Bid Form
COMBINATION SEWER CLEANER
25-B011

OPENING DA TE: MARCH 12TH,2025

TOTAL PRICE FOR COMBINATION SEWER CLEANER$ 481,400.00
INCLUDING DELIVERY.

ESTIMATED DELIVERY DATE 10 Days A.R.O.

Bidders must acknowledge all addenda. The Bidder acknowledges receipt of the following ADDENDA

No. 1 Dated: 02/20/2025 No. 2 Dated: 02/20/2025

SIGNATURE: Davis Taylor

COMPANY NAME: Vacuum Truck Sales & Service, LLC

NAME: Davis Taylor TITLE: Equipment Sales

MAILING ADDRESS: 9236 Ashland Road, Gonzales STATE: LA ZIP: 70737

ADDRESS OF PLANT 406 Mill Avenue SW, New Philadelphia STATE: OH ZIP: 44663

EMAIL: dtaylor@vtsales.net

PHONE NUMBER: (225) 744-2850 FAX NUMBER: (225) 744-2852

The signature on the bid must be that of an authorized representative of the corporation, partnership or other legal entity as defined by Louisiana Public Bid Law Revised Statute 38:2212.A.(I)(c) which dictates parties authorized to submit bids for public contracts.

No taxes. environmental Fees. shop fees or fuel surcharges shall be applied or added to invoices. 81d must be total cost.

The City of Slidell reserves the right to reject any and all bids.

The bidder shall complete every space on this bid form. You should mark specification bidder's proposal column with a check mark to indicate if the item being bid is exactly as specified. If not, the "NO" column must be checked and a detailed description of the deviation from the specification to be supplied.

CITY OF SLIDELL

SPECIFICATION FOR COMBINATION SEWER CLEANER

BID# 25-B011

ADDENDUM NO.1

DATE ISSUED: 02/20/2025

Positive Displacement Blower:

A lobe type positive displacement blower shall be provided which is capable of 6000 CFMs and 18" of Hg with cyclone separator. Control of the blower regarding start, stop and the rate of vacuum suction is to be performed from the front of the truck. A vacuum suction breaker disconnect switch is provided to enable the operator to pick up large debris with boom and place debris on road surface. The vacuum system shall operate independent of the high-pressure water system.

The Blower is driven by the chassis via a closed loop hydrostatic system using a variable piston pump and motor. This system shall use a heat exchanger for extreme ambient conditions and to maintain the pump suction oil temperature at 160 deg. F max. The heat exchanger shall be protected by a 30-micron filter and cold weather bypass valve. Hydrostatic loop filtration shall be accomplished by a 10 Beta micron return filter and a 10-micron absolute (no bypass) charge filter.

Two 3" diameter vacuum relief valves (@ 18"hg) shall be provided for system protection.

Unit must be capable of vacuuming under water without air induction (240" of water column from top of water level to vacuum boom elbow)

Blower to have a minimum of a 12-month non-prorated warranty.

The above mentioned shall replace the Centrifugal Compressor (Fan Design).

CITY OF SLIDELL

ONE OR MORE

SPECIFICATIONS FOR COMBINATION SEWER CLEANER

BID# 25-B011

GENERAL:

All equipment furnished under this contract shall be new and current production.

The machine can remove stones, grit, grease, sludge, and other debris from sanitary sewer and/or storm drain lines by the flushing action of high-pressure water. The machine will be equipped with a self-contained, non-corrosive, non-metallic water tank supply as the water source for the high-pressure pump.

The machine is capable of being operated by one man, with all operating controls for high-pressure water pump, and hose reel located at the front of the machine for safety.

The machine shall be dual engine design with a total of SIOHP to reduce wear on the chassis engine by driving the water pump with the auxiliary engine. The machine used a 2025 Freightliner 1145D chassis for these specifications or equal.

DEBRIS BODY:

Debris storage body has a minimum usable liquid capacity of 11 cubic yards. The debris body shall be round for maximum strength and constructed of 3/16-inch ASTM A242 Corten A steel for enhanced corrosion resistance.

The rear door shall be flat (industrial style) and flanged for maximum strength. It shall be full-opening to 90 degrees by means of 2 hydraulic cylinders and hinged at the top with low profile and adjustable style hinges. There shall be a 6" diameter liquid drain knife valve and screen weldment inside for retaining solids while removing excess liquids. Drain will have 10 feet of 6" lay flat hose.

The debris body shall be supplied with a debris deflector shield mounted at the inlet of the vacuum port. The debris deflector shield shall deflect material from the rear door to prevent the door from being damaged by debris entering the tank. A rear door safety prop shall be provided. For ease of maintenance there shall be no hydraulic components located inside the debris body or rear door.

The door locking system shall have four (4) externally mounted wedge-style door locks that lock hydraulically. The hydraulic locks shall be operated by one (1) sequential control and 2 hydraulic cylinders to allow the operator to control the discharging of the liquids, from the debris tank, by cracking open the door slowly prior to dumping the debris.

Dual steel weldments with stainless steel screen 8" x 28" each providing up to 1200 square inches of added filtration for the vacuum system shall be provided inside the debris tank. These weldments shall be removable and require no cutting or welding.

A double acting power up/power down hydraulic scissors lift mechanism will be provided to raise the body to a minimum SO-degree angle. The scissors lift mechanism shall be designed to support a minimum of 24 inches of the debris tank width to provide stability and when dumping on uneven ground. The lift capacity of hydraulic scissors lift cylinder is 56,000 lbs.

Dump controls are located on curbside mid-ship of the unit, well forward of the dumping area for operator safety. A manual override system is provided in case of system failure.

The debris body has a five-year warranty. A copy of the manufacturer's warranty statement shall be enclosed with the bid. If pro-rated so state on the bid form.

An internal polyethylene float device with external indicator is supplied to show when body is loaded to capacity.

AUTOMATIC VACUUM BREAKER:

The automatic vacuum breaker assembly is located inside the body.

The automatic vacuum breaker assembly shall be controlled by an electric over hydraulic circuit. The entire system shall be replaceable via a bolt on assembly. The assembly shall consist of a 12" inlet and two 8" ports that provide air flow to the vacuum system.

A full indication activates an automatic vacuum breaker shut down system that completely shuts down 100 percent of the airflow to the vacuum system to prevent overfilling and wastewater discharge into the atmosphere.

The vacuum breaker system is automatically activated (closed) when the parking brake system is released to eliminate carryover during transit.

The system is controlled/activated, at the front hose reel control station. This enables the operator to pick up large debris with boom and place debris on the road surface. This system can be used for safety in the event suction must be shut off in case of an emergency.

CENTRIFUGAL COMPRESSOR (FAN DESIGN):

The centrifugal vacuum compressor shall be of 3-stage construction (i.e. 3-27" minimum diameter fans in tandem). The centrifugal compressor (fans) shall be constructed of Carten steel. The compressor's outer housing shall be spun from one piece of 3/16" steel for strength and provide proper airflow in operation. The vacuum system shall operate independent of the high-pressure water system.

The compressor is driven by the chassis engine via a closed loop hydrostatic system using a variable piston pump and motor. This system shall include a heat exchanger for extreme ambient conditions and to maintain the pump suction oil temp at 160 deg. F. max. The heat exchanger shall be protected by a 30-micron filter and cold weather bypass valve. Hydrostatic loop filtration shall be accomplished by a 10 Beta micron return filter and a 10-micron Absolute (no bypass) charge filter.

To maximize long term durability by reducing the load on one side of the compressor, the compressor shaft shall extend through the compressor and shall be additional stabilized by using two high speed bearings, one at each side of the shaft. No exceptions will be allowed to this requirement.

A means of starting, stopping and varying the vacuum suction from operator station at the front of the machine is provided.

A centrifugal separator located in the inlet chamber to the fans with cleanout box is provided. The separator removes particles from the air stream, thus enabling the unit to vacuum wet or dry material. The separator is separate from the debris body. The centrifugal compressor (fan) system can produce 90% vacuum with no airflow. This feature allows material to be vacuumed under the water surface, i.e. lift stations, plugged manholes, etc.

Unit must be capable of vacuuming under water 16.6' (200") without air induction. A manometer/vacuum test may be required to demonstrate the system performance.

The centrifugal compressor fans have a 5-year replacement non-prorated warranty.

VACUUM PICK UP HOSE:

Shall be front loading, attached at the front of the machine to provide ease of positioning the machine over the manhole, as well as afford maximum safety for the operator.

The 8" will be mounted on a boom that will provide a minimum of 18' vertical lift utilizing dual hydraulic cylinder and 230 degree of boom rotation powered hydraulically for non-interrupted smooth movement. Boom to have a lift capacity of 500 lbs. at the front bumper.

The boom will be powered by an electric over hydraulic system: up/down by dual lift cylinders. The right/left movements shall be hydraulic via worm gear rotation.

The boom shall hydraulically telescope a minimum of 10 ft. forward from the operator's station. The height of the boom shall not change while the boom is being telescoped. A manual override system shall be provided for right/left, and up/down functions in case of system failure.

Control of the boom is by means of a joystick control at the operator's station, requiring no cables at operator's feet for boom operation. A wireless remote control will be provided for Boom, Vacuum Breaker, Chassis Throttle, and Debris Body functions. A manual override system shall be provided for right/left, and up/down functions in case of system failure.

A boom coverage chart shall be provided showing the square footage of boom coverage.

8-inch diameter pipe extensions with clamps will be provided and carried on the truck as follows:

- 1 6-1/2' Catch Basin Nozzle
- 1 6' Aluminum Pipe Extension
- 1 5' Aluminum Pipe Extension
- 1 3' Aluminum Pipe Extension

WATER SUPPLY:

The water tanks shall have a minimum usable capacity of **1300** U.S. gallons.

The water tanks shall be constructed of non-corrosive, non-metallic, durable, cross-linked polyethylene to eliminate rust, corrosion, and stress cracking.

The water tanks shall be mounted at and below the truck frame level to provide a low center of gravity for truck stability.

A 2-1/2-inch diameter x 25 feet long hydrant hose with hydrant wrench is supplied on the unit.

An anti-siphon fill device is installed on the unit.

Inspection ports shall be provided to fill or to add chemicals to the water system. A sight gauge to indicate water level is located within sight of the operator station.

The water tanks are protected by a minimum of 11-gauge steel plating mounted below the water tanks for protection against road hazards when unit travels over the road, *off* the road or to landfills.

The water tanks carry a ten-year replacement warranty.

AUXILARY ENGINE (WATER PUMP DRIVE ENGINE):

The auxiliary engine, John Deere Tier 4 final -140HP or approved equal, shall be used to drive the water pump. An electronic digital diagnostic and fault monitoring panel shall be mounted on the front of the unit at the operator's station and be able to display various engine operation conditions including but not limited to engine rpm, hours, coolant temp and oil pressure. A standard integrated safety shutdown system shall be provided in the engine ecu and will shut the engine down in the event of low oil pressure or excessive coolant temperature. The ignition system start stop switch will be located at the operator's station. The auxiliary engine shall be shrouded and have a hinged door on the driver's side of the unit. The engine oil dipstick shall be accessed from the ground level on the driver's side.

HIGH-PRESSURE WATER PUMP:

The high-pressure water pump shall be rated to deliver smooth continuous pressure and flow through the entire flow range of the pump. The high pressure shall have smooth continuous flow for both the high-pressure system and the handgun system.

A continuous duty flow of 60 gpm. and 3,000 psi shall be provided.

High-pressure relief valves are provided for both the high-pressure system and handgun system.

The water pump operates independently of the vacuum system and is powered by the auxiliary engine via clutch less, direct dual powerband drive system.

The high-pressure water pump drive system carries a five-year replacement warranty. Warranty excludes the drive engine, i.e. auxiliary engine. The water pump can run dry.

Controls for starting and stopping the water pump and to vary the flow and pressure shall be at the front hose reel operator's station.

The high-pressure water pump is equipped with a cold weather drain valve. The valve allows the operator to completely drain the high-pressure pump.

HOSE REEL ASSEMBLY:

The hose reel assembly is mounted on the front of the vehicle. The hose reel shall have a minimum of 30" inside diameter with a capacity of 800' x 1" hose. The hose reel is hydraulically powered in both directions by means of a double chain and sprocket drive. The controls for operating the motor have a flow control device to regulate the rotational speed of the reel in both directions. All hydraulic hoses are behind a steel housing to protect operator from hydraulic oil if a hose fails. The hydraulic motor, chain, and sprockets have a protective cover or are mounted on the radiator side of the hose reel for operator safety. The hose reel articulates 180 degrees to the driver's side allowing operator to work in any position through this arc. This allows greater flexibility in truck placement for manholes located in tough areas and provides greater safety to the operator. Reel extends beyond the width of unit for greater flexibility for positioning reel over offset manholes, catch basins, etc. A hydraulically controlled outrigger leg is supplied that comes in contact with the ground at any one position. A warning light is located in the cab to warn the operator that the outrigger leg is not in its transported position prior to moving the unit. A manual bypass system for the hose reel assembly is provided to manually pull the reel assembly away from its transported position. This feature allows operators to check fluids without starting engines.

JET HOSE:

800' x 1" jet rodder hose will be supplied rated for 3000 psi working pressure and 7500 psi burst pressure.

A heavy-duty hose guide with 25' of nylon rope will be provided.

Nozzles shall be hardened steel with replaceable ceramic orifices as follows: 1) Chisel head penetrator & 1) standard sanitary.

MANHOLE CLEANING WATER SYSTEM (HANDGUN):

The high-pressure pump and independent water tank assembly supplied shall be used for manhole cleaning. A smooth continuous flow of 20 gpm. and pressure of 600 psi shall be provided for ease of operation. A handgun pressure relief valve set at 600 psi shall be provided. One full functioning handgun with on/off hand control, replaceable nozzle tip, 12-inch extension, adjustable spray and 50' x 1/2" hose with retractable reel will be provided.

The handgun will attach to the system via a quick couple connection at the curbside of the unit. To avoid being coiled at the operator's station a handgun holder will be provided at the front bumper.

HYDRAULIC SYSTEM AND LUBRICATION:

The hydraulic system has a 55-gallon capacity.

The hydraulic system shall incorporate a main shut off valve in case of hydraulic failure.

The hydraulic system shall incorporate hydraulic pressure relief valves and pressure gauges for ease of trouble shooting and maintenance.

The unit is equipped on the passenger side, mid-section of the module, a permanent weatherproof white vinyl lubrication chart that points out lubrication points on the module and specifies what type of lubrication and hydraulic fluids are required. The chart also specifies the frequency of each lubrication point.

Remote plumbed grease fittings are provided for the vacuum compressor, boom rotation, and water pump drive areas.

ACCESSORIES:

A minimum twelve (12) month manufacturer's guarantee on the unit will be provided.

- A storage box behind the cab will be provided, 16" x 42" x 96"
- 1 - Debris body power flush out system
- 1 - Rear mounted hydraulic pump off system, 350 gpm w/20' lay flat hose
- 1 - Rear splash guard, tank mounted (2 - 10 O'clock Position)
- 1 - Air purge system
- 1 - 1/4 turn ball valve water drain
- 1 - Variable flow valve
- 1 - Lazy Susan style, deck mounted pipe rack, holds 5 pipe
- 1 - Hose footage counter, standard - drivers side
- 1 - Rear mounted tow hooks
- 1 - Auxiliary engine remote oil drain
- 1 - Remote boom grease zerk assembly, (accessible from ground level)
- 1 - 10' leader hose
- 1 - Water pump remote oil drain
- 1 - Built in Body Prop - Rear Boom Support Mounted

- 1 - Move pump off to front, curbside of debris tank
- 1 - Traffic Camera with Color Monitor (Camera placement must be picked)
- 1 - Rear traffic camera
- 1 - Front hose reel camera - to view front of hose reel area
- 1 - Cone racks, between bogies on tandem units
- 1 - Hydro excavation Package Includes: SO-foot handgun hose reel with 1/2" hose, 72" 1/2" schedule 80 lance with single forward spray nozzle, Storage tubes for lances, Heavy duty unloader valve, Main control ball valve, Variable flow valve - Wireless Remote Control for boom functions and debris tank functions
- 1 - OMSI Transfer Case ilo V the front-engine PTO vacuum drive

LIGHTING:

The entire module electrical system is vapor sealed to eliminate moisture damage.

All wiring is color-coded, labeled, and run in sealed terminal enclosures.

All module circuits are protected by circuit breakers.

Clearance lights and reflectors are furnished in accordance with D.O.T. requirements.

- 1 - LED strobe light with limb guard, rear debris tank door mounted - Whelen L21HAP LED Beacon with Whelen BGH Branch Guard
- 1 - 4 LED strobes - (2) front bumper, (2) rear bumper - Whelen S0A03ZCR - Amber
- 1 - LED Arrow stick - Whelen TAM85 Traffic Advisor
- 1 - LED Boom Mounted Flood Light - Whelen NP6BB Worklight
- 1 - LED Rear Mounted Flood Lights - Whelen NP6BB Worklight

PAINT:

Unit paint surfaces are shot blasted, Ambershield zinc primed, sanded, and sealed with epoxy primer. The hose reel spool, debris tank and sides of mainframe painted with PPG Delfleet single stage polyurethane paint. All other paintable surfaces coated in PPG Ambershield textured black paint.

Unit shall have reflective White or Blue body and boom stripes

Chassis shall be painted manufacturers standard white with DuPont Imron 5000 polyurethane paint.

TRAINING AND MANUALS:

Operator training will be conducted by a factory-trained representative for a minimum of one day at the time of delivery. 1 copy of the operating and maintenance manual for the sewer cleaner module shall be provided, on a USB flash drive, upon unit delivery.

MOUNTING AND DELIVERY:

The unit described will be mounted on a truck chassis acceptable to the body manufacturer at the factory of the body manufacturer.

EXCEPTIONS AND DEVIATIONS:

Bidder shall fully explain every variance, exception, and or deviation to the bid specifications. Additional sheets/lines may be added if required.

BID FORM:

Bids must be submitted on the Bid Form furnished by the City of Slidell. All the COMPLY, Indicate: Yes or No must be marked.

AFFIDAVIT:

An executed Affidavit must be submitted prior to award of bid.

SIGNATURE:

The signature on the bid form must be that of an authorized representative of the corporation, partnership or other legal entity as defined by Louisiana Public Bid Law Revised Statute 38:2212.A.(l){c)_which dictates parties authorized to submit bids for public contracts.

The City of Slidell reserves the right to reject any and all bids.

S P E C I F I C A T I O N

	Description	Weight Front	Weight Rear
Price Level			
	SD PRL-27D (EFF:MY25 ORDERS)		
Data Version			
	SPECPRO21 DATA RELEASE VER 033		
Vehicle Configuration			
	114SD PLUS CONVENTIONAL CHASSIS	7,934	6,476
	2025 MODEL YEAR SPECIFIED		
	SET FORWARD AXLE - TRUCK		
	STRAIGHT TRUCK PROVISION, NON-TOWING		
	LH PRIMARY STEERING LOCATION		
General Service			
	TRUCK CONFIGURATION		
	DOMICILED, USA 50 STATES (INCLUDING CALIFORNIA AND CARB OPT-IN STATES)		
	UTILITY/REPAIR/MAINTENANCE SERVICE		
	UTILITY BUSINESS SEGMENT		
	LIQUID BULK COMMODITY		
	TERRAIN/DUTY: 100% (ALL) OF THE TIME, IN TRANSIT, IS SPENT ON PAVED ROADS		
	MAXIMUM 8% EXPECTED GRADE		
	SMOOTH CONCRETE OR ASPHALT PAVEMENT - MOST SEVERE IN-TRANSIT (BETWEEN SITES) ROAD SURFACE		
	FREIGHTLINER SD VOCATIONAL WARRANTY		
	EXPECTED FRONT AXLE(S) LOAD : 20000.0 lbs		
	EXPECTED REAR DRIVE AXLE(S) LOAD : 46000.0 lbs		
	EXPECTED GROSS VEHICLE WEIGHT CAPACITY : 66000.0 lbs		
Truck Service			
	SEWER/INDUSTRIAL VACUUM BODY		
	VAC CON		
Engine			
	CUM L9 370 HP @ 2100 RPM; 2100 GOV RPM, 1250 LB-FT @ 1200 RPM	-850	-70
Electronic Parameters			
	72 MPH ROAD SPEED LIMIT		
	CRUISE CONTROL SPEED LIMIT SAME AS ROAD SPEED LIMIT		

	Description	Weight Front	Weight Rear
	PTO MODE ENGINE RPM LIMIT - 1400 RPM		
	PTO GOVERNOR RAMP RATE - 100 RPM PER SECOND		
	CRUISE CONTROL BUTTON PTO CONTROL		
	PTO MINIMUM RPM - 700		
	REGEN INHIBIT SPEED THRESHOLD - 5 MPH		
	PTO 1, DASH SWITCH, STATIONARY OPERATION		
	ENGINE MOUNT PTO, DASH SWTICH ENGAGES PTO MODE, STATIONARY OPERATION		
Engine Equipment			
	2010 EPA/CARB/GHG21 CONFIGURATION		
	2008 CARB EMISSION CERTIFICATION - CLEAN IDLE (INCLUDES 6X4 INCH LABEL ON LOWER FORWARD CORNER OF DRIVER DOOR)		
	STANDARD OIL PAN		
	OIL FILL AND DIPSTICK LOCATED FOR ENHANCED SERVICEABILITY		
	SIDE OF HOOD AIR INTAKE WITH DONALDSON HIGH CAPACITY AIR CLEANER WITH SAFETY ELEMENT, FIREWALL MOUNTED		
	DR 12V 160 AMP 28-SI QUADRAMOUNT PAD ALTERNATOR WITH REMOTE BATTERY VOLT SENSE		
	(2) DTNA GENUINE, FLOODED STARTING, MIN 2000CCA, 370RC, THREADED STUD BATTERIES	-50	-10
	BATTERY BOX FRAME MOUNTED		
	STANDARD BATTERY JUMPERS		
	SINGLE BATTERY BOX FRAME MOUNTED LH SIDE UNDER CAB		
	WIRE GROUND RETURN FOR BATTERY CABLES WITH ADDITIONAL FRAME GROUND RETURN		
	NON-POLISHED BATTERY BOX COVER		
	POSITIVE LOAD DISCONNECT WITH CAB MOUNTED CONTROL SWITCH MOUNTED OUTBOARD DRIVER SEAT	2	
	POSITIVE AND NEGATIVE POSTS FOR JUMPSTART LOCATED ON FRAME NEXT TO STARTER	2	
	PROGRESSIVE LOW VOLTAGE DISCONNECT AT 12.3 VOLTS FOR DESIGNATED CIRCUITS		
	CUMMINS TURBOCHARGED 18.7 CFM AIR COMPRESSOR WITH INTERNAL SAFETY VALVE		
	ELECTRONIC ENGINE INTEGRAL SHUTDOWN PROTECTION SYSTEM		
	CUMMINS ENGINE INTEGRAL BRAKE WITH VARIABLE GEOMETRY TURBO ON/OFF	20	

	Description	Weight Front	Weight Rear
	RH OUTBOARD UNDER STEP MOUNTED HORIZONTAL AFTERTREATMENT SYSTEM ASSEMBLY WITH RH B-PILLAR MOUNTED VERTICAL TAILPIPE	30	25
	ENGINE AFTERTREATMENT DEVICE, AUTOMATIC OVER THE ROAD REGENERATION AND VIRTUAL REGENERATION REQUEST SWITCH IN CLUSTER		
	INTEGRATED STACK AND B-PILLAR PIPE WITH MINIMUM STACK PROTRUSION ABOVE CAB		
	RH CURVED VERTICAL TAILPIPE B-PILLAR MOUNTED ROUTED FROM STEP		
	6 GALLON DIESEL EXHAUST FLUID TANK	-35	-10
	100 PERCENT DIESEL EXHAUST FLUID FILL		
	STANDARD DIESEL EXHAUST FLUID PUMP MOUNTING		
	LH MEDIUM DUTY STANDARD DIESEL EXHAUST FLUID TANK LOCATION		
	STANDARD DIESEL EXHAUST FLUID TANK CAP		
	ALUMINUM AFTERTREATMENT DEVICE/MUFFLER/TAILPIPE SHIELD(S)		
	AIR POWERED ON/OFF ENGINE FAN CLUTCH		
	AUTOMATIC FAN CONTROL WITH DASH SWITCH AND INDICATOR LIGHT, NON ENGINE MOUNTED		
	CUMMINS SPIN ON FUEL FILTER		
	COMBINATION FULL FLOW/BYPASS OIL FILTER		
	1300 SQUARE INCH ALUMINUM RADIATOR	-50	
	ANTIFREEZE TO -34F, OAT (NITRITE AND SILICATE FREE) EXTENDED LIFE COOLANT		
	GATES BLUE STRIPE COOLANT HOSES OR EQUIVALENT		
	CONSTANT TENSION HOSE CLAMPS FOR COOLANT HOSES		
	RADIATOR DRAIN VALVE		
	1350 ADAPTER FLANGE FOR FRONT PTO PROVISION	20	
	ELECTRIC GRID AIR INTAKE WARMER		
	DELCO 12V 38MT HD STARTER WITH INTEGRATED MAGNETIC SWITCH	-35	
Transmission			
	ALLISON 3000 RDS AUTOMATIC TRANSMISSION WITH PTO PROVISION		
Transmission Equipment			
	ALLISON VOCATIONAL PACKAGE 223 - AVAILABLE ON 3000/4000 PRODUCT FAMILIES WITH VOCATIONAL MODELS RDS, HS, MH AND TRV		

	Description	Weight Front	Weight Rear
	ALLISON VOCATIONAL RATING FOR ON/OFF HIGHWAY APPLICATIONS AVAILABLE WITH ALL PRODUCT FAMILIES		
	PRIMARY MODE GEARS, LOWEST GEAR 1, START GEAR 1, HIGHEST GEAR 6, AVAILABLE FOR 3000/4000 PRODUCT FAMILIES ONLY		
	SECONDARY MODE GEARS, LOWEST GEAR 1, START GEAR 1, HIGHEST GEAR 6, AVAILABLE FOR 3000/4000 PRODUCT FAMILIES ONLY		
	PRIMARY SHIFT SCHEDULE RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE		
	SECONDARY SHIFT SCHEDULE RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE		
	PRIMARY SHIFT SPEED RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE		
	SECONDARY SHIFT SPEED RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE		
	FUEL SENSE 2.0 DISABLED - PERFORMANCE - TABLE BASED		
	DRIVER SWITCH INPUT - DEFAULT - NO SWITCHES		
	DIRECTION CHANGE ENABLED WITH MULTIPLEXED SERVICE BRAKES - ALLISON 5TH GEN TRANSMISSIONS		
	MAXIMUM ENGINE SPEED FOR PTO ENGAGEMENT 1000 RPM		
	QUICKFIT BODY LIGHTING CONNECTOR UNDER CAB, WITH CAP		
	ELECTRONIC TRANSMISSION WIRING TO CUSTOMER INTERFACE CONNECTOR		
	CUSTOMER INSTALLED CHELSEA 280 SERIES PTO		
	PTO MOUNTING, LH SIDE OF MAIN TRANSMISSION ALLISON		
	MAGNETIC PLUGS, ENGINE DRAIN, TRANSMISSION DRAIN, AXLE(S) FILL AND DRAIN		
	PUSH BUTTON ELECTRONIC SHIFT CONTROL, DASH MOUNTED		
	TRANSMISSION PROGNOSTICS - ENABLED 2013		
	WATER TO OIL TRANSMISSION COOLER, IN RADIATOR END TANK	-15	
	TRANSMISSION OIL CHECK AND FILL WITH ELECTRONIC OIL LEVEL CHECK		
	SYNTHETIC TRANSMISSION FLUID (TES-295 COMPLIANT)		
Front Axle and Equipment			

	Description	Weight Front	Weight Rear
	DETROIT DA-F-20.0-5 20,000# FL1 71.0 KPI/3.74 DROP SINGLE FRONT AXLE	190	
	MERITOR 16.5X6 Q+ CAST SPIDER CAM FRONT BRAKES, DOUBLE ANCHOR, FABRICATED SHOES	10	
	NON-ASBESTOS FRONT BRAKE LINING		
	CONMET CAST IRON FRONT BRAKE DRUMS		
	FRONT BRAKE DUST SHIELDS	5	
	FRONT OIL SEALS		
	VENTED FRONT HUB CAPS WITH WINDOW, CENTER AND SIDE PLUGS - OIL		
	STANDARD SPINDLE NUTS FOR ALL AXLES		
	MERITOR AUTOMATIC FRONT SLACK ADJUSTERS		
	STANDARD KING PIN BUSHINGS		
	TRW THP-60 POWER STEERING WITH RCH45 AUXILIARY GEAR	130	
	POWER STEERING PUMP		
	4 QUART POWER STEERING RESERVOIR		
	OIL/AIR POWER STEERING COOLER MOUNTED ABOVE FRONT CLOSING CROSSMEMBER	5	
	MINERAL SAE 80/90 FRONT AXLE LUBE		
Front Suspension			
	20,000# FLAT LEAF FRONT SUSPENSION	310	
	GRAPHITE BRONZE BUSHINGS WITH SEALS - FRONT SUSPENSION		
	FRONT SHOCK ABSORBERS		
Rear Axle and Equipment			
	RT-46-160 46,000# R-SERIES TANDEM REAR AXLE		420
	5.38 REAR AXLE RATIO		
	IRON REAR AXLE CARRIER WITH STANDARD AXLE HOUSING		
	MXL 17T MERITOR EXTENDED LUBE MAIN DRIVELINE WITH HALF ROUND YOKES	40	40
	MXL 17T MERITOR EXTENDED LUBE INTERAXLE DRIVELINE WITH HALF ROUND YOKES		
	(1) INTERAXLE LOCK VALVE FOR TANDEM DRIVE AXLES		
	INDICATOR LIGHT AND BUZZER FOR EACH INTERAXLE LOCKOUT SWITCH		
	MERITOR 16.5X7 Q+ CAST SPIDER CAM REAR BRAKES, DOUBLE ANCHOR, FABRICATED SHOES		
	NON-ASBESTOS REAR BRAKE LINING		
	STANDARD BRAKE CHAMBER LOCATION		

	Description	Weight Front	Weight Rear
	CONMET CAST IRON REAR BRAKE DRUMS		
	REAR BRAKE DUST SHIELDS		10
	REAR OIL SEALS		
	BENDIX EVERSURE LONGSTROKE 2-DRIVE AXLES SPRING PARKING CHAMBERS		
	HALDEX AUTOMATIC REAR SLACK ADJUSTERS		
	MINERAL SAE 80/90 REAR AXLE LUBE		
	STANDARD REAR AXLE BREATHER(S)		
Rear Suspension			
	HENDRICKSON RT463 @46,000# REAR SUSPENSION		750
	HENDRICKSON RT/RTE - 7.19" SADDLE		
	STANDARD AXLE SEATS IN AXLE CLAMP GROUP		
	52 INCH AXLE SPACING		
	STEEL BEAMS AND BRONZE CENTER BUSHINGS WITH BAR PIN ADJUSTABLE END CONNECTIONS		
	FORE/AFT CONTROL RODS		
Brake System			
	WABCO 4S/4M ABS WITH TRACTION CONTROL		
	REINFORCED NYLON, FABRIC BRAID AND WIRE BRAID CHASSIS AIR LINES		
	FIBER BRAID PARKING BRAKE HOSE		
	STANDARD BRAKE SYSTEM VALVES		
	STANDARD AIR SYSTEM PRESSURE PROTECTION SYSTEM		
	STD U.S. FRONT BRAKE VALVE		
	RELAY VALVE WITH 5-8 PSI CRACK PRESSURE, NO REAR PROPORTIONING VALVE		
	WABCO SYSTEM SAVER HP WITH INTEGRAL AIR GOVERNOR AND HEATER		
	WABCO OIL COALESCING FILTER FOR AIR DRYER		
	AIR DRYER FRAME MOUNTED		
	STEEL AIR TANKS MOUNTED AFT INSIDE AND/OR BELOW FRAME JUST FORWARD OF REAR SUSPENSION		
	PULL CABLE ON WET TANK, PETCOCK DRAIN VALVES ON ALL OTHER AIR TANKS		
Wheelbase & Frame			
	6700MM (264 INCH) WHEELBASE		
	11/32X3-1/2X10-15/16 INCH STEEL FRAME (8.73MMX277.8MM/0.344X10.94 INCH) 120KSI	360	120
	1/4 INCH (6.35MM) C-CHANNEL INNER FRAME REINFORCEMENT	220	435

	Description	Weight Front	Weight Rear
	2275MM (90 INCH) REAR FRAME OVERHANG		
	FRAME OVERHANG RANGE: 81 INCH TO 90 INCH	-40	190
	12 INCH INTEGRAL FRONT FRAME EXTENSION	60	-10
	CALC'D BACK OF CAB TO REAR SUSP C/L (CA) : 180.32 in		
	CALCULATED EFFECTIVE BACK OF CAB TO REAR SUSPENSION C/L (CA) : 177.32 in		
	CALC'D FRAME LENGTH - OVERALL : 393.06 in		
	CALCULATED FRAME SPACE LH SIDE : 100.01 in		
	CALCULATED FRAME SPACE RH SIDE : 92.12 in		
	SQUARE END OF FRAME		
	FRONT CLOSING CROSSMEMBER		
	STANDARD WEIGHT ENGINE CROSSMEMBER		
	STANDARD MIDSHIP #1 CROSSMEMBER(S)		
	STANDARD REARMOST CROSSMEMBER		
	STANDARD SUSPENSION CROSSMEMBER		
Chassis Equipment			
	OMIT FRONT BUMPER, CUSTOMER INSTALLED SPECIAL BUMPER, DOES NOT COMPLY WITH FMCSR 393.203	-100	
	GRADE 8 THREADED HEX HEADED FRAME FASTENERS INSTALLED WITH BOLT HEADS ON OUTSIDE OF FRAME		
	EXTERIOR HARNESSES WRAPPED IN ABRASION TAPE		
Fuel Tanks			
	100 GALLON/378 LITER ALUMINUM FUEL TANK - LH	20	
	25 INCH DIAMETER FUEL TANK(S)		
	PLAIN ALUMINUM/PAINTED STEEL FUEL/HYDRAULIC TANK(S) WITH PAINTED BANDS		
	FUEL TANK(S) FORWARD		
	PLAIN STEP FINISH		
	FUEL TANK CAP(S)		
	DETROIT FUEL/WATER SEPARATOR WITH WATER IN FUEL SENSOR, HAND PRIMER AND 12 VOLT PREHEATER"	10	
	EQUIFLO INBOARD FUEL SYSTEM		
	AUXILIARY FUEL SUPPLY AND RETURN PORTS LOCATED ON LH FUEL TANK		
	HIGH TEMPERATURE REINFORCED NYLON FUEL LINE		
	FUEL COOLER	10	

	Description	Weight Front	Weight Rear
Tires			
	MICHELIN XZY-3 425/65R22.5 20 PLY RADIAL FRONT TIRES	196	
	MICHELIN X MULTI D 11R22.5 16 PLY RADIAL REAR TIRES		120
Hubs			
	CONMET PRESET PLUS PREMIUM IRON FRONT HUBS		
	CONMET PRESET PLUS PREMIUM IRON REAR HUBS		
Wheels			
	ACCURIDE 29374A 22.5X12.25 10-HUB PILOT 4.75 INSET 10-HAND ALUMINUM DISC FRONT WHEELS	-8	
	ACCURIDE 43644 ACCU-LITE 22.5X8.25 10-HUB PILOT ALUMINUM DISC REAR WHEELS		-256
	FRONT WHEEL MOUNTING NUTS		
	REAR WHEEL MOUNTING NUTS		
Cab Exterior			
	114 INCH BBC FLAT ROOF ALUMINUM CONVENTIONAL CAB		
	AIR CAB MOUNTING		
	NONREMOVABLE BUGSCREEN MOUNTED BEHIND GRILLE		
	FRONT FENDERS		
	3-1/2 INCH FENDER EXTENSIONS	15	
	LH AND RH GRAB HANDLES		
	BRIGHT FINISH RADIATOR SHELL/HOOD BEZEL		
	STATIONARY BLACK GRILLE WITH BRIGHT ACCENTS		
	CHROME HOOD MOUNTED AIR INTAKE GRILLE		
	FIBERGLASS HOOD WITH ACCESS HATCHES	10	
	SINGLE 14 INCH ROUND HADLEY AIR HORN UNDER LH DECK		
	SINGLE ELECTRIC HORN		
	SINGLE HORN SHIELD		
	REAR LICENSE PLATE MOUNT END OF FRAME		
	HALOGEN COMPOSITE HEADLAMPS WITH BRIGHT BEZELS		
	LED AERODYNAMIC MARKER LIGHTS		
	DAYTIME RUNNING LIGHTS		
	GROTE #54332 LED STOP/TAIL/TURN LIGHTS GROMMET MOUNTED WITH SEPARATE GROTE #62401 LED BACKUP LIGHTS		
	STANDARD FRONT TURN SIGNAL LAMPS		

	Description	Weight Front	Weight Rear
	DUAL WEST COAST BRIGHT FINISH HEATED MIRRORS WITH LH AND RH REMOTE		
	DOOR MOUNTED MIRRORS		
	102 INCH EQUIPMENT WIDTH		
	LH AND RH 8 INCH BRIGHT FINISH CONVEX MIRRORS MOUNTED UNDER PRIMARY MIRRORS		
	STANDARD SIDE/REAR REFLECTORS		
	RH AFTERTREATMENT SYSTEM CAB ACCESS WITH PLAIN DIAMOND PLATE COVER		
	63X14 INCH TINTED REAR WINDOW		
	TINTED DOOR GLASS LH AND RH WITH TINTED NON-OPERATING WING WINDOWS		
	RH AND LH ELECTRIC POWERED WINDOWS	4	4
	1-PIECE SOLAR GREEN GLASS WINDSHELD		
	8 LITER (2 GAL) WINDSHIELD WASHER RESERVOIR, CAB MOUNTED, WITHOUT FLUID LEVEL INDICATOR		
Cab Interior			
	RUGGED TRIM PACKAGE		
	GRAY & CARBON VINYL INTERIOR "RUGGED"		
	CARBON WITH PREMIUM GUNMETAL ACCENT (RUGGED)		
	MOLDED PLASTIC DOOR PANEL		
	MOLDED PLASTIC DOOR PANEL		
	BLACK MATS WITH SINGLE INSULATION		
	(1) DUAL USB CHARGING OUTLET, (1) LIGHTER OUTLET AND ASH TRAY		
	FORWARD ROOF MOUNTED CONSOLE		
	LH AND RH DOOR STORAGE POCKETS INTEGRATED INTO MOLDED DOOR PANELS		
	DIGITAL ALARM CLOCK IN DRIVER DISPLAY		
	(2) CUP HOLDERS LH AND RH DASH		
	M2/SD DASH		
	HEATER, DEFROSTER AND AIR CONDITIONER		
	STANDARD HVAC DUCTING		
	MAIN HVAC CONTROLS WITH RECIRCULATION SWITCH		
	STANDARD HEATER PLUMBING		
	VALEO HEAVY DUTY A/C REFRIGERANT COMPRESSOR		
	BINARY CONTROL, R-134A		
	STANDARD INSULATION		
	SOLID-STATE CIRCUIT PROTECTION AND FUSES		
	12V NEGATIVE GROUND ELECTRICAL SYSTEM		

	Description	Weight Front	Weight Rear
	STANDARD LED CAB LIGHTING		
	REMOTE KEYLESS ENTRY AND 2 TRANSMITTERS	2	
	DOOR LOCKS AND IGNITION SWITCH KEYED THE SAME		
	KEY QUANTITY OF 4		
	LH AND RH ELECTRIC DOOR LOCKS		
	BASIC ISRINGHAUSEN HIGH BACK AIR SUSPENSION DRIVERS SEAT WTIH MECHANICAL LUMBAR AND INTEGRATED CUSHION EXTENSION	30	
	BASIC ISRINGHAUSEN HIGH BACK AIR SUSPENSION PASSENGER SEAT WTIH MECHANICAL LUMBAR AND INTEGRATED CUSHION EXTENSION	25	10
	DUAL DRIVER SEAT ARMRESTS AND INBOARD PASSENGER SEAT ARMREST	6	
	LH AND RH INTEGRAL DOOR PANEL ARMRESTS		
	VINYL WITH VINYL INSERT DRIVER SEAT		
	VINYL WITH VINYL INSERT PASSENGER SEAT		
	BLACK SEAT BELTS		
	ADJUSTABLE TILT AND TELESCOPING STEERING COLUMN	10	
	4-SPOKE 18 INCH (450MM) LEATHER WRAPPED STEERING WHEEL WITH CHROME SWITCH BEZELS		
	DRIVER AND PASSENGER INTERIOR SUN VISORS		
Instruments & Controls			
	DIGITAL PANEL LAMP DIMMER SWITCH IN DRIVER DISPLAY		
	ELECTRONIC ACCELERATOR CONTROL		
	NO INSTRUMENT PANEL-DRIVER		
	FULLY CONFIGURABLE CENTER INSTRUMENT PANELS		
	ENGINE REMOTE INTERFACE WITH PARK BRAKE AND NEUTRAL INTERLOCKS		
	BRIGHT ARGENT FINISH GAUGE BEZELS		
	LOW AIR PRESSURE INDICATOR LIGHT AND AUDIBLE ALARM		
	DUAL NEEDLE PRIMARY AND SECONDARY AIR PRESSURE GAUGE		
	DASH MOUNTED AIR RESTRICTION INDICATOR WITH GRADUATIONS		
	87 DECIBELS TO 112 DECIBELS AUTOMATIC SELF-ADJUSTING BACKUP ALARM		3
	ELECTRONIC CRUISE CONTROL WITH CONTROLS ON STEERING WHEEL SPOKES		

Description	Weight Front	Weight Rear
KEY OPERATED IGNITION SWITCH AND INTEGRAL START POSITION; 4 POSITION OFF/RUN/START/ACCESSORY		
MANUAL REMOTE ENGINE STOP/START WITH PTO RE-ENGAGE		
PREMIUM INSTRUMENT CLUSTER WITH 5.0 INCH TFT COLOR DISPLAY		
HEAVY DUTY ONBOARD DIAGNOSTICS INTERFACE CONNECTOR LOCATED BELOW LH DASH		
2 INCH ELECTRIC FUEL GAUGE		
ENGINE REMOTE INTERFACE WITH MULTIPLE SET SPEEDS		
QUICKFIT POWERTRAIN INTERFACE CONNECTOR UNDER CAB WITH CAPS		
QUICKFIT PROGRAMMABLE INTERFACE CONNECTOR(S) UNDER CAB WITH CAP		
ENGINE REMOTE INTERFACE CONNECTOR AT POWERTRAIN INTERFACE CONNECTOR		
ELECTRICAL ENGINE COOLANT TEMPERATURE GAUGE		
2 INCH TRANSMISSION OIL TEMPERATURE GAUGE		
ELECTRONIC OUTSIDE TEMPERATURE SENSOR DISPLAY IN DRIVER MESSAGE CENTER		
ENGINE AND TRIP HOUR METERS INTEGRAL WITHIN DRIVER DISPLAY		
10 AMP FUSED BEACON LT PRE-WIRE THROUGH MIRRORS W/O RELAY		
PTO CONTROLS FOR ENHANCED VEHICLE ELECTRIC/ELECTRONIC ARCHITECTURE		
ELECTRIC ENGINE OIL PRESSURE GAUGE		
CENTER OVERHEAD INSTRUMENT PANEL BLANK		
QUICKFIT PROGRAMMABLE INTERFACE MODULE	10	
AM/FM/WB WORLD TUNER RADIO WITH BLUETOOTH, USB AND AUXILIARY INPUTS, J1939	10	
DASH MOUNTED RADIO		
(2) RADIO SPEAKERS IN CAB		
AM/FM ANTENNA MOUNTED ON FORWARD LH ROOF		
STANDARD RADIO WIRING WITH STEERING WHEEL CONTROLS		
ELECTRONIC MPH SPEEDOMETER WITH SECONDARY KPH SCALE, WITHOUT ODOMETER		
STANDARD VEHICLE SPEED SENSOR		

	Description	Weight Front	Weight Rear
	ELECTRONIC 3000 RPM TACHOMETER		
	DETROIT CONNECT PLATFORM HARDWARE		
	3 YEARS DAIMLER CONNECTIVITY BASE PACKAGE (FEATURES VARY BY MODEL) POWERED BY DETROIT CONNECT		
	TMC RP1226 ACCESSORY CONNECTOR LOCATED BEHIND PASSENGER SIDE REMOVEABLE DASH PANEL		
	IGNITION SWITCH CONTROLLED ENGINE STOP		
	TWO EXTRA HARDWIRED SWITCHES IN DASH, ROUTE TO BETWEEN SEATS, CAPPED		
	HARDWIRE SWITCH #1,ON/OFF MOMENTARY, 20 AMPS IGNITION POWER		
	HARDWIRE SWITCH #2,ON/OFF MOMENTARY, 20 AMPS IGNITION POWER		
	PRE-TRIP INSPECTION FEATURE FOR EXTERIOR LAMPS ONLY		
	(1) OVERHEAD MOUNTED LANYARD CONTROL FOR DRIVER AIR HORN		
	DIGITAL VOLTAGE DISPLAY INTEGRAL WITH DRIVER DISPLAY		
	SINGLE ELECTRIC WINDSHIELD WIPER MOTOR WITH DELAY		
	ROTARY HEADLAMP SWITCH, MARKER LIGHTS/HEADLIGHTS SWITCH WITH PULL OUT FOR OPTIONAL FOG/ROAD LAMPS		
	ONE VALVE PARKING BRAKE SYSTEM WITH DASH VALVE CONTROL AUTONEUTRAL AND WARNING INDICATOR		
	SELF CANCELING TURN SIGNAL SWITCH WITH DIMMER, HEADLAMP FLASH, WASH/WIPE/INTERMITTENT		
	INTEGRAL ELECTRONIC TURN SIGNAL FLASHER WITH 40 AMP (20 AMP PER SIDE) TRAILER LAMP CAPACITY		
Design			
	PAINT: ONE SOLID COLOR		
Color			
	CAB COLOR A: L0006EY WHITE ELITE EY		
	BLACK, HIGH SOLIDS POLYURETHANE CHASSIS PAINT		
	STANDARD E COAT/UNDERCOATING		
Certification / Compliance			
	U.S. FMVSS CERTIFICATION, EXCEPT SALES CABS AND GLIDER KITS		

TOTAL VEHICLE SUMMARY

Weight Summary

	Weight Front	Weight Rear	Total Weight
Factory Weight+	8513 lbs	8247 lbs	16760 lbs
Total Weight+	8513 lbs	8247 lbs	16760 lbs

Extended Warranty

TOWING: 2 YEARS/UNLIMITED MILES/KM EXTENDED TOWING
COVERAGE $750 CAP FEX APPLIES

(+) Weights shown are estimates only.
If weight is critical, contact Customer Application Engineering.

(***) All cost increases for major components (Engines, Transmissions, Axles, Front and Rear Tires) and government mandated requirements, tariffs, and raw material surcharges will be passed through and added to factory invoices.

SHIFT CHART

VEHICLE SPECIFICATIONS SUMMARY - SHIFT CHART

Model	114SD
Cab Size (829)	114 INCH BBC FLAT ROOF ALUMINUM CONVENTIONAL CAB
Desired Cruise Speed (mph)	65.0
Engine (101)	CUM L9 370 HP @ 2100 RPM; 2100 GOV RPM, 1250 LB-FT @ 1200 RPM
RPM at Peak Torque	1200
Governed RPM	2100
Transmission (342)	ALLISON 3000 RDS AUTOMATIC TRANSMISSION WITH PTO PROVISION
Gear Ratio: LL	N/A
Gear Ratio: L	N/A
Gear Ratio: 1	3.49
Gear Ratio: 2	1.86
Gear Ratio: 3	1.41
Gear Ratio: 4	1
Gear Ratio: 5	0.75
Gear Ratio: 6	0.65
Gear Ratio: 7	N/A
Gear Ratio: 8	N/A
Gear Ratio: 9	N/A
Gear Ratio: 10	N/A
Gear Ratio: 11	N/A
Gear Ratio: 12	N/A
Gear Ratio: 13	N/A
Gear Ratio: 14	N/A
Gear Ratio: 15	N/A
Gear Ratio: 16	N/A
Gear Ratio: 17	N/A
Gear Ratio: 18	N/A
Auxiliary Transmission (352)	NO AUXILIARY TRANSMISSION
Low Gear Ratio	N/A
High Gear Ratio	N/A
Transfer Case (373)	NO TRANSFER CASE
Low Gear Ratio	N/A
High Gear Ratio	N/A
Rear Axle (420)	RT-46-160 46,000# R-SERIES TANDEM REAR AXLE
Number of Speeds	1
Rear Axle Gear Ratio(s)	5.38 REAR AXLE RATIO
Rear Tires (094)	MICHELIN X MULTI D 11R22.5 16 PLY RADIAL REAR TIRES
Revolutions per Mile	494

TABLE SUMMARY - SHIFT CHART

Performance calculations are estimates only. If performance calculations are critical, please contact Customer Application Engineering.

STARTABILITY

VEHICLE SPECIFICATIONS SUMMARY - STARTABILITY

Model....114SD
Cab Size (829)....114 INCH BBC FLAT ROOF ALUMINUM CONVENTIONAL CAB
Expected Front Axle(s) Load (lbs)....20000.0
Expected Pusher Axle(s) Load (lbs)....0.0
Expected Rear Axle(s) Load (lbs)....46000.0
Expected Tag Axle(s) Load (lbs)....0.0
Expected GVW (lbs)....66000
Expected GCW (lbs)....0.0
Engine (101)....CUM L9 370 HP @ 2100 RPM; 2100 GOV RPM, 1250 LB-FT @ 1200 RPM
  Torque at Clutch Engagement (lbs-ft)....549
Transmission (342)....ALLISON 3000 RDS AUTOMATIC TRANSMISSION WITH PTO PROVISION
  Gear Ratio: Forward 1....3.49
  Gear Ratio: Forward 2....1.86
  Gear Ratio: Forward 3....1.41
  Gear Ratio: Reverse 1....5.03
  Gear Ratio: Reverse 2....N/A
  Gear Ratio: Reverse 3....N/A
Auxiliary Transmission (352)....NO AUXILIARY TRANSMISSION
  Low Gear Ratio....N/A
  High Gear Ratio....N/A
Transfer Case (373)....NO TRANSFER CASE
  Low Gear Ratio....N/A
  High Gear Ratio....N/A
Rear Axle (420)....RT-46-160 46,000# R-SERIES TANDEM REAR AXLE
  Number of Speeds....1
  Rear Axle Gear Ratio(s)....5.38 REAR AXLE RATIO
Rear Tires (094)....MICHELIN X MULTI D 11R22.5 16 PLY RADIAL REAR TIRES
  Revolutions per Mile....494
Vehicle Service (A85)....UTILITY/REPAIR/MAINTENANCE SERVICE
  Startability Factor....8
Terrain (AA5)....TERRAIN/DUTY: 100% (ALL) OF THE TIME, IN TRANSIT, IS SPENT ON PAVED ROADS
  Startability Factor....0
Most Severe Grade Expected (AB1)....MAXIMUM 8% EXPECTED GRADE
  Startability Factor....8
Road Surface (AB5).SMOOTH CONCRETE OR ASPHALT PAVEMENT - MOST SEVERE IN-TRANSIT (BETWEEN SITES) ROAD SURFACE
  Startability Factor....0
Suggested Torque Converter Stall Ratio....1.77

Performance calculations are estimates only. If performance calculations are critical, please contact Customer Application Engineering.

DIMENSIONS

VEHICLE SPECIFICATIONS SUMMARY - DIMENSIONS

Model.....114SD
Wheelbase (545) ..... 6700MM (264 INCH) WHEELBASE
Rear Frame Overhang (552).....2275MM (90 INCH) REAR FRAME OVERHANG
Fifth Wheel (578) .....NO FIFTH WHEEL
Mounting Location (577).....NO FIFTH WHEEL LOCATION
Maximum Forward Position (in).....0
Maximum Rearward Position (in) 0
Amount of Slide Travel (in).....0
Slide Increment (in).....0
Desired Slide Position (in).....0.0
Cab Size (829).....114 INCH BBC FLAT ROOF ALUMINUM CONVENTIONAL CAB
Sleeper (682)..... NO SLEEPER BOX/SLEEPERCAB
Exhaust System (016)..... RH OUTBOARD UNDER STEP MOUNTED HORIZONTAL AFTERTREATMENT SYSTEM ASSEMBLY WITH RH B-PILLAR MOUNTED VERTICAL TAILPIPE

TABLE SUMMARY - DIMENSIONS

Performance calculations are estimates only. If performance calculations are critical, please contact Customer Application Engineering.

SPEEDABILITY

VEHICLE SPECIFICATIONS SUMMARY - SPEEDABILITY

Model....114SD
Cab Size (829)....114 INCH BBC FLAT ROOF ALUMINUM CONVENTIONAL CAB
Desired Cruise Speed (mph)....65.0
Expected Front Axle(s) Load (lbs)....20000.0
Expected Pusher Axle(s) Load (lbs)....0.0
Expected Rear Axle(s) Load (lbs)....46000.0
Expected Tag Axle(s) Load (lbs)....0.0
Expected GVW (lbs)....66000
Expected GCW (lbs)....0.0
Engine (101)....CUM L9 370 HP @ 2100 RPM; 2100 GOV RPM, 1250 LB-FT @ 1200 RPM
- Governed RPM....2100
- HP at Governed RPM....370
- RPM at Max HP....2100
- Max HP....370
- HP at Governed RPM (High Torque)....370
- RPM at Max HP (High Torque)....2100
- Max HP (High Torque)....370
- Multi-torque....NO

Transmission (342)....ALLISON 3000 RDS AUTOMATIC TRANSMISSION WITH PTO PROVISION
Rear Axle (420)....RT-46-160 46,000# R-SERIES TANDEM REAR AXLE
- Number of Speeds....1
- Rear Axle Gear Ratio(s)....5.38 REAR AXLE RATIO

Rear Tires (094)....MICHELIN X MULTI D 11R22.5 16 PLY RADIAL REAR TIRES
- Revolutions per Mile....494
- Trailer Width (in)....0.0

Trailer Height (ground to top) (ft)....10.0
Body Width (in)....96.0
Body Height (ground to top) (ft)....10.0
Roof Mounted Aero Device (784)....NO AIR SHIELD OR BRACKETS
Road Surface (AB5).SMOOTH CONCRETE OR ASPHALT PAVEMENT - MOST SEVERE IN-TRANSIT (BETWEEN SITES) ROAD SURFACE
Auxiliary Transmission (352)....NO AUXILIARY TRANSMISSION
- High Gear Ratio....N/A
- Low Gear Ratio....N/A

Transfer Case (373)....NO TRANSFER CASE
- High Gear Ratio....N/A
- Low Gear Ratio....N/A

TABLE SUMMARY - SPEEDABILITY

Performance calculations are estimates only. If performance calculations are critical, please contact Customer Application Engineering.

TURNING RADIUS

VEHICLE SPECIFICATIONS SUMMARY - TURNING RADIUS

Model	114SD
Cab Size (829)	114 INCH BBC FLAT ROOF ALUMINUM CONVENTIONAL CAB
Wheelbase (545)	6700MM (264 INCH) WHEELBASE
Front Tires (093)	MICHELIN XZY-3 425/65R22.5 20 PLY RADIAL FRONT TIRES
Width (in)	17.7
Front Axle (400)	DETROIT DA-F-20.0-5 20,000# FL1 71.0 KPI/3.74 DROP SINGLE FRONT AXLE
Kingpin Intersection (in)	71
Bumper (556)	OMIT FRONT BUMPER, CUSTOMER INSTALLED SPECIAL BUMPER, DOES NOT COMPLY WITH FMCSR 393.203
Width (in)	96
Bumper Miter to Front Axle (in)	49.394
Primary Steering Location (003)	LH PRIMARY STEERING LOCATION
Steering Gear (536)	TRW THP-60 POWER STEERING WITH RCH45 AUXILIARY GEAR
Dual Steering Gear	RCH45
Ram	NONE
Rear Axle (420)	RT-46-160 46,000# R-SERIES TANDEM REAR AXLE
Axle Spacing (624)	52 INCH AXLE SPACING

Performance calculations are estimates only. If performance calculations are critical, please contact Customer Application Engineering.

GRADEABILITY

VEHICLE SPECIFICATIONS SUMMARY - GRADEABILITY

Model 114SD
Cab Size (829) ..... 114 INCH BBC FLAT ROOF ALUMINUM CONVENTIONAL CAB
Desired Gradeability at Peak Torque (%) 0.5
Desired Gradeability at Cruise Speed(%) 0.3
Desired Cruise Speed (mph) 65.0
Expected Front Axle(s) Load (lbs) 20000.0
Expected Pusher Axle(s) Load (lbs) 0.0
Expected Rear Axle(s) Load (lbs) 46000.0
Expected Tag Axle(s) Load (lbs) 0.0
Expected GVW (lbs) 66000
Expected GCW (lbs) 0.0
Engine (101) ..... CUM L9 370 HP @ 2100 RPM; 2100 GOV RPM, 1250 LB-FT @ 1200 RPM
- Peak Torque (lbs-ft) 1250
- RPM at Peak Torque 1200
- Peak Torque (Multi-torque High) (lbs-ft) 1250
- RPM at Peak Torque (Multi-torque High) 1200
- Multi-torque ..... NO

Transmission (342) ..... ALLISON 3000 RDS AUTOMATIC TRANSMISSION WITH PTO PROVISION
Rear Axle (420) ..... RT-46-160 46,000# R-SERIES TANDEM REAR AXLE
- Number of Speeds 1
- Rear Axle Gear Ratio(s) ..... 5.38 REAR AXLE RATIO

Rear Tires (094) ..... MICHELIN X MULTI D 11R22.5 16 PLY RADIAL REAR TIRES
- Revolutions per Mile 494
- Trailer Width (in) 0.0

Trailer Height (ground to top) (ft) 10.0
Body Width (in) 96.0
Body Height (ground to top) (ft) 10.0
Roof Mounted Aero Device (784) ..... NO AIR SHIELD OR BRACKETS
Road Surface (AB5)SMOOTH CONCRETE OR ASPHALT PAVEMENT - MOST SEVERE IN-TRANSIT (BETWEEN SITES) ROAD SURFACE
Auxiliary Transmission (352) ..... NO AUXILIARY TRANSMISSION
- High Gear Ratio ..... N/A
- Low Gear Ratio ..... N/A

Transfer Case (373) ..... NO TRANSFER CASE
- High Gear Ratio ..... N/A
- Low Gear Ratio ..... N/A

Trailer Configuration (AA2) ..... NO TRAILER SPECIFIED

TABLE SUMMARY - GRADEABILITY

Performance calculations are estimates only. If performance calculations are critical, please contact Customer Application Engineering.

COMPLY, Indicate: Yes or No

GENERAL: Yes (No)

The machine can remove stones, grit, grease, sludge, and other debris from sanitary sewer and/or storm drain lines by the flushing action of high-pressure water. The machine will be equipped with a self-contained, non-corrosive, non-metallic water tank supply as the water source for the high-pressure pump. The machine is capable of being operated by one man, with all operating controls for high-pressure water pump, and hose reel located at the front of the machine for safety. The machine shall be dual engine design with a total of 510HP to reduce wear on the chassis engine by driving the water pump with the auxiliary engine. The machine used a 2025 Freightliner 114SD chassis for these specifications.

DEBRIS BODY: Yes (No)

Debris storage body has a minimum usable liquid capacity of 11 cubic yards. The debris body shall be round for maximum strength and constructed of 3/16-inch ASTM A242 Corten A steel for enhanced corrosion resistance.

The rear door shall be flat (industrial style} and flanged for maximum strength. It shall be fully opened to 90 degrees by means of 2 hydraulic cylinders and hinged at the top with low profile and adjustable style hinges. There shall be a 6" diameter liquid drain knife valve and screen weldment inside for retaining solids while removing excess liquids. The drain will have 10 feet of 6" lay flat hose. The debris body shall be supplied with a debris deflector shield mounted at the inlet of the vacuum port. The debris deflector shield shall deflect material from the rear door to prevent the door from being damaged by debris entering the tank. A rear door safety prop shall be provided.

For ease of maintenance there shall be no hydraulic components located inside the debris body or rear door.

The door locking system shall have four (4) externally mounted wedge-style door locks that lock hydraulically. The hydraulic locks shall be operated by one (1) sequential control and 2 hydraulic cylinders to allow the operator to control the discharging of the liquids, from the debris tank, by cracking open the door slowly prior to dumping the debris.

Dual steel weldments with stainless steel screen 8" x 28" each providing up to 1200 square inches of added filtration for the vacuum system shall be provided inside the debris tank. These weldments shall be removable and require no cutting or welding.

A double acting power up/power down hydraulic scissors lift mechanism will be provided to raise the body to a minimum 50-degree angle. The scissors lift mechanism shall be designed to support a minimum of 24 inches of the debris tank width to provide stability and when dumping on uneven ground. The lift capacity of hydraulic scissors lift cylinder is 56,000 lbs.

Dump controls are located on curbside mid-ship of the unit, well forward of the dumping area for operator safety. A manual override system is provided in case of system failure.

The debris body has a five-year warranty. A copy of the manufacturer's warranty statement shall be enclosed with the bid. If pro-rated so state: Lifetime

An internal polyethylene float device with external indicator is supplied to show when the body is loaded to capacity.

AUTOMATIC VACUUM BREAKER: Yes (No)

The automatic vacuum breaker assembly is located inside the body.

The automatic vacuum breaker assembly shall be controlled by an electric over hydraulic circuit.

The entire system shall be replaceable via a bolt on assembly.

The assembly shall consist of a 12" inlet and two 8" ports that provide air flow to the vacuum system.

A full indication activates an automatic vacuum breaker shut down system that completely shuts down 100 percent of the airflow to the vacuum system to prevent overfilling and wastewater

discharge into the atmosphere.
The vacuum breaker system is automatically activated (closed) when the parking brake system is released to eliminate carryover during transit.
The system is controlled/activated, at the front hose reel control station. This enables the operator to pick up large debris with boom and place debris on the road surface. This system can be used for safety in the event the suction must be shut off in case of an emergency.

CENTRIFUGAL COMPRESSOR (FAN DESIGN):

Yes (No)

The centrifugal vacuum compressor shall be of 3-stage construction (i.e. 3-27" minimum diameter fans in tandem). The centrifugal compressor (fans) shall be constructed of Carten steel.
The compressor's outer housing shall be spun from one piece of 3/16" steel for strength and provide proper airflow in operation.
The vacuum system shall operate independent of the high-pressure water system.
The compressor is driven by the chassis engine via a closed loop hydrostatic system using a variable piston pump and motor.
This system shall include a heat exchanger for extreme ambient conditions and to maintain the pump suction oil temp at 160 deg. F. max. The heat exchanger shall be protected by a 30-micron filter and cold weather bypass valve. Hydrostatic loop filtration shall be accomplished by a 10 Beta micron return filter and a 10-micron Absolute (no bypass) charge filter.
To maximize long term durability by reducing the load on one side of the compressor, the compressor shaft shall extend through the compressor and shall be additional stabilized by using two high speed bearings, one at each side of the shaft. No exceptions will be allowed to this requirement.
A means of starting, stopping and varying the vacuum suction from operator station at the front of the machine is provided.
A centrifugal separator located in the inlet chamber to the fans with cleanout box is provided. The separator removes particles from the air stream, thus enabling the unit to vacuum wet or dry material. The separator is separate from the debris body. The centrifugal compressor (fan) system can produce 90% vacuum with no airflow. This feature allows material to be vacuumed under the water surface, i.e. lift stations, plugged manholes, etc.
Unit must be capable of vacuuming under water 16.6' (200") without air induction. A manometer/vacuum test may be required to demonstrate the system performance.
The centrifugal compressor fans have a 5-year replacement non-prorated warranty.

VACUUM PICK UP HOSE:

Yes (No)

Shall be front loading, attached at the front of the machine to provide ease of positioning the machine over the manhole, as well as afford maximum safety for the operator.
The 8" will be mounted on a boom that will provide a minimum of 18' vertical lift utilizing dual hydraulic cylinder and 230 degree of boom rotation powered hydraulically for non-interrupted smooth movement. Boom to have a lift capacity of 500 lbs. at the front bumper.
The boom will be powered by an electric over hydraulic system: up/down by dual lift cylinders. The right/left movements shall be hydraulic via worm gear rotation.
The boom shall hydraulically telescope a minimum of 10 ft. forward from the operator's station. The height of the boom shall not change while the boom is being telescoped. A manual override system shall be provided for right/left, and up/down functions in case of system failure.
Control of the boom is by means of a joystick control at the operator's station, requiring no cables at operator's feet for boom operation. A wireless remote control will be provided for Boom, Vacuum Breaker, Chassis Throttle, and Debris Body functions. A manual override system shall be provided for right/left, and up/down functions in case of system failure.
A boom coverage chart shall be provided showing the square footage of boom coverage.
8-inch diameter pipe extensions with clamps will be provided and carried on the truck as follows:

1 6-1/2' Catch Basin Nozzle

6' Aluminum Pipe Extension

1 5' Aluminum Pipe Extension

3' Aluminum Pipe Extension

WATER SUPPLY:

Yes (No)

The water tanks shall have a minimum usable capacity of 1300 U.S. gallons.
The water tanks shall be constructed of non-corrosive, non-metallic, durable, cross-linked polyethylene to eliminate rust, corrosion, and stress cracking.
The water tanks shall be mounted at and below the truck frame level to provide a low center of gravity for truck stability.
A 2-1/2-inch diameter x 25 feet long hydrant hose with hydrant wrench is supplied on the unit.
An anti-siphon fill device is installed on the unit.
Inspection ports shall be provided to fill or to add chemicals to the water system. A sight gauge to indicate water level is located within sight of the operator station. The water tanks are protected by a minimum of 11-gauge steel plating mounted below the water tanks for protection against road hazards when unit travels over the road, off the road or to landfills.
The water tanks carry a ten-year replacement warranty.

AUXILARY ENGINE (WATER PUMP DRIVE ENGINE):

Yes (No)

The auxiliary engine, John Deere Tier **4** final -140HP or approved equal, shall be used to drive the water pump. An electronic digital diagnostic and fault monitoring panel shall be mounted on the front of the unit at the operator's station and be able to display various engine operation conditions including but not limited to engine rpm, hours, coolant temp and oil pressure. A standard integrated safety shutdown system shall be provided in the engine ecu and will shut the engine down in the event of low oil pressure or excessive coolant temperature. The ignition system start stop switch will be located at the operator's station. The auxiliary engine shall be shrouded and have a hinged door on the driver's side of the unit. The engine oil dipstick shall be accessed from the ground level on the driver's side.

HIGH-PRESSURE WATER PUMP:

Yes (No)

The high-pressure water pump shall be rated to deliver smooth continuous pressure and flow through the entire flow range of the pump. The high pressure shall have smooth continuous flow for both the high-pressure system and the handgun system.
A continuous duty flow of 60 gpm. and 3,000 psi shall be provided.
High-pressure relief valves are provided for both the high-pressure system and handgun system.
The water pump operates independently of the vacuum system and is powered by the auxiliary engine via clutch less, direct dual powerband drive system.
The high-pressure water pump drive system carries a five-year replacement warranty. Warranty excludes the drive engine, i.e. auxiliary engine.
The water pump can be ran dry. Controls for starting and stopping the water pump and to vary the flow and pressure shall be at the front hose reel operator's station.
The high-pressure water pump is equipped with a cold weather drain valve. The valve allows the operator to completely drain the high-pressure pump.

HOSE REEL ASSEMBLY:

Yes (No)

The hose reel assembly is mounted on the front of the vehicle. The hose reel shall have a minimum of 30" inside diameter with a capacity of 800' x 1" hose. The hose reel is hydraulically powered in both directions by means of a double chain and sprocket drive. The controls for operating the motor have a flow control device to regulate the rotational speed of the reel in both directions. All hydraulic hoses are behind a steel housing to protect operator from hydraulic oil if a hose fails. The hydraulic motor, chain, and sprockets have a protective cover or are mounted on the radiator side of the hose reel for operator safety. The hose reel articulates 180 degrees to

the driver's side allowing operator to work in any position through this arc. This allows greater flexibility in truck placement for manholes located in tough areas and provides greater safety to the operator. Reel extends beyond the width of unit for greater flexibility for positioning reel over offset manholes, catch basins, etc. A hydraulically controlled outrigger leg is supplied that comes in contact with the ground at any one position. A warning light is located in the cab to warn the operator that the outrigger leg is not in its transported position prior to moving the unit. A manual bypass system for the hose reel assembly is provided to manually pull the reel assembly away from its transported position. This feature allows operators to check fluids without starting engines.

JET HOSE: (Yes) No

800' x 1" jet rodder hose will be supplied rated for 3000 psi working pressure and 7500 psi burst pressure. A heavy-duty hose guide with 25' of nylon rope will be provided.
Nozzles shall be hardened steel with replaceable ceramic orifices as follows: 1) Chisel head penetrator & 1) standard sanitary.

MANHOLE CLEANING WATER SYSTEM (HANDGUN}: (Yes) No

The high-pressure pump and independent water tank assembly supplied shall be used for manhole cleaning. A smooth continuous flow of 20 gpm. and pressure of 600 psi shall be provided for ease of operation. A handgun pressure relief valve set at 600 psi shall be provided. One full functioning handgun with on/off hand control, replaceable nozzle tip, 12-inch extension, adjustable spray and 50' x 1/2" hose with retractable reel will be provided.
The handgun will attach to the system via a quick couple connection at the curbside of the unit. To avoid being coiled at the operator's station a handgun holder will be provided at the front bumper.

HYDRAULIC SYSTEM AND LUBRICATION: Yes (No)

The hydraulic system has a 55-gallon capacity.

The hydraulic system shall incorporate a main shut off valve in case of hydraulic failure.
The hydraulic system shall incorporate hydraulic pressure relief valves and pressure gauges for ease of trouble shooting and maintenance.

The unit is equipped on the passenger side, mid-section of the module, a permanent weatherproof white vinyl lubrication chart that points out lubrication points on the module and specifies what type of lubrication and hydraulic fluids are required. The chart also specifies the frequency of each lubrication point.

Remote plumbed grease fittings are provided for the vacuum compressor, boom rotation, and water pump drive areas.

ACCESSORIES: (Yes) No

A minimum twelve (12) month manufacturer's guarantee on the unit will be provided. A storage box behind the cab will be provided, 16" x 42" x 96"

1 Debris body power flush out system

1 Rear mounted hydraulic pump off system, 350 gpm w/20' lay flat hose

Rear splash guard, tank mounted (2 - 1O O'clock Position)

1 Air purge system

1 1/4 turn ball valve water drain

Variable flow valve

Lazy Susan style, deck mounted pipe rack, holds 5 pipe

Hose footage counter, standard - drivers side

Rear mounted tow hooks

Auxiliary engine remote oil drain

Remote boom grease zerk assembly, (accessible from ground level)

Remote debris tank grease zerk assembly (accessible from ground level)

1O' leader hose

Water pump remote oil drain

Built in Body Prop - Rear Boom Support Mounted

Move pump off to front, curbside of debris tank

Traffic Camera with Color Monitor (Camera placement must be picked)

Rear traffic camera

Front hose reel camera - to view front of hose reel area

Cone racks, between bogies on tandem units

Hydro excavation Package Includes: 50-foot handgun hose reel with 1/2" hose, 72" 1/2" schedule 80 lance

with single forward spray nozzle, Storage tubes for lances, Heavy duty unloader valve, Main control ball valve, Variable flow valve

Wireless Remote Control for boom functions and debris tank functions

OMSI Transfer Case ilo front engine PTO VACUUM DRIVE

LIGHTING: (Yes) No

The entire module electrical system is vapor sealed to eliminate moisture damage. All wiring is color-coded, labeled, and run in sealed terminal enclosures.
All module circuits are protected by circuit breakers.
Clearance lights and reflectors are furnished in accordance with D.O.T. requirements.

LED strobe light with limb guard, rear debris tank door mounted - Whelen L21HAP LED Beacon with Whelen BGH Branch Guard

4 LED strobes - (2) front bumper, (2) rear bumper - Whelen 50A03ZCR - Amber

LED Arrow stick - Whelen TAM85 Traffic Advisor

LED Boom Mounted Flood Light - Whelen NP6BB Worklight

LED Rear Mounted Flood lights -Whelen NP6BB Worklight

PAINT: (Yes) No

Unit paint surfaces are shot blasted, Ambershield zinc primed, sanded, and sealed with epoxy primer. The hose reel spool, debris tank and sides of mainframe painted with PPG Delfleet single stage polyurethane paint. All other paintable surfaces coated in PPG Ambershield textured black paint.
Unit shall have reflective White or Blue body and boom stripes.
Chassis shall be painted manufacturers standard white with DuPont Imron 5000 polyurethane paint.

TRAINING AND MANUALS: (Yes) No

Operator training will be conducted by a factory-trained representative for a minimum of one day at the time of delivery. 1 copy of the operating and maintenance manual for the sewer cleaner module shall be provided, on a USB flash drive, upon unit delivery.

MOUNTING AND DELIVERY: (Yes) No

The unit described will be mounted on a truck chassis acceptable to the body manufacturer at the factory of the body manufacturer.

EXCEPTIONS AND DEVIATIONS: (Yes) No

Bidder shall fully explain every variance, exception, and or deviation to the bid specifications. Additional sheets/lines may be added if required

General: Single Engine Design

Debris Body: 12 yds (exceeds), 2 wedge-style door locks w/ 3 cylinders, 1 cylinder for raising body, lifetime warranty, oval shaped

Vacuum Breaker: Automatic vacuum relief valves that can also be manually activated from operator station, Automatic vacuum shutdown system with stainless steel floatball

Boom Hose: 8' 6" telescoping max

Water Supply: 1500 gallons (exceeds) - Aluminum (Lifetime Warranty)

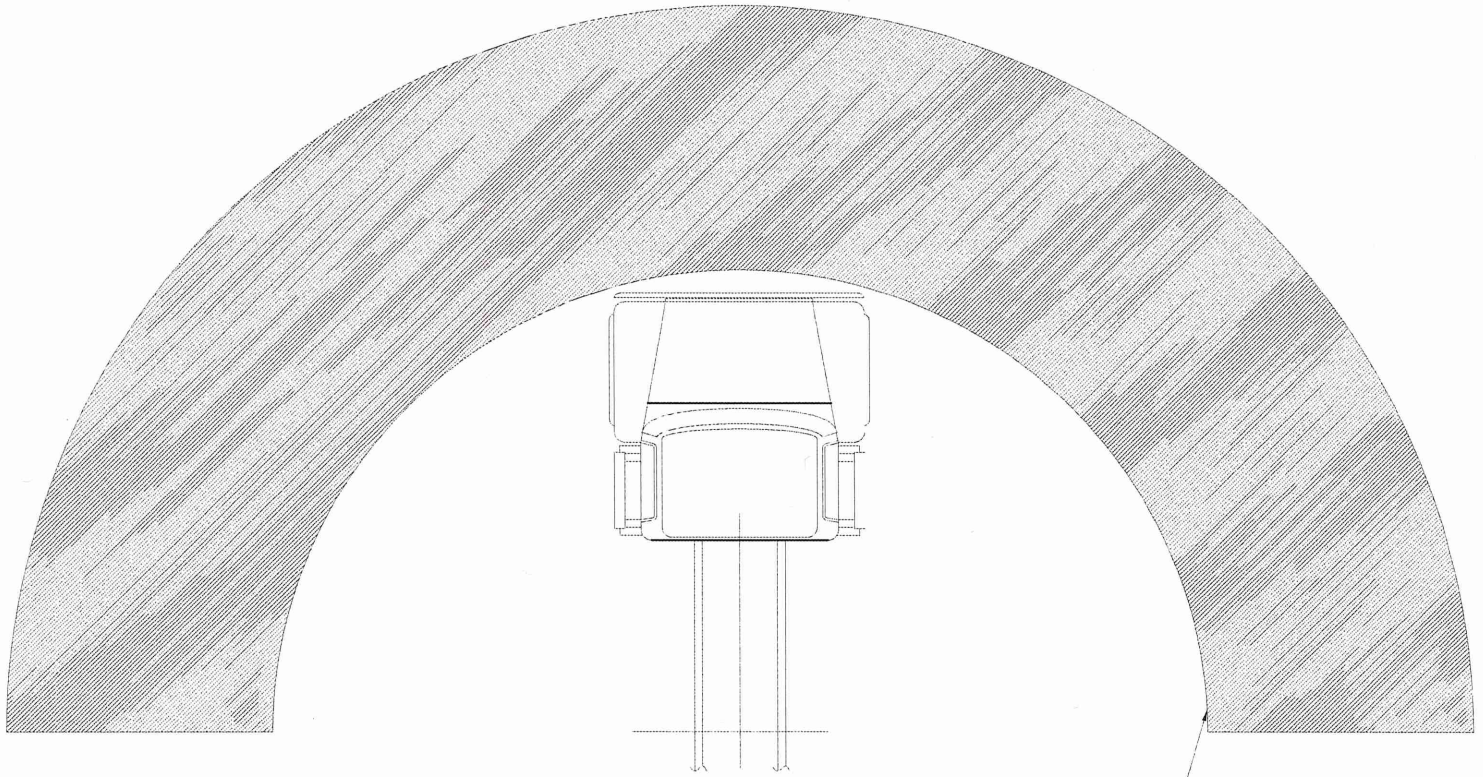
Auxilary Engine: Single Engine Design

Water Pump: 80 gpm @ 2,500 psi

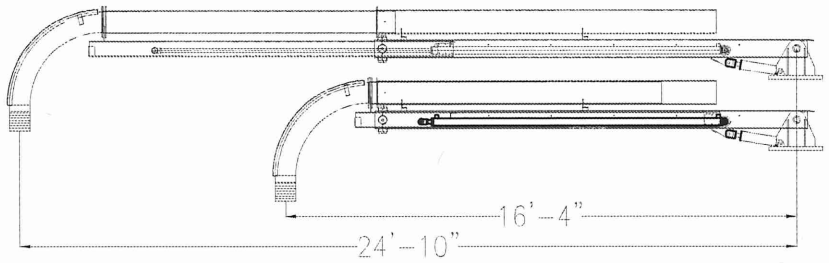
Hose Reel: No chain & sprocket (Pillow Block bearing, direct drive), reel never leaves centerline of truck

Hydraulic System: 40 gallon reservoir

DRAWING NUMBER
AJV00188



BOOM COVERAGE
AREA – 593 SQ. FT.



UNLESS OTHERWISE NOTED THIS IS A AUTOCAD CONTROLLED DOCUMENT.

SPECIFICATIONS
1) DIMENSIONING AND TOLERANCING PER ASME Y14.5M–1994
2) ALL WELDING TO STRUCTURAL WELD CODE–STEEL ANSI/AWS D1.1
3) ALL DIMENSIONAL TOLERANCES ARE ± .060
4) MACHINE TOLERANCE TO BE ± .015
5) ALL ANGLES ± 1°
6) MACH. SURF. 125 MAX

NEXT ASSY

DRAWN BY:	D.D
DATE:	05–07–08
CHK'D BY:	
DATE:	
ER NO.:	
CAGE CODE:	
SIMILAR TO	

GRADALL

TITLE: BOOM COVERAGE CHART
LONG VERSION

MAT'L:

SIZE D | DWG NO. AJV00188 | REV

SCALE: | EST WT. | SHEET 1 OF 1

VACALL

AllJetVac

Combination Jet/Vac Sewer Cleaners
with More Standard Advantages

OPERATING PERFORMANCE AND EFFICIENCY...

TELESCOPING BOOM PUTS VACUUM FORCES WHERE THEY'RE NEEDED

The standard AllJetVac boom telescopes, lifts and swings with proportional controls, putting the vacuum power exactly where you need it. An 8-inch tube moves debris efficiently from nozzle to debris tank.

CYCLONE SEPARATOR COLLECTS DEBRIS

Dust and mist-laden material is spun out in the cyclone separator and collected in a drop box below. Cleanout doors are located above and below the cyclone.

OPTIONAL LIFETIME WARRANTIES ASSURE DEBRIS TANK DURABILITY

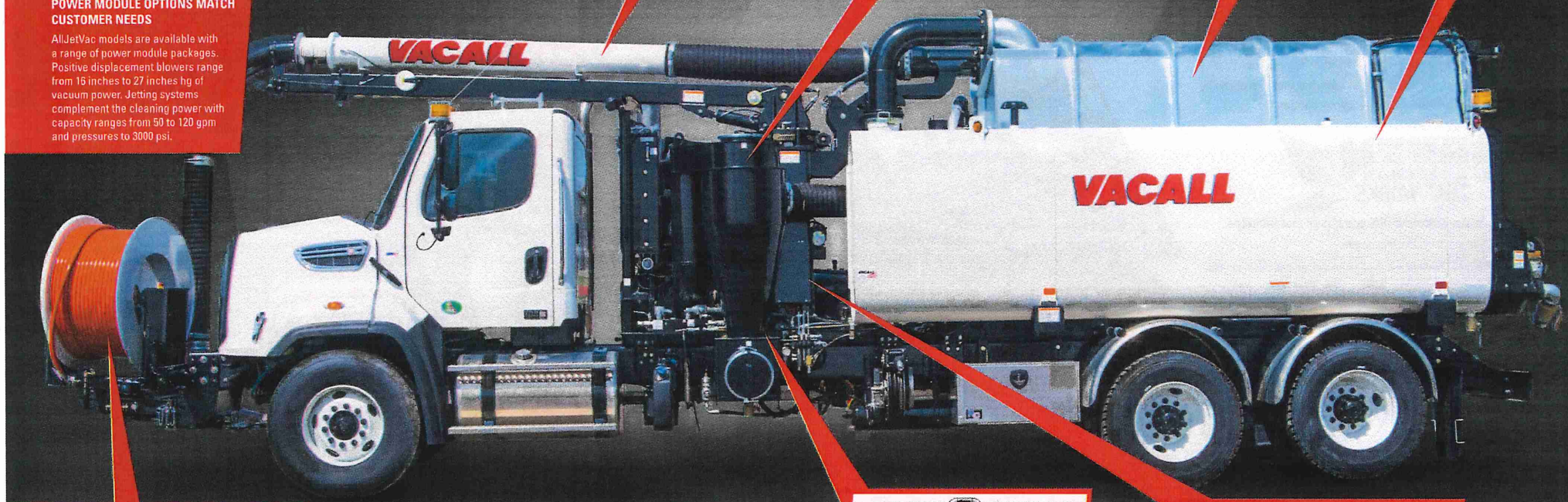
AllJetVac debris tanks are available with an optional galvanized finish that includes a lifetime warranty. With a standard powder coat paint finish both inside and out, the tanks maintain a good, durable finish for many years. Tanks are oval-shaped with cylindrical sides, top and bottom, minimizing load shifting that is a problem with round tanks. Tanks also are mounted low to create a lower center of gravity. An optional flush system can be used to clean the entire interior of the tank without hand-spraying.

WATER TANKS HAVE LIFETIME WARRANTIES

Fabricated with high quality aluminum for extra strength, water tanks have interior baffles and are mounted above the rear fenders to avoid damage from road debris. The tank position also creates a positive head pressure to the water pump inlet.

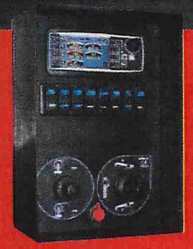
POWER MODULE OPTIONS MATCH CUSTOMER NEEDS

AllJetVac models are available with a range of power module packages. Positive displacement blowers range from 15 inches to 27 inches hg of vacuum power. Jetting systems complement the cleaning power with capacity ranges from 50 to 120 gpm and pressures to 3000 psi.



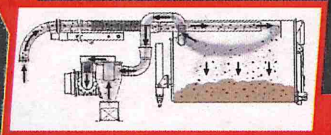
HOSE REEL ROTATES INTO POSITION

An axial pivoting hose reel is easily fixed into multiple positions for efficient operation. The unique, heavy-duty direct reel drive system consists of a rugged planetary gear box, driven by a hydraulic motor that incorporates a cross-port relief valve to cushion the system. With a dual latching system, there are no pin alignment problems common to other machines. Models are available with the operator station at the front or rear of the chassis. Popular options include auto level wind, Lexan® shields and hose tensioner.



ALLSMARTFLOW™ INTELLIGENT CONTROLS ARE STANDARD

Patented CAN bus smart controls – the AllSmartFlow system – is standard on AllJetVac models and protected by a cabinet to avoid damage common to other models' levers and joysticks. A programmable color LCD display monitors engine performance, water flow and vacuum functions. Using a wired or wireless pendant, proportional controls allow the operator to command machine functions from an optimum vantage point.



HIGHLY EFFICIENT FILTRATION SYSTEM

The unique Vacall multi-stage vacuum filtration system has a simplified design to reduce maintenance, extend performance and increase working life. At the rear of the debris body, material is separated by a deflector plate. Remaining material particles and moisture are removed by a cyclone separator. The filtered air then passes through the blower, the silencer and the exhaust.

HIGH PRESSURE PUMP

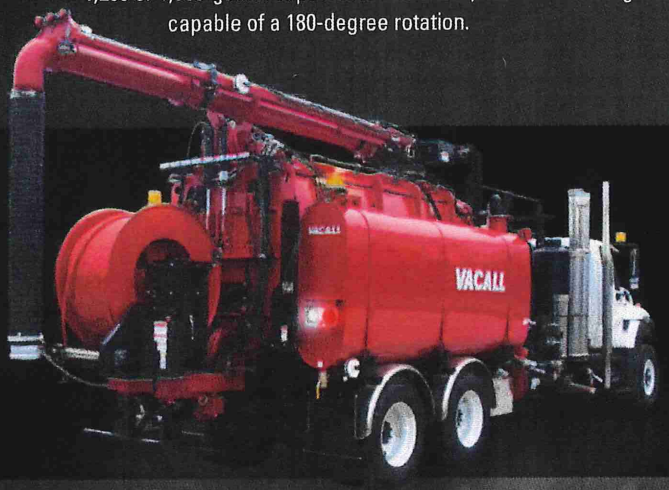
The plunger-style triplex pump delivers a smooth, continuous flow of water without the need for an accumulator. The pump is capable of flows from 50 to 120 gpm and features run-dry technology.

...DESIGNED INTO EVERY DETAIL

CHOOSE THE MODEL AND FEATURES YOU WANT

P Series

AllJetVac P Series combination sewer cleaner models use a positive displacement blower system that sets the industry standard for high performance and reliability. A pivoting hose and reel are mounted in the conventional location – at the front of the unit – where operators efficiently operate the vacuum and jetting forces to open clogged sewer lines and remove debris. Debris tank capacities range from six to 12 cubic yards while water tanks can have 1,000, 1,200 or 1,500-gallon capacities. The 8-foot, 6-inch extending boom is capable of a 180-degree rotation.



R Series

The hose and reel assembly is located at the rear on the AllJetVac R Series models, accommodating an operator preference for a quieter operation. Industry-leading vacuum and jetting forces clean and maintain sewer lines using a positive displacement blower design, efficiently controlled with the standard AllSmartFlow CAN bus system. Debris tank capacities range from 6 to 12 cubic yards while water tanks can have 1,000, 1,200 or 1,500-gallon capacities. The 8-foot, 6-inch extending boom is capable of a 270-degree rotation.

High Dump AJV

Equipped with an optional high dump system, these AllJetVac models allow the operator to raise the debris tank as much as 76 inches above ground level, and then shift it 21 inches to the back. Hydraulically operated, the high dump system enables an operator to dump material into dewatering or rolloff containers, helping to avoid spills or the need for dangerous ramps.

Built to last by Gradall

All Vacall machines are produced by Gradall Industries, Inc., with processes that meet ISO 9001-2008 standards. Located in New Philadelphia, Ohio, the Gradall manufacturing facilities encompass some 450,000 square feet with state-of-the-art features including robotic welding and powder-coat painting equipment. Before shipment, every Vacall machine undergoes rigorous testing to assure excellent machine quality and a long, reliable working life.

VACALL™

Gradall Industries, Inc. • 406 Mill Ave. SW, New Philadelphia, OH 44663
Phone 330-339-2211 • Toll-free 800-382-8302 • Fax 330-339-8468 • www.vacall.com

I MAKE AMERICA

GRADALL INDUSTRIES, INC
Where Ingenuity Works

ALAMO GROUP

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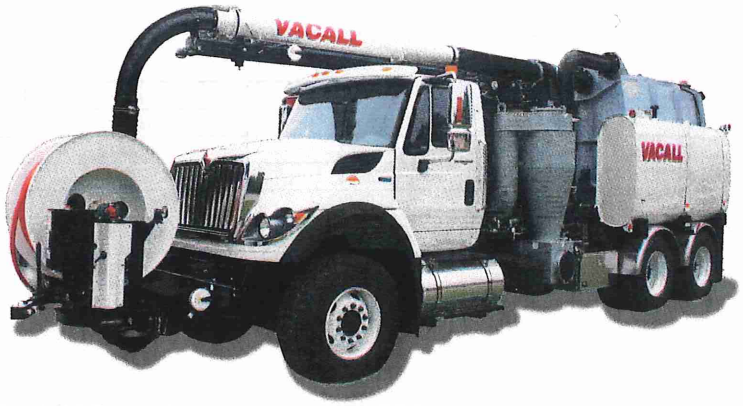
VACALL™

AllJetVac P Series



SPECIFICATIONS

BLOWER

Blower - Roots 824@16"; 18" Rotary lobe direct drive.
Drive - Direct - OMSI air-shift transfer case.
Speed - 2470 rpm.
Blower Vacuum - 16" hg standard: (217" h20).
Blower Airflow - 5200 CFM Free Air.

DEBRIS TANK

Volumetric Capacity - 6, 8, 10, 12 cu yd
Dump Angle - 42°.
Sides - ASTM A572 Grd 50 Carbon Steel - 1/4", (.250) x 3/8", (.375).
Construction - Oval shape, cylindrical sides, wrap-around gussets.
Lifitng - Hydraulic three-stage telescopic cylinder.
Tailgate - Heavy-duty Rear, full 90 °, hydraulically-opening, with dual positive-locking reverse angle wedges.
Debris Body Safety Prop - Manually-operated single prop located on hoist frame near rear axles.
Tailgate Safety Prop - Located outside, beside tailgate driver side.

CONTROLS

All Smart Flow Control - Enclosed cabinet control box containing 12 volt CAN bus boom control joystick recessed for protection. LCD color display to increase/decrease engine RPM, water pressure, vacuum. Emergency stop button, water pump and blower hour meter.
Wired pendant - Wired pendant with 12 proportional push buttons; 3-position rotary switch, latching emergency stop.

HYDRAULIC SYSTEM

Hydraulic Pump - Pressure-compensated piston pump.
Capacity - 40 Gallon.
Return Filter - 10 Micron.

BOOM

Diameter - 8".
Front Boom Reach - 25'.
Rotation - 180°.
Work Area - 552 Sq. Ft.
Telescoping - 8', 6".
Capacity - 1,000 Lbs.

WATER SYSTEM

Water Tank Construction - High-quality, fully-welded aluminum.
Water Tank Capacity - 1,000 or 1,500 Gallons.
Pump Type - Hydraulically-powered triplex plunger.
System Flow - Variable-flow 85gpm @ 2,000 rpm.
Hose Reel - 1" Diameter hose, 800' capacity, direct-drive reel, 230° rotation.
Catch Basin Cleaning - Side-mounted handgun.
Filter - Inlet suction strainer.

OPTIONS

Sludge Pump - 710 gpm @ 10' head pressure.
Lighting - Strobe, work, directional, corner strobes.
Toolboxes/Tube Racks - Optional Aluminum or Carbon Steel.
Lateral Cleaning Reel - 2-1/2" Y Strainer on fill.
Internal Tank Flush - Optional.
Emergency Hydraulics - Optional Electric 12VDC.
Galvanized Debris Tank - Optional.
Cold Weather Recirculation - Optional Electric 12VDC.
Remote Grease Manifolds - Optional.
Air Purge - Optional.
Empty Water/Full Debris Electronic De-rate
Wireless Remote
High Dump

License No. SV-2024-00138 2024-2026

DPS Code: S VA

Not Transferable
Valid Only at Address Below

Louisiana Motor Vehicle Commission

This Certifies that

Vacuum Truck Sales & Service, LLC
9236 Ashland Road
Gonzales, LA 70737
B.T. Steadman, Dealer-Operator

is duly licensed as a

Specialty Vehicle Dealer

of the following

Conversion(s): Curbtender Refuse Trucks, Curbtender Sweepers, Johnston Sweepers
Pac-Mac Refuse & Recycling Equ, Vacall

For the period ending May 31, 2026, unless license is sooner revoked.

In Witness whereof, **LOUISIANA MOTOR VEHICLE COMMISSION,** under and by virtue of the authority vested in it by the laws of the **State of Louisiana,** has caused this license to be issued with its seal imprinted hereon.

LOUISIANA MOTOR VEHICLE COMMISSSION
Dated June 1, 2024
Signed, Sealed and Attested

Issue Date: 06/28/2024

Executive Director

(To be prominently displayed in place of business)

LMVC-DL (R2/20)

License No. SV-2024-00092 2024-2026 Not Transferable

Louisiana Motor Vehicle Commission

This Certifies that

William Davis Taylor of Springfield, LA

has been licensed by this Commission as a

MOTOR VEHICLE SALESMAN, AUTHORIZED TO SELL SPECIALTY VEHICLES ONLY

Employed by Specialty Vehicle Dealer Licensee

SV-2024-00138

Vacuum Truck Sales & Service, LLC

9236 Ashland Road

Gonzales, LA 70737

pursuant to the laws of the State of Louisiana for the period ending May 31, 2026.

Louisiana Motor Vehicle Commission

Dated June 1, 2024

Executive Director

Issued 06/28/2024

NOTE: This Certificate is to be retained by the Employer. It is to be returned by the Employer to the Commission Office at 3017 Kingman Street, Metairie, LA 70006, within ten days of the termination of the Salesman's employment.

Termination Date:

Louisiana Motor Vehicle Commission

License No. SV-2024-00092 2024-2026

This is to Certify that

William Davis Taylor of Springfield, LA

has been duly licensed by this Commission as a

MOTOR VEHICLE SALESMAN,

AUTHORIZED TO SELL SPECIALTY VEHICLES ONLY

Employed by Specialty Vehicle Dealer Licensee

SV-2024-00138 Vacuum Truck Sales & Service, LLC

Gonzales, LA 70737

For the period ending 5/31/2026.

Louisiana Motor Vehicle Commission

Issued: 06/28/2024

Executive Director

Dated: 6/01/2024

(OVER)