MIL-R-46164C <u>13 June 1983</u> <u>SUPERSEDING</u> MIL-R-0046164B(AT) 16 January 1981 MIL-C-46164(MR) 26 September 1973

MILITARY SPECIFICATION RUSTPROOFING FOR MILITARY VEHICLES AND TRAILERS

This specification is approved for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification covers the application of corrosion preventative compounds to all sheet metal areas of vehicles and trailers, including the frame and all its structural members. When applied, such compounds shall prevent rusting of vehicles and trailers in all severe environmental areas (see 3.2).

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 <u>Specifications and standards</u>. Unless otherwise specified (see 6.2), 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.

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.

NO DELIVERABLE DATA REQUIRED

AREA - MFFP

SPECIFICATIONS

MILITARY

MIL-M-43719	- Marking Materials and Markers, Adhesive, Elastomeric, Pigmented, Specifications for.
MIL-C-62218	- Corrosion Preventive Compound, Cold Application (for Fielded Motor Vehicles).

STANDARDS

MILITARY

MIL-STD-105 -	Sa	mpling	ςΡ	roce	dures	and	Tables	foi
	In	specti	on	by	Attril	outer	8.	

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

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11621624 - Plugs

DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)

OSHA

-Safety and Health Regulations.

(Application for copies should be addressed to the Department of Labor, Assistant Secretary of Labor, Occupational Safety and Health Administration, Washington, D.C. 20210.)

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

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

3. REQUIREMENTS

3.1 <u>First article</u>. When specified (see 6.2), the contractor shall furnish sample vehicles for first article inspection and approval (see 4.4 and 6.3). First article samples shall be inspected by the contractor under Government surveillance to determine conformance to quality assurance provisions of this specification. First article samples shall be fully

representative of vehicles supplied from contractor facilities. Any change or deviation of production vehicles from first article sample shall be subject to approval of the Government.

3.2 <u>Materials</u>. The corrosion preventive compounds used for application to military vehicles and trailers shall conform to MIL-C-62218 (see 4.7.1), and the application of these compounds shall prevent rusting of vehicles and trailers in all severe environmental areas. These areas include, but are not limited to the following:

- a. Acid rain.
- b. Heavy rainfall.
- c. High-humidity.
- d. Snow.
- e. Salt-spray.
- f. Tropical.
- g. Industrial pollutant.
- h. Atmosphere pollutant.

3.3 Application equipment (4.7.2).

3.3.1 <u>Spray gun</u>. An airless atomization-type spray gun designed for fluid pressure atomization shall be used. The spray gun shall be capable of spraying materials on vertical or horizontal surfaces without abnormal fatigue to the operator. Material passages shall be adequate for material demand required for spraying with a minimum drop in pressure. The gun shall consist of a body, applicator (wand), and necessary parts for the assembly of nozzle(s), material valve, filter connection, and a trigger.

3.3.2 <u>Nozzle</u>. The nozzle(s) shall be equipped with a tungsten carbide spray nozzle or tip capable of providing cone and flat-fan shaped patterns. The size of the nozzle shall be capable of passing through a 1/2-inch hole when assembled to an applicator with sufficient forward and backward throw for adequate coverage.

3.3.3 <u>Applicators</u>. A series of wands or applicators capable of operating through 1/2-inch access holes shall be provided. Types of applicator assemblies, each designed for a specific operation, shall be used as specified herein.

3.3.3.1 <u>Applicator assembly (90°) </u>. An applicator 12 inches long with a 90° angle, bent 1-1/2 inches from nozzle end, with a flat spray nozzle, having a 0.026 inch spray orifice, and a rigid straight spray, shall be used to spray the interior surfaces or boxed-in sections of vehicles and trailers. This wand assembly consists of a tip, nozzle, tube, nut, ferrule, coupling, filter assembly, and quick-disconnect plug (see figures 1.A and 1.F). Due to extremely high operating pressures, it is important that all connections be properly tightened to prevent leakage of rustproofing material.

3.3.3.2 <u>Applicator assembly (45°) </u>. An applicator with a straight-through flat pattern, 12 inches long with a 45° angle, bent 1-1/2 inches from nozzle end, shall be used to spray exterior underbody panels and frame rails. The nozzle used with this applicator assembly has a 0.026-inch orifice (see figure 1.B).

3.3.3.3 <u>Flexible applicator assembly</u>. A flexible applicator, 72 inches long with a straight-through cone, pattern nozzle (see figure 1.C), shall be used primarily for fog spraying on enclosed curved sections and rocker panels.

3.3.3.4 <u>Rigid applicator assembly</u>. A rigid spray applicator 60 inches long with a straight-through cone pattern nozzle (see figure 1.D), shall be used for fog spraying of door panels and other enclosed body areas.

3.3.3.5 <u>All purpose applicator assembly</u>. An all purpose applicator with a flat-fan spray applicator (see figure 1.E), shall be used to spray vehicle areas that cannot be reached with foregoing applicators.

3.4 <u>Application procedure</u>. Vehicles and trailers shall be clean, dry, and free from loose materials prior to application of rustproofing compounds. Vehicles or trailers that have accumulated deposits of rust, mud, dirt, oil, and grease, shall be cleaned by any suitable means such as power water washing. Allow vehicles to air dry a minimum of 24 hours before applying rustproofing compound(s). Blowing of air in lieu of drying by air for 24 hours is also acceptable. Surface preparation of vehicle areas to be rustproofed is necessary because it has a direct bearing on the life of the coating. During application of rustproof compound(s), particular attention shall be given to those areas of the vehicle that are most susceptible to corrosion such as seams, welds, crevices, and hidden recessed areas. During cleaning and application procedures, operator shall process vehicle in a well-ventilated area, and shall wear protective clothing such as goggles, face shields, rubber gloves, aprons, and boots (4.7.3).

3.4.1 Thickness. The corrosion preventive compound shall be applied to a film thickness of 5 mils minimum measured when the film is dry to touch. If necessary to obtain the required thickness, two or more coats of compound shall be applied with a two hour minimum drying time between each coat (4.7.4).

3.4.2 Access and drain holes. After application and drying of corrosion preventive compound, all drilled access holes in body, engine compartment, and wheel splash panels shall be closed with plugs conforming to Drawing 1162162. Plug color shall be in the range of dark brown to black. Inspection hole plugs, if removed for application of compound or inspection, shall be reinstalled. Drain holes and passages shall not be plugged (4.7.5).

3.4.2.1 <u>Tactical vehicles</u>. Military drawings and technical document(s) showing all access holes, areas to be covered, drainage holes, and other pertinent rustproofing details shall be provided for such vehicles (4.7.6).

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3.4.2.2 <u>Non-tactical vehicles</u>. One-half inch access holes shall be drilled for inserting application tools. The location of the holes shall be as specified. Boxed-in areas shall have access holes drilled on no greater than 18 inch centers. After application, the holes shall be sealed with weather resistant plastic or rubber caps (4.7.5).

3.4.3 <u>Application areas</u>. Vehicles and trailers shall be rustproofed in accordance with a drawing or sketch supplied by the Government, or prepared by the contractor for Government approval (see 4.7.6). Areas requiring corrosion preventive compound(s) shall include, but not be limited to the following:

- a. Splash panel, (see figure 2).
- b. Sheet metal header, (see figures 5,2,6,7,8).
- c. Light wells, (see figures 2,6,7,8).
- d. Fenders and quarter panels, (see figures 2,6,7,8).
- e. Hood and deck lid, (see figures 6,7,8).
- f. Cowl and fire wall, (see figures 6,7,8).
- g. Rocker panel and dog legs, (see figures 2,3,6,7,8).
- h. Seams and moldings, (see figures 2,6,7,8).
- i. Floor pan, (see figures 6, 7, 8).
- j. Structural members, (see figures 2,6,7,8).
- k. Center door and windshield posts, (see figures 2,4,6,7,8).
- 1. Front and rear door pillars, (see figures 2,6,7,8).
- m. Front and rear doors, (see figures 5,6,7,8).
- n. Trunk lid and lower rear beads, (see figures 2,6).
- o. Tailgate, (see figure 6).
- p. Roofs and trunk cabs, (see figures 6,7,8).
- q. Unitized body.
- r. Fuel tank and lines (exterior).
- s. Catwalks.
- t. Body and undersides, including enclosed and expansible vans, cargo, dump, ambulance, crane, light trucks, station wagons, etc.
- u. Fuel dispersing pumps, water dispersing pumps, and meter cabinets.
- v. Inner panels, (see 6.5.2).
- w. Crane gondolas.
- x. Trailers, including frame, crossmembers, stake, pockets, and underbody, (see figures 9,10).
- y. Miscellaneous corrosion-producing vehicle or trailer areas.
- NOTE: All figures are shown for illustrative purposes only, and are not to be used in lieu of approved drawings or sketches showing areas to be rustproofed for specific vehicles and trailers.

3.4.3.1 <u>Prohibited application areas</u>. Caution shall be taken during application of corrosion preventive compound to avoid the coating of components, assemblies, or subassemblies whose function or life could be affected by the compound. This applies to any portion of moving components (mechanical or electrical) considered to be part of the vehicle (4.7.6). This includes, but is not limited to the following:

a. Bearing surfaces.

b. Rubber or plastic.

c. Engine and components.

d. Engine exhaust system.

e. Transmission housing.

f. Transfer case.

g. Drive shafts and universal joints.

h. Parking brake and linkage.

1. Brake drums.

j. Disc brake components.

k. Brake backing plates.

1. Axle.

m. Shock absorbers.

n. Stearing gear box.

o. Steering linkage.

p. Heat shields and catalytic converters.

q. Air cleaner.

r. Air inlet pipes.

s. Lubrication fittings.

t. Component breathers.

u. Wheel and tire surfaces.

v. Fan, generator, alternator belts, and power steering belt, if applicable.

w. Fuel tanker dispensing equipment.

x. Upholstery, windows, and trim.

y. Window lift and door lock mechanisms.

z. Miscellaneous non-sheet metal areas.

3.5 <u>Marking</u>. A decal identifying the rustproofing process and processon shall be furnished and mounted in a visible location inside the vehicle or under the hood, and for trailers, locate decal adjacent to data plate. The decal shall conform to material and performance requirements of MIL-M-43719 type I, class 1, and shall include, but is not limited to the following information:

a. Make and model number.

b. Contractor and company rustproofing the vehicle or trailer.

c. Rustproofing material used and its manufacturer.

d. Date vehicle or trailer was rustproofed.

e. Contract number.

3.6 <u>Workmanship</u>. Workmanship shall be of such quality to assure that application of corrosion preventive compound(s) to all vehicles and trailers under contract, shall conform to the rustproof drawings and technical documents referenced in the contract and to requirements of this specification. Particular attention shall be paid to the requirement of an evenly applied coating with no running, sagging, or excessive build-up. Any overspray of material on body finish, trim, windows, or upholstery shall

be removed without causing damage to any component or material (paint, rubber, plastic, etc.). Any overspray that may accumulate in prohibited areas (see 3.4.3.1), shall be removed with a clean cloth and solvent, such as naphtha. A minimum amount of solvent should be used to remove deposits of compound from the upholstery. Necessary precaution shall be taken to assure that the solvent used does not cause damage to rubber padding, upholstery, adhesives, and any other prohibited areas (4.7.8).

4. QUALITY ASSURANCE PROVISIONS

4.1 <u>Responsibility for inspection</u>. Unless otherwise specified in the contract or purchase order, contractor shall be responsible for performance of all inspection requirements specified herein. Unless otherwise specified in the contract or purchase order, contractor may use any 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 <u>Materials</u>. The contractor shall provide the Government with objective evidence that materials (see 3.2) used are as specified herein.

4.1.2 Quality assurance rustproofing plan. The contractor shall provide for Government approval, a written description of a quality assurance rustproofing plan, prior to initiation of the rustproofing process.

4.1.3 <u>Contractor process control procedures</u>. A current written description of contractor process and details for each specific type of vehicle and trailer to be treated, shall be submitted to the contracting officer for approval, prior to initiation of the rustproofing process. Sample specimens shall be prepared for all boxed in areas. They shall be made from the same materials used in production. The sample specimens shall be rustproofed as if they were part of a complete vehicle. The specimens shall then be sectioned and inspected to determine the extent of coverage and thickness that the rustproofing process has achieved. The contractor shall notify the Government and obtain approval of any subsequent change to the submitted procedures, prior to implementing the change into the system.

4.1.3.1 <u>Certification of rustproofer</u>. The contractor shall include a plan (in-process control procedures) to assure rustproofing application personnel are knowledgeable in accordance with the rustproofing application requirements, and have demonstrated the technical capability in operating the rustproofing equipment (see 3.3). The contractor shall maintain a current written record of certification tests which shall be made available to the Government upon request.

4.1.3.2 <u>Instructions</u>. Unless otherwise specified, illustrated rustproofing instructions covering the vehicle to be rustproofed shall be prepared and maintained by the contractor in technical manual form. The manuals shall specify required tools, materials, procedures, and application for proper rustproofing of the specific vehicle. The manual shall be used by trained rustproofing personnel.

4.1.4 <u>Safety and health</u>. It is the responsibility of the contractor to assure that the application of rustproofing compound(s) do not present safety or health hazards to anyone connected with rustproofing project. Compliance with the Occupation Safety and Health Act (OSHA) standards are a requirement. The elimination of safety or health hazards is not limited to such compliance, and shall cover State and local health and safety ordinances associated with rustproofing project.

4.2 <u>Classification of inspections</u>. Inspection requirements specified herein are classified as follows:

- a. First article inspection (see 4.4).
- b. First production vehicle inspection (see 4.5).
- c. Quality conformance inspection (see 4.6).

4.3 <u>Inspection conditions</u>. Unless otherwise specified, all tests, examinations, and operations performed by the contractor shall be subjected to Government verification at unscheduled intervals. Verification shall consist of the following:

- a. Surveillance of the operation to determine that practices, methods, and procedures of the written inspection plan are being properly applied.
- b. Government inspection to assure quality of product submitted for approval.
- c. Deviation from prescribed or agreed upon procedures, or practices which might have an adverse effect upon the quality of the product, shall be immediately called to the attention of the contractor. Failure of the contractor to promptly correct defects discovered, or non-conformance to approved procedures, shall be cause for suspension of acceptance until corrective action has been taken, or until conformance of product to specified criteria has been demonstrated with no cost to the Government.

4.4 First article inspection.

4.4.1 <u>Sampling for first article inspection</u>. When first article inspection is specified (see 6.2), a sample shall be selected by the Government from the first 10 vehicles processed under the contract.

4.4.2 First article inspection. When specified, first article inspection (see 3.1 and 6.2) shall be performed after award of contract. Inspection shall be performed on sample vehicles which have been processed to approved procedures (see 4.1.3) and quality assurance rustproofing plan (see 4.1.2). First article approval is valid only on the contract which it is granted, unless extended by the Government to other contracts. All inspections shall be done by the contractor under Government surveillance.

4.4.2.1 First article inspection procedure. First article sample (see 4.4.1) shall be inspected at a location approved by the Government to determine conformance to the requirements of this specification. Inspection shall consist of all examinations as specified in table I, in the order listed. All inspections shall be done by the contractor under Government surveillance. Where necessary, access to areas requiring inspection shall be accomplished by cutting, burning, or any other means necessary to perform a complete inspection of all processed areas of the vehicle. The inspection may be destructive in nature, and shall be performed at the discretion of the Government, at a site approved by the Government. Sample vehicles and trailers inspected, shall be retained at contractor facilities as Government Furnished Equipment (GFE), and shall be used as acceptance criteria for subsequent vehicles.

4.4.3 <u>Failure</u>. Failure of any first article sample to pass first article inspection as specified in 4.4.2.1, shall be cause for the rejection of the first article sample. Correction of deficiencies shall be made by the contractor at no cost to the Government before acceptance of the first article sample. The Government may elect to perform a second first article inspection.

4.5 First production vehicle inspection.

4.5.1 <u>Pre-process inspection</u>. A pre-process inspection shall be conducted by the contractor to assure the vehicle is clean and dry (see 3.4), prior to application of rustproofing compound.

4.5.2 <u>In-process inspection</u>. During processing of the first vehicle, an in-process inspection shall be conducted by the Government to evaluate conformance of materials and workmanship to requirements specified (see 4.1).

4.5.3 <u>Completed first production vehicle</u>. The first production vehicle of each vehicle configuration under contract, shall be completely inspected by the contractor for conformance to the requirements specified herein. Upon completion of the contractor inspection, the contractor shall submit the vehicle, and make available all inspection records and certifications to the responsible Government inspection officers at contractor facilities for preliminary inspection.

4.5.4 <u>Preliminary inspection</u>. The vehicle shall receive a preliminary inspection by the responsible Government inspection element. Inspection shall include verifications of contractor correction of all deficiencies reported during the in-process inspection as specified in 4.5.2.

4.5.5 <u>Provisional inspection</u>. The completed first production vehicle will be subject to provisional inspection at contractor facilities by representatives of the US Army Tank-Automotive Command, Product Assurance Directorate. The contractor shall provide any required inspection assistance. At the time of this inspection, the contractor shall make available inspection plans, inspection records, and certifications.

4.5.6 <u>Vehicle disposition</u>. After approval of the first production vehicle of a specific model, this vehicle shall remain at the contractor facilities as a production standard, and be the last vehicle shipped on the contract.

4.5.7 <u>Failure</u>. Defects found as a result of the foregoing inspections or the acceptance examinations, 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 completed product, until corrective action has been accomplished.

Examination	Requirement	Me	thod
Workmanship	3.6	4.7.8	Visual
Thickness	3.4.1	4.7.4	Gage
Access and drain holes	3.4.2	4.7.5	Visual
Marking	3.5	4.7.2	Visual
Application and prohibited areas	3.4.3 3.4.3.1	4.7.6	Visual, with the aid of an inspection probe (minimum 8 inch probe length) light

TABLE I. Classification of examinations.

4.6 Quality conformance inspection.

4.6.1 Lot formation. Unless otherwise specified (see 6.2), a lot shall consist of a vehicle or trailer of one type, and manufacturer from an identifiable production period, submitted at one time for acceptance examination.

4.6.2 Quality conformance examination.

4.6.2.1 Sampling for quality conformance examination. Unless otherwise specified, samples for quality conformance examination shall be randomly selected in accordance with MIL-STD-105, level II, 25 defects per hundred.

4.6.2.2 Quality conformance examination. Vehicles and trailers selected in accordance with 4.6.2.1, shall be examined and conform to requirements as specified in table I. Defects revealed shall be corrected as specified in 4.6.2.3. Vehicle rustproofing standards shall conform to requirements as specified in 4.5.6.

4.6.2.3 <u>Classification of defects</u>. Unless otherwise specified, vehicles and trailers that do not comply with the specifications herein shall be considered defective, and shall be cause for the entire lot or lots to be rejected. Failure of the contractor to promptly correct defects shall be cause for suspension of acceptance of completed product, until corrective action has been taken. Such deficiencies in the corrosion preventive processing, shall be corrected by the contractor at no cost to the Government.

4.6.2.4 <u>Unclassified defects</u>. Defects considered to be departures from good workmanship, but having no bearing on function, safety, or life of rustproof coating, shall be noted in writing, and shall be available to Government inspection officers at any time.

4.6.2.5 <u>Failure</u>. Failure of a vehicle or trailer to pass any part of the quality conformance examination, shall be cause for the Government to refuse to continue acceptance of vehicle processing, until objective evidence has been provided by the contractor that corrective action of the deficiencies has been demonstrated. Any deficiencies found during the examination shall be corrected by the contractor at no cost to the Government.

4.6.3 Acceptance examination.

4.6.3.1 <u>Sampling for acceptance examination</u>. Each vehicle or trailer that has been rustproofed, shall be subjected for acceptance examination.

4.6.3.2 <u>Acceptance examination</u>. Each vehicle or trailer selected in accordance with 4.6.3.1, shall be subjected to all examinations as specified in table I, in the order listed.

4.6.3.3 <u>Failure</u>. Failure of any vehicle or trailer to conform to any single requirement as specified in 4.6.3.2 during the acceptance examination shall be cause for the Government to refuse to accept subsequent lots, until it has been proven to the satisfaction of the Government that the deficiency has been corrected. Deficiencies shall be corrected by the contractor at no cost to the Government.

4.6.4 Comparison examinations.

4.6.4.1 <u>Sampling for comparison examination</u>. Unless otherwise specified, comparison examination samples shall be randomly selected by the Government at a rate of one vehicle from each lot of 100 vehicles processed.

4.6.4.2 <u>Comparison examination</u>. Vehicles selected in accordance with 4.6.4.1, shall be examined to determine conformance to the requirements specified in table I. Where necessary, access to areas requiring examinations shall be accomplished by cutting, burning, or any other means necessary to

perform a complete inspection of all processed areas of the vehicle. The inspection may be destructive in nature, and shall be performed at the discretion of the Government, at a site approved by the Government. Sample vehicles or trailers inspected, shall be retained at contractor facilities as Government Furnished Equipment (GFE), and shall be used as acceptance criteria for subsequent vehicles.

4.6.4.3 <u>Failure</u>. Failure of a vehicle or trailer to pass any part of the comparison examination, shall be cause for Government refusal to continue acceptance until corrective action has been taken. Deficiencies shall be eliminated by the contractor at no cost to the Government.

4.7 <u>Methods of examination</u>. Each vehicle and trailer being processed, shall be examined at various stages of cleaning and treatment to insure compliance with requirements of this specification.

4.7.1 <u>Materials</u>. To determine conformance to 3.2, a certified report shall be furnished upon presentation of a vehicle lot (see 4.6.1), certifying that materials used are as specified in 3.2.

4.7.2 <u>Application equipment</u>. To determine conformance to 3.3 inclusive, a visual examination at unscheduled intervals shall be given to determine compliance to 3.3, at contractor facilities during rustproof processing.

4.7.3 <u>Application procedure</u>. To determine conformance to 3.4, a visual examination with the aid of an inspection probe (minimum 8 inch probe length) light shall be given to determine compliance to 3.4. Seams, welds, corner, crevices, and boxed-in areas shall be visually examined to make sure that they are adequately coated.

4.7.4 <u>Thickness</u>. To determine conformance to 3.4.1, the dry film thickness shall be examined with an Elcometer Gage or an equivalent gage having a scale of 0-20 mils.

4.7.5 Access and drain holes. To determine conformance to 3.4.2 inclusive, all inspection holes and drilled access holes shall be visually examined to insure all covers and plugs have been properly installed. All drain holes shall be visually examined to insure holes are open.

4.7.6 <u>Application areas</u>. To determine conformance to 3.4.3 inclusive, vehicles and trailers shall be visually examined with the aid of an inspection probe (minimum 8 inch probe length) light to insure that all areas including inner surfaces requiring rustproofing compounds have been properly coated in accordance with an approved rustproofing drawing and this specification. Vehicles shall be visually examined to insure that no compound has been applied to prohibited areas (see 3.4.3.1) and to insure that all material has been cleaned from prohibited application areas (see 3.4.3.1). If applicable, windows should be lowered and raised to insure that there is no pick-up of compound on them.

4.7.7 <u>Marking</u>. To determine conformance to 3.5, a visual examination shall be given to determine conformance to 3.5.

4.7.8 <u>Workmanship</u>. To determine conformance to 3.6, a visual examination shall be given to insure that corrosion preventive compounds have been properly applied, coating film does not exhibit cracking, alligatoring, or any other irregularities, and to determine compliance to 3.6.

- 5. PACKAGING
- 5.1 Packaging. This section is not applicable to this specification.
- 6. NOTES

6.1 Intended use. This specification is intended to outline the requirements for application of rustproofing compounds to sheet metal areas including frame, inner panels (see 6.5.2), and structural members (see 6.5.1) of military vehicles and trailers. When applied in accordance with such requirements, vehicles and trailers shall be protected against rusting in any severe corrosion hazard environment (see 3.2).

6.2 Ordering data. Acquisition documents should specify the following:

- a. Title, number, and date of this specification.
- b. Number and type of vehicles to be treated.
- c. First article, if required (see 3.1).
- d. Location where vehicles are to be processed.
- e. Whether rustproofing drawing is to be supplied by the Government, or prepared by the contractor (see 4.1.3).
- f. If a warranty is required (see 6.4).

6.3 First article. First article samples shall be tested and approved under the appropriate provisions of 7-204.55 of the Defense Acquisition Regulation. The contracting officer should include specific instructions in all procurement instruments regarding arrangements for examinations, tests, and approval of the first article (see 3.1).

6.4 <u>Warranty</u>. If requested in the contract or purchase order, the contractor shall supply a warranty stating that no component of a vehicle or trailer which has been coated with a corrosion preventive compound (s) shall show evidence of rusting for a specified period of time as agreed to by the contractor and the acquisition activity. New vehicles, vehicle components, and trailers properly cleaned and treated should show no evidence of corrosion for a minimum of five years.

6.5 Definitions.

6.5.1 <u>Structural members</u>. In a unitized or semi-unitized body, boxed-frame members are usually used. These areas should be thoroughly treated inside and out because of their contact with the body surface. Small, but similar members welded to the floor pan should also be treated inside and out. Access to these areas may be gained through gage and drain holes already present. A short curved wand should be used for spraying the inside of these areas.

6.5.2 <u>Inner panels</u>. The inner panels separate the cargo compartment from the outside of the vehicle providing a double-wall structure. If the inner panels do not extend the full height of the body, spray the compound from the top edge downward. In some cases, 3/8 inch or 1/2 inch holes must be drilled 6 inches to 8 inches from the bottom of the inner panel between all vertical braces. Insert a short curved wand and spray the lower portion of this area.

6.6 <u>Revisions</u>. Revisions A and B to MIL-R-0046164 were never published. Copies of these revisions, if needed, can be obtained from US Army Tank-Automotive Command, ATTN: DRSTA-GSS, Warren, MI 48090.

Custodians: Army - AT Preparing activity: Army - AT

Air Force - 99

Project No. MFFP-0241

Review activities: Army - MR

Air Force - 84

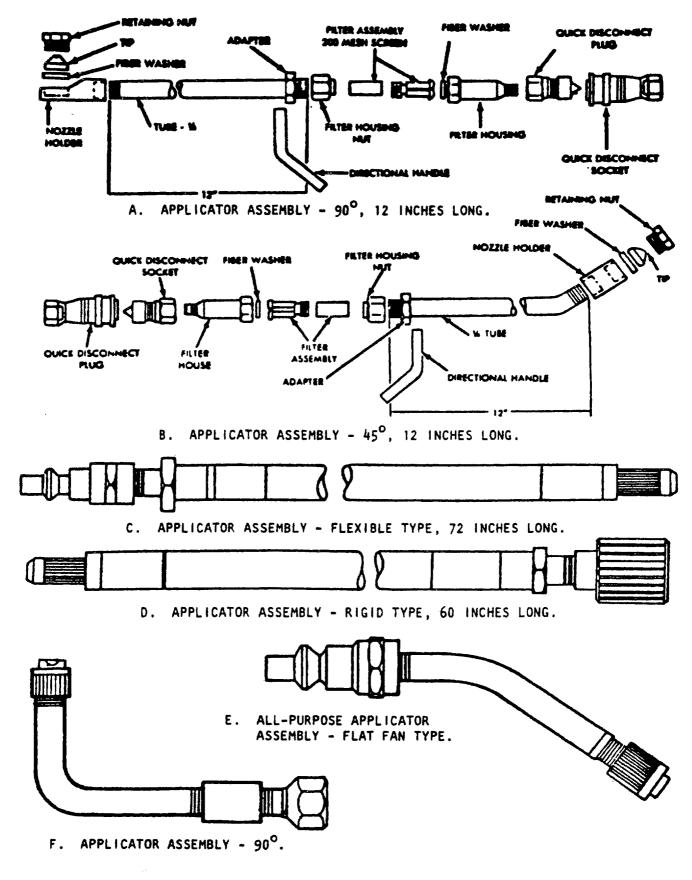


FIGURE 1. Applicator assemblies.

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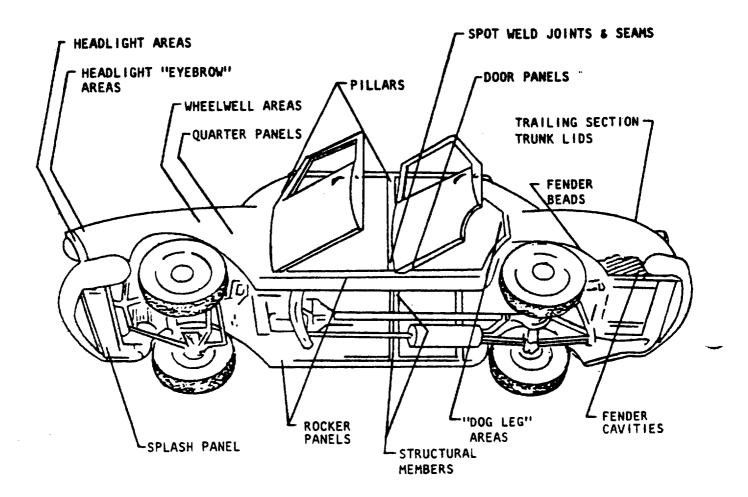
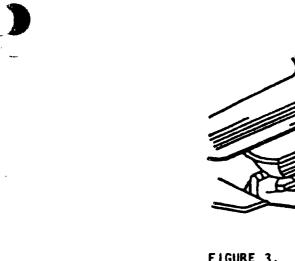


FIGURE 2. Vehicle areas to be rustproofed.





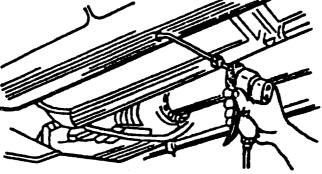


FIGURE 3. Spraying inside of rocker panel.

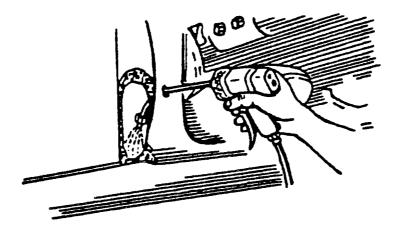


FIGURE 4. Spraying inside of center door post.

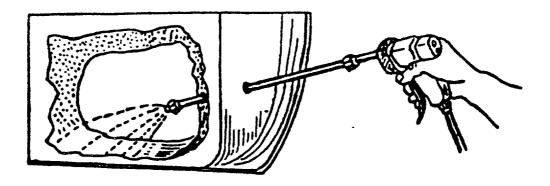
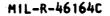


FIGURE 5. Spraying inside of door.



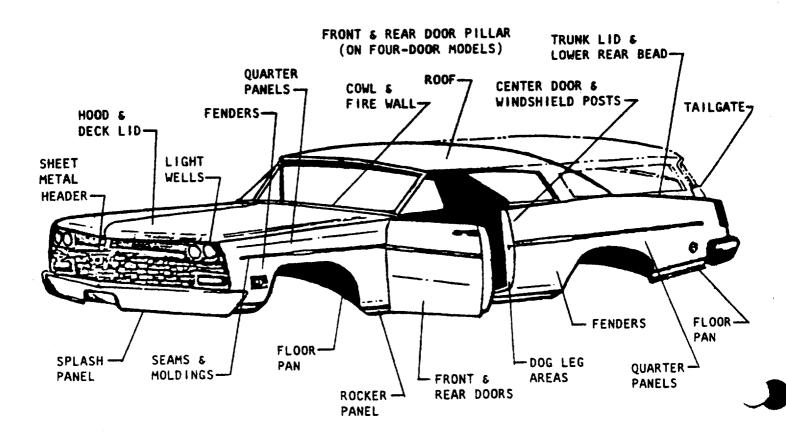


FIGURE 6. Vehicle areas to be rustproofed.

NOTE: Areas depicted on figures 6, 7, and 8 will generally be the same for all types of vehicles.



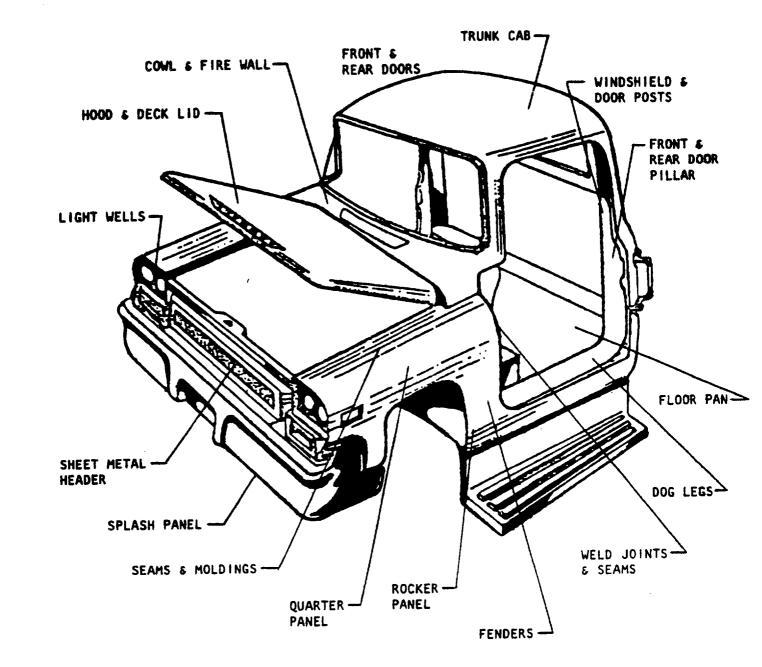


FIGURE 7. Vehicle areas to be rustproofed.

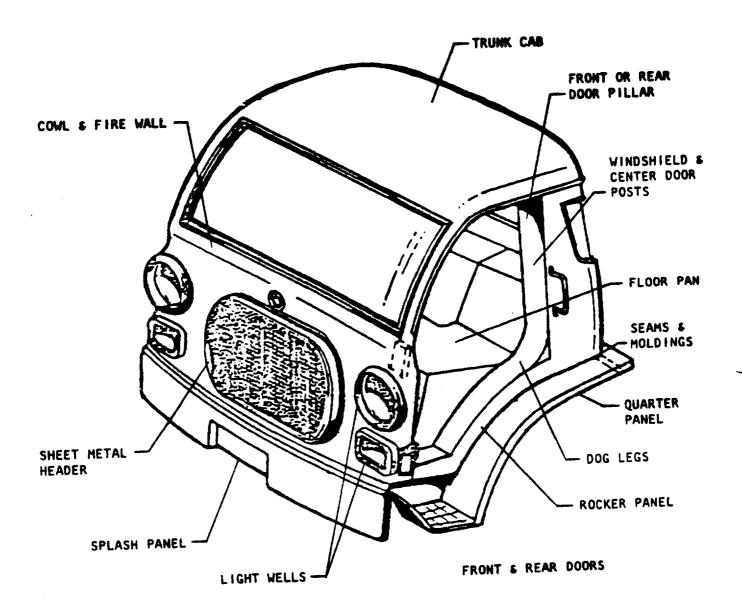


FIGURE 8. Vehicle areas to be rustproofed.

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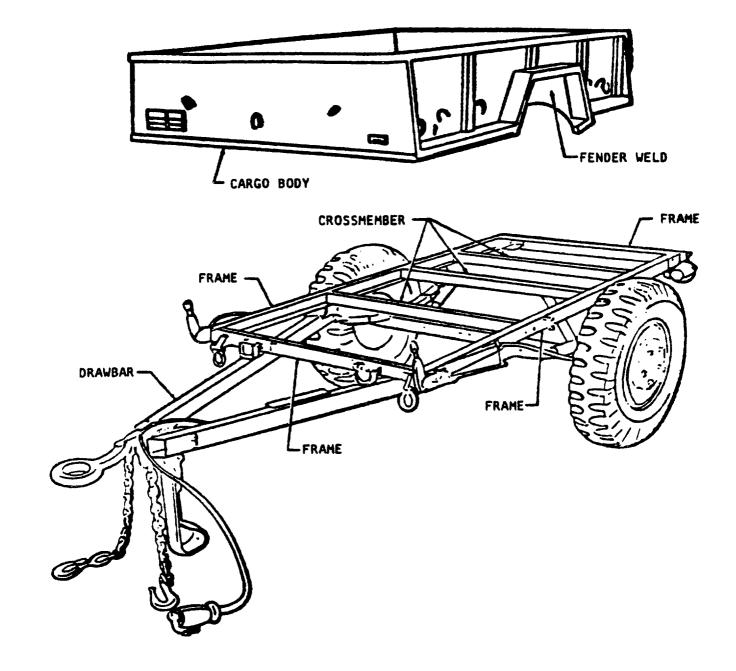


FIGURE 9. Trailer areas to be rustproofed.

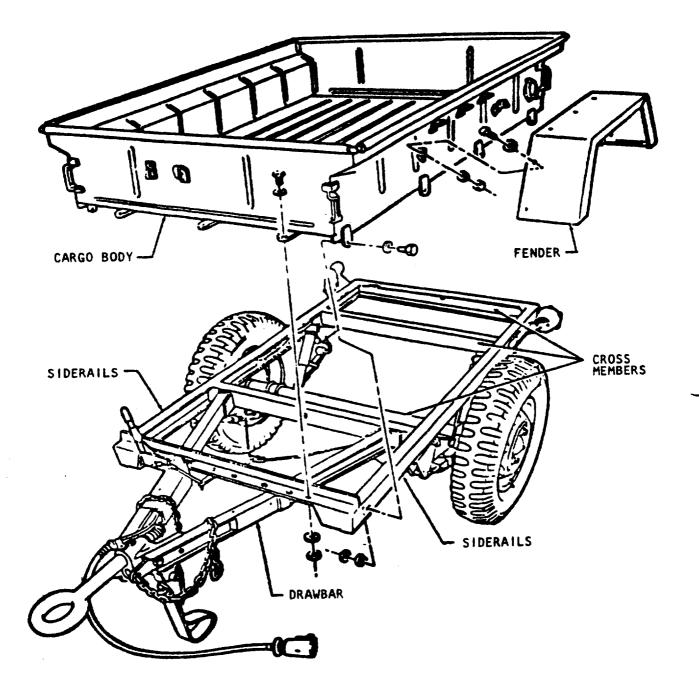


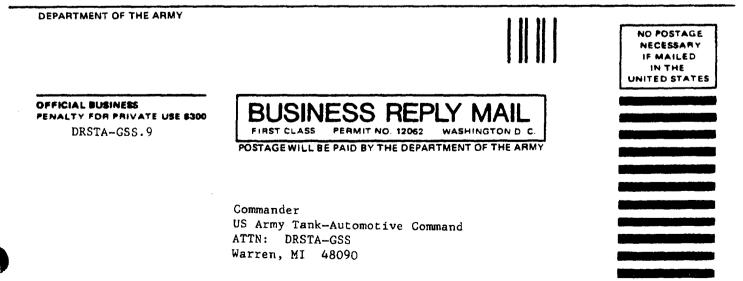
FIGURE 10. Trailer areas to be rustproofed.

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