



NOTICE:

This standard contains numerous changes and deletions from the previous revision, as well as new requirements. Do not make any assumptions as to the context of the document. This standard should be carefully read prior to ordering a vehicle and its options, submitting an offer, building a vehicle, or conducting an inspection.

Further, to maintain the integrity of contracts, the past practice of underscoring changes has been discontinued because it is impractical to show all changes, deletions, etc. The contract must stand on the substance of the document as written.



307**TRUCKS: Light, Commercial, 4X2, & 4x4
1,800 to 9,000 KG (4,000 to 19,999 LBS) GVWR**Federal Standard Number 307AG, July 1, 2003
Superseding Federal Standard Number 307AF, July 1, 2002**I N D E X**

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VEHICLES AVAILABLE WITH ALTERNATIVE FUELS

Vehicle Configuration	Fuel Type	Item Number	Manufacturer	Remarks
Wagon Van, Full Size	CNG	22 & 24	Ford & GM**	
Wagon Van, Full Size	CNG2	22 & 24	GM**	
Cargo Van, Full Size	CNG	32 & 34	Ford, & GM**	
Cargo Van, Full Size	CNG2	32 & 34	GM**	
Pickup, Full Size, Regular Cab	CNG	42	Ford & GM**	
Pickup, Full Size, Regular Cab	CNG	47	GM**	
Pickup, Full Size, Regular Cab	E85 FFV	41 & 46	GM* & DCX	
Pickup, Full Size, Extended Cab	E85 FFV	41C & 46C	GM* & DCX	W/ L6 only (G)
Pickup, Full Size, Extended Cab	HEV	41H & 46H	GM*	
Pickup, Full Size, Regular Cab	CNG2	42 & 47	Ford & GM**	
Pickup, Full Size, Extended Cab	CNG2	42C & 47C	Ford & GM**	
Pickup, Full Size, Regular Cab	LPG2	42 & 47	Ford	
Pickup, Full Size, Extended Cab	LPG2	42C & 47C	Ford	
Pickup, Full Size, Crew Cab	CNG	57	GM**	
Pickup, Full Size, Crew Cab	CNG2	57	GM**	
Pickup, Compact, Crew Cab	E85 FFV	61E & 67E	Ford	
Cab & Chassis, Full Size, Regular Cab	CNG	74 & 77	GM**	
Cab & Chassis, Full Size, Regular Cab	CNG2	74 & 77	GM**	
Cab & Chassis, Full Size, Crew Cab	CNG2	77E	GM**	
Utility Service, Regular Cab	CNG	83 & 87	GM**	
Utility Service, Regular Cab	CNG2	83 & 87	GM**	
Cutaway Cab & Chassis	CNG	92, 94, 94A	GM**	
Cutaway Cab & Chassis	CNG	94B & 94D	Ford	
Cutaway Cab & Chassis	CNG2	92, 94, 94A	GM**	
Sport Utility, 4 Door	E85 FFV	100B & 100C, 101 & 101C, 105B & 105C, 106 & 106C	GM*	
Sport Utility, Compact	E85 FFV	100A & 105A	Ford	
Stake Bed, Regular Cab	CNG	123	GM**	
Stake Bed, Regular Cab	CNG2	123	GM**	
Stake Bed, Crew Cab	CNG2	146	GM**	
Panel Van Maintenance Conversion	CNG & CNG2	162	GM**	

* Available with 5.3L V8 Engine Federal Emissions Only (N/A in CA, NY, MA, ME, & VT)

** Available with 6.0L V8 Engine Only

ORDERING NOTE: HEV items do not meet EPAC requirements

FUEL TYPES

CNG = dedicated compressed natural gas only

CNG2 = bi-fuel – compressed natural gas or gasoline

E85 FFV = flexible fuel ratio ranging from a maximum of 85% ethanol and 15% gasoline to 100% gasoline

HEV = hybrid electrical vehicle

LPG = dedicated liquefied petroleum gas (propane)

LPG2 = bi-fuel – LPG or gasoline

TRAILER TOWING GUIDE

TRAILER TOWING

Trailer towing presents many major concerns relating to equipment reliability, safety and ultimately liability. It is highly recommended that agencies follow the OEM's towing guidelines for the appropriate type of vehicle to govern their trailer towing operations. Listed below are some facts about towing that agencies engaged in towing operations should be familiar with:

Hitch and Associated Equipment:

When codes RH1, 2, 3 or 4 are specified, an OEM hitch/receiver will be furnished with a trailer lighting package. The ordering agency will be responsible for obtaining the proper hitch ball, ball mounting device and the associated equipment required to tow the trailer and its load.

Brake requirements:

Electric brake systems are highly recommended on all sizes of trailers. The towing vehicle manufacturers require operational brake systems for all trailers having a gross weight of 1,000 lbs. or more.

Trailers with surge brakes do not comply with Federal Motor Carrier Safety Regulations 393.48 and 393.49 and therefore cannot be used in commercial application. The use of surge brakes may not permit the use of some equalizing and weight distributing devices.

Total Weight:

The combined weight of the trailer and the load on board the trailer should never exceed the trailer manufacturer's rating of the trailer.

The total combined weight of the towing vehicle, load on board towing vehicle, trailer and load on board trailer should never exceed the towing vehicle manufacturer's GCWR for the towing vehicle.

Tv = weight of loaded towing vehicle.

Tr = weight of loaded trailer.

GCW = combined weight of loaded towing vehicle and loaded trailer.

Tv + Tr Must NOT exceed the GCW

GCW may be referred to as GCWR

Trailer Tongue Weight:

Tongue weight should be between 10 - 15% of gross trailer weight.

Trailer classes:

Class I – Light Duty

- 2,000 pound maximum gross trailer weight.
- Can be pulled with a weight-carrying hitch except where other types are recommended by manufacturer of tow vehicle.

Class II – Medium Duty

- 2,001 - 3,500 pounds maximum gross trailer weight.
- Can be pulled with a weight-carrying hitch except where other types are recommended by manufacturer of tow vehicle.

Class III – Heavy Duty

- 3,501 - 5,000 pounds maximum gross trailer weight.
- Can be pulled with a weight-carrying hitch except where other types are recommended by manufacturer of tow vehicle.

Class IV – Extra Heavy Duty

- 5,001 - 12,500 pounds maximum gross trailer weight.
- A weight-distributing hitch and an anti-sway device is required for this class trailer.

Trailer gross weights exceeding 12,500 pounds require a special type hitch. (This is an AREQ requirement)

For assistance email John McDonald at jmcdonald@gsa.gov or call 703-305-6652



OEM TOWING GUIDELINES

The following are links to the OEM web sites for towing information:

DCX: <http://www.fleet.chrysler.com/vehicles.jsp> (then click on the towing guide)

Ford: http://www.fleet.ford.com/products/rv_trailer_towing/2002/2002_default.asp

GM: http://www.chevrolet.com/astro/library/fs/index_trailer.htm
http://www.chevrolet.com/avalanche/library/fs/index_trailer.htm
http://www.chevrolet.com/blazer/library/fs/index_trailer.htm
http://www.chevrolet.com/express/library/fs/index_trailer.htm
http://www.chevrolet.com/silverado/library/fs/index_trailer.htm
http://www.chevrolet.com/suburban/library/fs/index_trailer.htm
http://www.chevrolet.com/tahoe/library/fs/index_trailer.htm
http://www.chevrolet.com/tracker/library/fs/index_trailer.htm
<http://www.chevrolet.com/trailblazer/trailer.htm>
http://www.chevrolet.com/venture/library/fs/index_trailer.htm

Be sure to follow the information specified in the vehicle manufacturer's ratings and recommendations. Never overload any part of your towing system. Individual state and local government requirements must be adhered to and in cases where the above information conflicts with local laws, local laws take precedence.



1. SCOPE AND PURPOSE.

1.1 SCOPE

This document covers commercially available, two and four wheel driven, light trucks of less than 9,000 kg (20,000 lb) GVWR and associated optional equipment. Types include pickup trucks, sport utility vehicles, passenger, cargo, and delivery vans. Also included are chassis and cab, and trucks equipped with service/utility, stake, and dump bodies.

1.2 PURPOSE

The purpose of this document is to achieve a practical degree of standardization within the Federal Government's automotive fleet and to simplify competitive procurement of vehicles. This Standard establishes various types and sizes of trucks, and general equipment requirements. Purchasers should also review the information under Section 6 - Notes.

1.3 COVERAGE

This Federal Standard covers only those vehicles generally acquired competitively by the Federal Government and does not include all the varieties of the commodity indicated by the title. Additional requirements and deviations for special purpose vehicles may be submitted in accordance with Sections 6.3 and 6.4. Approved modifications will be included in the solicitations for offers, contract, or amendments. All vehicle procurements must comply with the Federal Property Management Regulations (FPMR) and the Federal Acquisition Regulations (FAR).

1.4 CLASSIFICATION

The vehicle's characteristics, components, equipment, and options shall be based upon the manufacturer's make and model offered, and shall be verifiable in the vehicle's and body/equipment manufacturer's publications, and data that is required by the U.S. Environmental Protection Agency (EPA), Department of Energy (DOE), and other applicable regulatory agencies.

1.5 FUEL ECONOMY

Agencies are encouraged to use fuel mileage ratings as a factor in the selection of their vehicles. Miles per gallon ratings for all vehicles of less than 3,864 kg (8,500 lb) GVWR are available in AUTOCHOICE under the price comparison tab or on the EPA website at www.fueleconomy.gov.

1.6 METRICATION

Federal Agencies, to the extent economically feasible, use the metric system of measurement in procurements and other business related activities. Specifications and standards are developed in metric when metric is the accepted industry system. In this document, metric is used with the exception of items covered by Federal Regulations and items built to inch measurements for interchangeability such as wheel diameters. Metric and U.S. standard equivalent measurements are provided to facilitate the use of this document.

2. REFERENCE DOCUMENTS AND MATERIALS

2.1 APPLICABLE REFERENCES

When published references are stated they shall be of the issue in effect on the date of the solicitation for offers or request for proposals. Military Handbooks:

- MIL-HDBK-1223 - Nontactical Wheeled Vehicles Treatment, Painting, Identification Marking, and Data Plate Standard.

2.1.1 ORDER OF PRECEDENCE

Unless otherwise specified, in the event of a conflict between this standard and an applicable reference, this standard shall take precedence.

2.2 ABBREVIATIONS AND DEFINITIONS

The following are the abbreviations and their meanings, as they appear in this standard:

Abbreviation	Definition
A.....	Available/Option Available
ABS	Antilock Braking System
ALT	Alternate/Alternative
AREQ.....	Additional Requirements
AS.....	All Season (Tire Tread)
AMP.....	Ampere
AT.....	All Terrain (Tire Tread)
AUTO.....	Automatic
BAT	Battery
CA	Cab to Axle Dimension
CAP	Capacity
CCA	Cold Cranking Amps
CD	Engine Cubic Displacement in Liters
cfm	Cubic Feet per Minute
cm.....	Centimeters
CNG	Compressed Natural Gas
CNG2	Bi-Fuel Compressed Natural Gas or Gasoline
CYL	Cylinders
D.....	Daimler Chrysler
dia.	Diameter
DR	Door
ENG	Engine
F	Ford
FC.....	Forward Control
FL.....	Freightliner
FMVSS.....	Federal Motor Vehicle Safety Standard(s)
FPMR	Federal Property Management Regulation(s)
ft	Foot or Feet
FWD.....	Front Wheel Drive

Abbreviation	Definition
G.....	General Motors
GAL	Gallons
GAWR	Gross Axle Weight Rating
GCWR	Gross Combined Weight Rating
GVWR	Gross Vehicle Weight Rating
HD	Heavy Duty
HDA.....	Heaviest Duty Available
HP.....	Horsepower
HWY	Highway
in.....	Inches
kg	Kilograms
KPH	Kilometers Per Hour
L.....	Liters
Lb	Pounds
lb-ft.....	pound-feet of torque
LT.....	Left
MAN	Manual
MAX	Maximum
m.....	Meters
MFR	Manufacturer(s)
MIN	Minimum
mm	Millimeters
MPG.....	Miles Per Gallon
MPH.....	Miles Per Hour
MSPC.....	Manufacturer's Standard Paint Color
n/a.....	Not Applicable or Not Available
OEM.....	Original Equipment Manufacturer(s)
OO	On-Off Road (Tire Tread)
OPT	Option - Optional
PASS	Passengers
PTO	Power Take Off
psi.....	Pounds per Square Inch
R.....	Radial (Tire)
RT.....	Right
reqd.....	Required
RWD.....	Rear Wheel Drive
spd	Speed
S and std.....	Standard
SAE	Society of Automotive Engineers
TRANS.....	Transmission
V.....	V-type (Engine)
W	Workhorse
w/	With
w/o	Without
-	Not Required, No Option Offered
/.....	And, And/Or
4x2	Two Wheel Drive
4x4	Four Wheel Drive

3. DETAILED REQUIREMENTS

3.1 DESIGN

3.1.1 DESIGN

The vehicles and the related equipment furnished under this document shall be the vehicle manufacturer's current production. The vehicle(s) offered shall be as shown under the Federal Standard "Item Number." Vehicle(s) shall be complete with all the necessary operating components and accessories customarily furnished to the general public, whether stipulated herein or not, together with such modifications and accessories as may be necessary or are specified herein to enable the vehicle to function reliably and efficiently in sustained operation. The term "heavy-duty" (h.d.), as used to describe an item, shall mean in excess of the usual quantity, quality, or capacity that is normally supplied with the standard production vehicle or component. When a heaviest duty available (h.d.a.) component is specified, the supplier may provide a vehicle with the standard component(s) when no OEM heavy-duty component is offered for the model specified. OEM refers to the chassis manufacturer. The term "standard" for a component or accessory means that it is a required part of the item. The term "minimum" as used to describe an item shall mean the item is required.

3.1.2 VEHICLE EQUIPMENT AND ACCESSORIES

Unless otherwise specified, the vehicle, components, assemblies, and accessories to be delivered under the contract shall be standard or optional commercial products that meet or exceed the requirements specified. They shall comply with all Federal Motor Vehicle Safety Standards (FMVSS), EPA regulations, and state and local regulations applicable to the specified vehicle on the date of manufacture. In addition, the vehicle(s) shall be furnished with the equipment, systems, and accessories as specified by the option codes in the tables. Option codes are defined in the text of the standard, or are self-explanatory, as generally used in the automotive industry. All components and optional items shall be as represented in the manufacturer's current technical data. Technical data shall be limited to specifications and technical material identical to that furnished to the authorized company representatives for selection of vehicle models and components, and shall be on file in appropriate offices of the procuring activity. When a specified component or accessory is available in the chassis manufacturer's sales/engineering data, the vehicle shall be so equipped with the OEM item. The OEM component parts of the vehicle need not be the products of the same manufacturer. Optional and standard equipment ordered shall be installed, serviced, and ready for use.

3.1.3 RECOVERED MATERIALS/REGULATORY REQUIREMENTS

In accordance with section 23.403 of the Federal Acquisition Regulations (FAR), the Government's policy is to acquire items composed of the highest percentage of recovered materials practical, consistent with maintaining a satisfacto-

ry level of competition without adversely affecting performance requirements or exposing suppliers' employees to undue hazards from the recovered materials. The term "recovered materials" means materials that have been collected or recovered from solid waste and reprocessed to become a source of raw materials, as opposed to virgin raw materials. None of the above shall be interpreted to mean that the use of used or rebuilt products is allowed under this document. The use of re-refined oil shall not be prohibited. This does not prohibit vehicle manufacturers from using performance criteria for acceptable oil. Any re-refined oil product shall meet the performance criteria of the vehicle and component manufacturers.

3.2 VEHICLE, COMPONENTS, AND SYSTEMS

3.2.1 CURB WEIGHT

The curb weight of the vehicle is defined as the weight of the complete vehicle without load. Curb weight shall include the chassis, cab and body, all attached devices, equipment, and a full complement of fuel, lubricants, and coolants.

3.2.2 PAYLOAD CAPACITY

Payload specified in the tables for each Item Number is defined as the minimum net weight for occupants and body/cargo carrying capacity, regardless of the equipment that may be ordered/specified (see Section 6.1). Occupant weight shall be calculated at 68 kg (150 lb) each. The payload shall be evenly distributed in accordance with the vehicle design and intended use. NOTE: Payload is reduced by the weight of options for lift gate, winch, snowplow, brush guard, and other equipment. For chassis and cab vehicles the payload shall be reduced by the weight of the body and equipment.

3.2.3 GROSS VEHICLE WEIGHT RATING (GVWR)

The gross vehicle weight rating is the maximum, fully loaded weight of a vehicle. The minimum GVWR of a vehicle furnished shall comply with payload shown in the tables for each Item Number, and shall be at least the sum of the curb weight and the payload capacity specified. Manufacturers shall provide a rating label showing the actual GVWR of the vehicle furnished. Unless otherwise specified, the chassis manufacturer's maximum GVWR, shown on the certification label, shall not be increased.

3.2.4 CAB-TO-AXLE (CA) DIMENSIONS

Unless otherwise specified, for chassis and cab vehicles the cab-to-axle dimension provided shall accommodate an excess of 50 percent of the outside body length forward of the rear axle centerline.

3.2.5 WHEELBASE

Unless specified or required by the CA dimension, the wheelbase shall be the manufacturer's shortest for the type and model specified.

3.2.6 SPEED AND GRADEABILITY

The vehicle shall maintain a speed of 105 kph (65 mph) on a smooth, hard-surfaced, and level road. From a standing start the vehicle shall ascend a 20 percent grade. The vehicle shall

perform as stated when equipped with all specified options and loaded to the GVWR, and the air conditioner compressor is engaged. These requirements are in addition to the minimum engine size and transmission type shown in the tables.

3.2.7 EMISSION CONTROL SYSTEM

Vehicles destined for all states shall comply with Environmental Protection Agency (EPA) Regulations governing Control of Air Pollution from New Motor Vehicles and New Motor Vehicle Engines in effect on the date of manufacture and with state requirements for which the vehicles are destined.

3.2.8 FUEL SYSTEM

The fuel tank(s) shall be protected by a metal shield, or be located in an area which will be free from hazards of off-road operation. (Example: tanks located between frame rails or more than 38 cm (15 in) ground clearance.) The fuel fill pipe shall be protected against deformation by body or component installation. When more than one fuel tank is furnished, the tanks shall be interconnected. A fuel gauge shall be provided which accurately indicates total remaining fuel.

3.2.9 COOLING SYSTEM

A coolant overflow recovery tank and compensating system shall be furnished. The cooling system shall be protected with an OEM solution of permanent type anti-freeze and water in equal parts by volume. The supplier shall provide the OEM maximum size cooling system for the engine provided.

3.2.10 BRAKE SYSTEM

All vehicles furnished shall be equipped with the OEM power assisted, self-adjusting, front and rear wheels, antilock braking system (ABS).

3.2.11 HYDRAULIC SYSTEM GENERAL REQUIREMENTS.

The following requirements shall apply to vocational hydraulic systems installed on vehicles with GVWR exceeding 17,000 lbs. Hydraulic tailgates are exempt from these requirements.

A. Drive systems.

Hydraulic pumps shall be driven by one of the following:

1. Engine or transmission mounted PTO. Pumps shall be flange mounted to the PTO. Belt drives of any type are not acceptable and shall not be used. Drive shafts from the PTO to the pump are not acceptable.
2. Electric motor driven. (Authorized for hydraulic tailgates only.) Pumps shall be flange mounted to the electric motor.
3. Engine crankshaft front PTO driven. Only OEM integral frame extensions and OEM approved and furnished chassis for front PTO shall be used.
4. Pump support brackets shall be installed from the transmission to support the pump(s) if the combined weight of the pump(s), hoses, and fittings exceed 40 lbs., of if the combined length of the PTO

and pump(s) exceeds 18 inches measured from the center-line of the PTO to the end of the pump(s).

5. PTO's shall be rated at a minimum of 150% of the maximum horsepower requirement of the hydraulic system. The minimum PTO horsepower rating shall be calculated by the following formula:

$$PV \times 1.50 = \text{Minimum PTO HP Rating} \\ 1714 \times .85$$

Where P = max working pressure in PSI
and V = max flow in GPM

6. PTO's shall be compatible with and certified for use by power shift PTO's engaged by an electric-over-hydraulic actuator. Overspeed engagement protection shall be furnished with power shift PTO's. Power shift PTO's installed on automatic or manual shift transmissions shall disengage when the pre-set engine RPM is reached.
7. The torque or horsepower required of the hydraulic drive PTO shall not exceed the maximum torque or horsepower rating of the PTO opening on the transmission or PTO drive pad on the engine or engine crankshaft.
8. All PTO's shall be installed within the backlash recommendations of the PTO manufacturer.

B. Hydraulic system hoses, fittings, pressures, and flow rates.

1. Hydraulic hoses shall be rubber covered double wire braid reinforced and comply with SAE 100R2, type A or AT, or 100R9, type A or AT, of SAE J517. The working pressure of the hose shall exceed the pressure setting of the relief valve. Hoses shall be sized such that the maximum velocity of hydraulic fluid in the hose does not exceed the following:

A. Fluid velocity in suction lines shall not exceed 4 ft./sec.

B. Fluid velocity in discharge lines shall not exceed 25 ft./sec

2. All hoses shall be installed in accordance with the requirements and recommendations of SAE J1273
3. System working pressures shall not exceed 3500 PSI.
4. Hydraulically actuated implements, such as snowplows, which are deployed while the vehicle is moving, shall be furnished with mechanical stops that prevent hydraulic shock if the implement strikes an obstruction while roading.
5. Hydraulic hose fittings shall comply with the

requirements of SAE J516 for permanently attached (crimped) fittings with JIC 37° flare. Field replaceable type fittings are not acceptable. Forged steel hydraulic adapters shall be used. Cast steel fittings are not acceptable.

C. Pressure protection:

All hydraulic systems shall be furnished with either a spring or pilot actuated pressure relief valve. The relief valve shall be used for overpressure protection only and shall not be used for any flow control purpose. In no case shall a relief valve be set at a pressure higher than the lowest working pressure rated component (hose, coupler, adapter, cylinder, etc.) in the system.

D. Flow control valves.

Flow control valves shall be of a type (such as open-center valves) that assures that hydraulic fluid is never deadheaded and forced to flow over the relief valve. Flow control valves may be stacked to control multiple devices, either in parallel or in series. Series designed systems shall not exceed the maximum working pressure of any component in the series.

E. Fluid filtration.

A return line hydraulic filter shall be furnished having a minimum efficiency rating of 99% down to 10-micron size particles and meet or exceed the filtration requirements of the pump, motor, or driven device manufacturer. The filter shall be furnished with a pressure differential type service gauge or service indicator.

F. Hydraulic system cooling.

Hydraulic systems shall be designed to operate in ambient temperatures ranging from -20 deg F to +120 deg F. The hydraulic system shall be designed such that the maximum hydraulic oil temperature does not exceed 200 deg. F. For continuously driven devices, such as spreaders and other motor driven applications, auxiliary cooling, such as air-to-oil coolers or water-to-oil coolers, shall be furnished if required to meet the maximum oil temperature requirement. The government reserves the right to request and be furnished test documents showing maximum stabilized temperatures of hydraulic systems.

G. Hydraulic reservoirs.

A stainless steel, aluminum (6061-T6 or 5086-H32 construction only), or other non-corroding type hydraulic reservoir shall be furnished and sized such that the reservoir working volume is a minimum of 150% of the maximum hydraulic flow rate. The reservoir shall be furnished with the following:

1. The reservoir shall be furnished with a baffle separating the suction from the return flow.
2. The reservoir shall be furnished with minimum in. air filtration type breather or combination breather cap with not greater than 10 micron air born particle rating.
3. The reservoir shall be furnished with a sump and valve for draining water from the bottom of the tank and for draining oil.

4. The reservoir shall be furnished with a metal enclosed and protected sight glass for observing oil level.
5. The reservoir shall be furnished with a maximum 300 mesh (50 micron) fill strainer.
6. The reservoir shall incorporate a return tube that discharges return oil below the surface of the reservoir oil.

H. Oil pressure and temperature gauges.

A pressure gauge shall be furnished on all hydraulic systems. An oil temperature gauge and pressure gauge shall be furnished on central hydraulic systems. The gauges shall be diaphragm actuated, environmentally sealed gauges, F.W. Murphy B-series Murphygage® gauges, or equal, mounted at the operator control station. When specified, temperature gauges shall be switch gauges providing over temperature indication to a warning light or indicator installed at the operator control station.

I. Hydraulic oil.

Hydraulic oils shall meet the minimum requirements of the hydraulic pump or other critical component manufacturer(s). Water based hydraulic fluids shall not be used. A nameplate shall be affixed near the fill cap on the reservoir indicating the type of oil to be used.

J. Installation and workmanship.

The hydraulic system shall be comply with the following requirements:

1. All tapered threaded fittings shall be installed using an anti-seize thread sealing compound. Teflon tape is not acceptable.
2. Hoses shall be routed for easy tracing of hoses and shall be protected with grommets when passing through bulkheads. Hoses shall be protected from abrasion when routed over or through bare metal edges.
3. Hydraulic hoses shall be supported with metal hose clamps that provide protection for the hose from the metal portion of the clamp. Hoses shall not be allowed to droop or to be entangled with other hoses or lines. The clamps shall be spaced not more than 18 in. apart.
4. Overhanging weight of fittings, hoses, valves, or piping shall be supported from the reservoir to eliminate flexing of sidewalls.
5. All hoses shall be routed and installed in accordance with the requirements and recommendations of SAE J1273. Special attention to routing and installation shall be given to avoid to the following:
 - A. Tensile loads on the hose
 - B. Side loads
 - C. Flattening
 - D. Kinking

- E. Thread damage
- F. Damage to sealing surfaces
- G. Abrasion
- H. Twisting
- I. Exceeding minimum hose bend radius
- K. Operational Test

The hydraulic system and hydraulically driven components shall be operated and checked for leaks and proper operation. The operational test shall include the maximum requirements (height, extension, speed, etc.) of the driven devices under no-load conditions. No leakage is permitted beyond a class "1" leak in accordance with SAE J1176-External Leakage Classifications for Hydraulic Systems.

3.3 DRIVETRAIN

3.3.1 ENGINE

The engine furnished shall have the minimum horsepower and torque specified. When specified that the vehicle(s) will be exported, the engine shall also comply with 3.8.6, Overseas Vehicle Requirements.

3.3.2 TRANSMISSION

3.3.2.1 AUTOMATIC TRANSMISSION

Unless otherwise specified, the OEM standard production automatic transmission shall be provided.

3.3.2.1.1 AUTOMATIC TRANSMISSION FLUID COOLER

Unless otherwise specified, the OEM standard automatic transmission fluid cooler shall be provided.

3.3.2.2 MANUAL TRANSMISSION

When specified by code T5 or T6, a manual transmission shall be provided. The number in the code represents the number of forward transmission gears.

3.3.2.2.1 CLUTCH

Vehicles equipped with a manual transmission shall be furnished with the OEM heaviest duty available clutch assembly offered for the model furnished.

3.3.3 TRANSFER CASE

The transfer case shall be of the two-speed type that will provide a part-time (selective) four-wheel drive system. Protective skid plates or shields shall be provided when specified (code SP), or when ground clearance is 38 cm (15 in) or less.

3.3.4 DRIVE HUBS, FRONT WHEELS

The OEM heaviest duty available 4x4 full time or front wheel locking system engaged from the cab shall be furnished.

3.4 SUSPENSION SYSTEM

3.4.1 SUSPENSION

The vehicle shall be equipped with a suspension system (axles, springs, wheels and tires) having a rated capacity equal to or in excess of the GVWR. Unless otherwise spec-

ified, the chassis shall not be modified above manufacturer's maximum GAWR as shown on the certification label. All vehicles shall be furnished with OEM heaviest duty available springs, shock absorbers, and stabilizer device(s).

3.4.2 SPRING STOPS

The spring and/or axle stops furnished shall prevent the axle and other suspension components from striking any part of the chassis or body.

3.4.3 WHEELS AND TIRES

The minimum wheel and tire size shall be furnished as specified in the tables. A spare assembly (a tire mounted on a wheel) shall be furnished. Wheels and tires, including the spare assembly, shall be of the identical size, type, brand, and load range. Spare tire assemblies for compact vans may be space saver type if the manufacturer does not offer a full size spare. All tires shall have radial construction. The tire assembly shall be mounted in a bulkhead or side wall carrier, or in a spare tire compartment. On a chassis and cab the spare assembly may be shipped strapped to the frame if a carrier is not available.

3.5 ELECTRICAL

3.5.1 ELECTRICAL SYSTEM

The electrical systems, equipment, and components furnished on the specified bodies, devices, and equipment shall comply with all the applicable SAE recommended standards and practices. All van cab and body wiring, except for the engine compartment, shall be concealed behind paneling, headliners, or protected in flexible conduit, except for terminal ends. Passage through bulkheads/structural members shall be protected with grommets or equivalent. Exposed fuse boxes shall be provided with a non-conductive cover. All added wiring, for bodies, shall have SXL or GXL insulation and be mounted in a minimum 150°C (300°F) rated wire loom. Wiring shall be routed to avoid movement and high temperature components, and positively secured every 46 cm (18 in) maximum with clamps and/or clips. Plastic ties may be used to form wiring bundles, but shall not be used to secure wiring bundles to the vehicle. Wiring shall not be secured to brake lines and/or fuel lines.

3.5.2 ALTERNATOR AND BATTERY

When additional electrical power consuming equipment is furnished, the manufacturer shall provide a generating system capable of supplying the total continuous electrical load at normal engine idle for the equipment furnished with the completed vehicle. Intermittent loads such as winches, lift gates, and dump hoists are not included as continuous electrical load. The supplier shall furnish the vehicle with OEM component(s) available for the model (item) having ratings of not less than as specified in the tables. Batteries furnished shall be of the maintenance-free type, when available.

3.5.3 LIGHTING

Halogen headlamps shall be provided. Lights and reflectors shall not be mounted on vertical surface of rub rails, or mounted on vehicle bumpers, or in any manner to increase

vehicle width. Rear lights, with the exception of license plate lights, shall be installed flush with, or forward of, the rear of the body. Two backup lights shall be furnished. Interior lighting shall be provided in all vehicles, and applicable closed bodies. On multistop trucks, the tail lights, stop lights, backup lights and rear turn signals shall be located to avoid obstruction by the rear doors when the doors are in fully opened position. On utility bodies, recessed lights and their electrical connections shall be provided, with guarding to prevent interior damage from shifting loads/cargo.

3.5.4 RADIO INTERFERENCE SUPPRESSION

Non-OEM electrical equipment and devices used and installed on these vehicles shall be suppressed to the limitations of SAE J551.

3.6 CAB/BODY, EQUIPMENT AND ACCESSORIES

3.6.1 CAB AND CAB/BODY

Cabs shall be of the conventional type. The cab, or the cab/body, shall be equipped with, but not limited to, the following: front doors with crank-operated windows; rear doors and cargo doors, as applicable, with checks or door stops; all latches, with exception of lift gates and end gates, operable from the inside and outside; both front side doors equipped with external key locks; two sets of keys; upholstery and floor covering, as indicated, of the manufacturer's standard color shades or mixtures compatible with exterior color; seating capacity as stated in the tables with the first row being a full width adjustable bench seat is required unless otherwise stated in the tables; tinted glass on all windows, where available from the OEM; manufacturer's standard insulation and sound deadening materials; license plate brackets, front and rear; and glove (dispatch) compartment.

3.6.2 CONTROLS AND OPERATING MECHANISMS

Controls and operating mechanisms shall be located for left-hand drive. Equipment controls shall be complete and conveniently located for the driver. Lever controls for specified equipment shall be designed and located to permit easy entrance and of the driver's compartment. Instruments and controls shall be identified as to their function and installed in a manner to facilitate removal and servicing.

3.6.3 ACCESSORIES, CAB/BODY

Unless otherwise specified, the accessories, convenience items, and devices furnished for each vehicle shall include, but not be limited to: electric power point; gauges; dome light(s); fresh air type heater with dual defroster; dual sun visors; armrests; dual windshield wipers/washer; signal lights; inside rear view mirror (not required on items in tables 24, 25 & 26); dual outside rear view mirrors; electric horn; outside clearance reflectors when required; tire/wheel changing tools and jack, except chassis and cab. Hub caps shall be furnished if available from the OEM.

3.6.4 TRUCK BODY DESIGN

Unless otherwise specified by authoritative documents, each truck body furnished shall be designed and mounted to fit the vehicle chassis specified, shall provide the proper weight

distribution for steering and balance, and present a satisfactory appearance. Body widths shall be not less than the overall width of the rear tires, or more than 5 cm (2 in) greater than the overall width of the rear tires per side. Bodies designed with wheel openings shall have the vehicle's wheels centered within the wheel opening +/- 5 cm (2 in) longitudinally and ± 1.3 cm (0.5 in) laterally. Wheel housing envelopes shall be of a size to provide snow chain clearance as determined by SAE J1232. Materials used in the fabrication of bodies, if not specifically described, shall be not less in quality and strength than those materials normally used by body manufacturer. Wherever dissimilar metals are used they shall be insulated against corrosion.

3.6.4.1 BODY MOUNTING

Bodies, other than OEM standard production bodies, shall have at least three (3) Grade 5, 16 mm (5/8 inch bolts), or equivalent, to attach each body bracket to the frame/chassis, mounted so as to minimize any lateral or longitudinal movement of the body relative to the frame. The body shall be mounted in accordance with the body and chassis manufacturer's recommendations. Body mounting crashworthiness shall not be compromised from that mandated by FMVSS crash test requirements. Bodies furnished for the cutaway chassis shall be mounted utilizing full floating rubber body mounts that are either (1) furnished by the chassis manufacturer, (2) identical or equivalent to those used by the chassis manufacturer to mount the cab, or (3) approved by the chassis manufacturer. Body mounting and installation of fuel filler pipe and vent shall be in accordance with chassis and body manufacturer's recommended procedures to retain the certifications for all applicable FMVSS. Reinforcement or filler blocks shall be used where mounting device(s) may deform frame flanges. Mounting devices shall be locked units which will minimize loosening, but which may be tightened if necessary. Modular bodies shall not be welded to the frame at any point, and be interchangeable with other chassis of the manufacturer's having a similar cab to axle (CA) dimension. The fuel tank filler pipe shall be installed and vented in a manner to permit refueling at normal fuel pump delivery rates without regurgitation of fuel. The installed body shall not be in contact with any part of the exhaust system.

3.6.5 PREPARATION FOR PAINTING

The furnished bodies and the associated finished equipment surfaces, concealed or exposed, except polished metal parts, shall be cleaned, treated, and coated with a firm primer and preservative with rust inhibiting properties in accordance with MIL-HDBK-1223 (see 4.2.3.3). Subsequent finishes shall be industry's standard practice. MIL-HDBK-1223 does not apply to OEM provided cab and chassis.

3.6.6 PAINT, FINISH, OR COLOR

Unless otherwise specified, the civilian agencies' vehicle(s) exterior will be the manufacturer's standard colors. Where available under contract, military agencies' vehicle(s) exterior color may be in accordance with MIL-HDBK-1223, as specified by the procuring activity. The interior finish shall be manufacturer's standard compatible color with the exterior.

or. Unless otherwise specified, all vehicles shall be painted with a gloss automotive paint, and for cut off van bodies and stake bodies, body and exterior mounted equipment shall be the same gloss automotive paint color as the cab with maintenance bodies painted in base coat/clear coat. Auxiliary or fiberglass hard tops may be furnished in manufacturer's standard color. Pintles, towing devices, winches, and bumpers may be manufacturer's standard finish or color.

3.6.7 MIRRORS, OUTSIDE

Unless otherwise specified, dual OEM outside rearview mirrors shall be provided, one on each side of the vehicle. Unless otherwise specified in the tables, only rearview mirrors with a foldaway feature shall be provided. When low mount mirrors are specified in the tables, low-mounted or sail-mounted style mirrors with minimum 230 sq cm (36 sq in) each shall be provided.

3.7 VEHICLE OPTION CODES

The following Option Codes are offered for selected vehicle applications. Detailed requirements for these codes follow this Index. Not all option codes apply to all paragraphs. The Code only applies if listed in the Optional Equipment Code listing for that particular table.

3.7.1 OPTION CODE INDEX

Para. Code	Description	Ref. Para.
A		
AC	Air Conditioning	3.7.1.2
AC2	Auxiliary Rear Air Conditioning	3.7.1.2
AH	Auxiliary Rear Heater	3.7.1.3
AL	Aluminum Body	3.7.1.4
AP	Adjustable Pedals	3.7.1.5
AS	All Season Tires	3.7.1.6
AT	All Terrain Tires	3.7.1.6
AT1	Aluminum Wheels	Table 3
AT2	Runflat Tires w/1 Piece Al Wheels	Table 3
AT3	Runflat Tires w/2 Piece Al Wheels	Table 3
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AVSC	Automatic Vehicle Stability Control	3.7.1.136
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AWDC	Four Wheel Drive Conversion	3.7.1.9
B		
B09	Body Length, 2.7 m (9 ft)	3.7.1.25
B12	Body Length, 3.7 m (12 ft)	3.7.1.25
B14	Body Length, 4.3 m (14 ft)	3.7.1.25
B16	Body Length, 4.9 m (16 ft)	3.7.1.25
B18	Body Length, 5.5 m (18 ft)	3.7.1.25
BBM	Bulkhead Maintenance Body	3.7.1.10
BBS	Bulkhead Stake Body	3.7.1.11
BC	Body Cover	3.7.1.12
BDF	Diamond Tread Steel Floor	3.7.1.13
BDS	Dump Stake Body	3.7.1.14
BF	Bench Front Seat	3.7.1.15
BH	Interior Bulkhead	3.7.1.16
BHP	High Profile Maintenance Body	3.7.1.17
BL	Bedliner	3.7.1.18
BPC	Body Paint Color	3.7.1.19
BR	Translucent Roof	3.7.1.20

BRH	Stake Racks, 100 cm (40 in)	3.7.1.21
BRT	Interior Rope Ties	3.7.1.22
BSF	Smooth Steel Floor	3.7.1.23
BUA	Backup Alarm	3.7.1.24

C

CA1	Cab To Axle, 275 cm (108 in)	3.7.1.26
CA3	Cab To Axle, 350 cm (138 in)	3.7.1.26
CA4	Cab To Axle, 305 cm (120 in)	3.7.1.26
CA5	Cab To Axle, 320 cm (126 in)	3.7.1.26
CA6	Cab To Axle, 152 cm (60 in)	3.7.1.26
CA8	Cab To Axle, 213 cm (84 in)	3.7.1.26
CAB	OEM Cab Rear Panel	3.7.1.27
CBE	Cargo Bed Extender	3.7.1.28
CCH	Cargo Compartment Heater	3.7.1.28
CCW	Cargo Compartment Windows	3.7.1.30
CM	Carpeted Floor Covering in Seating Areas	3.7.1.31
CMS	Crossview Mirror	3.7.1.112
CNG	Compressed Natural Gas	3.7.1.32
CNG2	Dual Fuel, CNG/Gasoline	3.7.1.32
CNS	Consignee Delivery	3.7.1.33
CR	Cruise Control	3.7.1.126
CRT	Cargo Restraining Track w/ Hardware	3.7.1.34
CRTS	Cruise Control and Tilt Steering	3.7.1.35
CTIS	Central Tire Inflation System	Table 3
CU	Cloth Upholstery	3.7.1.36

D

D3	Special Traction	3.7.1.37
D7	Towing/Mountain Ratio	3.7.1.38
DA	Delete Air Conditioning	3.7.1.39
DALT	Dual Alternators	3.7.1.1
DCG	Engine Mounted Air Compressor	3.7.1.40
DCL	Dome Cargo Lamp	3.7.1.41
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DPW	Bulkhead Door Window	3.7.1.44
DRB	Delete Running Boards	3.7.1.154
DRG	Delete Rear Cargo Door Window	3.7.1.45
DRL	Daytime Running Lights	3.7.1.46
DST	Delete Spare Tire (Supply Wheel)	3.7.1.47
DSTD	Delete Spare Tire Carrier	3.7.1.48
DTG	Dark Tinted Glass	3.7.1.49
DVAL	Delivery Van Body, Aluminum	3.7.1.50
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DVD	Dual Rear Doors	3.7.1.52
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DVE1	Extra Height Interior, Min 213 cm (84 in)	3.7.1.53
DVF	Wood Floor	3.7.1.54
DVG	Roof Ventilator, Static Type	3.7.1.56
DVS	Commercial Utility Body Cutaway Cab & Chassis	3.7.1.57
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E

E1	Four Cylinder Engine	3.7.1.59
E2	Five/Six Cylinder Engine	3.7.1.59
E3	Eight Cylinder Engine	3.7.1.59
E4	Extra Power Engine	3.7.1.59

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F

FG	Fiberglass Body	3.7.1.63
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FPUC	Fiber Glass Pickup Cap	3.7.1.65
FRP	Fiberglass Delivery Van Body	3.7.1.55
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H

HEV	Hybrid Electrical Vehicle	3.7.1.153
HTG	Hydraulic Lift Gate	3.7.1.68
HTGR	Rail Type Lift Gate	3.7.1.68
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HTP	Power Close Tail Gate	3.7.1.68

I

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LPG2	Bi-fuel (Propane and Gasoline)	3.7.1.76
LR	Luggage Roof Rack	3.7.1.77
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M

MBG	Front Brush Guard	3.7.1.78
MCT	Off Road Extended Duty Package	3.7.1.79
MCTE	On Board 5000 Watt Electrical System	3.7.1.80
MCTL	Military Package	3.7.1.81
MEW	Winch, Electrical	3.7.1.82
MF	Floor Mats	3.7.1.83
MFO	Metal Floor Overlay	3.7.1.146
MFDV	Metal Floor Delivery Van	3.7.1.84
MHP	Pipe and Conduit Holder	3.7.1.85
MIL	Military Data Plate	3.7.1.86
MPS	Snow Plow, Reversible	3.7.1.87
MRB	Warning Light, Strobe Type, Blue	3.7.1.89
MRR	Warning Light, Strobe Type, Red	3.7.1.89
MRS	Warning Light, Strobe Type, Amber	3.7.1.89
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NGDS	Non-Gloss Paint—Sand	3.7.1.81
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O

OEMC	Furnish OEM Console	3.7.1.75
OPW	Furnish Opaque Glass	3.7.1.123
OO	On/Off Road Tires	3.7.1.6
ORM	Off Road Body Mounting	3.7.1.93

P

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PRS	Passenger Restraint System	3.7.1.96
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PSME	Parts and Service Manuals, Electronic	3.7.1.97
PT	Power Takeoff Opening	3.7.1.98
PWL	Power Windows And Locks	3.7.1.99

R

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RACS	AM/FM Radio With Cassette	3.7.1.101
RAD	AM/FM Radio With CD Player	3.7.1.102
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RDSH	Rear Doors, Side Hinged	3.7.1.105
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T

T5	Five Speed Manual Transmission	3.7.1.128
T6	Six Speed Manual Transmission	3.7.1.128
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TSD	Delete Tailgate and Sides	3.7.1.115

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U

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WR	Increased GVWR	3.7.1.131
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X

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XS	Short Body Van	3.7.1.150
XW	Extra Wide Load Space	3.7.1.151

Y

YD	Diesel Engine	3.7.1.152
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3.7.1.1 CODE "DALT" DUAL ALTERNATORS

ORDERING NOTE: This option is available for Items In Table 25 only.

When code DALT is specified, the vehicle shall be equipped with the chassis manufacturer's dual alternator system.

3.7.1.2 CODE "AC" AIR CONDITIONING AND CODE "AC2" - AUXILIARY REAR AIR CONDITIONING**3.7.1.2.1 CODE AC**

When code AC is specified, the vehicle shall be equipped with the chassis manufacturer's standard dehumidifying/all weather air conditioner. The air conditioning system shall include, but shall not be limited to increased engine cooling capacity, alternator and battery capacities, and insulation (headliner, firewalls, and side panels) as available for the model furnished.

Vehicles having capacities of 7-15 passengers shall be provided with dual evaporator systems and outlets, and with an auxiliary heater located in the rear passenger carrying section.

Multistop Van Trucks (Table 26) require a solid type interior partition (DPB) when AC is specified. This is done to insure that the passenger compartment of this vehicle will be adequately cooled. Selecting a screen type interior partition (DPA) or no partition with AC will result in severe performance degradation of the air conditioning in the passenger compartment.

3.7.1.2.2 CODE AC2

When code AC2 is specified, the OEM auxiliary rear compartment air conditioning system, shall be furnished.

3.7.1.3 CODE "AH" AUXILIARY HEATER

When code AH is specified, in addition to the standard in-cab heater, an auxiliary heater with two speed or variable speed blower shall be furnished for the passenger compartment. The auxiliary heater shall be installed under the rear seat, if possible without raising the seat, or on the sidewall or behind the rear seat or under the front seat with protection, in crew cabs, and under the intermediate seat on other types of vehicles with airflow directed toward the rear seat(s). On van-wagon vehicles, the OEM auxiliary heater shall be installed. Rated air flow shall be not less than 5240 cu l (185 cu ft) per minute and heater rated output shall be not less than 4,410 kg-calories (17,500 BTU) at 66° C (150°F) water over air differential. The heater controls shall be located convenient to the driver.

3.7.1.4 CODE "AL" ALUMINUM BODY

When code AL is specified, the utility service body shall be constructed of aluminum.

3.7.1.5 CODE "AP" ADJUSTABLE PEDALS

When code AP is specified, adjustable pedals shall be furnished.

3.7.1.6 CODES "AS", "AT", "LT", "OO" AND "TT" TIRE TYPE

When code AS, AT, LT, OO or TT are specified, the corresponding type tires, of the minimum size specified in the tables, shall be provided.

Code AS - all season; Code AT - all terrain; Code LT - light truck; Code OO - on/off road; Code TT - Traction Tread Rear Tires.

When code TT is specified, traction tread tires shall be furnished on the rear wheels. Tires shall be commercial type General LMT450, Goodyear 124, Michelin XZT, or equal.

3.7.1.7 CODE "ATC" AUTOMATIC TRACTION CONTROL

When ATC is specified, an OEM automatic traction control system, functioning through the vehicle brake and/or engine systems, shall be furnished.

3.7.1.8 CODE "AWD" OEM ALL WHEEL DRIVE

When code AWD is specified, the OEM all wheel drive system with a single speed transfer case shall be furnished.

3.7.1.9 CODE "AWDC" FOUR WHEEL DRIVE (4x4) CONVERSION (Non-OEM-Dealers Only)

When code AWDC is specified, a four wheel drive conversion shall be furnished. The conversion (4x4) shall be a professionally engineered conversion from a two wheel drive (4x2) to a four wheel drive (4x4) meeting or exceeding all applicable requirements herein. All workmanship, welding, mechanical fit, grade and quality of components and materials used in conversion(s) shall be equal to or greater than the chassis manufacturer's production of other vehicles in the same weight class that are available as factory assembled 4x4 units. Conversion components shall not interfere with other body, chassis, or mechanical parts through the complete range of suspension and wheel angle travel and allow proper alignment of axles. The tracking and wheelbase of the front/rear axles shall be identical on both sides of the vehicle. When available, the chassis manufacturer's original equipment components for 4x4 units shall be furnished, including but not limited to: spring hangers, shackles, drive axle, integral transmission/ transfer case, universal joints, steering linkage, stabilizer bars, radius and torque rods, transfer case shift linkage, brake calipers, pads, rotors, shock absorbers, and springs. The chassis manufacturer's guidelines/requirements for 4x4 conversions shall be followed. The conversion shall, at a minimum, maintain the payload as required for the Standard Item number furnished. The furnished axle ratings, as a minimum, shall provide the original or greater GAWR and GVWR. The design of the 4x4 conversion shall not raise the vehicle's center of gravity over that of the original vehicle, and chassis height shall not be raised more than 12 cm (5 in). The transfer case selector shall have a readily visible shift diagram and a position indicator. A yellow, dash mounted 4 wheel drive warning light shall be provided in close proximity to permanent warning decal or metal plate advising conditions under which 4 wheel drive shall not be used. A dash mounted metal plate or permanent decal indicating the proper procedure for engaging and disengaging the 4 wheel drive shall be provided. The ratio of the front drive axle shall be identical +/- 1% of that furnished in the rear axle. Unless otherwise specified, the front drive axle hubs shall be manually engaged. Each vehicle's rear axle shall be furnished with chassis manufacturer's special traction differential (option code D3). Contractor shall furnish FMVSS re-certification of the complete fuel system should the original fuel system be modified in any manner. The 4x4 converter shall furnish a completed applicable FMVSS certification label as required for an Alterer, Intermediate, or Final Stage manufacturer. In addition to the required OEM manuals, the vehicle shall be provided with operation, maintenance, and 4x4 system specifications information.

The 4x4 converter shall provide to the purchaser a full parts and labor warranty covering all added 4x4 parts and materials, including workmanship and design. The warranty shall also cover all OEM components affected or modified by the conversion process. This warranty shall be at least equivalent, in mileage and time, to the chassis manufacturer's original warranty, including any extended warranties required or furnished.

3.7.1.10. CODE "BBM" BULKHEAD, UTILITY SERVICE BODY

When code BBM is specified, the body manufacturer's steel cab guard shall be provided at the front bulkhead, and when an aluminum body is furnished the cab guard shall be aluminum. On fiberglass bodies, the cab guard shall be steel or aluminum. The guard shall be at least the width of the load space and the height of the cab and include openings for rear visibility.

3.7.1.11 CODE "BBS" BULKHEAD, STAKE BODY

When code BBS is specified, an all steel, solid front bulkhead with a screen opening behind the cab window shall be provided in lieu of the front end rack.

3.7.1.12 CODE "BC" DUMP BODY COVER

When code BC is specified, a permanently mounted, retractable, mechanical cargo cover of vinyl-coated nylon material shall be furnished.

3.7.1.13 CODE "BDF" DIAMOND TREAD STEEL FLOOR

When code BDF is specified, a diamond tread steel plate, 3.2 mm (1/8 in.) thick, shall be furnished over the standard stake/platform wood floor.

3.7.1.14 CODE "BDS" DUMP STAKE BODY

When code BDS is specified, a NTEA class B dump hoist shall be provided for 8 and 9 ft bodies, and a NTEA class C for 12 and 14 ft bodies. The vehicle shall be equipped with a transmission mounted PTO/hydraulic pump for powering the hoist having a minimum lifting capacity rating of 2727 kg (6,000 lb) in accordance with the National Truck Equipment Association Hoist Classification chart. The hydraulic system shall be provided with a pressure relief valve to protect against overloading of the hoisting mechanism at 125% of rated capacity. Hoist shall lift the body to a minimum angle of 45 degrees; controls shall be located in the cab. Hydraulic lines and hoses shall be secured in a protected position, and shall not hang below the chassis frame. Dump stake bodies shall incorporate structural steel channel long sills. Wiring harness for the body shall have overload protection and be enclosed in conduit or plastic loom, except at terminal ends, and shall be secured by hangers to the underbody on not more than 46 cm (18 in) centers. The front rack section shall be capable of withstanding a horizontal static load equal to one-half the payload capacity of the load space without permanent distortion of the rack section or its mounting.

3.7.1.15 CODE "BF" BENCH FRONT SEAT

When code BF is specified, a front solid bench seat shall be furnished.

3.7.1.16 CODE "BH" INTERIOR BULKHEAD

When code BH is specified, an interior bulkhead shall be constructed of not less than 17 gauge steel with a rigid center section door and side panels, which shall be located between the driver and cargo areas. The door shall have openings in the upper and lower halves separated by a solid area. The openings shall be open mesh covered or perforated type with dia-

mond-shaped or round holes contained within the open area and shall have an outside perimeter of not less than 43 cm (17 in) high for standard vans or 38 cm (15 in) high by 38 cm (15 in) wide for compact vans, with the solid separation between openings of not less than 9 cm (3.5 in). The upper edge of the upper opening shall be 2.5 to 13 cm (1 to 5 in) from the top of the bulkhead. The openings shall be hinged to swing into the cargo area. Bulkhead shall be secured to the body interior with easily removable, corrosion resistant fasteners. Provision shall be made on cargo side of bulkhead for relocation of spare tire assembly to left or right side panel(s) or under frame.

3.7.1.17 CODE "BHP" HIGH PROFILE MAINTENANCE BODY

When code BHP is specified, a high profile utility maintenance body shall be supplied. Minimum cabinet height (front and rear) shall be 99 cm (39 in) and minimum load space height shall be 61 cm (24 in).

3.7.1.18 CODE "BL" BED LINER

When code BL is specified, an OEM protective cargo bed liner shall be furnished.

3.7.1.19 CODE "BPC" BODY PAINT COLOR

When code BPC is specified, the body color shall be a customer specified color other than the standard white.

3.7.1.20 CODE "BR" TRANSLUCENT ROOF

When code BR is specified, the roof panel over the cargo section of Multistop Van Trucks shall be translucent white, fiberglass reinforced, polyester material, min. 1.8 mm (0.070") thick.

3.7.1.21 CODE "BRH" STAKE RACKS, 100 CM (40 IN)

When code BRH is specified, the rack sections shall be minimum 100 cm (40 in) high.

3.7.1.22 CODE "BRT" INTERIOR ROPE TIES

When code BRT is specified, the body side lining (panels) shall be furnished with tie rings for cargo securing. The tie rings shall be recessed and shall be spaced on 61 cm (2 ft) centers, and 76 cm (30 in) above the floor line plus or minus 5 cm (2 in), unless otherwise specified. Tie rings are not required on the bulkhead.

3.7.1.23 CODE "BSF" SMOOTH STEEL FLOOR

When code BSF is specified, a smooth steel plate 3.2 mm (1/8 in) thick shall be provided for the stake platform floor.

3.7.1.24 CODE "BUA" BACKUP ALARM

When code BUA is specified, an alarm shall be furnished which provides an audible warning whenever the ignition switch is "on" and the vehicle transmission control is in reverse.

3.7.1.25 CODES "B09, B12, B14, B16, AND B18" BODY LENGTH

These codes describe the length of truck bodies. Code B09 requires a 2.7 m (9 ft) body length. Code B12 requires a 3.7

m (12 ft) body length. Code B14 requires a 4.3 m (14 ft) body length. Code B16 requires a 4.9 m (16 ft) body length. Code B18 requires a 5.5 m (18 ft) body length.

3.7.1.26 CODES "CA1, CA3, CA4, CA5, CA6, AND CA8" CAB TO AXLE LENGTH

When specified;

code CA1 requires a cab to axle length of 275 cm (108 in), code CA3 requires a cab to axle length of 350 cm (138 in), code CA4 requires a cab to axle length of 305 cm (120 in), code CA5 requires a cab to axle length of 320 cm (126 in), code CA6 requires a cab to axle length of 152 cm (60 in), code CA8 requires a cab to axle length of 213 cm (84 in).

3.7.1.27 CODE "CAB" OEM CAB REAR PANEL

When code CAB is specified, a chassis OEM, fully enclosed cab shall be furnished.

3.7.1.28 CODE "CBE" CARGO BED EXTENDER

When code CBE is specified, the OEM cargo bed extender shall be provided.

3.7.1.29 CODE "CCH" CARGO COMPARTMENT HEATER

When code CCH is specified, a load space heater, having a minimum rated output of 4,410 kg-cal (17,500 BTU) at 65°C (150°F), water over air differential, mounted behind right hand rear wheelhouse shall be provided. Heater height will be no higher than rear wheelhouse and will be securely fastened to prevent vibration/breakage. A dash-mounted blower switch and under-hood coolant flow shutoff valve to restrict water flow to the heater shall be provided to afford capability for on/off heat control to vehicle interior.

3.7.1.30 CODE "CCW" CARGO COMPARTMENT WINDOWS

When code CCW is specified, two centered front to rear on the cargo box, sliding side windows with screens shall be installed, one on each side of the cargo compartment. Window area shall be approximately 107 cm (42 in) wide by 56 cm (22 in) high. All windows used in the body shall be watertight and of first quality as used by quality builders in motor and mobile home construction.

3.7.1.31 CODE "CM" CARPETED FLOOR COVERING

When code CM is specified, carpeted floor covering shall be provided in all seating areas at a minimum.

3.7.1.32 CODES "CNG AND CNG2" COMPRESSED NATURAL GAS

When code CNG is specified, an OEM compressed natural gas alternative fuel system of the type specified in the table shall be provided. When code CNG2 is specified, OEM dual fuel natural gas/gasoline alternative fuel system shall be provided.

3.7.1.33 CODE "CNS" CONSIGNEE DELIVERY

When consignee (direct) delivery code CNS, is specified, the contractor shall deliver the vehicle to the consignee delivery

address designated on the motor vehicle delivery order. The consignee is responsible for the predelivery inspection and servicing. Items to be installed as part of the predelivery servicing shall be shipped in the vehicle. Vehicle title/registration and safety/emission tests are the responsibility of the requisitioning agency.

3.7.1.34 CODE "CRT" CARGO RESTRAINING TRACK

When code CRT is specified, a cargo restraining track shall be installed on each interior side wall at the manufacturer's standard height(s), unless specific height(s) are specified. Cross bars and hardware for insertion into the tracks shall be furnished, unless otherwise specified.

3.7.1.35 CODE "CRTS" CRUISE CONTROL AND TILT STEERING

When code CRTS is specified, the manufacturer's cruise control and tilt steering wheel shall be furnished.

3.7.1.36 CODE "CU" CLOTH UPHOLSTERY

When code CU is specified, the OEM standard cloth interior upholstery shall be provided.

3.7.1.37 CODE "D3" SPECIAL TRACTION

When code D3 is specified, the vehicle shall be provided with a positive-traction, automatic locking differential.

3.7.1.38 CODE "D7" TOWING/MOUNTAIN RATIO

When code D7 is specified, it shall indicate that the vehicle will be used for trailering (towing), or operating in mountainous terrain. The supplier shall furnish the vehicle with the OEM higher than standard numerical axle ratio that is compatible with the required equipment.

3.7.1.39 CODE "DA" DELETE AIR CONDITIONING

When code DA is specified, the vehicle supplier shall furnish the vehicle without air-conditioning components.

3.7.1.40 CODE "DCG" ENGINE MOUNTED AIR COMPRESSOR

Ordering Notes: The Code MCT is required with this option and must be specified by the ordering agency. The Code MCTE, On Board 5000 Watt Electrical System, is not available with this option.

When code DCG is specified, a vehicle engine mounted rotary screw air compressor providing a minimum of 70 cfm @ 150 psi air pressure supply shall be furnished. An automatic throttle control shall be furnished and set to adjust the engine rpm based on air demand. The system shall include a compressor oil cooler, a moisture ejector system, a quick release air hose connector at the rear bumper, a splitter, and two (2) 25 ft air hoses. The system shall be configured to operate when the transmission selector is placed in the "Park" position and with the parking brake applied.

3.7.1.41 CODE "DCL" DOME CARGO LAMPS

When Code DCL is specified, four dome lamps shall be located off center, two on each side, one foot from side panel

in cargo compartment. The lamps shall be controlled through two interior, manual switches, one on the right hand side of the rear door and one on the right hand side of the curbside sliding door. Switches will be located at a height to prevent accidental breakage when entering/exiting vehicle. Wiring of switches will allow for turn on/off with either switch.

3.7.1.42 CODE "DDS" DROP SIDE DUMP BODY

When code DDS is specified, the supplier shall furnish the dump body with left and right (single or double) drop side style body.

3.7.1.43 CODE "DPA" SCREEN TYPE INTERIOR PARTITION AND CODE "DPB" SOLID TYPE INTERIOR PARTITION

When code DPA or DPB is specified, a steel or aluminum bulkhead with a sliding-type entry door and fixed side panels shall be furnished between the driver's area and the cargo space. The door shall slide on the front side of the partition, and be furnished with a securing device. On cutaway cab vehicles the door shall slide to the curb side. The partition shall be capable of withstanding a horizontal static load equal to payload capacity of the vehicle without permanent distortion. When code DPA is specified, a screen type interior partition with door shall be installed. When code DPB is specified, a solid type partition with door shall be installed. The location of the partition shall allow for full seat travel with the seat back at a 23-degree angle from the vertical. Partition door shall be operable from both sides, with provisions for locking from the front. When the partition is installed, the load space may be reduced by up to 13 cm (5 in). The load space shall be measured from the rearmost intrusion of the partition. When a recess in the partition is used to accommodate the back of the reclined seat it shall also provide additional clearance for the driver's and passenger's head. The recess width shall be at least as wide as the seat. The recess height shall come to within 6 mm (0.25 in) of the cab/body mounting flange.

3.7.1.44 CODE "DPW" PARTITION DOOR WINDOW

Note: Bulkhead may reduce load space length by up to 13 cm (5 in).

When code DPW is specified, a bulkhead door with a framed clear plastic 3 mm (0.125 in) thick upper half shall be provided allowing unrestricted sight line from the driver's seated eye level through the rear door(s) and window(s).

3.7.1.45 CODE "DRG" DELETE REAR CARGO DOOR WINDOW

When code DRG is specified, rear window(s) shall not be furnished.

3.7.1.46 CODE "DRL" DAYTIME RUNNING LIGHTS

When code DRL is specified, daytime running lights shall be furnished.

3.7.1.47 CODE "DST" DELETE SPARE TIRE (SUPPLY WHEEL)

When code DST is specified, a spare wheel shall be furnished without a tire.

3.7.1.48 CODE "DSTD" DELETE SPARE TIRE CARRIER

When code DSTD is specified, the spare tire carrier shall not be furnished.

3.7.1.49 CODE "DTG" DARK TINTED GLASS

When code DTG is specified, OEM dark tinted glass on all windows behind the front seat shall be furnished.

3.7.1.50 CODE "DVAL" CUTAWAY CAB AND CHASSIS DELIVERY VAN BODY, ALUMINUM

When code DVAL is specified, the manufacturer's standard commercial delivery van body shall be furnished. When code DVAL is specified for a Cutaway Cab and Chassis, Code DVC is standard. The body shall have a nominal full width, roll up, rear door with upper and lower windows. The body shall be aluminum. The body shall be mounted in the same manner as the chassis manufacturer's standard floating mount for the cab portion and mounted per chassis manufacturer's recommendations. All holes in chassis to accommodate body shall be drilled in accordance with chassis manufacturer's instructions. Body dimensions shall be as specified in the table.

The complete underside of the van body shall be rustproofed in accordance with Federal Standard Number 297E. The van body exterior color shall be body manufacturer's standard white, unless otherwise specified (code "BPC"). For item 92, the body width may be up to 10 cm (4 in) greater than the width of the rear tires, per side. No partition between cab and load space shall be furnished, unless code DPA or DPB is specified. When air transport is specified the overall maximum unloaded height, including roof vents (code VR), shall not exceed 264 cm (104 in).

3.7.1.50.1 FABRICATION

Aluminum bodies shall be a minimum 1 mm (0.040 in). Vertical posts shall be aluminum or galvaneel on 41 cm (16 in) centers. The metal roof assembly shall consist of a one-piece aluminum sheet with support bows on maximum 61 cm (24 in) centers, metal roof reinforcements that are bonded in place and constructed to ensure adequate drainage. Aluminum roofs are not required to be painted. All roof and body seams shall be sealed and weatherproofed. Rub rails permanently attached to the body exterior shall be positioned to ensure proper body protection. Metal roof and sides shall be lined and completely insulated with no less than 2.5 cm (1 in) thick fiberglass batting or polystyrene. Headliner for roof and side lining shall be sheet metal of the type used for body construction, or 6.4 mm (1/4 in) minimum exterior grade plywood. The interior body sides shall be smooth or ribbed with no other protrusions except fasteners and corner posts. When steel/aluminum materials are used in combination, these dissimilar metals shall be provided with galvanic insulation at all points of contact. These side liners are to cover side walls from floor to roof rail, with no exposed wiring or struts. All wall and roof liners shall be smoothly fitted with no separation or protrusion between liners. The fasteners shall project no more than 2.8 mm (7/64 in) into the interior and shall be blended and smooth. Side lining panels fur-

nished shall be securely fastened and completely line the body without gaps between panels, except at the roofline, where a gap between side and roof panels shall not exceed 1.3 cm (1/2 in). All interior panels shall be removable to facilitate body repair. Each sheet metal headliner and side lining panel shall be rigid, shall have no sharp edges exposed to the touch and shall be fastened so as to prevent scalloping and edge ridges in the panels. Each plywood headliner and side lining panel shall be free of defects, sanded smooth and flush with adjacent panels. The body side lining (panels) shall be reinforced for load support. Tie rings shall be provided when code BRT is specified.

3.7.1.50.2 FLOOR AND BUMPER

Cargo floor shall be low type, with wheel wells. The floor shall be body manufacturer's standard wood floor. The understructure shall be of all metal construction. Rear bumper shall be steel, step type, not less than 15 cm (6 in) front to rear, frame attached, and painted the same color as the vehicle. Abrasive nonskid surface material or rubber scuffplates shall be applied to step area of bumper if bumper step is not tread plate.

3.7.1.51 CODE "DVC" ROLLUP REAR DOORS

When code DVC is specified, a full width, roll-up, overhead rear door shall be provided. When Code DVFG or DVAL is specified for a Cutaway Cab and Chassis, Code DVC is standard. The door shall be of the sectional type, having not less than five sections and a minimum of 183 cm (72 in) wide if dual wheel body style, and a minimum 168 cm (66 in) if single wheel body. The door sections shall incorporate joints of the tapered tongue and groove or shiplap type. The door shall be plastic covered or aluminum covered 1.9 cm (3/4 in) marine plywood construction. Door section corrosion-resistant hinges shall be mounted on the inside of the door, one at each end of each section joint. The door track shall be manufacturer's standard corrosion-resistant type equipped with a positive stop at the end of the track. Door rollers, counter-balance units, and cables of corrosion-resistant construction shall be provided. The door shall be weather tight. A heavy-duty, corrosion-resistant slam or cam-operated lever-type lock shall be provided with provisions for key locking. One heavy-duty, corrosion-resistant grab handle, closed type, shall be provided on the inside bottom of the door. One nylon, double loop pull-down strap not less than 3.8 cm (1.5 in) wide and 30 cm (12 in) in length shall be provided outside the door and located adjacent to the door lock. The rear door shall be provided with upper and lower safety glass window(s) having a total rear door glass area not less than 2,580 sq cm (400 sq in). The glass area in the upper section of the rear door shall be at eye level of the operator when in a seated position in the driver's compartment. When roll-up rear door is furnished, loadspace may be reduced to accommodate clearance required for rear door hardware.

3.7.1.52 CODE "DVD" DUAL REAR DOORS

When code DVD is specified, two side-hinged, full width rear doors both with inner stops shall be provided. Upper and lower windows with a minimum total of 1,930 sq cm (300 sq in) of clear glass area shall be provided in the rear doors. Rear doors shall have door operating handles inside

and outside. Rear doors shall be provided with door checks to hold doors in full open position. In addition to the door operating handles, grab handles to assist in closing the doors shall be provided on inside of rear doors.

3.7.1.53 CODE "DVE" AND CODE "DVE1" EXTRA HEIGHT - INTERIOR

When code DVE is specified, a load space height of a minimum 203 cm (80 in) shall be furnished. When code DVE1 is specified, a load height space of a minimum 213 cm (84 in) shall be furnished.

3.7.1.54 CODE "DVF" WOOD FLOOR

When code DVF is specified, a wood floor, a minimum of 2 cm (0.75 in), shall be furnished.

3.7.1.55 CODE "FRP" FIBERGLASS DELIVERY VAN BODY FOR CUTAWAY CAB

When Code FRP is specified for a Cutaway Cab and Chassis, Code DVC, Rollup Rear Doors, is standard. When code FRP is specified, a delivery van body meeting the requirements for code DVAL shall be furnished with the following changes in construction: The body shall be constructed using fiberglass-reinforced panels in lieu of aluminum. These fiberglass-reinforced panels shall consist of panels having a minimum thickness of 0.95 cm (0.375 in). This type of body does not require a liner and may have a fiberglass roof. The rear frame assembly for this type body shall be constructed of aluminum or galvanized steel.

3.7.1.56 CODE "DVG" ROOF VENTILATOR

When code DVG is specified, a roof type, static ventilator shall be furnished having controls for opening and closing. The ventilator shall be located approximately in the center of the cargo space.

3.7.1.57 CODE "DVS" UTILITY SERVICE BODY ON A CUTAWAY CAB

When code DVS is specified, the truck shall be of the size specified, having a body manufacturer's standard commercial utility service body for a cutaway cab type chassis. Nominal body lengths shall be 3.4 m (11 ft) for cutaway chassis with 203 cm (80 in) CA; and 4 m (13 ft) for a 300 cm (118 in) CA. The body interior height shall be nominally 188 cm (74 in). The body shall comply with the requirements stated for Tables 18, 19, and 20, code USS and Code USS2. A door integrated in the bulkhead shall be furnished to allow for entry and exit to the body from the cab. The body shall provide space for the full range of travel for both the driver and passenger seats.

3.7.1.58 CODE "DVW" CURB SIDE WINDOWS

When code DVW is specified, the side panels on the curb-side in the cargo area shall be provided with window(s). The window(s) shall be a minimum 107 cm (42 in) long centered in the side panel area, and extend from near the bottom of the roof cap rail approximately 61 cm (24 in) down to the belt line. When more than one window is furnished, dividers between the windows shall not reduce the total side glass area more than 10 percent.

3.7.1.59 CODES "E1, E2, E3, E4, AND E5" ENGINES

When code E1 is specified, the OEM applicable four cylinder engine shall be provided. When code E2 is specified, the OEM applicable five/six cylinder engine shall be provided. When code E3 is specified, OEM applicable V8 engine shall be furnished. When code E4 is specified, an OEM 8 cylinder engine with additional power as specified shall be provided. When code E5 is specified, the OEM extra power V8 or 10 cylinder engine as specified shall be provided.

3.7.1.60 CODE "ECTD" (Military Only) DELETE COSMETIC TRIM

When code ECTD is specified, the exterior cosmetic trim shall be deleted in accordance with MIL-HDBK-1223. Applies to vehicles listed under code MCT, Off Road Extended Duty Package.

3.7.1.61 CODE "EH" ENGINE BLOCK HEATER

Ordering Note: When Code "YD" is specified, "EH" shall be furnished.

When code EH is specified, the OEM engine highest wattage block heater(s) shall be furnished.

3.7.1.62 CODE "ELFS" (Military Only) FOLD UP TROOP SEATS

Ordering Note: The Code MCT is required with this option and must be specified by the ordering agency.

When code ELFS is specified, eight (8) longitudinal fold up type troop seats made from fiber-glass reinforced composite material conforming to MIL-C-62419 shall be furnished. The troop seats are to be mounted in the pickup bed in accordance with MIL-T-21171, paragraph 3.5.3.1.1, Commercial Trucks with Racks and Bench Seats. A pickup bed canvas cover and bow, meeting the requirements of ATPD-2076, Military Purchase Description-Trucks, Commercial: Cargo Box Cover Kit, shall be furnished.

3.7.1.63 CODE "FG" FIBERGLASS BODY

When code FG is specified, fiberglass, having strength equal to that of steel, shall be furnished in lieu of the specified material.

3.7.1.64 CODE "FLFL" FLAT CARGO FLOOR

When code FLFL is specified, a flat cargo floor shall be furnished.

3.7.1.65 CODE "FPUC" FIBERGLASS PICKUP CAP

Ordering Note: The Code MCT is required with this option and must be specified by the ordering agency. This option is available only with the 8 ft bed size.

When Code FPUC is specified, a fiberglass pickup cap shall be furnished. The cap shall have dark tinted glass, locking left and right side windows, and a swing up rear access door with dark tinted glass and gas spring props. The top shall

have a fixed front window. All door and window seals shall be neoprene. Door locks shall have covers. An interior cap light with an on/off switch located in the cab and cap shall be furnished. A high mounted rear brake light shall be furnished and permanently mounted. The cap shall be painted the same color as the vehicle.

3.7.1.66 CODE "FTH" FRONT TOW HOOKS

When code FTH is specified, the manufacturer's optional front tow hooks shall be frame mounted on the front of the vehicle. Unless otherwise specified, the manufacturer's front tow hooks shall be provided on all 4X4 vehicles.

3.7.1.67 CODE "E85" ETHANOL FLEXIBLE FUEL

When code E85 is specified, the engine shall be capable of normal operation on gasoline fuel containing up to 85 percent ethanol.

3.7.1.68 CODES "HTG", "HTGR", "HTGU", AND "HTP" HYDRAULIC LIFT GATE, RAIL TYPE LIFT GATE, FOLD UNDER TAIL GATE, AND POWER CLOSE TAIL GATE

Note: Vehicle payload will be reduced by the weight of the lift gate assembly

A rear bumper may be required to comply with FMVSS regulations.

When code HTG is specified, the vehicle shall be equipped with a power elevating and manual folding type tailgate lift.

When code HTGR is specified, the vehicle shall be equipped with a power rail type elevating and manual folding type tailgate lift.

When code HTGU is specified, the vehicle shall be equipped with a power type fold under tailgate.

When code HTP is specified, the powered tailgate lift shall be as specified for code HTG or HTGR, with the addition of a powered folding type platform.

Unless otherwise amended in the solicitation or modified in the contract, the lift gate shall be hydraulic type with a rated lift capacity of not less than 363 kg (800 lb) when furnished on vehicles with single rear wheels. Lift gate capacity shall be 454 kg (1,000 lb) on vehicles with dual rear wheels.

Hoisting operations shall be accomplished hydraulically, powered from the truck's PTO or electrical system. Controls for operation of the lift shall be mounted outside of the body. Opening of the platform shall be power assisted. Closing of the platform shall be manual, or power assisted when code HTP is specified. The vehicle's spare tire assembly may be mounted on a secured carrier in the load space. When the tailgate lift is supplied on a stake body truck, the two removable rack sections across the rear of the truck bed will be required.

The tailgate platform shall be non-skid, full width of body interior less 5 cm (2 in), and shall have a depth of not less than 64 cm (25 in), exclusive of ramp. The top of the rear edge shall

come to within 1.3 cm (0.50 in) of the ground. The tailgate shall fold vertically against the rear of the vehicle for traveling and shall have a continuous toe clearance between rear edge of the floor and the tailgate platform, latches to hold the tailgate at floor level, if available, and devices to prevent movement due to road shock. When the tailgate is in line with the floor of the vehicle, the distance between rear edge of the floor and the tailgate shall be not more than 2.5 cm (1 in).

3.7.1.69 CODE "J560" TRAILER ELECTRICAL RECEPTACLE

Note: This is a seven conductor electrical connector for high-way tractors and trailers.

This is **NOT** a 7-way round plug that is used with class I – IV trailer towing.

This requirement is intended for Military use only.

When code J560 is specified, a 7-way truck-trailer electrical receptacle, meeting SAE J560 requirements, shall be furnished.

3.7.1.70 CODE "L6" SHORT BED PICKUP BODY

When code L6 is specified, the truck body furnished shall have an overall interior length of 1.8 to 2 m (6 to 6.7 ft).

3.7.1.71 CODE "LB" LONG BED PICKUP BODY

When code LB is specified, the body furnished shall have a minimum overall interior load length with tailgate closed of 244 cm (8 ft).

3.7.1.72 CODE "LD" LEFT DOOR

When code LD is specified, a left side, swing out, 60/40 passenger/cargo door shall be furnished.

3.7.1.73 CODE "RX2" ROOF WIRING

When code RX2 is specified, a circuit containing a minimum of two 10-gage wires shall be furnished to the forward center of the roof area. The headliner shall be removable in this area for easy access. No hole shall be made in the roof.

3.7.1.74 CODE "LED" LIGHT EMITTING DIODES

When code LED is specified, all added stop/tail, directional, and marker lights shall be light emitting diodes. LED lights shall be installed with tamper resistant hardware.

3.7.1.75 CODE "OEMC" OEM CONSOLE

Ordering Note: This option is only available on Items 100C, 101C, 102C, 105C, 106C & 108C.

When code OEMC is specified, the OEM console shall be installed in between the driver's and front passenger's seats.

3.7.1.76 CODE "LPG AND LPG2" LIQUIFIED PETROLEUM GAS

When code LPG is specified, the OEM's liquefied petroleum gas alternative fuel engine shall be provided. When code LPG2 is specified, the OEM's bi-fuel engine shall be furnished. This engine shall be capable of normal operation LPG or gasoline.

3.7.1.77 CODE "LR" LUGGAGE RACK

When code LR is specified, an OEM, roof mounted luggage rack shall be provided.

3.7.1.78 CODE "MBG" FRONT BRUSH GUARD

When code MBG is specified, the vehicle shall be equipped with a radiator and headlamp brush guard.

3.7.1.79 CODE "MCT" Off Road Extended Duty Package

Ordering Notes: for options over and above the standard MCT equipment listed here, please refer to the option codes section. Codes T5 and T6 are not available with this Code.

This package consists of suspension, tire, and other vehicle enhancements to provide for upgraded survival and mobility in an off road environment. The fording capability of this vehicle is 20 inches.

This code shall apply only to Standard Item No.'s 49B, 49E and 57. The unit shall be certified for Air Transportability per Wright Patterson Air Force Base procedures.

The pick up box size for code MCT will be 8 ft only. The engine furnished shall be a diesel, turbocharged, with a minimum horsepower rating of 300. Code D3, limited slip differential, shall be included with code MCT. A high capacity two stage air cleaner with flow restriction indicator shall be furnished. The front bumper shall be painted the same color as the body. Shock absorbers shall be heavy duty gas pressurized, min 46 mm, designed for on/off road use. Kevlar covers shall be installed on front CV joints. Two front and two rear pivoting tie down loops mounted on the bumpers shall be furnished. Four (4) (two front and two rear) cargo tie down eyes in the pickup bed shall be furnished. A heavy duty brush guard grill shall be furnished and designed to protect the radiator grille, headlamps, and turn-signals from damage caused by minor impacts and shall be painted the same color as the vehicle. Rear mounted combination pintle and ball towing hook with reinforcement and 12 pin military trailer light hookup (7,500 lb w/1,000 lb tongue weight on highway or 3,800 lb off highway) shall be furnished. Hitch height shall be no higher than 29 inches from the ground to the centerline of the ball. An adapter from the military 12 pin to a commercial 8 pin shall be included. The equipped vehicle is rated for 12,000 lb maximum trailer weight. The transmission, transfer case, and differential vent filters shall be remote mounted above the vehicle's fording line. License plate mounting kit with illumination for rear license plate shall be furnished.

3.7.1.80 CODE "MCTE" ON BOARD 5,000 WATT ELECTRICAL SYSTEM

Ordering Note: The Code MCT is required with this option and must be specified by the ordering agency.

When code MCTE is specified, a 120/240 volt, 60 Hz, continuous duty rated 5,000 watt generator/power system shall be furnished. It shall consist of a chassis manufacturer

approved, engine mounted, belt driven generator, remotely mounted electronic control unit, a control module, auto-throttle control, appropriate wiring, and power distribution panel. The chassis manufacturer shall approve the installation.

3.7.1.81 CODE "MCTL" MILITARY PACKAGE

Ordering Note: This code is for Military use only. The Code MCT is required with this option and must be specified by the ordering agency.

When code MCTL is specified, the following shall be furnished: A 24 volt electrical power source consisting of an on board regulated power supply that converts 12 VDC to 24 VDC. The system shall be rated at 40 amps continuous output and include: high temperature thermal limiting device, current limiting regulator, electrical overload protection, fuse panel for short circuit protection, protection in case of "loss of grounding," and fusible links for battery reversals. This system shall employ dual batteries with 660 CCA minimum each, wired in parallel for 12 volt starter and series hook up for 24 volt power source. The system shall include a series/parallel relay for diesel powered vehicles only. A NATO polarized jump-start receptacle mounted in the front grill area shall be provided.

A military blackout lighting package shall be furnished which includes two (2) front and two (2) rear LED lamps, and one (1) front drive light. A master switch unit for the set up shall be provided and must be capable of disconnecting all other vehicle light sources when the blackout lighting system is activated.

A vertical weapons carrier bracket for two M16/M14s, shall be mounted in the cabin to the cab "B" post. The wheel hubcaps shall be deleted. Protective green seat covers of woven polyester nylon material shall be installed over the standard vinyl seats shall be furnished to provide increased durability. The seat cover material shall conform to Military Drawing #12468573.

A Government Data Plate shall be furnished in accordance with 3.8.1 and be permanently mounted on the left front door jam. A vehicle shipping plate in accordance with Mil. Std. 2091 shall be furnished.

Vehicles shall be available with non-gloss paint colors sand, code NGDS, forest green, code NGFG, or tri-color camouflage, code TCCP. Painting shall be in accordance with MIL-HDBK-1223 and code ECTD. Paint color is to be specified by the ordering agency.

3.7.1.82 CODES "MEW" ELECTRIC WINCH

When code MEW is specified, an electrically driven commercially available, non-hoisting, front mount, self-recovery winch assembly with fairlead shall be provided. The winch shall permit not less than a 23-degree angle of approach, unless the vehicle is also equipped with a snowplow mount, and suitable for assisting the vehicle in negotiating difficult terrain. The winch shall be supplied with the manufacturer's standard length and diameter of galvanized aircraft or equal wire rope with minimum breaking strength exceeding the maximum single line pull rating of the winch and minimum

requirements for single line pull rating, length, and diameter shown below. Winch assemblies shall include the winch manufacturer's recommended standard mount(s) providing for transfer of winching forces to the vehicle frame and shall place the winch as close to vehicle frame as practical. Acceptable mounts will include grill/brush guard type, heavy-duty bumper type, or behind the bumper type. Wire rope shall include replaceable clevis hook. Inside the cab winch controls shall be provided for hydraulically driven winches. Minimum 3 m (10 ft) remote controls removable for security and storage and permitting in-cab operation of the winch shall be provided. Winches shall have forward and reverse drum drive and free spooling. The vehicle shall be furnished with the OEM heaviest duty capacity optional battery and alternator for model truck specified.

Winch Application			
Vehicle GVWR	Single Line Pull Rating (min)	Length Wire Rope (min)	Wire Rope Diameter (min)
Kg (lb)	Kg (lb)	M (ft)	Mm (in)
Under 3855 (8500)	3636 (8000)	25 (80)	8 (5/16)
3855-4536 (8500/10,000)	4318 (9500)	30 (100)	10 (3/8)
Over 4356 (10,000)	5455 (12,000)	30 (100)	10 (3/8)

3.7.1.83 CODE "MF" FLOOR MATS

When code MF is specified, floor mats shall be provided.

3.7.1.84 CODE "MFDV" METAL FLOOR DELIVERY VAN

When code MFDV is specified, an all metal floor with safety tread sheet shall be provided. The sheet shall be not less than 12 gauge (0.1046 in), except for step treads which shall be not less than 18 gauge (0.0478 in). Crossmembers shall be of sufficient spacing and strength to withstand the following loads: a) evenly distributed load of 2,500 lbs on the load floor; and b) concentrated load of 1,000 lbs over a 30 in lateral by 96 in longitudinal area on both the left and right side of the van box. When an aluminum body (code AL) is specified, floor shall be of extruded aluminum dry freight construction with strength at least equal to above loading conditions.

3.7.1.85 CODE "MHP" PIPE AND CONDUIT HOLDER

When code MHP is specified, the overhead ladder racks shall include a minimum 3 m (10 ft) pipe and conduit holder. The pipe and conduit holder shall be a minimum of 15 cm (6 in) in diameter with and have end closures. This unit may be shipped separate from the vehicle.

3.7.1.86 CODE "MIL" MILITARY MARKINGS AND DATA PLATES

When code MIL is specified, only data plates will be furnished by the OEM. Markings, data plates, and DD Form 250s are only available from OEM dealers where available under contract.

3.7.1.87 CODE "MPS" SNOW PLOW, REVERSIBLE

Ordering Note: The Code SZ is furnished with this option and

should not be additionally specified by the ordering agency.

When code MPS is specified, a snowplow with an electro-hydraulic or mechanical-hydraulic raising and angling mechanism and auxiliary lights shall be installed on the vehicle. The snowplow, when fully angled, shall equal the widest part of the truck excluding mirrors and hubcaps. It shall be frame mounted with quick disconnect locking fasteners and shall be capable of angling at least 30° to each side. Hydraulic lines shall be the quick disconnecting type. The weight of the total snowplow assembly shall not cause the vehicle manufacturer's front axle rating to be exceeded. The plow shall be shipped in the load space and lights shall be shipped within the cab when possible. Brackets and connections shall be installed on all vehicles to enable ready installation of the lights and snowplow at the destination. Snowplow and lights shall be installed on the first vehicle to ensure proper operation, and they may be removed for shipment after Government inspection. Height of moldboard shall be a minimum of 68 cm (27 in) on vehicles over 3,864 kg (8500) GVWR.

3.7.1.89 CODE "MRS, MRR, MRB" STROBE TYPE WARNING LIGHT

A strobe type, 360° warning light shall be furnished and mounted with reinforcement at point of attachment, on vehicle centerline on top of the cab or driver's compartment. The light shall be operated by means of a separate switch with an amber indicator light located on the instrument panel and marked to indicate function of the switch. The warning light shall be an integral solid-state unit, having a minimum of 15 joules per main flash, with a double flash rate of 90 plus or minus 15 flashes per minute. The strobe light unit shall include an optic lens/cover mounted in a weatherproof housing with a corrosion resistant metal base. Housing shall be no larger than 22 cm (8.5 in) high by 23 cm (8-75 in) base diameter. At the option of the manufacturer or when specified, the warning light shall be removed for shipment. When removed, the light shall be stowed within the vehicle or may be shipped separately, and the roof opening shall be provided with a weather-tight cover. Provisions for reinstalling the light, including access to the light wiring and mounting devices from inside the vehicle, shall be provided.

When code MRS is specified, the light shall be amber.

When code MRR is specified, the light shall be red.

When code MRB is specified, the light shall be blue.

3.7.1.90 CODE "MSC" COLD WEATHER PACKAGE

Ordering Note: This option is only available w/ MSW

When code "MSC is specified, chassis manufacturer supplied equipment meeting the following requirements shall be furnished: cooling system protected to minus 48°C (minus 55°F) with a mixture of water and ethylene glycol, or equal permanent type antifreeze, with rust inhibiting additives; chassis manufacturer's highest capacity engine block heater; 130 amp alternator; 750 CCA battery for gasoline-powered units or dual batteries that have 650 CCA each for diesel-powered units.

3.7.1.91 CODE "MSW" FLIGHTLINE VAN CONVERSION

When code MSW is specified, delivery van with cutaway cab shall be provided with body complying with the requirements specified for option code FRP. The following option codes shall be incorporated, unless otherwise specified: CCH, CCW, DCL, MFDV, RDSH, and SEM. Van bodies shall be fiberglass reinforced plywood (code FRP), unless specified to be aluminum (code AL). A gasket designed specifically for a cutaway van shall seal the junction of the van body and the cutaway cab. All screws used on the body to fasten window assemblies, reflectors, lamps, and fender flares shall be stainless steel. Routing of all wiring and hoses shall avoid interference with any moving parts. The front bulkhead shall have a walk through opening min. 60 cm (24 in) width and min. 120 cm (48 in) height. Opening shall be reinforced, and trimmed with a protective molding on the sides and a head pad on top. The minimum interior height of the van body shall be 178 cm (70 in). The contractor shall employ configuration control methods to ensure that the completed vehicles, to include the after-market body, are configured the same, regardless of destination or location of manufacturer's facility(s).

Air transportability is required. Overall maximum unloaded height shall not exceed 264 cm (104 in).

3.7.1.92 CODE "MWW" REMOVABLE WINCH

Ordering Note: The Code MCT is required with this option and must be specified by the ordering agency. The Code MWW Is not available when code MCTE, 5,000 watt generator, or code DCG, vehicle mounted air compressor, is ordered.

When code MWW is specified, a removable, dual-position self-recovery 12-volt winch rated at 4,090 kg (9,000 lb) minimum shall be furnished. The winch shall be combination mounted with mounting brackets and hookups located both front and rear. One plug in remote control unit with a minimum 3.5 m (12 ft) lead shall be furnished. Winch cable length shall be a minimum of 30m (100 ft). Cable diameter shall be 7.94 mm (0.3125 in). Front and rear power receptacles shall be wired with 1 gauge electrical cable, be weather resistant, and be polarized. A lockable storage box mounted in the pickup bed for accessories shall be furnished. A heavy duty accessory kit that includes a snatch block, tree protector, shackle, gloves, choker chain, and a 7.62 cm x 9.1 m (3 in x 30 ft) recovery strap shall be furnished. These items shall be stored in a camouflage soft carry case. The Dual Alternator Option (factory) shall be included.

3.7.1.93 CODE "ORM" OFF ROAD BODY MOUNTING

When code ORM is specified for a utility body an off-road mounting system shall be provided that will allow flexing of the truck frame independent of the utility body.

3.7.1.94 CODE "PCI" COMPARTMENT INTERIOR PAINT

When code PCI is specified, all cabinet and door interiors shall be completely prepared, primed, and finished painted with the same finish paint as the exterior of the body.

3.7.1.95 CODE "PD" PANEL REAR DOORS

When code PD is specified, vertical side hinged, rear panel type doors, with fixed glass windows, shall be furnished.

3.7.1.96 CODE "PRS" PASSENGER RESTRAINT SYSTEM

When code PRS is specified, an OEM right front passenger air bag supplemental restraint system shall be provided.

3.7.1.97 CODE "PSM & PSME" PARTS AND SERVICE MANUALS

When PSM or PSME is specified, the contractor shall furnish all parts lists and service publications for the vehicle and all equipment furnished.

When PSM is specified, the publications furnished shall be printed documents.

When PSME is specified, the publications shall be electronic (CD or web-based)

NOTE: The publications will be shipped separately from the vehicle. The publications will be shipped to the consignee mailing address as shown on the MVDO.

3.7.1.98 CODE "PT" POWER TAKEOFF OPENING

When code PT is specified, the designated transmission or transfer case shall be provided with a usable PTO opening. When a PTO unit is provided on a vehicle, a caution plate or decal reading, "Do not operate vehicle at highway speeds with PTO engaged," shall be installed in the cab, readily visible to the driver. Controls to operate the power takeoff shall be located in the truck cab accessible to the seated driver. The PTO unit shall have a rated capacity to operate the provided equipment.

3.7.1.99 CODE "PWL" POWER WINDOWS AND LOCKS

When code PWL is specified, the OEM power windows and power locks option shall be provided.

3.7.1.100 CODE "RA" AM/FM/CLOCK RADIO

When code RA is specified, the OEM AM/FM radio with integrated clock shall be furnished.

3.7.1.101 CODE "RACS" INTEGRAL CASSETTE PLAYER

When code RACS is specified, the OEM AM/FM/clock radio with integrated cassette player shall be provided.

3.7.1.102 CODE "RAD" INTEGRAL DISC PLAYER

When code RAD is specified, the OEM AM/FM/clock radio with integrated compact disc player shall be provided.

3.7.1.103 CODE "RB" RUNNING BOARD

When code RB is specified, running boards shall be furnished. The running boards shall be securely mounted to the frame of the vehicle to prevent flexing when used by vehicle occupants during entry and exit.

3.7.1.104 CODE "RD" REAR ELECTRIC DEFROSTER

When code RD is specified, the OEM rear window electric defogger/defroster shall be furnished.

3.7.1.105 CODE "RDSH" REAR DOOR, SIDE HINGED

When code RDSH is specified, two side hinged, full width doors, both with an inner stop, with one key-locking handle on the curbside door, capable of swinging 270 degrees, shall be provided. Four fixed windows, two in each door, with not less than 1,239 sq cm (192 sq in) per window. Both doors shall have substantial latch operating handles inside and outside. Each door shall have a heavy duty latch at the top and the bottom of the door. Retainers shall be installed on the side of the vehicle to secure the doors in the open position to the side of the vehicle. Rubber socket holdback devices are not acceptable. Doorstops shall be provided to prevent the door or door handle from contacting the side or glazing when the door is opened.

3.7.1.106 CODE "RF" RUBBER FLOOR COVERING

When code RF is specified, a rubber or vinyl floor cover shall be provided.

3.7.1.107 CODES "RH1, RH2, RH3, AND RH4" OEM TRAILER HITCH PROVISIONS AND DRAW BAR RECEIVER

When code RH1 is specified, a 3/4 in hole for a Class I, weight carrying trailer hitch ball shall be provided in the rear bumper. The rear bumper and its mounting shall comply with SAE J684. A trailer lighting package shall be furnished.

When code RH2 is specified, a 3/4 in hole for a Class II, weight carrying trailer hitch ball shall be provided in the rear bumper. The rear bumper and its mounting shall comply with SAE J684. A trailer lighting package shall be furnished with all trailer hitch provisions.

When code RH3 is specified, a Class III receiver hitch with a 5x5 cm (2x2 in) square opening shall be furnished. The receiver and its mounting shall comply with SAE J684. A trailer lighting package shall be furnished with all trailer hitch provisions.

When code RH4 is specified, a Class IV receiver hitch with a 6.35x6.35 cm (2.5x2.5 in) square opening shall be furnished. The receiver and its mounting shall comply with SAE J684. A trailer lighting package shall be furnished with all trailer hitch provisions.

3.7.1.108 CODE "RKE" REMOTE KEYLESS ENTRY

When code RKE is specified, the OEM optional remote keyless entry system shall be furnished.

3.7.1.109 CODE "RL" REAR LINING, CARGO VAN

When code RL is specified, the rear compartment shall be lined with the OEM van-wagon panels.

3.7.1.110 CODE "RM" EXTRA WIDE MIRRORS, CAMPER STYLE

When code RM is specified or when a body furnished is 15 cm (6 in) or more wider than the cab, dual swing away/adjustable camper style mirrors, minimum 368 sq cm (57 sq in) each, shall be furnished and mounted to provide an adequate view to the rear with any body that may be mounted. These mirrors are recommended for dual rear wheel trucks, or for trailer towing only. Stake bed, dump, and multistop van trucks shall be provided with dual swing away, western styled, adjustable combination (flat and convex) mirrors. The combination mirror shall have a minimum of 368 sq cm (57 sq in) of flat reflective area and 64.5 sq cm (10 sq in) of convex reflective area unless otherwise specified in the tables. In the extended position the inside edge of the mirror shall be a minimum of 15 cm. (6 in) horizontal distance from the cab door mounting surface. For consignee (Option Code CNS) delivery, large style mirrors may be shipped dismounted within the vehicle.

3.7.1.111 CODE "RS" RECLINING BUCKET/ CAPTAIN'S CHAIRS

When code RS is specified, reclining bucket/captain's chairs shall be furnished.

3.7.1.112 CODE "CMS" CROSSVIEW MIRROR SYSTEM

When code CMS is specified, a crossview mirror system shall be furnished to allow the viewing of the bumper area by looking into the mirror system.

3.7.1.113 CODE "S5" FIVE PASSENGER SEATING

When code S5 is specified, 5 passenger seating shall be furnished and the rear AC/heat unit may be deleted.

3.7.1.114 CODES "S6, S7, S8, S9, AND S12" PASSENGER SEATING

When code S6, S7, S8, S9, or S12 is specified, seating for 6, 7, 8, 9, or 12, respectively, passengers shall be provided. Provisions for ease of ingress and egress to the rear seating positions shall be provided. Center and rear seats shall be of the removable or foldaway type.

3.7.1.115 CODE "TSD" DELETE TAIL GATE AND SIDES

Ordering Note: This option is only available on Item 110D

When code TSD is specified, the OEM pickup body tailgate and sides shall be deleted.

3.7.1.116 CODE "SCC" VAN INDIVIDUAL SEATING

When code SCC is specified, individual high back seats shall be provided in the first and second row (minimum capacity remains at seven passengers).

3.7.1.117 CODE "SE" SLIDING TYPE SIDE DOOR

When code SE is specified, the OEM sliding type side door shall be furnished.

3.7.1.118 CODE "SEM" SLIDING DOOR

When code SEM is specified, the delivery van shall have a sliding side door installed on the curbside. The door opening shall be positioned as far forward as possible with out compromising structural integrity of the cargo box. The window shall be centered as close as possible front to rear on the cargo box but shall not be covered by the sliding door when the door is in it's rearmost position. This door shall open from front to rear and have a 50 cm (20 in) by 61 cm (24 in) (nominal) fixed glass window, minimum 3,030 sq cm (470 sq in), located in the door at the same height as the driver and passenger door windows. The door is to be sealed to withstand hard driving rain and provide a method to prevent moisture from accumulating in the door enclosure area. The sliding side door will have a 53 cm (21 in) wide by 178 cm (70 in) high opening with a step height of less than 48 cm (19 in) from the ground. Abrasive nonskid floor surfacing material or rubber scuff plates in the step well of the sliding door area is required. A locking handle shall be operable from inside and outside the door. Door must be capable of being secured in the open position to prevent movement when vehicle is in motion.

3.7.1.119 CODE "SF" SPLIT FRONT BENCH SEAT

When code SF is specified, a split front bench seat shall be furnished.

3.7.1.120 CODE "SK" METRIC ODOMETER

When code SK is specified, the odometer shall show cumulative distance in kilometers.

3.7.1.121 CODE "SP" SKID PLATES

When code SP is specified, protective plates, or shields, shall be provided. The OEM skid plate(s) shall provide protection for at least the transfer case. The skid plates shall be demountable for service of the components they protect. Sufficient openings shall be provided to enable draining of transmission and servicing the underside of the engine. A ground clearance of 38 cm (15 in) or less automatically requires these plates.

3.7.1.122 CODE "SZ" SNOW PLOW PREP PACKAGE

When code SZ is specified, the vehicle requires the OEM snowplow preparation package or OEM recommended snowplow preparation equipment if an option is not available. When electro hydraulically raised plow is furnished, manufacturer's optional heaviest duty capacity alternator and battery shall be furnished.

3.7.1.123 CODE "OPW" OPAQUE GLASS

Ordering Note: This option is only available on Items 30 & 30B

When code OPW Is specified, the OEM's opaque glass and/or panels shall be furnished behind pillar B.

3.7.1.124 CODE "SRG" SLIDING REAR WINDOW

When code SRG is specified, the OEM sliding rear glass window shall be furnished.

3.7.1.125 CODE "SRS" DRIVER RESTRAINT SYSTEM

When code SRS is specified, the OEM driver's side air bag supplemental restraint system shall be furnished.

3.7.1.126 CODE "CR" CRUISE CONTROL

Ordering Note: This option is only available on Items 22A & 32A

When code CR is specified, the manufacturer's cruise control shall be furnished.

3.7.1.127 CODE "TC" HARD TONNEAU COVER

When code TC is specified, an OEM lockable, weather resistant, hard tonneau pickup bed cover shall be furnished.

3.7.1.128 CODES "T5", AND "T6", FIVE, AND SIX SPEED MANUAL TRANSMISSION

When code T5, or T6 is specified, a five, or six speed manual transmission, respectively, shall be furnished. The transmission shall be furnished with a PTO opening(s) in accordance with SAE J704, unless an exception is noted under the code.

3.7.1.129 CODE "TD" DELETE SPARE TIRE ASSEMBLY

When code TD is specified, the spare tire assembly shall not be furnished.

3.7.1.130 CODE "EHM" ENGINE HOUR METER

When code EHM is specified, an engine hour meter shall be provided. The meter shall have a totalizing mechanism of not less than 9,999 hours for the chassis engine to register accurately the number of hours of operating time. The meter shall be of rugged construction to ensure continuous trouble-free performance under severe operating conditions. The meter shall be mounted on the cab instrument panel or in the engine compartment in a readable location.

3.7.1.131 CODE "WR" INCREASED GVWR

When code WR is specified, the GVWR shall be increased by the OEM to the maximum level available.

3.7.1.132 CODE "UFT" TOP OPENING COMPARTMENTS

When code UFT is specified, a body with added top opening compartments shall be provided. Top opening lids shall be full length and nominal width of the compartment tops and supported by gas springs, minimum one at each end of door lid. Top opening compartment shall be provided with a minimum of 15 adjustable dividers per side. The maximum height in Table A may be increased by up to 4 cm (1.5 in).

3.7.1.133 CODE "UOR" AND CODE "USM" OVERHEAD RACKS WITH LADDER CLAMPS AND SIDE LADDER RACK FOR SUPERSTRUCTURE BODY

When code UOR is specified, removable overhead racks with adjustable brackets for transportation only of ladder(s) shall be provided. When code USM is specified, side mounted ladder racks shall be provided. Code USM requires code

USS or USS2. All ladder racks shall be equipped with adjustable chain or spring hold down devices.

3.7.1.134 CODE "UPR" PIPE RACKS

When code UPR is specified, a pipe rack mounted on top of the curbside cabinet shall be furnished. The front of the rack shall permit the pipes to clear the cab door. The rack shall be equipped with adjustable chain or spring hold down devices.

3.7.1.135 CODE "URH" ROPE HOOKS

When code URH is specified, a minimum of four rope hooks, in lieu of adjustable shelves, shall be furnished inside a vertical cabinet.

3.7.1.136 CODE "AVSC" AUTOMATIC VEHICLE STABILITY CONTROL

Ordering Note: The Code AVSC is available only on Item 24, 100B, 101, 105B and 106.

When code AVSC is specified, the OEM's integrated vehicle stability enhancement system shall be furnished. AVSC will help the driver control the vehicle on a variety of road surfaces, in inclement weather, and in avoidance maneuvers.

3.7.1.137 CODE "USS" AND "USS2" SUPERSTRUCTURE BODY AND SUPERSTRUCTURE BODY WITH EXTRA INTERIOR LOADSPACE HEIGHT

Ordering Note: The Code BHP is required with this option and must be specified by the ordering agency.

When code USS or USS2 is specified, the utility body shall have a center load space; cabinets on each side of the body, with doors opening from the outside; equipment racks above the cabinets, with openings to the inside of the body; a fixed weather tight roof (superstructure) over the load space; and double doors at the rear. The body shall conform to Table B dimensions. A bulkhead fixed safety glass window shall be provided and aligned with the rear cab window.

Double rear doors hinged at the sides shall be provided and shall completely enclose the body interior. The doors shall be equipped with safety glass windows in the upper section, door locks with cylinder locks, and retainers for keeping the doors in open position. The doors shall be equipped with seals to prevent the entry of dust and water. The center load space shall be painted the same color as the exterior.

3.7.1.138 CODE "UTC" SPARE TIRE CARRIER IN LOAD SPACE

When code UTC is specified, a vertically mounted tire assembly on a carrier shall be furnished located in the front end of the load space behind the cab. When a load space roof prevents vertical mounting, the tire assembly may be secured horizontally in the load space.

3.7.1.139 CODE "UTR" TELESCOPING ROOF

When code UTR is specified, a telescoping roof and end gate enclosure shall be furnished. The telescoping roof shall be provided with automatic catches that lock the roof in full open and full closed positions. The roof shall be constructed

to ensure proper roof drainage. The end gate or door enclosure shall have side opening style doors, or two part folding, or single type that can be swung up without interference, and laid on the roof. A single handle, with key lock, that operates two latches, one on each side, shall be furnished on the end gate enclosure. The load area shall be painted the same color as the body exterior.

3.7.1.140 CODE "UVB" VICE BRACKET AND PIPE REST

When code UVB is specified, a removable pipe vise bracket and pipe rest shall be furnished on the right side cabinets at rear. The vise plate shall be horizontal, attached to a sliding bar and locked in place by a vertical pin.

3.7.1.141 CODE "VR" ROOF VENTILATOR

When code VR is specified, two roof type, static ventilators shall be furnished having controls for opening and closing on the inside of the van body. Roof vents shall be on center at the front and rear of cargo box.

3.7.1.142 CODE "VU" VINYL INTERIOR

When Code VU is specified, manufacturer's optional vinyl interior shall be furnished.

3.7.1.143 CODE "VUR" VINYL REAR SEAT

When Code VUR is specified, a vinyl rear seat shall be furnished.

3.7.1.144 CODE "WA" WIDE TREAD REAR AXLE

Ordering Note: The Code RM is furnished with this option and should not be additionally specified by the ordering agency.

When code WA is specified, the manufacturer's extra wide tread axle shall be furnished providing a minimum of 234 cm (92 in) overall width.

3.7.1.145 CODE "WD" SIDE CARGO DOOR WINDOWS

When code WD is specified, window(s) shall be furnished in the curb side cargo door(s).

3.7.1.146 CODE "MFO" METAL FLOOR OVERLAY

When code MFO is specified, a one or two piece aluminum (min. thickness 0.280 cm (0.100 in)) overlay shall be furnished over the wood floor. If the overlay is made of two pieces, the seam shall be welded.

3.7.1.147 CODE "ULCL AND ULCR" LONG HORIZONTAL COMPARTMENT

A horizontal compartment that runs from behind the front vertical cabinet to the rear of the body and one vertical cabinet located to the rear of the wheel housing and below the horizontal compartment shall be supplied. When code ULCL is specified, the horizontal compartment shall be located on the left (street) side of the body. When code ULCR is specified, the horizontal compartment shall be located on the right (curb) side of the body.

3.7.1.148 CODE "WY" WINDOWS, ALL SIDES

When code WY is specified, OEM windows shall be provided on all sides of the vehicle.

3.7.1.149 CODE "XL" EXTRA LONG BODY

When code XL is specified, the OEM extra long body shall be furnished.

3.7.1.150 CODE "XS" SHORT BODY VAN

When code XS is specified, the OEM shortest van body shall be furnished.

3.7.1.151 CODE "XW" EXTRA WIDE LOAD SPACE

When code XW is specified, a minimum 137 cm (54 in) wide center load space shall be provided. Includes a wide track axle.

3.7.1.152 CODE "YD" DIESEL ENGINE

When code YD is specified, OEM maximum power diesel engine available for the specified application shall be furnished. This shall include option "EH" all other cold weather operation equipment that the OEM offers. All engines are approved for operation on JP-8.

3.7.1.153 CODE "HEV" HYBRID ELECTRIC VEHICLE

When code HEV is specified, the OEM's hybrid electric propulsion system shall be provided.

3.7.1.154 CODE "DRB" DELETE RUNNING BOARDS

When code DRB is specified, the OEM's standard running boards shall be deleted.

3.7.1.155 CODE "SIAB" SIDE IMPACT AIR BAGS

When code SIAB is specified, OEM side impact air bags shall be supplied.

3.8 STANDARD AND ADDITIONAL REQUIREMENTS

3.8.1 MARKINGS, DATA PLATES, AND INFORMATION

Unless otherwise specified, caution, instructional, and informational plates/decals/labels shall be conspicuously installed for all equipment requiring such notices. Each vehicle shall be provided with a copy of all applicable warranty documents in the cab compartment. A decal, sticker, or window label shall be provided in each vehicle with the following information: contract number and purchase order number; date of delivery, month and year; and the Government contact name, address, and phone number.

3.8.2 OPERATOR'S, SERVICING, AND PARTS MANUALS

The contractor shall furnish with the vehicle at least one copy of all warranty information and handbooks for:

- The vehicle
- Any special equipment furnished with, or as a part of the vehicle

The handbooks shall include as a minimum:

- Vehicle operator's manual
- Vehicle maintenance handbook
- Special equipment handbook

3.8.3 PREDELIVERY INSPECTION AND SERVICING

Prior to the acceptance of the vehicle(s), the contractor, at his plant or at the manufacturer's authorized dealership of the same make, shall perform final predelivery inspection. This inspection shall include the predelivery servicing, lubricating, adjustments, appearance cleaning, and everything necessary to make ready to use and operate the vehicle and the furnished contracted equipment. The predelivery servicing shall be performed in accordance with the equipment and vehicle manufacturer's prescribed form. Servicing shall comply to the ambient temperatures and conditions applicable with the route of transport and the consignee's ultimate destination and area of operation. All vehicle cooling systems shall be protected with a minimum 50/50 solution of permanent type antifreeze and water. Dealer or installer shall not affix any decals, plates, logos, or other dealer or installer identification to the vehicle.

3.8.3.2 DEALER DELIVERY

Unless consignee delivery (CNS) is specified, dealer delivery is standard. The contractor shall have the final predelivery inspection and servicing performed at an authorized dealer of the same make nearest to the destination. Following predelivery servicing, the dealer shall notify the person/office designated on the delivery order that the vehicle is ready for pick up.

3.8.4 WORKMANSHIP

- A. Vehicles shall be free from defects that may impair their serviceability or detract from appearance.
- B. All bodies, systems, equipment, and interfaces with the chassis shall be done in accordance with the OEM Body Builders Book.
- C. Defective components shall not be furnished. Parts, equipment, and assemblies that have been repaired or modified to overcome deficiencies shall not be furnished without the approval of the purchaser. Component parts and units shall be manufactured to definite standard dimensions with proper fits, clearances, and uniformity. General appearance of the vehicle shall not show any evidence of poor workmanship.
- D. The following shall be reason for rejection:
 1. Rough, sharp, or unfinished edges, burrs, seams, corners, and joints.
 2. Paint runs, sags, orange peel, "fish eyes," etc.
 3. Body panels or components that are uneven, unsealed, or contain cracks and dents.
 4. Misalignment of body fasteners, glass, viewing panels, light housings, other items with large or uneven gaps, spacing, etc., such as door, body panels, and hinged panels.

5. Improperly fabricated and routed wiring or harness.
6. Improperly supported or secured hoses, wires, wiring harnesses, mechanical controls, etc.
7. Interference of chassis components, body parts, doors, etc.
8. Leaks of any gas, vacuum, or fluid lines (air conditioning, coolant, oil, etc.).
9. Noise, panel vibrations, etc.
10. Inappropriate or incorrect use of hardware, fasteners, components, or methods of construction.
11. Incomplete or improper welding, riveting, or bolting.
12. Lack of uniformity and symmetry where applicable.

3.8.5 STATEMENT OF ORIGIN OR BILL OF SALE

Unless otherwise specified, manufacturer's Statement of Origin and/or Bill of Sale showing the applicable purchase order number for each vehicle procured shall be provided. The document shall be forwarded to the consignee mailing address prior to shipment. Vehicle title/registration and safety/emission tests are the responsibility of the requisitioning agency.

3.8.6 OVERSEAS VEHICLE REQUIREMENTS

Export vehicle(s) shall conform to applicable FMVSS of U.S.A. Vehicles shall be supplied with OEM export configuration.

Unless otherwise specified, the speedometer shall indicate speeds in both miles and kilometers and the odometer shall show cumulative distance in either kilometers or miles.

3.9 WARRANTY

3.9.1 WARRANTY COVERAGE

The contractor shall provide the OEM commercial whole vehicle (bumper-to-bumper) warranty. This coverage shall be for at least three (3) years from date of acceptance or thirty-six thousand (36,000) miles, exclusive of accumulated drive away mileage, whichever occurs first. Refer to the manufacturer's warranty for precise terms and conditions.

The contractor shall provide the manufacturer's warranty for equipment provided in addition to the OEM vehicle. The warranty shall cover parts failure or malfunction due to design, construction or installation errors, defective workmanship, and missing or incorrect parts for a minimum of twelve (12) months or twelve thousand (12,000) miles of operation, exclusive of any accumulated drive away mileage, whichever occurs first. For foreign use vehicles, the period shall be fifteen (15) months. The warranty begins when the Government accepts the vehicle at its destination.

NOTE: Some manufacturers offer basic whole vehicle warranties in excess of the required minimum. This information can be found in Auto-Choice.

3.9.1.1 RESERVED**3.9.2 CORROSION COVERAGE**

The contractor shall provide the chassis manufacturer's commercial corrosion warranty coverage. This coverage shall be for at least 5 years/100,000 miles. This coverage applies only to domestic use vehicles.

3.9.3 EMISSION CONTROL SYSTEM

The contractor shall provide the OEM emission control system warranty, which shall be in conformance with applicable regulations of the U.S. Environmental Protection Agency.

3.9.4 DOMESTIC USE

When vehicles are used within the 50 States of the United States, the District of Columbia, Puerto Rico, and the Virgin Islands, the warranty shall include furnishing, without cost to the Government (FOB contractor's nearest dealer or branch to vehicle's location or station), new parts and assemblies to replace any that failed or malfunctioned within the warranty period. In addition, when the Government elects to have the work performed at the contractor's plant, branch, or dealer, or with the contractor's approval (i) to correct the vehicle itself or (ii) to have the vehicle corrected by a commercial garage facility, the cost of the labor involved in the replacement of the failed or malfunctioned parts or assemblies shall be borne by the contractor.

3.9.5 FOREIGN USE

When vehicles are used outside the 50 States of the United States, the District of Columbia, Puerto Rico, and the Virgin Islands, the warranty shall include the furnishing of new parts or assemblies to replace any returned to the contractor by the Government which failed or malfunctioned within the warranty period. The replacement parts or assemblies shall be delivered by the contractor to the port of embarkation in the United States designated by the Government. The contractor shall not be required to bear the cost of the labor involved in correcting defects in vehicles operated in foreign countries.

3.9.6 WARRANTY EXTENSIONS

If the contractor receives from any supplier or subcontractor additional warranty coverage on the whole or any component of the vehicle, in the form of time and/or mileage including any pro rata arrangements, or the contractor generally extends to his commercial customers a greater or extended warranty coverage, including anti-corrosion, powertrain, or emission, the Government shall receive corresponding warranty benefits.

 **4. QUALITY ASSURANCE PROVISIONS**
4.1 RESPONSIBILITY FOR INSPECTION

Unless otherwise specified in the contract or motor vehicle delivery order, the contractor is responsible for the performance of all inspection requirements specified herein. 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 of the inspections deemed necessary to ensure that supplies and services conform to prescribed requirements.

4.2 CLASSIFICATION OF INSPECTIONS

The solicitation and/or contract will specify the inspection(s) required for each vehicle. The inspections are classified as follows:

- (a) Source inspection (4.2.1).
- (b) Destination examination (4.2.2).
- (c) First production vehicle inspection (4.2.3).

4.2.1 SOURCE INSPECTION

When specified in the contract or motor vehicle delivery order, vehicles shall be visually inspected upon completion, and by examination of documentation and data books, by the Government, prior to shipment from manufacturer's factory or assembly plant to determine compliance with the contract requirements.

4.2.2 DESTINATION EXAMINATION

When specified in the contract or motor vehicle delivery order, the contracted vehicle(s) shall be examined at its destination. The vehicle(s) shall be visually examined to determine compliance to the contract requirements and include the operational check of 4.2.2.1. Vehicle failures, defects, and/or shortcomings may be accepted subject to correction by the contractor/manufacturer at those points or by dealer.

4.2.2.1 OPERATIONAL CHECK

Operational checks shall cover all controls, systems, and devices, doors, windows, accessories, and road testing of the completed vehicle. Vehicle shall be driven at various speeds, brakes tested for dependability, checked for rattles, squeaks, and compliance to section 3 requirements.

4.2.3 FIRST PRODUCTION VEHICLE INSPECTION

When specified in the contract or motor vehicle delivery order, the first production vehicle produced under contract shall be inspected by the contractor at his plant under the direction and in the presence of Government representatives. The purpose of the inspection shall be to determine vehicle conformity with the contract. Acceptance of the first production vehicle shall not constitute a waiver by the Government of its rights under the provisions of the contract. Failure of the first production vehicle to meet the requirements of the contract shall be cause for the Government to refuse acceptance of the vehicle until corrective action has been taken.

4.2.3.1 VEHICLE WEIGHT

The first production vehicle shall be weighed to determine curb weight and the distribution of the curb weight on the front and rear axles. The imposed loading on the front and rear axles will be computed using the curb weight, the occu-

pants at 68 kg (150 lbs each), and the remaining payload, uniformly distributed over the vehicle load area, to determine if the GVWR is adequate. Calculated imposed loads on the front and rear axles will be utilized to ascertain that the GAWR is adequate.

4.2.3.2 ROAD TEST

The first production vehicle will be examined and road tested (less payload) by the contractor to ensure that the vehicle will operate in accordance with the contract requirements. The Government reserves the right to perform inspection requirements on the first production vehicle with payload where such inspections are deemed necessary to ensure the vehicle will operate in accordance with the contract requirements.

4.2.3.3 TRUCK BODIES, TREATMENT, AND PAINTING

The certification regarding the body cleaning, treatment, and painting as required by MIL-HDBK-1223 (see 3.6.5 and 3.6.6) shall be presented to the Government representative of the procuring activity for examination and approval.

4.3 GOVERNMENT VERIFICATION

Quality assurance operations performed by the contractor will be subject to Government verification at unscheduled intervals. Verification will consist of observation of the operations to determine that practices, methods, and procedures of the contractor's inspection are being properly applied. Failure of the contractor to promptly correct product deficiencies discovered shall be cause for suspension of acceptance until correction has been made or until conformance of product to specification criteria has been demonstrated.

4.4 PRODUCT CONFORMANCE

The products provided shall meet the salient characteristics of this standard; conform to the producer's own drawings, specifications, standards, and quality assurance practices; and be the same product offered for sale in the commercial market. The Government reserves the right to require proof of such conformance.

5. PREPARATION FOR DELIVERY

5.1 PREPARATION

Unless otherwise specified, the vehicle shall be packaged for mobile delivery in accordance with the supplier's standard commercial practice, ensuring carrier acceptance and safe delivery to destination in compliance with regulations applicable to the mode of transportation. When consignee delivery (CNS) is specified, the fuel tank shall be filled with a minimum of 12 l (3 gal) of fuel. Unless otherwise specified, for dealer delivery, the fuel tank(s) shall be filled to at least the quarter full mark on the fuel gauge.

6. NOTES

6.1 ORDERING DATA

Purchaser should select the required vehicle(s) and options from the tables in the Federal Standard. For the most expeditious requisitioning of these vehicles use the AUTO-CHOICE web site at:

<http://fss.gsa.gov/vehicles/roads/roads.cfm>. As an alternate, orders may also be submitted in hard copy on GSA Form 1781. Inspection acceptance and shipment shall be in accordance with sections 4 and 5.

6.1.1 PRECAUTIONS AND OBSERVATIONS

Due to the variety of light truck models this standard must cover, the purchasers are cautioned that the options offered herein are subject to manufacturer's changes or availability. Customizing these standard vehicles with special requirements will seriously limit the number of offerers and suppliers. Most special requirement items are not offered as assembly line or factory options. Therefore, if special features or non-standard equipment is desired, procurement locally of such items after the vehicle is contracted for or received is often more advantageous. Reference the manufacturer's data books and brochures before ordering vehicle(s) with special requirements.

6.2 PROCEDURE TO IDENTIFY VEHICLES AND OPTIONS

The payload/passengers requirements determine the model and GVWR of vehicle desired (see 3.2.2 and 3.2.3). The requisition must identify the desired vehicle by the item number which appears above each truck (item) in the tables, followed by the option code(s) shown next to the options required by the purchaser. DO NOT repeat option codes that are already standard on a model under the item number selected.

Example to order:

Wagon van. Two-wheel drive, 7 passenger, compact van, automatic transmission, air conditioning, power steering, and radio. See Table 3.

Item 20;
Quantity - 18
Colors - 6 Blue, 6 White, 6 Tan

To order:

Regular cab, full size pickup. Two wheel drive, with payload capacity of 2,000 lb, 8 foot body equipped with std. V8 engine, automatic transmission, on-off road or all-terrain tires, special traction rear end, towing ratio, power steering, air conditioning, mixed colors. See Table 9.

Item 42; D3, D7, AT
Quantity - 33
Colors - 11 Tan, 17 Blue, 5 White

6.3 DEVIATION FROM FEDERAL STANDARD NO. 307

Requisitions from agencies for vehicle(s) and other systems or equipment not identified in this Standard, or for sole source options identified in this Standard, shall be accompanied by supporting justification. Such justification shall be in accordance with section 6.4, setting forth the intended use of the vehicle including a description of the terrain over which vehicle(s) will be used.

6.4 POLICY AND PROCEDURE

Alternate items, sole source items, and sole source options noted with symbol (**) and other special equipment shall be selected by the purchasing agency to provide for overall economy, safety, efficiency, and suitability of the vehicle for the purposes intended. The agency head or his designee shall determine which vehicles require these specific additional systems or equipment, and among other factors shall consider:

- (a) Climatic conditions prevailing in the area of operation.
- (b) Effect on vehicle operational capabilities.
- (c) Special terrain requirements.
- (d) Availability of maintenance and service facilities.
- (e) Fuel availability and cost.
- (f) Delivery delays of completed vehicle, due to customizing specified.

6.5 ENERGY POLICY REQUIREMENTS

The fleet fuel economy average of light trucks acquired by an Executive Agency must meet or exceed the average fuel economy standard for the appropriate model year, under Executive Order 12375, dated August 4, 1982. See 41 CFR 102-34.

6.6 NOTIFICATION

Federal Standard No. 307 includes light, two wheel drive (4x2) and four wheel drive (4x4) trucks. Automobiles and station wagons appear in Federal Standard No. 122. Federal Standard 794 covers medium trucks. Federal Standard 807 covers heavy trucks.

6.7 WARRANTY EXCEPTIONS

Unless otherwise specified or within additional coverage under 3.9, the following items are considered normal maintenance and repair for which the contractor need not assume liability for reimbursing the Government regardless of the vehicle age or mileage.

- (a) Abuse, negligence, or unapproved alteration of original parts.
- (b) Damage from accidents.
- (c) Brake and standard clutch adjustments.
- (d) Headlamp adjustments.
- (e) Wheel alignment or tire balancing.
- (f) Tires, and batteries (if warranted by their manufacturers).
- (g) Miscellaneous incurred expenses such as fuel, towing, telephone, travel, lodging, or loss of personal property.
- (h) Damage such as atmospheric pollution.