11.2.1	4.6.26.1.1	4.6.26.1.1	
Circuit test	3.5.11.2.2	4.6.26.1.2	4.6.26.1.2	
Vibration and noise level	3.5.12			
Equipment operation	3.5.12.1	4.6.27		4.6.27
Operator protection	3.5.12.2	4.6.27	4.6.27	
In-tank pumps	3.5.13	4.6.28		4.6.28
Fuel return	3.5.14	4.6.29		4.6.29
Air cleaner	3.5.15	4.6.30	4.6.30	
Painting and marking	3.5.16			
Painting	3.5.16.1	4.6.31	4.6.31	
Marking	3.5.16.2	4.6.31	4.6.31	
Plates	3.5.16.3	4.6.31	4.6.31	
Break-in	3.5.17	4.6.32	4.6.32	
Workmanship	3.5.18	4.6.33	4.6.33	4.6.33

1/ = Government proving ground.

2/ = Contractor premises.

4.6 Methods of inspection.

4.6.1 Construction examination. Conformance to 3.4 (inclusive) shall be determined during visual, dimensional, and primary functional examination (see 4.5.2).

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4.6.2 Performance tests. Conformance to 3.5 shall be determined during all tests specified in table VI.

4.6.3 Power plant and power train test. Conformance to 3.5.1 shall be determined during steering and braking tests (see 4.6.8 and 4.6.13). None of the malfunctions stated in 3.5.1 shall exist.

4.6.4 Environments test. Conformance to 3.5.2 shall be determined during initial production tests (see 4.4.3.1). The vehicle shall operate properly under all ambient temperatures stated in 3.5.2. When specified (see 6.2), storage tests in accordance with MIL-STD-210 shall be performed.

4.6.4.1 Cooling system test. Conformance to 3.5.2.1 shall be determined during initial production tests (see 4.4.3.1). Engine and transmission temperature indicators shall remain in the green (safe) area.

4.6.5 Acceleration test. To determine conformance to 3.5.2.2, the chassis shall be operated as specified and performance timed. Time shall be not more than 13 seconds.

4.6.6 Level road speeds test. To determine conformance to 3.5.2.3, the chassis shall be operated under specified conditions. A speed of not less than 30 mph shall be maintained for 10 minutes with engine at full governed speed. A speed of not less than 2.5 mph shall be maintained for 5 minutes with engine at full governed speed and transmission in low gear. There shall be no damage to power plant or power train.

4.6.7 Level road drift test. To determine conformance to 3.5.2.4, the chassis shall be operated on smooth, paved surface at speed indicated. The test shall be run twice in each direction and the average drift at end of four runs shall not exceed 4 feet.

4.6.8 Level road stopping test. To determine conformance to 3.5.2.5, the chassis shall be operated on a smooth, paved surface at speed indicated. The stopping distance shall be measured and shall not exceed 60 feet.

4.6.9 Grade and slope tests. To determine conformance to 3.5.2.6, 3.5.2.6.1, 3.5.2.6.2, 3.5.2.6.3, and 3.5.2.6.4, the chassis shall be operated on the grades and slopes indicated and performance observed. The chassis shall meet all grade and slope requirements.

4.6.10 Shallow water fording test. To determine conformance to 3.5.2.7, the chassis shall be operated in 48 inches of water for not less than the time indicated and water depth in the hull measured. Water accumulation shall not exceed a depth of two inches.

4.6.10.1 Engine starting (shallow water) test. To determine conformance to 3.5.2.7.1, the chassis and engine shall be operated as required and the engine observed for proper restart within indicated time. Accessories and instruments shall be observed for proper operation. Engine shall restart in not more than 3 minutes, all accessories shall function.

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4.6.10.2 Lubricant contamination test. To determine conformance to 3.5.2.7.2, after completion of fording test, lubricant samples shall be tested for water content. Test results shall be submitted to the Government inspector. Water content shall be not more than 2 percent by volume.

4.6.11 Trench crossing test. To determine conformance to 3.5.2.8, the chassis shall be operated over obstacles of the dimensions stated and observed for performance and visually examined for physical damage. Inability to negotiate the trench, or physical damage to the chassis shall constitute a test failure.

4.6.12 Vertical obstacles test. To determine conformance to 3.5.2.9, the chassis shall be operated over obstacles of the dimensions stated, observed for performance, and visually examined for physical damage. Inability to negotiate the obstacles, or physical damage to the chassis shall constitute a test failure.

4.6.13 Turning test. To determine conformance to 3.5.2.10, the chassis shall be operated as stated. When measured, the pivot-circle shall not exceed 35 feet.

4.6.14 Sealing test. To determine conformance to 3.5.2.11, seals shall be visually examined after completion of all mobile tests. Leakage shall not exceed the requirements of 3.5.2.11.

4.6.15 Escape hatch seal test. To determine conformance to 3.5.2.11.1, the chassis shall be exposed to heavy rain conditions (natural or simulated) and the hatch seal visually examined for leakage. Any leakage will constitute a test failure.

4.6.16 Controls and adjustment mechanisms test. To determine conformance to 3.5.3 and 3.5.4, controls shall be observed for proper function during mobile test operations. After mobile test operations, adjustment mechanisms shall be observed for adjustment maintenance. Any malfunction will constitute a test failure.

4.6.17 Generator and blower tests. To determine conformance to 3.5.5 and 3.5.5.1 with the engine running at various speeds, generator voltage shall be tested for requirements. Air flow to the generator shall be observed for continuous flow. Generator voltage shall remain within the required limits. There shall be a continuous air flow to the generator.

4.6.18 Air cleaner blower test. To determine conformance to 3.5.6 with engine running, all air outlets shall be examined for continuous air flow. Further examination shall show that air flow stops when the engine is stopped. Lack of continuous air flow at any outlet, or failure of the blower to switch off when the engine is stopped shall constitute a test failure.

4.6.19 Lights. Conformance to 3.5.7 and 3.5.7.1 shall be determined during visual, dimensional, and primary functional examination (see 4.5.2).

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4.6.20 Hull drain valves test. To determine conformance to 3.5.8.1, drain valve levers shall be unlocked and the effort required to open the valves measured. Effort shall not exceed the requirement for each valve.

CAUTION: Valves shall be closed and locked after test.

4.6.21 Escape hatch release test. To determine conformance to 3.5.8.2, the force required to release the hatch locking device shall be measured and shall be within required tolerances.

4.6.22 Operator seat test. To determine conformance to 3.5.8.3, with an average weight person (180 pounds nominal) in the seat, force required to actuate adjustment levers shall be measured and shall not exceed the requirement. A person in-seat is only required for the fore and aft adjustment test.

4.6.23 Fuel shut-off test. To determine conformance to 3.5.8.4, the engine shall be operated at 50 percent of governed rpm, the manual shut-off valve shall be actuated to the "OFF" position. Time required for the engine to stop shall be measured and shall be not more than 30 seconds. The fuel valve shall be returned to "ON" position and the system primed and bled of air.

4.6.24 Fire extinguisher. To determine conformance to 3.5.9, the fire extinguisher shall be tested for operation. With the engine idling at 700 to 800 rpm, the internal control shall be pulled with a maximum effort of 55 pounds using a force gage. The first shot shall actuate one bottle. After a time delay of more than 6 seconds but less than 11 seconds, the engine shall have stopped and the system shall begin discharging CO₂ into the engine compartment and in the center of the engine "V". After the handle has returned to its original position, a second actuation shall discharge the remaining two bottles of CO₂. Removal and weighing of each CO₂ bottle after test, shall show not less than 9 pounds of CO₂ discharged during test. The CO₂ bottles shall be recharged and reinstalled, and the test repeated using the external control. Actuation of the external control shall not stop the engine. When conducting these tests, safety precautions shall be exercised (see 6.5.1).

4.6.25 Personnel heater test. To determine conformance to 3.5.10, activate the heater by placing the heater ignition switch in the "high" or "low" position run mode. Verify that the heater blower motor operates at low speed and that the heater ignites within 4 minutes. After ignition, place the heater ignition switch in the "high" position run mode if the initial activation was made in the "low" position run mode, and verify that the blower motor operates at high speed. Place the heater ignition switch in the "off" mode and verify that the burner extinguishes, and the blower motor shuts off within 3.5 minutes.

4.6.26 Engine smoke generator test. To determine conformance to 3.5.11.1, activate the engine smoke generator switch when the engine is warm and operating at 1600 rpm. Verify that both right and left exhaust ducts emit white smoke.

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NOTE: Do not test the engine smoke generator for more than 15 seconds, nor within a building, nor with personnel exposed to the exhaust plume.

4.6.26.1 Smoke grenade discharger circuit tests.

4.6.26.1.1 Arming test. To determine conformance to 3.5.11.2.1 move the master battery switch to "ON" and the grenade system power switch to "ON", and verify that the power-on (ready) lamp in the grenade power box illuminates. Move the grenade system power switch to "OFF" and verify that the power-on (ready) lamp is extinguished.

4.6.26.1.2 Circuit voltage test. To determine conformance to 3.5.11.2.2, arm the circuit as specified in 4.6.2.6.1.1 and verify that the power-on (ready) lamp is illuminated. Actuate the RIGHT firing pushbutton and verify that the voltage on the smoke grenade discharger pins shown in figure 2 is as specified in 3.5.11.1.2. Actuate the LEFT firing pushbutton and verify that the voltage on the smoke grenade discharger pins is as specified. Return power-on (ready) switch to "OFF" and verify that voltage is not present on any of the firing pins.

4.6.27 Vibration and noise level test. To determine conformance to 3.5.12.1 and 3.5.12.2, the average of three noise level readings at each octave band shall be determined at each operator head position under normal operating procedures. The sound level meter, microphone related equipment, and techniques employed shall be in accordance with MIL-STD-1474. Verify that the noise hazard signs are clearly visible to personnel in all crew stations.

4.6.28 In-tank fuel pumps. To determine conformance to 3.5.12, a pressure gage shall be attached to the engine end of the fuel line disconnect. The pumps shall be electrically activated and the pressure shall be not less than 5 psig for each pump.

4.6.29 Fuel return system. To determine conformance to 3.5.14, air pressure of 3 to 5 psig shall be applied to the fuel return line and the return selector valve checked in the "LEFT" and then "RIGHT" positions to verify that the fuel is diverted into the correct tank as indicated by the pointer. After the test, the selector valve shall be placed in the "BOTH" position and lockwired in that position.

4.6.30 Air cleaner outlet system. To determine conformance to 3.5.15, the filter shall be removed. The hose clamp at the turbocharger inlet shall be loosened and the outlet system shall be sealed off at both ends and pressurized to a vacuum pressure between 25 to 30 inches of water. After 3 minutes, any pressure drop shall not exceed 3 inches of water.

CAUTION: Maintain turbocharger inlet cleanliness during testing and when reattaching the hose clamp.

4.6.31 Painting, marking, and data plates examination. Conformance to 3.5.16.1, 3.5.16.2, and 3.5.16.3 shall be determined during visual, dimensional, and primary functional examination (see 4.5.2).

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4.6.32 Verification of break-in run. To determine conformance to 3.5.17, before any chassis inspections are performed, the contractor shall give written notice to the Government inspection element that all requirements of 3.5.17 have been met.

4.6.33 Workmanship examination. Conformance to 3.5.18, shall be determined during visual, dimensional, and primary functional examination (see 4.5.2).

5. PREPARATION FOR DELIVERY

5.1 Processing for storage and shipment. Unless otherwise specified (see 6.2), preparation for delivery shall be in accordance with Level A or B of MIL-C-62279.

6. NOTES

6.1 Intended use. The tank chassis is intended for use as a transporting launcher for an AVL bridge after subsequent adaptation of the launching and bridge mechanism to the chassis.

6.2 Ordering data. Acquisition documents should specify the following:

- a. Title, number, and date of this specification.
- b. If first article is not required (see 3.1).
- c. If responsibility for inspection is other than as specified (see 4.1).
- d. If inspection conditions shall be other than as specified (see 4.3).
- e. If storage tests are required (see 4.6.4).
- f. Applicable level of processing (see 5.1).

6.3 First article. When a first article sample inspection is required, the item will be tested as specified in 4.4. The first article samples shall consist of three units. The contracting officer should include specific instructions in all acquisition documents regarding arrangements for examination, tests and approval of the first article samples (see 3.1).

6.4 Process average. Sampling may be initiated if the process average value for the first 20 assemblies inspected is less than the AQL specified in the classification of defects for major and minor defects.

$$\text{Process average} = \frac{\text{Number of defects}}{\text{Number of vehicles inspected}} \times 100$$

If the computed process average exceeds the specified AQL, 100 percent inspection shall be performed and continued until such time that the process average for 20 consecutive vehicles is less than the specified AQL (see 4.5.2.2).

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6.5 Safety precautions.

6.5.1 Fire extinguisher (see 4.6.24). Caution should be exercised in handling carbon dioxide fire extinguisher cylinders. They should not be dropped, permitted to strike each other, or handled roughly. Extreme care should be exercised during reinstallation to avoid tripping the fire extinguisher control system since physical injury is highly probable.

6.6 Definitions.

6.6.1 Recurring major defects. A major defect is recurring when the same defect occurs more than once in the same sample or when the defect occurs in two successive samples. A major defect may be considered recurring when the historical inspection records ("P" chart or equivalent) reflect such a condition. Recurring major defects shall be cause for the entire lot or lots to be inspected for the recurring defects.

6.6.2 Recurring minor defects. A minor defect is recurring if it occurs more than twice in the same sample or when the defect occurs in four successive samples. Recurring minor defects shall be cause for the entire lot or lots to be inspected for the recurring defects.

6.6.3 Leaks. The following definitions shall be used for the examination of defects for leaks:

- a. Weep: - Any evidence of fluid beyond the seal.
- b. Seep: - Any evidence of fluid beyond the seal that does not result in formation of a droplet.
- c. Droplet: - Any evidence of fluid beyond the seal that results in the formation of a droplet.
- d. Drip: - Any evidence of fluid beyond the seal where a droplet forms and falls.

6.7 Recycled materials. Use of recycled materials which meet the requirements of applicable material specifications without jeopardizing the intended use of the item shall be encouraged (see 3.3).

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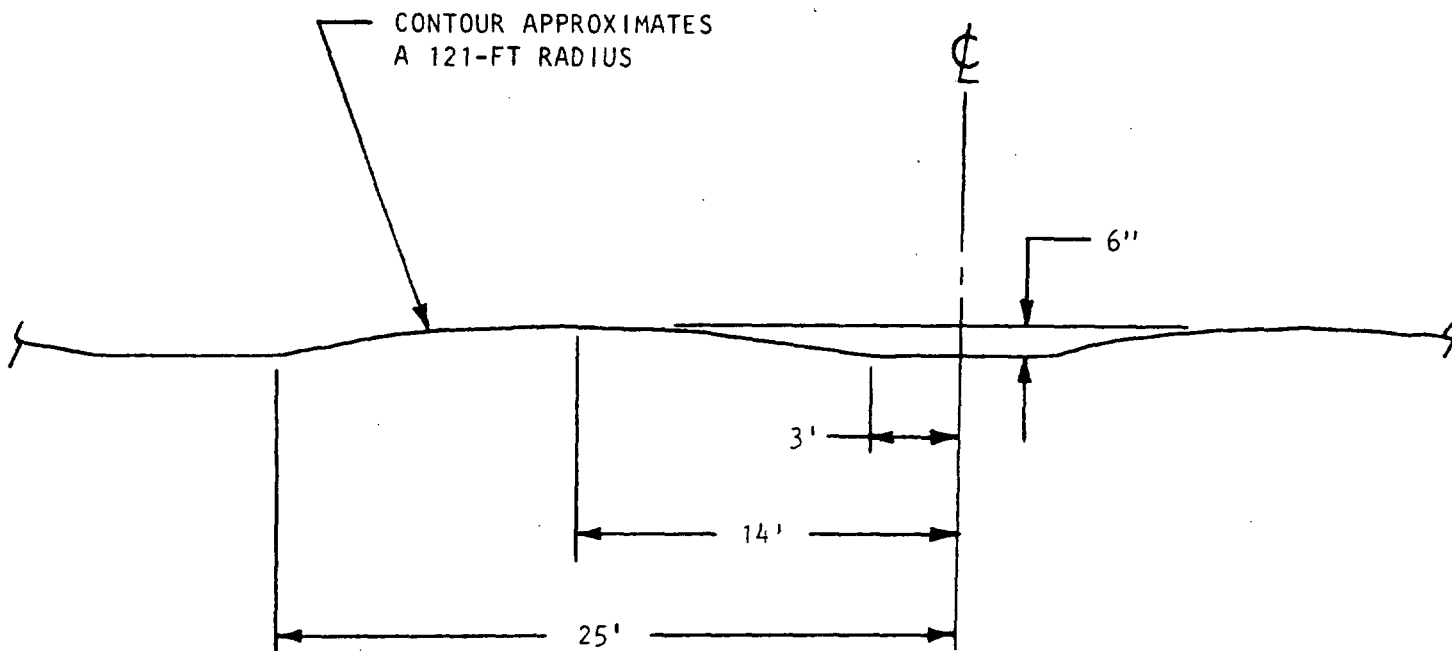


FIGURE 1. Profile of Test Track (Artificial Bump).

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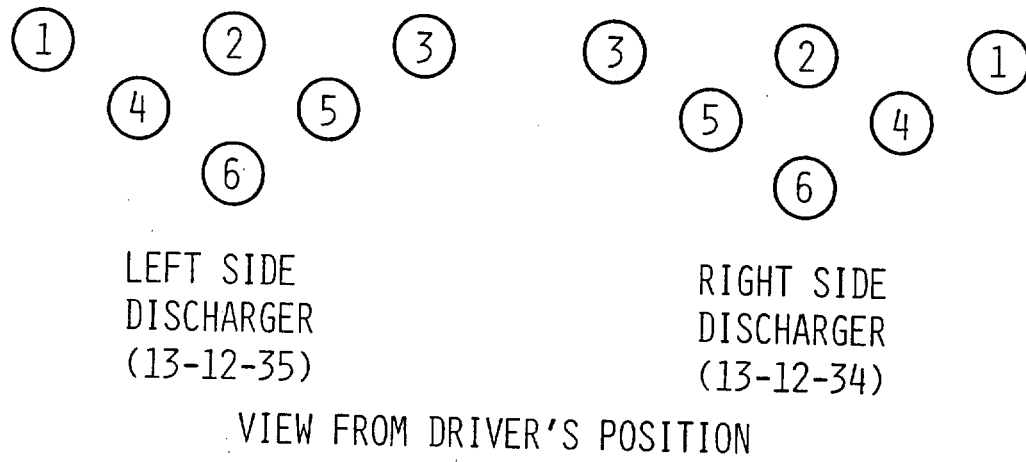


FIGURE 2. Firing pin positions.

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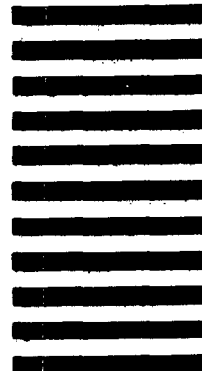


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(See Instructions - Reverse Side)

1. DOCUMENT NUMBER		2. DOCUMENT TITLE	
3a. NAME OF SUBMITTING ORGANIZATION		4. TYPE OF ORGANIZATION <i>(Mark one)</i>	
b. ADDRESS <i>(Street, City, State, ZIP Code)</i>		<input type="checkbox"/> VENDOR	
		<input type="checkbox"/> USER	
		<input type="checkbox"/> MANUFACTURER	
		<input type="checkbox"/> OTHER <i>(Specify):</i> _____	
5. PROBLEM AREAS			
a. Paragraph Number and Wording:			
b. Recommended Wording:			
c. Reason/Rationale for Recommendation:			
6. REMARKS			
7a. NAME OF SUBMITTER <i>(Last, First, MI)</i> - Optional		b. WORK TELEPHONE NUMBER <i>(Include Area Code)</i> - Optional	
c. MAILING ADDRESS <i>(Street, City, State, ZIP Code)</i> - Optional		8. DATE OF SUBMISSION (YYMMDD)	