

[INCH-POUND]  
A-A-50580  
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SUPERSEDING  
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## COMMERCIAL ITEM DESCRIPTION

### TRUCK, TANK: SEWAGE OR WASTE COLLECTION, COMMERCIAL 4 BY 2

The General Services Administration has authorized the use of this commercial item description for all Federal agencies.

1. **SCOPE.** This commercial item description (CID) covers commercial sewage or waste collection trucks intended for collection of waste or raw unscreened sewage by suction.

2. **CLASSIFICATION.** Trucks shall be of the following types as specified (see 7.2):

Type I - 1,300-gallon (4 921 litre (L)) minimum to 1,500-gallon (5 678 L) capacity pressure vessel.

Type II - 2,000-gallon (7 570 L) minimum capacity pressure vessel.

3. **SALIENT CHARACTERISTICS.**

3.1 **Design.** The truck shall consist of a pressure vessel, a power-takeoff-driven vacuum pump, complete with all necessary piping, valves, controls, and safety devices. The sewage collection components shall be mounted on a four-wheel, two-rear-wheel-drive, diesel-engine-driven chassis with conventional cab. The unit shall be Department of Transportation (DoT) certified for hazardous, flammable, corrosive, class B poison or combination thereof.

3.2 **Standard commercial product.** The sewage collection truck shall, as a minimum, be in accordance with the requirements of this CID and shall be the manufacturer's standard

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commercial product. Additional or better features which are not specifically prohibited by this CID but which are a part of the manufacturer's standard commercial product, shall be included in the sewage collection truck being furnished. A standard commercial product is a product which has been sold or is being sold or is being currently offered for sale on the commercial market through advertisements or manufacturer's catalogs, or brochures, and represents the latest production model.

3.2.1 Coolant system. The unit shall be equipped with a heavy duty cooling system capable of maintaining a coolant temperature below the boiling point of the coolant when the truck is operated in ambient air of not less than 125 degrees Fahrenheit (°F) (52 degrees Celsius (°C)) at an altitude of 10,000 feet (3 048 metre (m)) with a load equal to the gross vehicle weight rating. The coolant system shall include a deaeration system and a surge tank or a coolant recovery reservoir of not less than a 2-quart (2 L) capacity.

3.2.1.1 Alarms and indicators. A high coolant temperature or low coolant level alarm buzzer and red indicator warning light shall be provided on the cab dash instrument panel.

3.2.1.2 Coolant temperature control. The unit shall be provided with a thermostatic coolant temperature control. The thermostat shall control both the flow of coolant through the radiator and the radiator shutters.

3.3 Drain plugs. Permanent magnet type drain plugs shall be provided for the manual transmission and the rear axle.

3.4 Towing devices. Not less than two hooks or loops, mounted to the frame or to rigid members which are attached to the frame, shall be furnished on the front of the truck for towing purposes.

3.5 Radio interference suppression. The vehicle shall be suppressed to limit electromagnetic radiation in accordance with SAE J551. Any mounted equipment shall be suppressed to the same level.

3.6 Splash guards. The truck shall be equipped with the manufacturer's standard splash and stone guards in accordance with SAE J682.

3.7 Sound level. The vehicle exterior sound level shall conform to Environmental Protection Agency (EPA) Noise Emission Standards for Transportation Equipment, Medium and Heavy Trucks. The interior sound level shall conform to DoT Federal Motor Carrier Safety Regulations, section 393.94.

3.8 Air pollution control. The truck shall comply with the EPA regulations governing Control of Air Pollution from New Motor Vehicles Engines in effect on the date of manufacture. Vehicles destined for California shall comply with State of California regulations governing air pollution control in effect on the date of manufacture.

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3.9 Safety. The truck shall not contain any radioactive material in which activity is in excess of 0.002 microcuries as identified in Title 10, Code of Federal Regulations, Part 40. The truck shall not contain any asbestos material.

3.10 Vehicle curb weight. The curb weight shall include the weight of the chassis and cab, with all attachments, accessories, equipment, body, full complement of fuel, lubricants, and coolant.

3.11 Weight rating. The gross vehicle weight rating (gvwr) shall consist of the curb weight, operator (weight computed at 175 pounds (lbs) (79 kilograms (kg)), and a payload computed at 8.3 lbs per gallon (1 kg/L) to provide not less than the specified gvwr.

3.11.1 Weight distribution. The distribution of the gvwr for the purpose of establishing suspension, axle, and tire capacities shall be determined with the payload uniformly distributed over the load area.

3.12 Ratings. Component and chassis ratings shall not be raised to meet the requirements of this specification. Minimum gvwr shall be as follows:

TABLE I. Minimum gross vehicle rating.

Type	GVWR
I	24,000 lbs (10 848 kg)
II	34,000 lbs (15 402 kg)

3.13 Dimensions. The overall width of the vehicle, exclusive of mirrors, lights, reflectors, and tires, shall be not more than 96 inches (2 438 millimetre (mm)). The cab to axle dimension shall be in accordance with the body manufacturer's recommendation.

3.14 Performance requirements. The performance requirements of the vehicle shall be achieved with the vehicle loaded to gvwr and shall be as follows:

3.14.1 High speed gradeability. The vehicle shall ascend a continuous 1.0 percent grade at 50 miles per hour (mph) (80 kilometre per hour (km/h)). Gradeability requirements shall be met with the main transmission in direct drive, and with the multispeed axle in high speed range. Gradeability shall be verified with calculations in accordance with SAE J688 (see 7.3).

3.14.2 Low speed gradeability. The low speed range of the vehicle shall provide a truck speed of more than 5 mph (8 km/h) with the engine operating at not less than 35 percent of recommended governed speed. The fully loaded vehicle shall be capable of moving up a grade of not less than 25 percent from a parked location.

3.14.3 Brake performance. Service brakes shall comply with the performance requirements specified in DoT Federal Motor Carrier Safety Regulations, section 393.52. Service brakes shall control and hold the fully loaded truck on a grade not less than 30 percent. Parking brake shall

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hold the truck loaded to the specified gvwr, headed either up or down the grade, without slipping on a 30 percent grade.

3.15 Chassis components. The chassis of the vehicle shall contain the following components:

3.15.1 Engine. The chassis manufacturer's standard engine or an optional engine for the commercial model truck which meets or exceeds the requirements of this specification shall be furnished. The engine shall be a liquid cooled, compression ignition, two-stroke or four-stroke cycle diesel engine with not less than four cylinders. The engine net horsepower (hp) figures used in performance prediction calculations shall be determined in accordance with SAE J1349. A fan clutch shall be provided to automatically reduce fan speed when not required for engine cooling. A full flow type oil filter shall be furnished. An engine governor shall be furnished, set, and sealed to limit engine speed to the maximum operating speed recommended by the engine manufacturer. The fuel system shall conform to DoT Federal Motor Carrier Safety Regulations, sections 393.65 and 393.67. A dry type air cleaner meeting engine manufacturer's requirements shall be furnished.

3.15.2 Electrical system. The electrical system shall be in accordance with DoT Federal Motor Carrier Safety Regulations, sections 393.27 through 393.31 and 393.33.

3.15.2.1 Starting system. The vehicle starting system shall include the following:

A 12-volt (V) or 24V starting system.

A 12V direct current lighting system.

An alternator capable of producing not less than 60 ampere (A).

A measured shot, key or manually operated ether starting system with a reservoir of not less than 12 fluid ounces (355 millilitre) or a glow plug. The ether starting system shall be inoperative when the engine is warm.

3.15.2.2 Batteries. Each battery shall be of 12V potential. The total reserve capacity rating and the total cold cranking rating, measured in accordance with SAE J537, shall be not less than 320 minutes and 1200A respectively.

3.15.2.3 Lighting. All truck lights, reflectors, and wiring shall conform to DoT Federal Motor Carrier Safety Regulations, sections 393.12 and 393.19 through 393.26, as applicable. Lights and reflectors shall not be mounted on vertical surfaces of rub rails or bumpers unless recessed and fully protected. All wiring shall be installed in vapor resistant and fully protected conduit from the cab rearward. Brake lights shall override the emergency flashers of this truck.

3.15.3 Fuel tank(s). The fuel tank(s) shall be the manufacturer's standard for the truck furnished, except that the total capacity shall be not less than 40 gallons (151 L). When more than one fuel tank is furnished, means shall be provided to assure equalized fuel level in both tanks.

3.15.4 Exhaust systems. The exhaust system shall conform to DoT Federal Motor Safety Regulation, section 393.83. Vertical exhaust mufflers shall be provided with a hinged rain cap

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and those within easy reach of personnel entering or leaving either side of the cab shall be provided with heat shields.

3.15.5 Drive line components. The drive line components shall be adequate to transmit the maximum delivered torque of the engine, as developed through the maximum gear train reduction.

3.15.5.1 Transmission. The truck shall have a manually shifted transmission with not less than five forward speeds. The input torque capacity of the transmission shall be at least equal to the maximum torque delivered by the engine. The transmission and axle gear ratio shall be selected to provide performance specified in 3.14. The transmission shall be provided with SAE J704 power takeoff opening on both right and left sides.

3.15.5.2 Clutch. The clutch shall be the largest capacity clutch offered for the truck and engine furnished, with torque capacity exceeding maximum delivered engine torque.

3.15.5.3 Power takeoff drive. A power takeoff shall be furnished to operate the vacuum pump and shall be heavy duty and continuous operation type. As an option the power takeoff drive may operate a hydrostatic drive for the operation of the vacuum pump. Controls to operate the power takeoff shall be located in the truck cab accessible to the seated driver. A caution plate or decal reading "DO NOT OPERATE VEHICLE AT HIGHWAY SPEEDS WITH POWER TAKEOFF ENGAGED" shall be provided and installed so as to be readily visible to the seated driver.

3.15.6 Frame. The chassis frame shall be the manufacturer's standard for the truck furnished.

3.15.7 Suspension. The truck shall be equipped with a suspension system having components of rated capacity at least equal to the load imposed on each member, measured at the ground, with the truck loaded to a specified minimum gvwr, (see 3.11 and 3.12). When suspension capacity is rated at the spring pads, the unsprung weight shall be deducted. The truck shall be equipped with hydraulic, double-acting, shock absorbers at the front wheels.

3.15.8 Axles. Axle ratings shall be at least equal to the load imposed on each axle, measured at the ground, with the truck loaded to a specified minimum gvwr, (see 3.11 and 3.12). Two speed rear axle shall be furnished, equipped with electric-, or air-shift and provided with ratios which will permit proper gear splitting. Rear axle gear ratio shall provide performance specified in 3.14.1 and 3.14.2.

3.16 Wheels, rims, tires, and tubes. The truck shall be equipped with single front and dual rear wheels. Rim and tire ratings shall conform to Tire and Rim Association (TRA) or European Tyre and Rim Technical Organization (ETRTO) recommendations, for the type and size tires furnished. Tire and rim sizes shall be the same for all wheels on each truck. Disk type wheels shall be furnished.

3.16.1 Tires. The tires shall be tube or tubeless, truck type radial ply, with highway tread. The tires shall be of rated capacity at least equal to the load imposed on each tire, measured at each

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wheel, at the ground, with the truck loaded to the rated gvwr. Tires shall conform to TRA or ETRTO recommendations.

3.16.2 Tubes. When tube type tires are furnished, tubes shall be of heavy-duty type, and shall be of proper size for tires furnished. Tire flaps shall be provided for tube-type tires in accordance with TRA or ETRTO.

3.16.3 Spare wheel assembly carrier. A carrier for a spare wheel or rim and tire shall be installed in a readily accessible location on the truck. When specified (see 7.2), a spare wheel or rim and inflated tire shall be furnished on the truck. The tire shall be of the same size and tread design and of the highest ply rating furnished on the truck.

3.16.4 Tire chain clearance. There shall be no interference that would prevent attaching and using chains on rear wheels.

3.17 Brakes. The brakes shall conform to DoT Federal Motor Safety Regulation, sections 393.40 through 393.43 and 393.45 through 393.52 and as specified herein.

3.17.1 Service brakes. Truck shall be equipped with full-air service brakes. Full-air braking systems contain but are not limited to the following:

- a. Air compressor, unloader-head-type, engine driven and engine lubricated, air or water cooled, and having a capacity of not less than 7.25 cubic feet per minute (cfm) (212 litre per minute (L/m)) equipped with drain, and with safety and check valves between compressor and first reservoir tank.
- b. Air storage reservoir, with not less than 2,000 cubic inch (393 L) total capacity, each tank equipped with drain, and with safety and check valves between compressor and first reservoir tank.
- c. Foot control pedal.
- d. Air control valves.
- e. Air pressure gage, visible to the driver.
- f. Low pressure warning, visible and audible to driver.
- g. Alcohol aspirator, with unbreakable transparent container.
- h. Automatic moisture ejector.

3.17.2 Air brake emergency system. An emergency air brake system shall be provided.

3.17.3 Parking brake. The truck shall be equipped with a manually actuated parking brake.

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3.17.4 Brake control from a towing vehicle. When specified (see 7.2), the vehicle shall be furnished with a system for controlling the brakes from a towing vehicle (wrecker). The installation shall be complete with air brake couplers, relay emergency valve with no-bleed-back feature (except when spring applied emergency brake is furnished), additional air lines and fittings. The service and emergency couplers shall be mounted on the front in a protected position providing for a ready attachment of air hose from a towing vehicle. The service and emergency couplers shall be identified and provided with dummy glad-hand couplers with chains. The system shall not compromise conformance to any DoT Federal Motor Safety Regulations referenced herein or to any DoT Federal Motor Safety Standard.

3.18 Cab. The cab shall be full width providing not less than two seating positions, one each for the operator and one passenger. Cab doors shall be equipped with locks, operable from inside the cab through mechanical linkage, and with not less than one door equipped with external key operated lock. Drip rails shall be installed above the cab doors. Cab shall have upholstered, full width, adjustable seat and back or individual driver's seat and individual passenger seat. The color of the upholstery and the interior finish shall be compatible with the exterior color. White upholstery shall not be furnished. Safety grips shall be provided on each side of the cab to assist personnel to enter or leave the cab. Interior dome lighting shall be provided. Seat belts shall be furnished for each seating position in the cab.

3.18.1 Heater and defroster. A heater and defroster, supplied with heat from the engine cooling liquid, shall be provided. The heater shall use fresh air, recirculated air, or a combination of both. Discharge outlets shall direct the heated air into the cab, through the defroster to the windshield, or a combination of both. The heater shall be furnished with a multispeed blower with controls mounted convenient to the driver.

3.18.2 Controls and operating mechanisms. All controls and operating mechanisms shall be located for left-hand drive. Lever controls shall be designed and located to permit easy entrance and exit of the operator to and from the driver's compartment. Instruments and controls shall be permanently identified as to their function and installed in a manner to facilitate removal and servicing. All instruments shall be panel mounted.

3.18.3 Accessories and equipment. Chassis equipment shall be complete with all accessories furnished as standard equipment by the manufacturer. Not less than the following equipment shall be furnished:

- a. Key-operated ignition switch.
- b. Ammeter, charging indicator, or voltmeter.
- c. Fuel gage.
- d. Oil pressure gage or indicator.
- e. Engine temperature gage or indicator.
- f. Speedometer with recording odometer.
- g. Dual sunvisors.
- h. Door mounted armrest on driver's side.
- i. Cab ventilator other than windows.

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- j. Manufacturer's standard electric horn.
- k. Tachometer.

3.18.4 Engine hour meter. An engine hour meter having totalizing mechanism of not less than 9,999 hours shall be furnished 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. Engine hour meter shall be mounted on the cab instrument panel or in the engine compartment in a readable location.

3.18.5 Steering. Manufacturer's standard power steering shall be furnished.

3.18.6 Windshield wipers and washers. The truck shall be equipped with dual windshield wipers and windshield washers. The windshield wipers shall be multispeed type and operated by either air or electric motor(s).

3.19 Front bumper. A channel type front bumper shall be furnished.

3.20 Rear end protection. Rear end of the truck shall be protected in accordance with DoT Federal Motor Carrier Safety Regulations, section 393.86. Rear bumper shall be furnished.

3.21 Tools. When specified (see 7.2), the truck shall be furnished with tools required for exchanging mounted tire assembly with a spare wheel and inflated tire assembly, and shall include as a minimum a hydraulic jack, jack handle, and wheel nut wrench. The jack shall be of such closed height as to permit its location under the axle, or other satisfactory lift point, at any wheel with the tire flat. The jack, without blocking, shall be capable of raising the truck while fully loaded, to a height adequate to permit removal and replacement of the wheel and with the tire inflated.

3.22 Rearview mirrors. Outside rearview mirrors, each with not less than three supporting arms, shall be mounted on each side of the cab. Both flat and convex mirror heads (may be combined assembly) shall be furnished. The mirror surfaces shall be not less than 50 square inches (27 258 square millimetre (mm<sup>2</sup>)) in the flat heads, and 20 square inches (10 903 mm<sup>2</sup>) in the convex heads.

3.23 Sewage collection equipment. Sewage, waste, or sewage waste shall be lifted into the tank through a hose line by suction, provided by a partial vacuum developed within the tank. Unloading the sewage, waste, or sewage waste from the truck shall be by gravity and by compressed air to evacuate the tank of sewage, waste, or sewage waste through a rear gate valve. The required partial vacuum and air pressure shall be generated by a dual-purpose pump furnished with the truck and designated herein as the vacuum pump.

3.23.1 Tank and vacuum pump performance. The vacuum pump shall be of adequate capacity to provide an average water flow rate into the sewage tank of not less than 300 gallons per minute (19 litre per second (L/s)) with a vertical lift of 10 feet (3 048 mm); an average water flow rate of



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not less than 200 gallons per minute (13 L/s) with a vertical lift of 18 feet (5 486 mm); and an average water flow rate of not less than 20 gallons (1.3 L/s) per minute with a vertical lift of 25 feet (7 620 mm). Evacuation of sewage from the tank shall be at an average flow rate of not less than 250 gallons per minute (16 L/s) when using compressed air from the discharge side of the vacuum pump. All sewage inlet and outlet piping shall be capable of passing solids up to 2-inch (51 mm) sphere size. Float shutoff valves of the sewage tank shall be capable of closing the vacuum line, when under suction from the vacuum pump, without transmitting any liquid to the vacuum pump when either the sewage tank or surge tank is filled with water. The sewage tank valve and surge tank shall be capable of preventing sewage from entering the vacuum pump suction line when the truck is loading waste caustics and detergents, to within an allowable leakage tolerance of 1/50 of 1 percent of the sewage tank capacity collected into the tank.

3.23.2 Sewage tank. The sewage collection tank shall meet the capacities listed in table II. The sewage tank shall be the horizontal type, in accordance with ASME Boiler and Pressure Vessel Code, section VIII, for a design pressure of not less than 40 pounds per square inch (276 kilopascals (kPa)) and for full vacuum. ASME Boiler and Pressure Vessel Code, section VIII, certification shall be furnished by an authorized Boiler and Vessel Inspector. The tank shall be fabricated from not less than 0.25-inch (6 mm), high tensile, low alloy steel; or from mild steel or copper bearing steel of a thickness that produces equivalent strength, with welded smooth skin construction. The tank heads shall be substantially dished, flanged, and reinforced to provide structural strength of hydraulic pressure from either direction. The length of the tank shall be such as to give load distribution proportional to the rated capacity of the front and rear axles of the truck chassis. Outlet opening shall be at the rear bottom of the tank located to provide complete tank drainage. Full length longitudinal Z-type, box type, or V-type tank frame members shall be furnished.

TABLE II. Tank capacity in gallons (litre).

Type	Minimum	Maximum
I	1,300 (4 921)	1,500 (5 678)
II	2,000 (7 570)	2,300 (8 706)

3.23.3 Baffles. The tank shall be provided with baffles, the number of which shall be such that the linear distance between any two adjacent baffles, or between the tank head and the baffle nearest to it, shall be not greater than 50 inches (1 270 mm). Baffles shall be reinforced and provided with half round openings at top and bottom. Each baffle shall be provided with an opening not less than 16 inches (406 mm) in diameter. The baffle area shall be not less than 80 percent of the cross-sectional area of the tank.

3.23.4 Access openings. An access opening shall be provided in the top of the tank to provide access to the tank float shutoff valve. In addition, a washout opening shall be provided on the top of the tank. Each opening shall be not less than 16 inches (406 mm) in diameter, or an oval with axis of not less than 12 inches by 16 inches (305 mm by 406 mm). Each opening shall be provided with a quick opening type cover equipped with a synthetic rubber gasket. Special tools shall not be required to open the cover.

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3.23.5 Sewage intake. Sewage intake shall be from rear top of the tank, or through rear bottom through a vertical standpipe, not less than 3-inch (76 mm) inside diameter (id), extending up within 18 inches (457.2 mm) of the tank top. The standpipe shall be provided with a baffle wear plate.

3.23.6 Tank sewage safety valve. A sewage tank safety valve shall be provided. The pressure relieving safety valve shall be of copper-alloy and shall be sized and installed in accordance with requirements of ASME Boiler and Pressure Vessel Code, section VIII. The safety valve shall have a relieving capacity not less than the maximum output capacity of the vacuum pump.

3.23.7 Surge tank. A surge tank of not less than 1-gallon (4 L) capacity shall be furnished in the vacuum line between sewage tank and vacuum pump. Means shall be provided to drain and clean the surge tank.

3.23.8 Accessories and valves. Accessories and valves furnished with the sewage tank shall include not less than the following:

- a. A cleanout opening of not less than 75 square inches (4887 square millimetre (mm<sup>2</sup>)) size at the bottom rear end of the tank, provided with quick opening cover and synthetic rubber gasket.
- b. Gage(s) with less than 3-inch (76 mm) diameter dial(s) to indicate the partial vacuum attained when loading the tank, the air pressure during the time the tank is loaded with sewage, and when evacuating the tank.
- c. Mechanical liquid level indicator graduated in quarters of tank capacity.
- d. Quick opening inlet and outlet sewage gate valves of not less than 3-inch (76 mm) and 4-inch (102 mm) nominal size, respectively, fitted with cam-locking type hose couplers and furnished with blank dust caps for the couplers.

All valves and drain cocks shall be not less than commercial quality of iron body valves with corrosion-resistant seats. All shutoff valve floats shall be type 316 stainless steel, copper, copper-alloy, and not less than of 8 inches (203 mm) in diameter.

3.23.9 Sewage tank mounting. Sewage tank subframe shall be secured with U-bolts, twin studs, or by brackets and the mounting shall include a hardwood breaker strip.

3.23.9.1 U-bolts or twin studs. When U-bolts or twin studs are used, there shall be not less than three U-bolts or twin studs, per side, each having not less than 0.5625-inch (14 mm) body diameter with not less than 0.625-inch (16 mm) thread diameter. Tie plates shall be not less than 0.5-inch (13 mm) thick. Truck chassis frame shall be braced, using hardwood blocks at each mounting point unless mounting point is located at a full depth, frame crossmember. Blocks shall incorporate a keeper strap or groove for mounting bolt, and shall be of sufficient width to ensure retention. Two shear bolts shall be provided, one each side of the rear portion of the body

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subframe, to maintain body alignment on the truck chassis. Forward mounting bolts shall be located to the rear of the tapered portion of the breaker strips (see 3.23.9.3).

3.23.9.2 Brackets. When brackets are used, they shall be bolted to the web of the chassis frame rails. The mounting brackets shall provide means of drawing down the body subframe on the chassis rails and provisions shall be made to prevent lateral shifting of the breaker strips. When additional holes are required to secure mounting brackets to chassis frame rails, they must be located within the area of the rail which is designated as being safe for drilling in accordance with the chassis manufacturer's body builders layouts. Attachments shall not interfere with nor obstruct existing chassis components.

3.23.9.3 Breaker strips. A hardwood breaker strip, not less than 1.0625-inch (27 mm) finished thickness, shall be installed between the sewage tank longitudinal sills and the truck chassis frame. Breaker strips shall have a taper of 1-inch (25 mm) in 18 inches (457 mm) at the forward end.

3.23.10 Piping. Unless otherwise specified (see 7.2), all vacuum lines inside the tank shall be steel or iron pipe with corrosion-resistant fittings. The pipe and fittings shall be not less than 2-inch (51 mm) standard iron pipe sizes (ips), and shall be made up of subassemblies and interconnected by boiler unions or similar quick disconnects. Vacuum line piping outside the tank shall be not less than 2-inch (51 mm) ips, of steel or hard copper pipe with matching fittings of iron or copper alloy, respectively. Flexible hard rubber hose is acceptable.

3.23.11 Vacuum pump. The vacuum pump shall be water- or air-cooled, multicylinder, reciprocating piston pump or rotary type pump with automatic oilers, capable of performance required in 3.23.1 for both partial vacuum and compressed air output, and shall be furnished complete with all necessary accessories. The vacuum pump suction and discharge openings shall be not less than of 2-inch (51 mm) id. The vacuum pump shall have a continuous duty pressure of 150 cfm (4 247 L/m) at 26 inches of mercury (88 kPa), and discharge pressure of not less than 35 lbs per square inch (241 kPa). Vacuum pump mounting shall be such as to prevent undue vibration. Ground clearance for the vacuum pump shall be not less than 12 inches (305 mm). A four-way valve, or four valves, shall be provided on the vacuum pump manifold in order to permit the tank supply line to be switched between the partial vacuum and the compressed air outlets of the vacuum pump, control(s) for the operator shall be located at the side or rear of the truck. Each or all valves shall be operated from a control lever capable of remaining in any position setting unaffected by vibration. Exhaust air from the vacuum pump shall be piped to an outlet located on the opposite side of the truck from the truck engine tailpipe.

3.23.12 Hoses and hose carriers. Unless otherwise specified (see 7.2), eight 25-foot (7 620 mm) lengths of suction hose, and four 25-foot (7 620 mm) of discharge hose shall be furnished. Hose shall be smooth bore, rated at full vacuum and pressure of not less than 45 pound-force per square inch (psi) (310 kPa). Each section shall be fitted with male and female copper-alloy or aluminum couplings of the cam-lock type, rated for not less than 100 psi (689 kPa). Troughs shall be provided for stowing the hose sections and shall be provided with sufficient drainage. Hose sections shall be attached to the troughs with hose clamps.

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3.23.13 Storage compartments. The truck shall be equipped with an underslung compartment on each side of the sewage tank. Compartments shall have hinged doors with locks operable with the same key.

3.23.14 Walkway and access ladder. The truck shall be equipped with a walkway on the curbside of the sewage tank. The walkway shall extend the full length of the sewage tank and shall have a nonskid surface. The walkway shall provide an unobstructed surface. An access ladder with grab rails or grab handles, located on the curbside of the truck, shall be provided to gain access from the walkway to the sewage tank access openings. The ladder steps and grab handles shall be provided to gain access from ground level to the walkway.

3.23.15 Rear wheel fenders. Fenders shall be furnished and mounted to cover rear wheels for an arc of not less than 135 degrees. Fenders shall be of one-piece construction.

3.23.16 Instruction plate. A metal plate, showing a schematic layout of all valves, valve controls, and piping system with full operating instructions, shall be fastened on the inside of the curbside compartment door. The metal plates and markings shall be constructed so as to last not less than seven years while exposed to the environmental elements.

3.24 No smoking sign. Metal signs stating “**NO SMOKING WITHIN 50 FEET (1 524 mm)**,” in painted enamel lettering not less than 3 inches (76 mm) high, shall be permanently fastened on both sides and rear of truck without interfering with the truck markings specified (see 3.27.1).

3.25 Floodlight. When specified (see 7.2), a sealed unit floodlight shall be furnished and mounted in a swivel type holder at the rear of the truck. The floodlight shall have a weatherproof switch accessible from the ground.

3.26 Lubrication. Means for lubrication shall be in accordance with the manufacturer’s standard practice. The lubricating points shall be easily accessible. Hydraulic lubrication fittings shall be in accordance with SAE J534. Where use of high pressure lubricating equipment, 1,000 psi (6 894 kPa) or higher, will damage grease seals or other parts, a suitable warning shall be affixed to the equipment in a conspicuous location.

3.27 Cleaning, treatment, and painting. Surfaces normally painted in good commercial practice shall be cleaned, treated, and painted as specified herein. The color of the finish coat shall be as specified (see 7.2). Surfaces to be painted shall be cleaned and dried to ensure that they are free from contaminants such as oil, grease, welding slag and spatter, loose mill scale, water, dirt, corrosion product, or any other contaminating substances. As soon as practicable after cleaning, and before any corrosion product or other contamination can result, the surfaces shall be prepared or treated to insure the adhesion of the coating system. The painting shall consist of at least one coat of primer and one finish coat. The primer shall be applied to a clean, dry surface as soon as practicable after cleaning and treating. Painting shall be with manufacturer's current materials according to manufacturer's current processes and the total dry film thickness shall be not less than 0.0025-inch (0.065 mm) over the entire surface. The paint shall be free from runs, sags, orange peel, or other defects.

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3.27.1 Markings and data plates. As specified by the procuring activity for the appropriate service (see 7.2), identification marking and data plates shall be in accordance with MIL-STD-1223.

3.28 Rustproofing. When specified (see 7.2), the truck cab, chassis, and chassis underside shall be rustproofed in accordance with good commercial standard practice.

3.29 Servicing and adjusting. Prior to acceptance of the truck by the Government, the contractor shall service and adjust the truck for immediate operational use as required in the operator's manual. The servicing and adjusting shall include not less than the following:

- a. Inflation of all tires.
- b. Adjustment of brakes (when required).
- c. Proper functioning of all electrical systems.
- d. Wheel alignment (when required).
- e. Adjustment of engine to include tune-up (when required).
- f. Complete lubrication with grades of lubricants recommended for ambient temperature at the delivery point.
- g. Cooling system filled to capacity with clean solution of equal parts by volume of water and antifreeze (ethylene glycol).

The truck shall be conspicuously tagged to identify the lubricants and their temperature range.

3.30 Metric products. Products manufactured to metric dimensions will be considered on an equal basis with those manufactured using inch-pound units, provided they fall within specified tolerances using conversion tables contained in the latest version of ASTM E 380, and all other requirements of this commercial item description including form, fit and function are met. If a product is manufactured to metric dimensions and those dimensions exceed the tolerances specified in the inch-pound units, a request should be made to the specification preparing activity for changes to this document.

#### 4. REGULATORY REQUIREMENTS.

4.1 Recovered materials. The offeror/contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with paragraph 23.403 of the Federal Acquisition Regulation (FAR).

#### 5. QUALITY ASSURANCE PROVISIONS.

5.1 Product conformance. The products provided shall meet the salient characteristics of this commercial item description, 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.

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6. PACKAGING. The preservation, packing, and marking shall be as specified in the contract or order.

7. NOTES.

7.1 Source of documents.

7.1.1 Copies of specifications and standards required by suppliers in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.

7.1.2 The Federal Acquisition Regulation (FAR) may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

7.1.3 The Department of Energy, Title 10, Code of Federal Regulations, Part 40 is available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

7.1.4 The Department of Transportation Federal Motor Vehicle Safety Standards and regulations and Federal Motor Carrier Safety Regulations is available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

7.1.5 ASTM Standards are available from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

7.1.6 The Boiler and Pressure Vessel Code is available from the American Society of Mechanical Engineers, United Engineering Center, 345 East 47th Street, New York, NY 10017.

7.1.7 The European Tyre and Rim Technical Association Standards Manual is available from the European Tyre and Rim Technical Organization, 32, Avenue Brugmann, 1060, Brussels, Belgium.

7.1.8 The SAE Standards and Recommended Practices is available from the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096.

7.1.9 The TRA Yearbook is available from the Tire and Rim Association, Inc., 175 Montrose West Avenue, Suite 150, Copley, OH 44321.

7.2 Ordering data. Acquisition documents should specify the following:

- a. Title, number, date of this CID.
- b. Type of truck required (see 2.1).
- c. When spare wheel, rim, and tire is required (see 3.16.3).
- d. When brake control from towing vehicle is required (see 3.17.4).
- e. When tire servicing tools are required (see 3.21).
- f. When piping material other than as specified is required (see 3.23.10).
- g. When hose section lengths other than as specified are required (see 3.23.12).

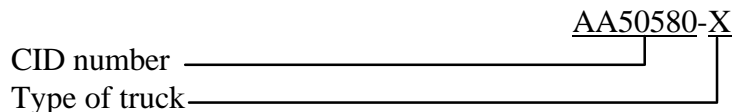
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- h. When floodlight is required (see 3.25).
- I. When finish color coat shall be as specified (see 3.27).
- j. When marking and data plates are required (see 3.27.1).
- k. When rustproofing is required (see 3.28).

7.3 Performance prediction. Completed copies of the SAE Truck Ability Prediction Procedure form and computation for speed requirements for each vehicle model furnished under the contract should be submitted as specified in the contract. The SAE Work Sheet Item should include vehicle model number, wheelbase, engine model number, and vehicle type. Unless other conditions are sighted in the contract, computations should be made for normal atmospheric pressure, normal ambient air temperature and still, dry air. The factors to be used in predicting truck ability (see 3.15.1) are established as follows for the corresponding SAE Truck Ability Prediction Procedure Tables:

Table 1	- Tire factor. This factor relates to the size of tires furnished by the contractor in accordance with this specification.	
Table 2	- Altitude factor.	1.00
Table 3	- Rolling factor.	1.613
Table 4	- Area factor. Use factor.	0.173
Table 5	- Velocity factor.	250.0
Table 6	- Altitude factor.	1.00
Table 7	- Chassis friction hp. Use applicable power unit gvw (to nearest, higher 1,000 lbs) and the engine revolutions per minute (to nearest 100 revolutions) which is required for 50 mph geared speed. For gvw and engine speed beyond the range of this table, factors shall be extrapolated.	
Table 8	- Grade factor.	0.75
Table 8A	- Correction factor.	Not required
Table 9	- Road factor.	0.0

7.4 Part Identification Number (PIN). The following part identification numbering procedure is for government purposes and does not constitute a requirement for the contractor. The PIN used for items acquired to this description are created as follows:



PIN codes:

- 1 = Type I
- 2 = Type II

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7.5 Subject term (key word) listing.

Engine  
Pumping  
Waste disposal

7.6 National Stock Numbers (NSNs). The following is a list of the NSNs assigned which correspond to this CID. The list may not be indicative of all possible NSNs associated with the CID.

<u>NSN</u>	<u>Type</u>
2320-01-314-4812	II
2320-01-323-4943	II

## MILITARY INTERESTS:

Custodians:

Army - AT  
Navy - YD1  
Air Force - 99

Review Activities:

Navy - MC  
Air Force - 84

## CIVIL AGENCY COORDINATING ACTIVITY:

GSA - FSS

Preparing Activity:

Navy - YD1

(Project 2320-0714)



# STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

## INSTRUCTIONS

1. The preparing activity must complete blocks 1, 2, 3, and 8. In block 1, both the document number and revision letter should be given.
2. The submitter of this form must complete blocks 4, 5, 6, and 7.
3. The preparing activity must provide a reply within 30 days from receipt of the form.

NOTE: This form may not be used to request copies of documents, nor to request waivers, or clarification of requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

### I RECOMMEND A CHANGE:

1. DOCUMENT NUMBER  
A-A-50580

2. DOCUMENT DATE (YYMMDD)  
970407

### 3. DOCUMENT TITLE

TRUCK, TANK: SEWAGE OR WASTE COLLECTION, COMMERCIAL 4 BY 2

### 4. NATURE OF CHANGE (Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed.)

### 5. REASON FOR RECOMMENDATION

### 6. SUBMITTER

a. NAME (Last, First, Middle Initial)

b. ORGANIZATION

c. ADDRESS (Include Zip Code)

d. TELEPHONE (Include Area Code)  
(1) Commercial  
(2) AUTOVON  
(if applicable)

7. DATE SUBMITTED  
(YYMMDD)

### 8. PREPARING ACTIVITY

a. NAME

RUDY PAMPLONA

b. TELEPHONE (Include Area Code)

(1) Commercial (2) AUTOVON

805-982-5843

551-58436

c. ADDRESS (Include Zip Code)

COMMANDING OFFICER, NCBC CODE 15E2D  
1000 23RD AVENUE  
PORT HUENEME, CA 93043-4301

**IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT:**

DEFENSE QUALITY AND STANDARDIZATION OFFICE  
5203 Leesburg Pike, Suite 1403, Falls Church, VA 22401-3466  
Telephone (703) 756-2340 AUTOVON 289-2340