

12-6-2018

CITY OF HATTIESBURG
200 FORREST STREET
HATTIESBURG, MS 39401

TO WHOM IT MAY CONCERN

WE, **EMPIRE TRUCK SALES, LLC**, APPRECIATE THE OPPORTUNITY TO QUOTE YOU ON YOUR NEW TRUCK EQUIPMENT NEEDS. WE ARE PLEASED TO PRESENT YOU WITH THE FOLLOWING SPECIFICATIONS.

FEW NOTES ON ORDERING:

1. WE DO NOT STOCK A TELMA RETARDER.
2. WE CANNOT OFFER A BUY BACK.
3. BECAUSE OF THE CURRENT ORDERS AT FREIGHTLINER WE CANNOT GIVE A SPECIFIC DELIVERY TIME UNTIL AN ORDER IS PLACED.

DELIVERY CAN BE EXPECTED BETWEEN 7-12 MONTHS OF ORDER DATE

THESE PRICES INCLUDE F.E.T. IF APPLICABLE, BUT DO NOT INCLUDE ANY STATE OR LOCAL TAXES OR FEES.

ONCE AGAIN, WE SINCERELY APPRECIATE YOUR INTEREST IN FREIGHTLINER TRUCKS AND EMPIRE TRUCK SALES, LLC., AND WE LOOK FORWARD TO ASSISTING YOU WITH ALL ASPECTS OF YOUR NEW TRUCK EQUIPMENT NEEDS. IF YOU HAVE ANY QUESTIONS OR CONCERNS, PLEASE DO NOT HESITATE TO CONTACT ME.

SINCERELY,
EMPIRE TRUCK SALES, INC.

ANDREW RICHARDSON

**SPECIFICATION
FOR "KBF-222A" SERIES LOADER
TRUCK MOUNTED KNUCKLE BOOM LOADER
("A" STYLE OUTRIGGERS, STAND-UP HYD JOYSTICKS)**

THE UNIT WILL BE USED IN COLLECTION AND LOADING OF BULK TRASH, LIMBS, LEAVES, BUILDING MATERIALS, AND WHITE GOODS, OR OTHER MATERIALS OF THAT NATURE. **UNIT MUST BE MANUFACTURED IN AN ISO 9000:2000 CERTIFIED FACILITY.** ALL BIDDERS MUST FILL IN ALL INFORMATION. IF MEETING OR EXCEEDING SPECIFICATIONS PUT **YES** AND IF EXCEPTIONS ARE TAKEN PUT **NO**. ANY EXCEPTIONS MUST BE EXPLAINED IN WRITING. ALL PROPOSALS INCLUDE DELIVERY, TRAINING OF OPERATORS AND SERVICE PERSONNEL.

LOADER SPECIFICATIONS

1.0 BOOM:

- 1.1 Total boom length to be 22ft.
- 1.2 Minimum lift capacity to be 3,000 lbs. @ 22 ft., (including grapple)
- 1.3 Boom Pedestal to be constructed of High Strength Steel with a moment capacity of 110,000 ft-lbs. and shall be mounted between rear axle and cab for maximum stability.
- 1.4 Boom Pivot shall be mounted to the pedestal by means of a slewing ring bearing that has a minimum capacity of 513,000 lbs. static load and 186,000 Ft-Lbs. moment. The Boom Pivot-Pedestal Assembly shall not exceed 95 inches in height from truck frame (truck frame approx. 40 inches in height). Boom pivot shall be constructed with a safety device.
- 1.5 Boom shall have 360 degrees continuous rotation. A positive locking pin shall be provided to alleviate rotation while transporting.
- 1.6 Boom rotation shall be accomplished by a direct hydraulic swing drive through a slewing (bearing) ring capable of producing 342,000 inch-pounds min. of torque. The motor shall be equipped with both counterbalance and pressure relief valves.
- 1.7 Entire Boom Assembly shall be designed with a tensile strength to provide a safety factor of 3 to 1 at the rated load capacity.
- 1.8 Main Boom and Tip Boom shall be constructed of reinforced High Strength Steel Tube.
- 1.9 Main Boom shall be equipped with mechanical stops to prohibit hydraulic cylinders from bottoming out.
- 1.10 Boom pedestal to be mounted directly to the chassis frame rails. Mounting must include inside frame rail supports at the mounting points.
- 1.11 The entire boom must be serviceable down to the component level, e.g., every hydraulic hose, fluid tubes, bracket, pin, etc. Having to replace subassemblies in order to repair a component will not be acceptable.
- 1.12 All boom connections requiring pins shall be equipped with replaceable bushings and heat-treated steel pins with provisions for lubrication.

2.0 Operator's Station:

- 2.1 Operator controls shall be controlled by means of hydraulic joysticks located on both sides of the

loader (two per side, three functions per joy stick)

2.2 A safety feature shall be provided to allow only one side of controls to function at a time. Joy sticks shall function only from one side at a time.

2.3 Joy sticks shall not require any lubrication thereby eliminating frequent maintenance.

2.4 Outriggers controlled by individual levers located conveniently in the center of the operator's platform.

2.5 Body dumping is controlled by a single lever at the center of the operator's platform separate from any other control. Proper enclosures shall be provided to protect operator from hydraulic fluid and components. All controls shall be clearly identified as to function.

2.6 Unit to have an electric operated throttle control to maintain proper engine speed when loader is operated under load. Switch for throttle control to be mounted on operator's platform for operator's convenience.

3.0 Trash Grapple\Bucket:

3.1 Bucket shall have a 360 degree continuous rotating grapple with a replaceable hydraulic swivel. Swivel shall not be welded or be an integral part of the grapple.

3.2 Bucket is to be opened and closed by (2) 3½ inch bore hydraulic cylinders with a closing force\”bite” of 4,000 lbs.

3.3 Bucket is to be 4ft. long and capable of opening to 60 inches from lip to lip.

3.4 Bucket shall be fabricated with a bolt on replaceable H.S.H.C. steel cutting edge.

4.0 Hydraulics:

4.1 Reservoir shall be a minimum of 50 gallons. It shall have a dual level/oil temperature gauge on side of tank. An in-tank suction strainer is included.

4.2 Filter shall be a 10-micron, return line replaceable mounted on outside of reservoir.

4.3 Main Boom and Tip Boom shall contain pilot operated check valves as an integral part of each cylinder. Bolt on pilot operated check valves will not be permissible.

4.4 All hoses shall be rated at 4,000-psi working pressure.

4.5 Port tubing throughout the main and tip boom shall have steel tubing rated at 4,000 PSI working pressure.

4.6 Control valves shall have a 24 GPM rating at 3,000 PSI and an adjustable relief valve.

4.7 All hydraulic cylinders to be of the “bolt-on head gland” design.

4.8 Successful bidder must provide a computer printout at time of delivery showing particle testing of the hydraulic oil done just prior to the unit being shipped in order to illustrate totally uncontaminated oil.

5.0 Power Source:

5.1 A heavy – duty clutch style (Hot Shift) PTO and a heavy duty tandem bi-rotational hydraulic pump which allows for “multiple function control” of the crane functions.

6.0 Throttle Control:

6.1 Unit to have an electric operated throttle control to maintain proper engine speed when loader is operated under load. Switch for throttle control to be mounted on operator's platform for operator's convenience.

6.2 Throttle speed-up shall operate only when the transmission is in the neutral position.

7.0 Outriggers:

7.1 Outriggers shall be extendable to a distance that will resist the tipping moment under maximum rated load, and have pilot operated holding valves.

7.2 The outriggers are to be equipped with smooth pads to cause minimum damage to contacted surface.

7.3 Outriggers shall be "A" frame style.

The retracted overall dimension shall be approx. 7 ft. 11 inches and the extended dimension (at ground level) shall be approx. 9 ft. 8 inches.

7.4 Outrigger cylinders for stabilizing loader shall be mounted inside telescoping legs. Outrigger cylinders shall have pilot operated check valve to prevent possible leak down.

8.0 Paint:

8.1 Loader shall receive (1) coat of high- grade primer and (2) coats of high-grade enamel paint (manufacturer's standard colors).

1.0 Trash Body:

1.1 30 cubic yard capacity.

1.2 20ft. body length.

1.3 Body floor shall be made of 1/4" steel 1 solid piece.

1.4 Body walls to be constructed with 10 gauge sheet steel. Wall stiffeners to be 3 inches x 4 inches minimum, 11 gauge formed channels placed on approximately 24 inch centers.

1.5 Body walls shall have a top rail formed from 11 gauge minimum steel in such manner as to encapsulate top end of vertical wall stiffeners and edge of wall sheet.

1.6 Wall stiffeners will be welded to top rail and wall skins and floor bumper rail.

1.7 Front body wall to be 42 inches high with side walls transition from 42 inches at the front to 72 inches high 8 ft. from the front.

1.8 Body full length main structural channel sills to be 8 inch @ 11.5 lbs. per ft. Cross sills to be 4 inch @ 5.4 lbs. per ft structural channel. Cross sills to be placed on 12 inch centers.

1.9 Body shall have a one piece door 5 foot with 3 heavy duty hinges with 1 inch diameter pin and allow for lubrication.

1.10 The rear door shall serve as the grapple rest and have a slot 25 inches wide x 12 inches tall. The door shall have a 3/16 " skin with 4 inch x 2 inch x 1/4 inch rectangular tubing reinforcement to support weight of grapple.

1.11 Door latch shall be cam operated from the driver's side and provide a safety lock. A provision

shall be made to allow the door to be opened and rotate against passenger side body wall with latch to hold open while dumping body.

2.0 Body Hoist:

2.1 Hoist to be twin telescopic 5" main bore cylinders mounted outboard the chassis frame rails for greater stability. Lift capacity to be 15 tons and the dump angle achieved is to be 45 degrees. The cylinders shall be power up and power down.

3.0 Lights and Reflectors:

3.1 L.E.D. lights shall be provided. One marker and strobe light on left and right top of rear body posts. a 2 ½ inch marker and 2 inch x 6 inch strobe. Also, provide one light on left and right rear under body for back up and brake/turn in metal box. There shall be 3 marker lights mounted on rear of body centered. All Lighting to be Dot Standards and shall conform to current state and federal standards.

3.2 Reflective safety tape shall be on both sides and on rear of body.

4.0 Paint:

4.1 Body exterior shall receive (1) coat of high-grade primer and (2) coats of high-grade enamel paint.

4.2 Body interior shall receive (1) coat of high-grade primer.

5.0 Safety Rear Bumper:

5.1 Body shall have a rear safety bumper.
bumper to meet u.s. department of transportation federal motor carrier safety administration, part 571.233 for rear impact guards and part 571.224 for rear impact protection.

6.0 Safety Props

6.1 Two (2) body safety props shall be installed one on each side of the body frame rails.

7.0 Warranty:

7.1 Bidder must provide all warranties required below. Failure to provide such warranties may result in your bid being deemed non-responsive.

7.2 Entire unit to have a one Year Parts and Labor warranty and a 3 year structural warranty.

7.3 All Warranty Work shall be done on Customer's site (On-site Warranty repair). Customer shall not be responsible for transportation of unit for warranty work.

8.0 Delivery:

8.1 Indicate number of days product shall be delivered after issue date of the purchase order.

9.0 OTHER REQUIREMENTS

9.1 A 18" DEEP X 18" WIDE X 36" LOCKING HEAVY DUTY TRUCK BOX SHALL BE FRAME MOUNTED ON EACH SIDE OF CAB BEHIND OPERATOR PLATFORM.

9.2 TWO (2) SETS OF RAKE/SHOVEL LOOPS SHALL BE MOUNTED ON THE FRONT WALL OF THE BODY

HOL-MAC CORPORATION WARRANTY POLICY

Hol-Mac Corp. (Pac-Mac ®) warrants each Hol-Mac product it manufactures and each new part and component sold by Hol-Mac to be free of defects in material and workmanship, provided the parts and components are operated and maintained in accordance with Hol-Mac published operating and maintenance instructions applicable thereto. This warranty is subject to the terms and conditions stated below.

Warrantor: This warranty is granted by Hol-Mac Corporation, P.O. Box 349, Bay Springs, Mississippi 39422. All warranty work must be accomplished by Hol-Mac at its factory in Bay Springs, Mississippi, or by such other facility specifically authorized by Hol-Mac. All warranty work performed by a facility other than Hol-Mac must be approved by Hol-Mac in writing prior to commencement of said work.

Duration of Warranty: The time periods applicable to the warranty of the specified component parts of the Hol-Mac products are as follows:

Major Structural Component Parts —3 year
Non-Hydraulic Replacement Parts - 1 year
Hydraulic Drive - 2 year

Exclusion and Disclaimers: This warranty does not extend to normal maintenance services such as cleaning, greasing, mechanical adjustments and maintenance inspections or to any defect due to the negligence of others, failure to operate or maintain the product in accordance with the published operating and maintenance instructions furnished by Hol-Mac, unreasonable use, accidents, alterations or wear and tear. Hol-Mac also reserves the right to make changes in the design or material of its products without incurring obligation to incorporate such changes in any product previously manufactured.

Procedure for Obtaining Performance Under this Warranty: In order to qualify under this warranty, the owner must notify Hol-Mac within (45) days of discovery of the defect and promptly deliver the entire product or defective part to Hol-Mac at its factory in Bay Springs, MS, or if requested by Hol-Mac to such other authorized facility designated by Hol-Mac. Upon receipt of such product, part or component, if it is found not to be defective in material or workmanship, Hol-Mac shall notify the owner of such fact and request instructions for the return of such product, part or component to the owner. All costs of transporting Hol-Mac products to and from the Hol-Mac factory, or such other authorized facility designated by Hol-Mac, shall be paid by the owner.

NO OTHER WARRANTY, WHETHER OF FITNESS OR OTHERWISE, EXPRESSED OR IMPLIED, IN FACT OR BY LAW, IS GIVEN BY HOL-MAC WITH RESPECT TO ANY NEW PRODUCT, PART OR COMPONENT, OR WITH RESPECT TO ANY WORK AND NO OTHER OR FURTHER OBLIGATION OR LIABILITY SHALL BE INCURRED BY HOL-MAC BY REASON OF THE MANUFACTURE, SALE, OR LEASE OF ANY PRODUCT, PART, OR COMPONENT OR OF ITS USE, WHETHER FOR BREACH OF WARRANTY, NEGLIGENCE OF MANUFACTURE OR OTHERWISE.



WORK SMART

FREIGHTLINER TRUCKS GOVERNMENT & MUNICIPALITY



YOU CAN JUST WORK HARD. OR YOU CAN WORK SMART.



114SD Set-forward Axle

Fixing roads, plowing snow and responding to emergencies are all in a day's work. And citizens depend on their government to be prepared for these jobs and more. So wouldn't it be nice to have a fleet of tough and dependable trucks?

At Freightliner Trucks, we understand the pressure and responsibility you face. That's why we design and build trucks that not only perform their jobs well, they're ready for work every day. In fact, we offer a complete range of vehicles, from the dependable M2 106 and M2 112 to our lineup of Severe Duty trucks. The 108SD and 114SD offer all the features you would

expect: front frame extensions and radiator-mounted grilles for bumper-mounted attachments; front and rear engine power take-offs; and body-specific chassis layouts that give Truck Equipment Manufacturers (TEMs) the flexibility they need. And if you need something bigger, ask about the Freightliner 122SD. It excels in heavy-haul situations and is perfect for transporting dozers, loaders, generators and oversize loads. Simply put, Freightliner offers versatile trucks that can handle a wide range of functions with superior performance and efficiency. They don't just work hard. They work smart.

BUILT TOUGH TO WORK SMART.

We've applied sophisticated engineering to the structural elements of our work trucks. For starters, our cabs are lightweight, yet extremely tough. Corrosion-resistant aluminum is reinforced with e-coated steel and assembled to precise manufacturing tolerances with Henrob rivets and welded construction. This process produces a durable and safe cab that meets stringent A-pillar impact, rollover and back wall impact tests. Plus, the chassis includes a robust backbone with a complete offering of single- and double-channel frame rails. The result is a tensile strength of up to 120,000 psi and an RBM ratio up to 4.4 million inch-pounds per rail. This means our trucks can handle whatever your municipality requires, day after day and year after year.



Aluminum Structural
Reinforcements

E-coated Steel

Corrosion-resistant
Aluminum Panels

- Corrugated floor, roof and back-of-cab panels for added strength
- Meets Swedish A-pillar test standards and SAE J2422 roof strength requirements
- Available in day cab, extended cab or 4-door crew cab configurations
- 2,500 square-inch one-piece windshield for outstanding job site visibility
- Wide door openings with low step-in height for safe entry and exit
- Steel firewall for solid mounting of dash panel and driver controls



Components, systems and entire vehicles are subjected to an array of virtual and physical tests to ensure our trucks deliver the expected function, performance and reliability.

WE'VE ASSEMBLED A TOUGH CREW WITH A READY-TO-WORK ATTITUDE.



M2 106

SO MANY JOBS. ONE AMAZING TRUCK.

The Freightliner M2 106 is one of the most versatile trucks on the road. This medium-duty vehicle comes standard with a powerful yet fuel-efficient Cummins ISB or optional ISL engine for increased efficiency through great fuel economy and easy maintenance. Working in a challenging environment requires a truck that's agile and easy to drive, which is why the M2 was engineered with a turning radius that is one of the tightest in the industry. And its automatic transmission is easy on new and experienced drivers alike.

Because driver comfort is key for maximum driver performance, this truck features a spacious cab with low step-in height, an advanced heating and cooling system and a smooth, quiet ride. With a multiplex wiring system, clear frame rails and a variety of exhaust packages, you can get the configuration you need for the job at hand.

- Ideal for utility, stakebed and refuse applications
- GVWR up to 56,000 pounds
- Horsepower from 200 – 350 hp
- Torque ratings up to 1000 lb-ft



108SD

RUGGED AND VERSATILE WORK WELL TOGETHER.

The Freightliner 108SD set-back axle delivers a new level of performance and reliability. With its aluminum cab, 108-inch BBC, 42-inch set-back axle position and tilt hood with radiator-mounted stationary grille, this truck is the ideal vehicle for a municipal fleet. The 108SD comes standard with the Cummins ISL or optional ISB engine for excellent fuel economy and easy maintenance. Up to a 50-degree wheel cut means excellent maneuverability, even in the tightest streets. And, with our mid-chassis packaging, the 108SD is an easy body upfit.

- Ideal for sewer vacuum, tandem dump trucks and refuse applications
- GVWR up to 79,000 pounds
- Horsepower from 200 – 380 hp*
- Torque ratings up to 1250 lb-ft

** 400 hp ratings available for approved applications*





M2 112

FOR WHATEVER WORK YOU NEED DONE.

The dependable, reliable M2 112 is another high-performing Freightliner work truck, engineered with the kind of power to make a positive impact on your fleet's productivity. You can have it powered by a Cummins ISL, Cummins Westport ISL G (natural gas), or a Detroit™ DD13® engine with BlueTec® SCR emissions technology. It features a multiplex wiring system and a variety of horizontally-mounted exhausts, so you can get the configuration you want without affecting your bottom line. And, with more custom options and safety features than ever before, the M2 112 is a smart choice for your community.

- Ideal for tractor, fire/emergency service and refuse applications
- GVWR up to 62,000 pounds
- GCWR up to 80,000 pounds
- Horsepower from 260 – 470 hp
- Torque ratings up to 1650 lb-ft

114SD

HANDLES DUMPING, PLOWING AND HEAVY LIFTING.

The Freightliner 114SD features a 114-inch BBC and is available as a set-forward axle or set-back axle. The weight-optimized design of the workhorse 114SD keeps pace with your increasing demands and tough challenges. A range of options, including axles, frames and the widest availability of engine choices – Detroit DD13 or Cummins ISL and ISL G – let you spec for regional- and application-specific needs. The 114SD offers excellent visibility, with a clear back-of-cab chassis for easy upfit by equipment manufacturers. Legendary Freightliner quality, insightful, industry-specific innovations and a comprehensive warranty all make the 114SD the perfect vehicle to meet your most severe duty needs.

- Ideal for quad dump trucks, snow plows and high-capacity sewer vacuum applications
- GVWR up to 60,000 pounds (single axle), 80,000 pounds (tandem axle) or 91,000 pounds (tridem axle)
- Horsepower from 260 – 470 hp
- Torque ratings up to 1650 lb-ft



CONFIGURED FOR COMFORT AND CONTROL.

Every aspect of a Freightliner cab was designed to make the driver's job easier, leading to increased productivity. For example, strategically-designed wide cabs provide room between the seats for easy installation of the control tower. To reduce fatigue for drivers who make frequent stops, our lightweight, steel-reinforced cab features a low step-in

height with slip-resistant dual steps, a large door opening and strategically-placed exterior and interior grab handles. For safety, the cab's hood slopes downward for better line-of-sight, and a 2,500 square-inch windshield provides excellent visibility for spotting potential hazards. Freightliner vehicles offer a variety of cab configurations.

CAB CONFIGURATIONS AT-A-GLANCE

	M2 106	108SD	M2 112	114SD
GVWR	Up to 56,000 lbs.	Up to 79,000 lbs.	Up to 62,000 lbs.	Up to 91,000 lbs. (tridem)
Set-forward Axle				•
Set-back Axle	•	•	•	•
Day Cab	•	•	•	•
Extended Cab	•	•	•	•
Crew Cab	•	•	•	Set-back axle only
Sleeper	Extended cab with bunk	Extended cab with bunk	Extended cab with bunk	Extended cab with bunk

CAB CONFIGURATIONS



DAY CAB

- Full width bench seat
- Fixed or air suspension driver and passenger seats
- Passenger seats with storage or locking safe provisions



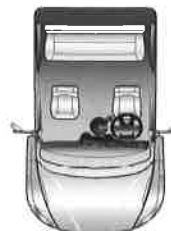
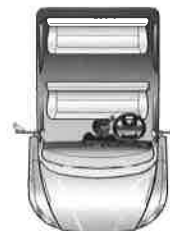
26" EXTENDED CAB

- 24" liftable bunk with storage
- Full-width rear bench seat or forward-facing rear jump seats
- Fixed or tip-out tinted side rear windows
- Cab privacy curtain



48" CREW CAB

- Rear bench or individual seats including air-suspended
- Electric rear door windows



TOUGH OUTSIDE. SMART INSIDE.



When you step inside a Freightliner truck, you'll definitely understand what it means to work smart. The driver-friendly dash features controls and switches within easy reach of the driver. The analog gauges are backlit with LED lights for easy readability. And our SmartPlex™ Electrical System provides optimal switch customization. Even the dash structure is designed with fewer sections, making it one of the quietest and most durable dashboards we've ever made.



114SD wing dash and interior (above and above left)

ALL-WHEEL DRIVE AND DUAL DRIVE OPTIONS

The Freightliner M2 trucks can be ordered with an all-wheel drive option and several combinations of axles and suspension for optimized performance. Available on the M2 106 and 108SD, the sit-down and stand-up dual drive option is an easy-to-use feature that allows smooth transitions from left-to-right-hand drive operations. Installed by Fontaine Modification, the right-hand-drive option is ideal for use in refuse collection, road striping, street sweeping and other specialized applications.



Interior featuring the sit-down dual drive option



The all-wheel drive option available on M2 106 and 108SD models optimizes off-road performance

BETTER PERFORMANCE IS SMARTER GOVERNMENT.

POWER AND EFFICIENCY.

Because we're committed to helping you make the best overall decisions, a broad range of engine and transmission choices allows you to select the optimum combination to match virtually any municipal application.

Freightliner Trucks has embraced proven SCR emissions technology. Based on environmental advantages and payback to owners in less maintenance, increased fuel economy, better reliability and more uptime, SCR has proven to be a successful platform for EPA 2010 and beyond.

WE MADE THIS JOB EASY.

For starters, we offer several sizes of diesel exhaust fluid (DEF) tanks, so you can incorporate filling into your standard maintenance intervals. Next, we integrated the DEF gauge into the diesel fuel gauge. The gauge indicates the level of DEF in the tank and has a series of alerts when the tank is running low. A driver who ignores his DEF low level warnings will see de-rates and restrictions on his vehicle, but will never be stranded.

M2 106

108SD

M2 112

114SD

ENGINES

Cummins ISB* 200 - 325 hp / 520 - 750 lb-ft torque	•	•		
Cummins ISL 260 - 350 hp / 660 - 1000 lb-ft torque	•	•	•	•
Cummins ISL* up to 380 hp / 1250 lb-ft torque		•	•	•
Cummins Westport ISL G (natural gas) up to 320 hp / 1000 lb-ft torque			•	•
Detroit DD13 350 - 470 hp / 1250 - 1650 lb-ft torque			•	•

* Higher ratings are available for approved applications

TRANSMISSIONS

Eaton Fuller Manual	•	•	•	•
Eaton Fuller Automated Manual	•		•	•
Allison Transmission	•	•	•	•

AXLES (UP TO)

Steer	16,000 lbs.	20,000 lbs.	16,000 lbs.	22,000 lbs.
Single Drive	30,000 lbs.	38,000 lbs.	30,000 lbs.	38,000 lbs.
Tandem Drive	40,000 lbs.	46,000 lbs.	46,000 lbs.	58,000 lbs.
Tridrive				69,000 lbs.

Detroit DD13 Engine

Cummins ISL Engine

THE POWER OF GOING GREEN.

As demand for eco-friendly products and services continues to grow, the M2 106 Hybrid, as well as the M2 112 and 114SD Natural Gas are optimal for government operations. Driving a hybrid or natural gas-fueled vehicle delivers both economic advantages today and environmental benefits for future generations. And natural gas is a domestic fuel source, reducing our dependence on foreign oil.

Thanks to government incentives, alternative-fueled vehicles can save you money even before they're on the job. Contact your local Freightliner dealer to find out which rebates and incentives are available to you in your area. It's just one more way we help you work smart.



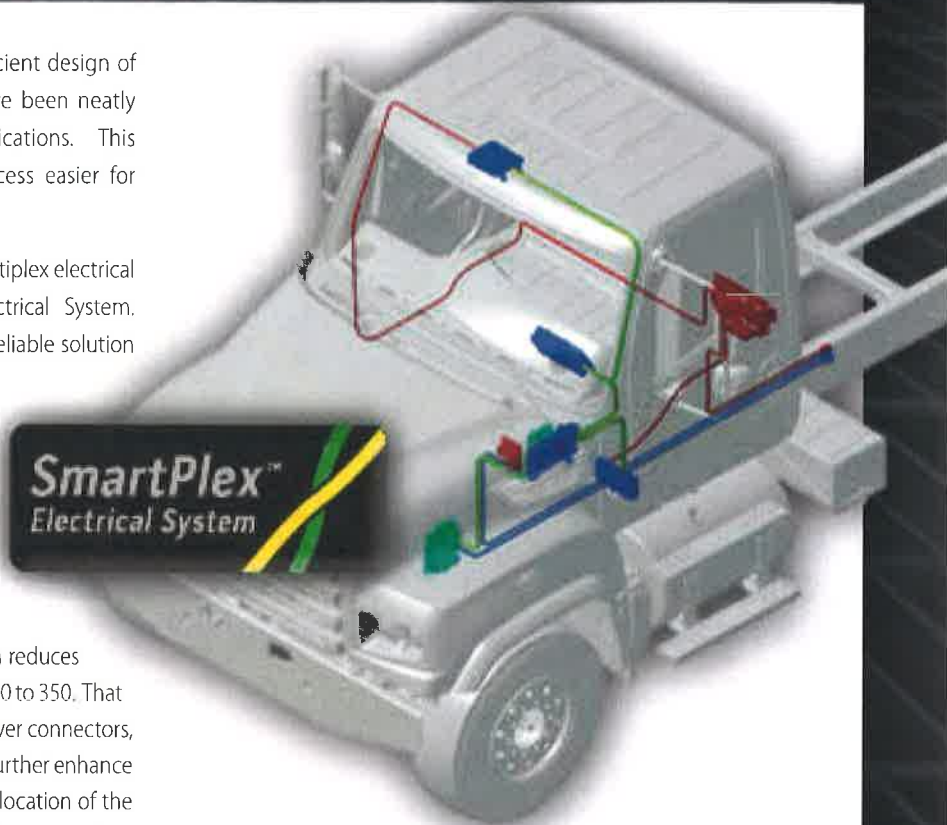
TRUCKS BUILT TO SERVE.

Truck Equipment Manufacturers (TEMs) love the efficient design of our trucks. Electrical, pneumatic and fuel lines have been neatly organized inside the left-hand rail for most applications. This relieves congestion at the back-of-cab, making access easier for body builders and service technicians.

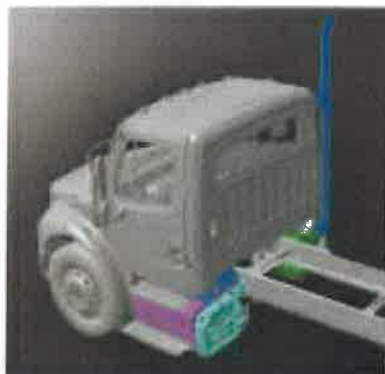
We've also spent a decade developing and refining multiplex electrical wiring. Our latest evolution is the SmartPlex Electrical System. SmartPlex provides TEMs with the most efficient and reliable solution that will increase the ease of body integration and application programming, keeping customers on the road and working smarter.

PRIMARY BENEFITS OF THE SMARTPLEX ELECTRICAL SYSTEM

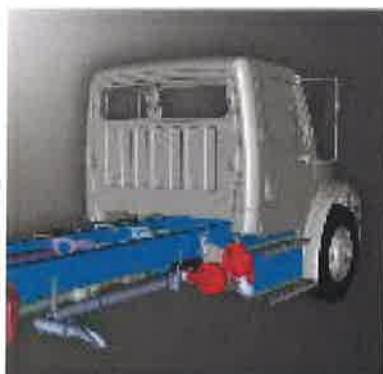
- **Improved Reliability** - The multiplex wiring system reduces the number of wires by more than 40 percent, from 650 to 350. That means 300 fewer possible failure points, as well as fewer connectors, relays and fuses. Advanced solid-state components further enhance the reliability of the multiplex system, as does the relocation of the Power Distribution Modules inside the cab for corrosion prevention.
- **Greater Flexibility** - Configuring a truck's wiring system is easier than ever. Simply install specific switches where they are most convenient, then use Freightliner's ServiceLink® to program them to do what you want them to do. If you want to move a switch from the dash to the overhead or vice versa, go ahead, there's no need to rewire or reprogram.
- **Easier Maintenance** - Onboard computers capture data, providing better diagnostic capability. If a problem occurs, the data is relayed to the dashboard, alerting the operator. This data also can be accessed using ServiceLink software for diagnosis by a technician.



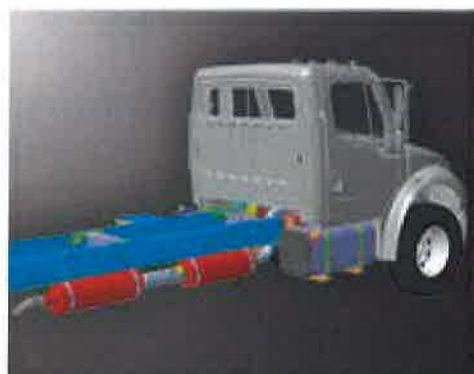
EXHAUST AFTERTREATMENT OPTIONS



CLEAR BACK-OF-CAB TAILPIPE
Clear left-hand and right-hand transmission
PTO mounting locations



CURBSIDE EXIT TAILPIPE



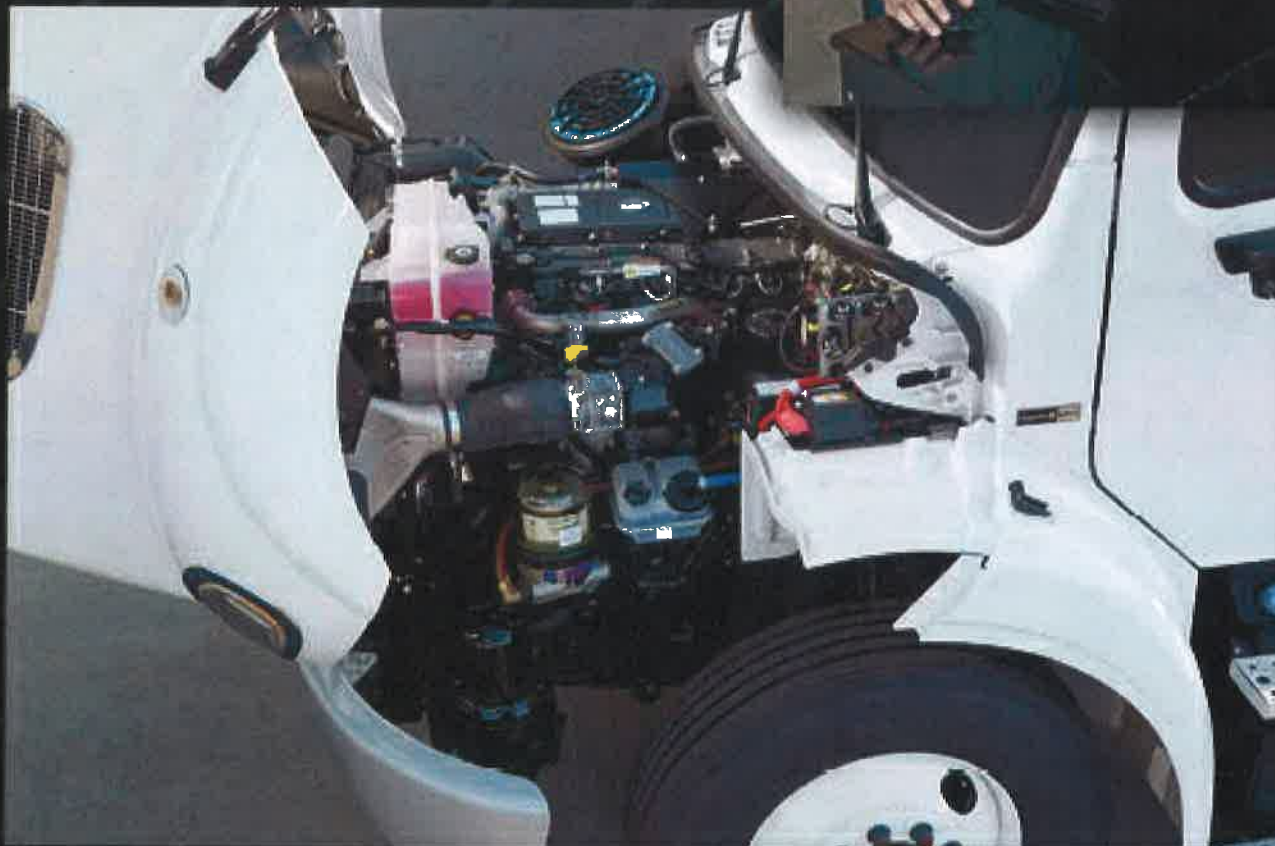
CLEAR UNDER-CAB TAILPIPE

MAINTENANCE MADE EASY.

We've designed these vehicles to be easy to maintain, with quick access to critical maintenance points. The hood opens easily and features integrated splash shields that lift out of the way for better accessibility. Frequently-inspected components are strategically placed, allowing for faster repairs and adjustments. See-through fluid reservoirs reduce the time spent checking fluid levels, and a removable floor section allows access to the transmission without removing the floor covering.

The standard proprietary Donaldson PowerCore® air cleaner is designed to go longer between replacements, yet still traps 99.85 percent of airborne particles before they reach the engine. An optional pre-cleaner is available for the harshest environments. There's a lube-free steering shaft, a self-adjusting hydraulic clutch and suspensions that require no maintenance or lubrication. The truck's multiplex electrical system has about half the wires of a traditional electrical system, which reduces possible failure points and allows technicians

to more quickly pinpoint electrical problems. With Virtual Technician on board 24/7 monitoring your truck's Detroit engine and automatically diagnosing engine fault codes, you're able to stay on the road longer, be more productive on the job and remain in control of your business. Even the three-piece bumper (M2 106 or M2 112) was designed to save repair costs by allowing partial replacement. The result is a vehicle that spends more time on the road.





114SD Set-back Axle



M2 106



114SD Set-back Axle



WORK SMART™

WE'VE GOT YOU COVERED.

UNMATCHED SERVICE AND SUPPORT.

With more than 300 Freightliner dealer locations across North America, you're never far from the convenient service and support you have come to expect from the industry leader. Our Elite Support program provides rapid diagnosis, responsive turnaround and quality, consistent communication, robust parts availability and superb customer service; all provided by a highly-trained staff. In addition, more than 200 Freightliner ServicePoint® facilities located at select TravelCenters of America and Petro Stopping Centers offer certified repair and warranty work. When you need a factory-certified technician, Detroit offers more than 800 locations in North America.

Freightliner also maintains strategically-located parts distribution centers throughout North America, ensuring fast parts delivery to keep customers up and running.

Freightliner's Customer Assistance Center provides customers a hotline that's available 24 hours a day, seven days a week. Customers may call the toll-free number (1-800-FTL-HELP) for technical support, to arrange roadside assistance or towing services, or to locate the nearest dealer or service center.

A SIMPLE PURCHASE PROCESS THAT'S SECOND TO NONE.

Purchasing a truck is one of the most important decisions you make. Freightliner makes the buying process easy, with highly-trained sales consultants and one of the largest dealer networks in the industry, so businesses don't have to look far for their next purchase. Count on Freightliner dealers for reliable product information, truck parts and service, and ongoing customer support.

FINANCING IS EASY.

Daimler Truck Financial (DTF) offers a variety of options, including loans and leases tailored to the trucking industry, that make financing go smoothly. DTF has been meeting the financing challenges of owner-operator and vocational customers for more than 30 years. It offers finance solutions including conventional retail financing at attractive and competitive rates, a variety of terms to match cash flow, and up to 100% financing for qualified customers.

Daimler Truck Financial

Financing that works for you.



COMPREHENSIVE WARRANTIES FOR ADDED PEACE OF MIND.

Freightliner stands behind its trucks every step of the way. We offer one of the most comprehensive warranties in the business, as well as a variety of extended warranties.

BETTER PARTS. GOOD PRICES.

Alliance Truck Parts offers a range of new and remanufactured maintenance, repair and replacement parts and accessories for virtually all types of heavy-duty trucks at an affordable price. Alliance Truck Parts are sold at Freightliner dealers throughout the U.S. and Canada.



FREIGHTLINERTRUCKS.COM/WORKSMART



Competitive financing available through Daimler Truck Financial. For the Freightliner Trucks dealer nearest you, call 1-800-FTL-HELP. www.freightlinertrucks.com. 10M, 10/13. FTL/MC-B-1288. Specifications are subject to change without notice. Freightliner Trucks is registered to ISO 9001:2008 and ISO 14001:2004. Copyright © 2013. Daimler Trucks North America LLC. All rights reserved. Freightliner Trucks is a division of Daimler Trucks North America LLC, a Daimler company.

LOCATIONS AND CONTACT INFORMATION

www.empiretruck.com

LOCATION	SALES		PARTS		SERVICE	
JACKSON						
373 Highway 49 South Richland MS 39218 (601) 939 - 5000 / (800) 872 - 3673 Fax: (601) 932 - 1570	Mike Tew, General Sales Mgr. Danny Felton, Voo. Mgr. Barry Newell, New/Used Coord. Travis Enlow Keith Winham, Bus Sales Mgr. Squires Huff, Used Truck Mgr. Wayne Brown Hunter Bower	(601) 946 - 1156 (601) 933 - 5284 (601) 933 - 5275 (601) 933 - 5211 (601) 933 - 5298 (601) 933 - 5251 (601) 937 - 1319 (601) 933 - 5223	Jason Dunn, GPM Rick Warrell, Mgr.	(601) 933 - 5221 (601) 933 - 5240	Bob Bullard, GSM Todd Rhodes, Mgr. Charles Goldsmith	(601) 933 - 5320 (601) 933 - 5293 (901) 277 - 6902
Lonnie Cook, Exeo. VP / GM Danny Ermine, VP / Customer Support Bob Bullard, General Service Mgr. Jason Dunn, General Parts Mgr.						
JACKSON BODY SHOP						
345 Highway 49 South Richland, MS 39218 (601) 933 - 5310 / (800) 872 - 3673 Fax: (601) 933 - 5312	Wes Guymon, Collision Spec. Jeff Payne, Collision Spec.	(601) 940 - 8806 (601) 750 - 2669	David Sayers, Coord.	(601) 933 - 5309	Ronnie Netherland, Mgr. (601) 668 - 2692	
MERIDIAN						
125 Highway 11 & 80 East Meridian, MS 39301 (601) 482 - 5575 / (800) 748 - 3082 Fax: (601) 693 - 1535	Danny Felton, Voo. Mgr.	(601) 946 - 8822	Danny Whitman, Mgr.	(662) 736 - 3632	Scott Switzer, Mgr.	(601) 616 - 2502
COLUMBUS						
155 Wilkins Wise Road Columbus, MS 39706 (662) 326 - 0820 / (800) 530 - 7121 Fax: (662) 326 - 1702	Danny Felton, Gov. Mgr.	(601) 946 - 8822	Bobby Easter, Mgr.	(662) 889 - 0054	Mike Burgess, Mgr. Justin Smith	(662) 889 - 4700 (662) 265 - 7601
HATTIESBURG						
300 Sullivan Kilrain Road Hattiesburg, MS 39402 (601) 544 - 3000 / (800) 611 - 6246 Fax: (601) 268 - 2232	Andrew Richardson	(601) 622 - 3747	Bryan West, Mgr.	(601) 517 - 2826	Darron Hodge, Mgr.	(601) 238 - 0937
BILOXI						
8480 West Oak Lawn Road Biloxi, MS 39532 (228) 355 - 0000 / (800) 748 - 9100 Fax: (228) 396 - 2333	Ricky Allen, Store Mgr.	(601) 946 - 0940	John West, Mgr.	(228) 348 - 2325	Terry Hobbs, Mgr.	(251) 229 - 8440
BROOKHAVEN						
121 Stribling Road Brookhaven, MS 39601 (601) 835 - 4400 Fax: (601) 835 - 1121	Tanner Malone	(601) 968 - 7004	John Wilson, OPS Mgr. Tracy Smith, Mgr.	(601) 236 - 2876 (601) 836 - 4400	Dean Smith, Mgr.	(601) 787 - 0134
WAYNESBORO						
3610 Highway 145 South Waynesboro, MS 39601 (601) 735 - 2092 Fax: (601) 835 - 1121	Andrew Richardson James Koontz	(601) 622 - 3747 (601) 938 - 2439	Chris Coward	(601) 410 - 2439		
MOBILE						
2495 WEST I-65 Service Road N. Mobile, AL 36612 (251) 330 - 0088 / (800) 550 - 0088 Fax: (251) 330 - 0933	Kevin Wood, Store Mgr. Danny McHenry Brent Partin	(251) 680 - 3188 (251) 454 - 7177 (251) 599 - 9828	Jim Lindsey, Mgr.	(251) 455 - 4461	Toby Pridgen, RSM	(251) 379 - 3330
MOBILE BODY SHOP						
2495 WEST I-65 Service Road N. Mobile, AL 36612 (251) 330 - 0088 / (800) 550 - 0088 Fax: (251) 330 - 1069	Louis Ashbee, Estimator	(251) 454 - 8714	Rose Flowers	(251) 591 - 6392	Marc Godzisz, Mgr.	(337) 400 - 1007
SLIDELL						
210 Frontage Road Slidell, LA 70458 (985) 641 - 4000 / (800) 256 - 5260 Fax: (985) 641 - 9808	Brian Jackson, Store Mgr. Brett Carrubba	(985) 400 - 8515 (228) 343 - 3706	Doug Palermo, Mgr.	(504) 460 - 8551	Wayne Hudspeth, Mgr. Mark Kohl, Mgr.	(504) 247 - 2450 (228) 671 - 0309
PENSACOLA						
2255 West Detroit Blvd Pensacola, FL 32514 (850) 316 - 9000 Fax: (850) 478 - 9907	Kevin Wood, Mgr. Bill Sadler Buster Slay Brent Partin	(251) 680 - 3188 (850) 287 - 3450 (334) 201 - 7529 (251) 599 - 9828	Erick Perkins, Mgr.	(850) 288 - 8618	Dan Nynas, Mgr.	(218) 310 - 6056
MOSSY HEAD						
15 Sand Mine Road Defuniak Springs, FL 32435 (850) 951 - 2100	Keith Snow, Store Mgr. Buster Slay	(850) 259 - 6469 (334) 201 - 7529	Al Wiles, Mgr.	(850) 698 - 4400	Kris Capps, Mgr.	(850) 736 - 3831



CENTRALBIDDING
FROM CENTRAL AUCTION HOUSE

Knuckle Boom Loader and Trash Body with Chassis
City of Hattiesburg - MS

Project documents obtained from www.CentralBidding.com

10-Nov-2018 01:39:42 PM

SPECIFICATIONS

KNUCKLE BOOM LOADER AND TRASH BODY WITH CHASSIS

THE UNIT WILL BE USED IN COLLECTION AND LOADING OF BULK TRASH, LIMBS, LEAVES, BUILDING MATERIALS, AND WHITE GOODS, OR OTHER MATERIALS OF THAT NATURE. **UNIT MUST BE MANUFACTURED IN AN ISO 9000:2000 CERTIFIED FACILITY.** PROPOSAL INCLUDES DELIVERY, TRAINING OF OPERATORS AND SERVICE PERSONNEL.

LOADER SPECIFICATIONS

1.0 Boom:

- | | |
|-----|--|
| YES | 1.1 Total boom length to be 22ft. |
| YES | 1.2 Minimum lift capacity to be 3,000 lbs. @ 22 ft., (including grapple) |
| YES | 1.3 Boom Pedestal to be constructed of High Strength Steel with a moment capacity of 110,000 ft-lbs. and shall be mounted between rear axle and cab for maximum stability. |
| YES | 1.4 Boom Pivot shall be mounted to the pedestal by means of a slewing ring\bearing that has a minimum capacity of 513,000 lbs. static load and 186,000 Ft-Lbs. moment. The Boom Pivot-Pedestal Assembly shall not exceed 95 inches in height from truck frame (truck frame approx. 40 inches in height). Boom pivot shall be constructed with a safety device. |
| YES | 1.5 Boom shall have 360 degrees continuous rotation. A positive locking pin shall be provided to alleviate rotation while transporting. |
| YES | 1.6 Boom rotation shall be accomplished by a direct hydraulic swing drive through a slewing (bearing) ring capable of producing 342,000 inch-pounds min. of torque. The motor shall be equipped with both counterbalance and pressure relief valves. |
| YES | 1.7 Entire Boom Assembly shall be designed with a tensile strength to provide a safety factor of 3 to 1 at the rated load capacity. |
| YES | 1.8 Main Boom and Tip Boom shall be constructed of reinforced High Strength Steel Tube. |
| YES | 1.9 Main Boom shall be equipped with mechanical stops to prohibit hydraulic cylinders from bottoming out. |
| YES | 1.10 Boom pedestal to be mounted directly to the chassis frame rails. Mounting must include inside frame rail supports at the mounting points. |
| YES | 1.11 The entire boom must be serviceable down to the component level, e.g., every hydraulic hose, fluid tubes, bracket, pin, etc. Having to replace subassemblies in order to repair a component will not be acceptable. |
| YES | 1.12 All boom connections requiring pins shall be equipped with replaceable bushings and heat-treated steel pins with provisions for lubrication. |
| YES | 1.13 HYDRAULIC LINES TO TRAVEL THROUGH THE INSIDE OF BOOM FOR SAFE, UNRESTRICTED OPERATION. |

2.0 Operator's Station:

- | | |
|-----|--|
| YES | 2.1 Operator controls shall be controlled by means of hydraulic joysticks located on both sides of the |
|-----|--|

loader (two per side, three functions per joy stick)

- YES 2.2 A safety feature shall be provided to allow only one side of controls to function at a time. Joy sticks shall function only from one side at a time.
- YES 2.3 Joy sticks shall not require any lubrication thereby eliminating frequent maintenance.
- YES 2.4 Outriggers controlled by individual levers located conveniently in the center of the operator's platform.
- YES 2.5 Body dumping is controlled by a single lever at the center of the operator's platform separate from any other control. Proper enclosures shall be provided to protect operator from hydraulic fluid and components. All controls shall be clearly identified as to function.
- YES 2.6 Unit to have an electric operated throttle control to maintain proper engine speed when loader is operated under load. Switch for throttle control to be mounted on operator's platform for operator's convenience.

3.0 Trash Grapple\Bucket:

- YES 3.1 Bucket shall have a 360-degree continuous rotating grapple with a replaceable hydraulic swivel. Swivel shall not be welded or be an integral part of the grapple.
- YES 3.2 Bucket is to be opened and closed by (2) 3½ inch bore hydraulic cylinders with a closing force\“bite” of 4,000 lbs.
- YES 3.3 Bucket is to be 4ft. long and capable of opening to 60 inches from lip to lip.
- YES 3.4 Bucket shall be fabricated with a bolt on replaceable H.S.H.C. steel cutting edge.

4.0 Hydraulics:

- YES 4.1 Reservoir shall be a minimum of 50 gallons. It shall have a dual level/oil temperature gauge on side of tank. An in-tank suction strainer is included.
- YES 4.2 Filter shall be a 10-micron, return line replaceable mounted on outside of reservoir.
- YES 4.3 Main Boom and Tip Boom shall contain pilot operated check valves as an integral part of each cylinder. Bolt on pilot operated check valves will not be permissible.
- YES 4.4 All hoses shall be rated at 4,000-psi working pressure.
- YES 4.5 Control valves shall have a 24 GPM rating at 3,000 PSI and an adjustable relief valve.
- YES 4.6 All hydraulic cylinders to be of the “bolt-on head gland” design.
- YES 4.7 Successful bidder must provide a computer printout at time of delivery showing particle testing of the hydraulic oil done just prior to the unit being shipped in order to illustrate totally uncontaminated oil.

5.0 Power Source:

- YES 5.1 A heavy – duty clutch style (Hot Shift) PTO and a heavy duty tandem bi-rotational hydraulic pump which allows for “multiple function control” of the crane functions.

6.0 Throttle Control:

YES 6.1 Unit to have an electric operated throttle control to maintain proper engine speed when loader is operated under load. Switch for throttle control to be mounted on operator's platform for operator's convenience.

YES 6.2 Throttle speed-up shall operate only when the transmission is in the neutral position.

7.0 Outriggers:

YES 7.1 Outriggers shall be extendable to a distance that will resist the tipping moment under maximum rated load, and have pilot operated holding valves.

YES 7.2 The outriggers are to be equipped with smooth pads to cause minimum damage to contacted surface.

YES 7.3 Outriggers shall be "A" frame style.
The retracted overall dimension shall be approx. 7 ft. 11 inches and the extended dimension (at ground level) shall be approx. 9 ft. 8 inches.

YES 7.4 Outrigger cylinders for stabilizing loader shall be mounted inside telescoping legs. Outrigger cylinders shall have pilot operated check valve to prevent possible leak down.

8.0 Paint:

YES 8.1 Loader shall receive (1) coat of high- grade primer and (2) coats of high-grade enamel paint (manufacturer's standard colors).

1.0 Trash Body:

YES 1.1 30 cubic yard capacity.

YES 1.2 20 ft. body length.

YES 1.3 Body floor shall be made of 1/4" steel 1 solid piece.

YES 1.4 Body walls to be constructed with 10-gauge sheet steel. Wall stiffeners to be 3 inches x 4 inches minimum, 11 gauge formed channels placed on approximately 24-inch centers.

YES 1.5 Body walls shall have a top rail formed from 11-gauge minimum steel in such manner as to encapsulate top end of vertical wall stiffeners and edge of wall sheet.

YES 1.6 Wall stiffeners will be welded to top rail and wall skins and floor bumper rail.

YES 1.7 Front body wall to be 42 inches high with side walls transition from 42 inches at the front to 72 inches high 8 ft. from the front.

YES 1.8 Body full length main structural channel sills to be 8 inch @ 11.5 lbs. per ft. Cross sills to be 4 inch @ 5.4 lbs. per ft structural channel. Cross sills to be placed on 12- inch centers.

YES 1.9 Body shall have a one-piece door 5 foot with 3 heavy duty hinges with 1-inch diameter pin and allow for lubrication.

YES 1.10 The rear door shall serve as the grapple rest and have a slot 25 inches wide x 12 inches tall. The door shall have a 3/16 "skin with 4-inch x 2-inch x ¼ inch rectangular tubing reinforcement to support

weight of grapple.

- YES 1.11 Door latch shall be cam operated from the driver's side and provide a safety lock. A provision shall be made to allow the door to be opened and rotate against passenger side body wall with latch to hold open while dumping body.

2.0 Body Hoist:

- YES 2.1 The hoist system shall be two 5" bore, two stage telescopic hydraulic cylinders rated @ 2,500 PSI working pressure mounted to provide a 45-degree dump angle. Left and right hoist cylinders must be mounted outboard of the chassis frame.

3.0 Lights and Reflectors:

- YES 3.1 L.E.D. lights shall be provided. One marker and strobe light on left and right top of rear body posts. a 2 ½ inch marker and 2-inch x 6-inch strobe. Also, provide one light on left and right rear under body for back up and brake/turn in metal box. There shall be 3 marker lights mounted on rear of body centered. All Lighting to be Dot Standards and shall conform to current state and federal standards.

- YES 3.2 Reflective safety tape shall be on both sides and on rear of body.

4.0 Paint:

- YES 4.1 Body exterior shall receive (1) coat of high-grade primer and (2) coats of high-grade enamel paint.

- YES 4.2 Body interior shall receive (1) coat of high-grade primer.

5.0 Safety Rear Bumper:

- YES 5.1 Body shall have a rear safety bumper. The bumper must meet U.S. department of transportation federal motor carrier safety administration, part 571.233 for rear impact guards and part 571.224 for rear impact protection.

6.0 Safety Props

- YES 6.1 Two (2) body safety props shall be installed one on each side of the body frame rails.

7.0 Warranty:

- YES 7.1 Bidder must provide all warranties required below. Failure to provide such warranties may result in your bid being deemed non-responsive.

- YES 7.2 Entire unit to have a one Year Parts and Labor warranty and a 1 year structural warranty.

- YES 7.3 All Warranty Work shall be done on Customer's site (On-site Warranty repair). Customer shall not be responsible for transportation of unit for warranty work.

8.0 Other Requirements:

- YES 8.1 18" DEEP X 18" WIDE X 36" LOCKING HEAVY DUTY TRUCK BOX SHALL BE FRAME MOUNTED ON EACH SIDE OF CAB BEHIND OPERATOR PLATFORM.

- YES 8.2 TWO (2) SETS OF RAKE/SHOVEL LOOPS SHALL BE MOUNTED ON THE FRONT WALL OF THE BODY.

YES 8.3 Two (2) LED WORK LIGHTS MOUNTED ON TIP BOOM

YES 8.4 REAR STROBE UNDER BODY W/GUARD

TRUCK CHASSIS REQUIREMENTS

YES 1.0 Engine
1.1 450 H.P. Inline 6 Cylinder Turbo Diesel Wet Sleeve w/ 1000lb/ft torque or Dry Sleeve. Minimum engine warranty – 24 Months/250,000 Miles

YES 1.2 160 or greater Amp Alternator

YES 1.3 (3) 12Volt 2280 CCA Batteries

YES 1.4 18.7 CFM Compressor

YES 1.5 115 Volt Block Heater

YES 1.6 Engine Brake w Variable geometry Turbo

YES 1.7 Gates Blue Stripe Coolant Hoses

YES 1.8 RH Inboard Frame Mounted Horizontal After-treatment Device w RH Cab Mounted Vertical Tailpipe.

YES 1.9 23-gallon DEF Tank filled 100% full at delivery

YES 1.10 1100 Square Inch Radiator

YES 1.11 Side of Hood Air Intake and Donaldson Air Cleaner, With Pre-Cleaner

YES 1.12 Battery Disconnect mounted inside cab

YES 2.0 Transmission
2.0 Allison 3000 RDS w/ PTO Provision and push button shift control on dash. with 6-Speed Overdrive Option.

YES 2.2 Interface Wiring and Body Builder Connector Back of Cab.

YES 2.3 Electronic Transmission Customer Access Connector Back of Cab

YES 2.4 Water to Oil Transmission Cooler

YES 2.5 Castrol Transynd Synthetic Transmission Fluid

YES 3.0 Front Axle
3.1 16,000lb Front Axle

YES 3.2 16,000lb Taper Leaf Suspension w/ Shock Absorbers

YES 3.3 16.5" x 6" Q+ Brake Shoes w/ Auto Slack Adjusters

- 4.0 Rear Axle
- YES** 4.1 40,000 lb. Rear Tandem Axle, w/ synthetic lube
- YES** 4.2 40,000lb Variable Rate Multi-Leaf Suspension w/ Helper and Radius Rod
- YES** 4.3 17N Main Driveline or Equivalent
- YES** 4.4 Axle ratio to be 5.29 and achieve road speed of 68 mph.
- YES** 4.4 16.5" x 7" Q Cam Brake Shoes w/ Auto Slack Adjusters
- 5.0 Brake System
- YES** 5.1 Anti-Lock Air Brakes
- YES** 5.2 Bendix AD-9 Air Dryer with heater and Pull Cables on all Reservoirs.
- 6.0 Frame and Wheelbase
- YES** 6.1 274" Wheelbase, 210" CA or Equivalent for Body Specified
- YES** 6.2 Front Tow Hooks
- YES** 6.3 11/32" x 3-1/2" x 10-3/16" Steel Frame or Equivalent with 120KSI
- YES** 6.4 Minimum 1,808,400 Frame RBM per rail / Section modulus 15.07 per rail
- 7.0 Fuel Tanks & Equipment
- YES** 7.1 80 Gallon LH Aluminum Fuel tank
- YES** 7.2 Fuel water Separator with Indicator Light
- YES** 7.3 Fuel Cooler
- 8.0 Cab
- YES** 8.0 Heavy Duty Aluminum Non-Automotive Cab with 60 Month / 150,000 Mile Warranty.
- YES** 8.1 Air Cab Mounts
- YES** 8.2 2-1/2 " Fender Extension
- YES** 8.3 Bug screen, LH/RH Grab handles,
- YES** 8.3 Heated Dual Stainless-Steel West Coast Mirrors w/ 8" Spot Mirrors
- YES** 8.4 Air Horn Roof Mounted
- YES** 8.5 Heater, Defroster, Air Conditioner
- YES** 8.6 High Back Air Ride Driver Seat w/ 2-Man Passenger Seat w/ Toolbox Underneath
- YES** 8.7 Vinyl Seat Covers for Driver and Passenger
- YES** 8.8 Cruise Control, Tachometer, Backup Alarm, Oil Pressure Gauge

YES 8.9 AM/FM/WB Radio

YES 8.10 Automatic Self-Reset Circuit Breakers

YES 8.11 2 ½lb Fire Extinguisher and Triangular Reflectors

YES 8.12 Two Cup Holders in Dash

YES 8.13 Electric Windshield Wipers with Delay

YES 8.14 12V Power supply in dash

YES 8.15 Tilt and Telescoping steering wheel

YES 8.16 Engine remote interface with preset fast idle

YES 8.17 Dash mounted PTO switch

9.0 Tires and Wheels

YES 9.1 Front Tires: 385/65R22.5 G291 18 Ply with Highway Tread – 10 Hub Pilot Disc Wheels

YES 9.2 Rear Tires: 11R/22.5 G287 14 Ply with Traction Tread –10 Hub Pilot Disc Wheels

General Chassis Requirements

YES * Must provide parts/warranty/service within 30-mile radius.

YES * Must provide a 24-hour service location

YES * Must provide dot inspection.

YES * Must provide on-site driver training at time of delivery.

YES * Must provide towing/roadside service warranty for 1Year.

YES * Selling Dealer must provide Diesel GHG14 and OBD 2015 support for both engine and exhaust systems.

NO Bidder shall provide a separate quote on chassis per bid specifications equipped with a Telma Retarder.

NO Bidder may offer a guaranteed buy-back provision at the end of two, three and four years. If buy-back is offered, bidder must list and conditions and/or limitations to their buy-back offer. The buy-back offer may be a factor in determining the lowest and best bid.

Prepared for:
City Clerk
City of Hattiesburg
200 Forrest Street
Hattiesburg, MS 39401
Phone: 6015454500

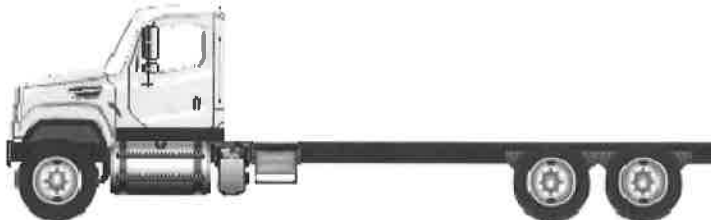
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A proposal for
City of Hattiesburg

Prepared by
EMPIRE TRUCK SALES
William Richardson

Dec 06, 2018

Freightliner 114SD



Components shown may not reflect all spec'd options and are not to scale



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

Data Code	Description	Weight Front	Weight Rear
Price Level			
PRL-18D	SD PRL-18D (EFF:04/17/18)		
Data Version			
DRL-031	SPECPRO21 DATA RELEASE VER 031		
Vehicle Configuration			
001-177	114SD CONVENTIONAL CHASSIS	7,934	6,576
004-220	2020 MODEL YEAR SPECIFIED		
002-003	SET FORWARD AXLE - TRUCK		
019-002	STRAIGHT TRUCK PROVISION		
003-001	LH PRIMARY STEERING LOCATION		
General Service			
AA1-002	TRUCK CONFIGURATION		
AA6-001	DOMICILED, USA 50 STATES (INCLUDING CALIFORNIA AND CARB OPT-IN STATES)		
A85-011	CONSTRUCTION SERVICE		
A84-1CO	CONSTRUCTION BUSINESS SEGMENT		
AA4-003	DRY BULK COMMODITY		
AA5-002	TERRAIN/DUTY: 100% (ALL) OF THE TIME, IN TRANSIT, IS SPENT ON PAVED ROADS		
AB1-008	MAXIMUM 8% EXPECTED GRADE		
AB5-001	SMOOTH CONCRETE OR ASPHALT PAVEMENT - MOST SEVERE IN-TRANSIT (BETWEEN SITES) ROAD SURFACE		
995-1AD	FREIGHTLINER LEVEL I WARRANTY		
A66-99D	EXPECTED FRONT AXLE(S) LOAD : 16000.0 lbs		
A68-99D	EXPECTED REAR DRIVE AXLE(S) LOAD : 40000.0 lbs		
A63-99D	EXPECTED GROSS VEHICLE WEIGHT CAPACITY : 56000.0 lbs		
Truck Service			
AA3-005	FLATBED/PLATFORM/STAKE BODY		



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	Data Code	Description	Weight Front	Weight Rear
	AF3-1W5	HOL MAC CORPORATION		
Engine				
	101-2X4	DETROIT DD13 12.8L 370 HP @ 1625 RPM, 1900 GOV RPM, 1250 LB/FT @ 975 RPM		
Electronic Parameters				
N	79A-068	68 MPH ROAD SPEED LIMIT		
	79B-000	CRUISE CONTROL SPEED LIMIT SAME AS ROAD SPEED LIMIT		
	79G-006	5 MINUTES IDLE SHUTDOWN WITH CLUTCH AND SERVICE BRAKE OVERRIDE		
	79K-001	PTO MODE ENGINE RPM LIMIT - 600 RPM		
	79M-002	PTO MODE BRAKE OVERRIDE - SERVICE BRAKE APPLIED OR PARK BRAKE NOT APPLIED		
	79P-001	PTO RPM WITH CRUISE SET SWITCH - 600 RPM		
	79Q-001	PTO RPM WITH CRUISE RESUME SWITCH - 600 RPM		
	79S-001	PTO MODE CANCEL VEHICLE SPEED - 5 MPH		
	79T-001	PTO MODE RPM INCREMENT - 25 RPM		
	79U-007	PTO GOVERNOR RAMP RATE - 250 RPM PER SECOND		
	79W-001	ONE REMOTE PTO SPEED		
	79X-003	PTO SPEED 1 SETTING - 800 RPM		
	80D-001	SOFT CRUISE CONTROL ENABLED		
	80G-001	PTO MINIMUM RPM - 600		
Engine Equipment				
	99C-017	2016 ONBOARD DIAGNOSTICS/2010 EPA/CARB/FINAL GHG17 CONFIGURATION		
	99D-011	2008 CARB EMISSION CERTIFICATION - CLEAN IDLE (INCLUDES 6X4 INCH LABEL ON LOWER FORWARD CORNER OF DRIVER DOOR)		
	13E-001	STANDARD OIL PAN		
	105-001	ENGINE MOUNTED OIL CHECK AND FILL		
	014-107	SIDE OF HOOD AIR INTAKE WITH FIREWALL MOUNTED DONALDSON AIR CLEANER WITH SAFETY ELEMENT AND PASSIVE PRECLEANER		
	124-1D7	DR 12V 160 AMP 28-SI QUADRAMOUNT PAD ALTERNATOR WITH REMOTE BATTERY VOLT SENSE		
	292-209	(3) DTNA GENUINE, FLOODED STARTING, MIN 3375CCA, 585RC, THREADED STUD BATTERIES		
	290-017	BATTERY BOX FRAME MOUNTED		

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Mobile:

Data Code	Description	Weight Front	Weight Rear
281-001	STANDARD BATTERY JUMPERS		
282-003	SINGLE BATTERY BOX FRAME MOUNTED LH SIDE BACK OF CAB		
291-017	WIRE GROUND RETURN FOR BATTERY CABLES WITH ADDITIONAL FRAME GROUND RETURN		
289-001	NON-POLISHED BATTERY BOX COVER		
87P-998	NO CAB AUXILIARY POWER WIRING		
293-060	POSITIVE LOAD DISCONNECT WITH CAB MOUNTED CONTROL SWITCH WITH LOCKING PROVISION MOUNTED OUTBOARD DRIVER SEAT	8	
107-044	BW MODEL BA-921 19.0 CFM SINGLE CYLINDER AIR COMPRESSOR WITH SAFETY VALVE		
152-041	ELECTRONIC ENGINE INTEGRAL SHUTDOWN PROTECTION SYSTEM		
128-002	JACOBS COMPRESSION BRAKE		
016-1C3	RH OUTBOARD UNDER STEP MOUNTED HORIZONTAL AFTERTREATMENT SYSTEM ASSEMBLY WITH RH HORIZONTAL TAILPIPE		
28F-002	ENGINE AFTERTREATMENT DEVICE, AUTOMATIC OVER THE ROAD REGENERATION AND DASH MOUNTED REGENERATION REQUEST SWITCH		
239-001	STANDARD EXHAUST SYSTEM LENGTH		
237-052	RH STANDARD HORIZONTAL TAILPIPE		
23U-003	23 GALLON DIESEL EXHAUST FLUID TANK	15	5
30N-003	100 PERCENT DIESEL EXHAUST FLUID FILL		
23Y-001	STANDARD DIESEL EXHAUST FLUID PUMP MOUNTING		
43X-003	LH FORWARD FACE OF DIESEL EXHAUST FLUID TANK 24 TO 28 INCHES BACK OF CAB		
43Y-001	STANDARD DIESEL EXHAUST FLUID TANK CAP		
273-036	BORG WARNER (KYSOR) REAR AIR ON/OFF ENGINE FAN CLUTCH		
276-001	AUTOMATIC FAN CONTROL WITHOUT DASH SWITCH, NON ENGINE MOUNTED		
110-068	DDC SUPPLIED ENGINE MOUNTED FUEL FILTER/FUEL WATER SEPARATOR WITH WATER-IN-FUEL INDICATOR		
118-001	FULL FLOW OIL FILTER		
266-057	1500 SQUARE INCH ALUMINUM RADIATOR		
103-039	ANTIFREEZE TO -34F, OAT (NITRITE AND SILICATE FREE) EXTENDED LIFE COOLANT		

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Data Code	Description	Weight Front	Weight Rear
171-007	GATES BLUE STRIPE COOLANT HOSES OR EQUIVALENT		
172-001	CONSTANT TENSION HOSE CLAMPS FOR COOLANT HOSES		
270-023	HDEP FIXED RATIO COOLANT PUMP AND RADIATOR DRAIN VALVE		
138-005	PHILLIPS-TEMRO 1500 WATT/115 VOLT BLOCK HEATER	4	
140-053	BLACK PLASTIC ENGINE HEATER RECEPTACLE MOUNTED UNDER LH DOOR		
155-074	DELCO 12V MOD 3.175-39MT+ OCP STARTER WITH THERMAL PROTECTION AND INTEGRATED MAGNETIC SWITCH		

Transmission

342-582	ALLISON 3000 RDS AUTOMATIC TRANSMISSION WITH PTO PROVISION
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Transmission Equipment

343-339	ALLISON VOCATIONAL PACKAGE 223 - AVAILABLE ON 3000/4000 PRODUCT FAMILIES WITH VOCATIONAL MODELS RDS, HS, MH AND TRV
84B-002	ALLISON VOCATIONAL RATING FOR CONCRETE MIXER APPLICATIONS ONLY AVAILABLE WITH 3000 PRODUCT FAMILIES
84C-023	PRIMARY MODE GEARS, LOWEST GEAR 1, START GEAR 1, HIGHEST GEAR 6, AVAILABLE FOR 3000/4000 PRODUCT FAMILIES ONLY
84D-023	SECONDARY MODE GEARS, LOWEST GEAR 1, START GEAR 1, HIGHEST GEAR 6, AVAILABLE FOR 3000/4000 PRODUCT FAMILIES ONLY
84E-000	PRIMARY SHIFT SCHEDULE RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE
84F-000	SECONDARY SHIFT SCHEDULE RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE
84G-000	PRIMARY SHIFT SPEED RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE
84H-000	SECONDARY SHIFT SPEED RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE
84L-000	LOAD BASED SHIFT SCHEDULE AND VEHICLE ACCELERATION CONTROL RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED VOCATIONAL USAGE

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Data Code	Description	Weight Front	Weight Rear
84N-000	NEUTRAL AT STOP - DISABLED, FUELSense - DISABLED		
84U-000	DRIVER SWITCH INPUT - DEFAULT - NO SWITCHES		
84V-001	DIRECTION CHANGE ENABLED WITH MULTIPLEXED SERVICE BRAKES - ALLISON 5TH GEN TRANSMISSIONS		
353-022	VEHICLE INTERFACE WIRING CONNECTOR WITHOUT BLUNT CUTS, AT BACK OF CAB		
34C-002	ELECTRONIC TRANSMISSION CUSTOMER ACCESS CONNECTOR MOUNTED BACK OF CAB		
362-035	CUSTOMER INSTALLED CHELSEA 277 SERIES PTO		
363-001	PTO MOUNTING, LH SIDE OF MAIN TRANSMISSION		
341-018	MAGNETIC PLUGS, ENGINE DRAIN, TRANSMISSION DRAIN, AXLE(S) FILL AND DRAIN		
345-003	PUSH BUTTON ELECTRONIC SHIFT CONTROL, DASH MOUNTED		
97G-004	TRANSMISSION PROGNOSTICS - ENABLED 2013		
370-011	WATER TO OIL TRANSMISSION COOLER, FRAME MOUNTED		
346-003	TRANSMISSION OIL CHECK AND FILL WITH ELECTRONIC OIL LEVEL CHECK		
35T-001	SYNTHETIC TRANSMISSION FLUID (TES-295 COMPLIANT)		

Front Axle and Equipment

400-1A9	DETROIT DA-F-16.0-5 16,000# FL1 71.0 KPI/3.74 DROP SINGLE FRONT AXLE	190
402-030	MERITOR 16.5X6 Q+ CAST SPIDER CAM FRONT BRAKES, DOUBLE ANCHOR, FABRICATED SHOES	10
403-002	NON-ASBESTOS FRONT BRAKE LINING	
419-023	CONMET CAST IRON FRONT BRAKE DRUMS	
409-006	FRONT OIL SEALS	
408-001	VENTED FRONT HUB CAPS WITH WINDOW, CENTER AND SIDE PLUGS - OIL	
416-022	STANDARD SPINDLE NUTS FOR ALL AXLES	
405-002	MERITOR AUTOMATIC FRONT SLACK ADJUSTERS	
406-001	STANDARD KING PIN BUSHINGS	
536-012	TRW TAS-85 POWER STEERING	40



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Data Code	Description	Weight Front	Weight Rear
539-003	POWER STEERING PUMP		
534-003	4 QUART POWER STEERING RESERVOIR	5	
40T-001	ORGANIC SAE 80/90 FRONT AXLE LUBE		
Front Suspension			
620-026	16,000# TAPERLEAF FRONT SUSPENSION	200	
619-005	MAINTENANCE FREE RUBBER BUSHINGS - FRONT SUSPENSION		
410-001	FRONT SHOCK ABSORBERS		
Rear Axle and Equipment			
420-1K4	MT-40-14XP 40,000# R-SERIES TANDEM REAR AXLE		-30
421-529	5.29 REAR AXLE RATIO		
424-001	IRON REAR AXLE CARRIER WITH STANDARD AXLE HOUSING		
386-073	MXL 17T MERITOR EXTENDED LUBE MAIN DRIVELINE WITH HALF ROUND YOKES	40	40
388-073	MXL 17T MERITOR EXTENDED LUBE INTERAXLE DRIVELINE WITH HALF ROUND YOKES		
878-019	(1) INTERAXLE LOCK VALVE FOR TANDEM OR TRIDEM DRIVE AXLES		
87A-001	BLINKING LAMP WITH EACH INTERAXLE LOCK SWITCH, INTERAXLE UNLOCK DEFAULT WITH IGNITION OFF		
423-020	MERITOR 16.5X7 Q+ CAST SPIDER CAM REAR BRAKES, DOUBLE ANCHOR, FABRICATED SHOES		
433-002	NON-ASBESTOS REAR BRAKE LINING		
434-003	STANDARD BRAKE CHAMBER LOCATION		
451-023	CONMET CAST IRON REAR BRAKE DRUMS		
440-006	REAR OIL SEALS		
426-101	WABCO TRISTOP D LONGSTROKE 2-DRIVE AXLE SPRING PARKING CHAMBERS		
428-002	MERITOR AUTOMATIC REAR SLACK ADJUSTERS		
41T-001	ORGANIC SAE 80/90 REAR AXLE LUBE		
42T-001	STANDARD REAR AXLE BREATHER(S)		
Rear Suspension			
622-006	40,000# 4-SPRING FLAT LEAF REAR SUSPENSION		
621-001	SPRING SUSPENSION - NO AXLE SPACERS		

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Data Code	Description	Weight Front	Weight Rear
431-001	STANDARD AXLE SEATS IN AXLE CLAMP GROUP		
624-011	52 INCH AXLE SPACING		
623-001	HEAVY DUTY FORE/AFT CONTROL RODS		
Brake System			
490-100	WABCO 4S/4M ABS		
871-001	REINFORCED NYLON, FABRIC BRAID AND WIRE BRAID CHASSIS AIR LINES		
904-001	FIBER BRAID PARKING BRAKE HOSE		
412-001	STANDARD BRAKE SYSTEM VALVES		
46D-002	STANDARD AIR SYSTEM PRESSURE PROTECTION SYSTEM		
413-002	STD U.S. FRONT BRAKE VALVE		
432-003	RELAY VALVE WITH 5-8 PSI CRACK PRESSURE, NO REAR PROPORTIONING VALVE		
480-009	BW AD-9 BRAKE LINE AIR DRYER WITH HEATER	20	
479-015	AIR DRYER FRAME MOUNTED		
460-001	STEEL AIR BRAKE RESERVOIRS		
477-004	PULL CABLES ON ALL AIR RESERVOIR(S)		
Trailer Connections			
335-004	UPGRADED CHASSIS MULTIPLEXING UNIT		
Wheelbase & Frame			
545-747	7475MM (295 INCH) WHEELBASE		
546-1B2	1/2X3.64X11-7/8 INCH STEEL FRAME (12.7MMX301.6MM/0.5X11.88 INCH) 120KSI	1,140	80
552-030	1600MM (63 INCH) REAR FRAME OVERHANG		
55W-006	FRAME OVERHANG RANGE: 61 INCH TO 70 INCH		
AC8-99D	CALC'D BACK OF CAB TO REAR SUSP C/L (CA) : 210.84 in		
AE8-99D	CALCULATED EFFECTIVE BACK OF CAB TO REAR SUSPENSION C/L (CA) : 207.84 in		
AE4-99D	CALC'D FRAME LENGTH - OVERALL : 374.26		
AM6-99D	CALC'D SPACE AVAILABLE FOR DECKPLATE : 211.54 in		
FSS-0LH	CALCULATED FRAME SPACE LH SIDE : 126.27 in		
FSS-0RH	CALCULATED FRAME SPACE RH SIDE : 265.69 in		
553-001	SQUARE END OF FRAME		

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Data Code	Description	Weight Front	Weight Rear
550-001	FRONT CLOSING CROSSMEMBER		
559-001	STANDARD WEIGHT ENGINE CROSSMEMBER		
562-001	STANDARD MIDSHIP #1 CROSSMEMBER(S)		
572-001	STANDARD REARMOST CROSSMEMBER		
565-001	STANDARD SUSPENSION CROSSMEMBER		
Chassis Equipment			
556-1AG	16.5 INCH PAINTED STEEL STRAIGHT BUMPER		
574-001	BUMPER MOUNTING FOR SINGLE LICENSE PLATE		
551-007	GRADE 8 THREADED HEX HEADED FRAME FASTENERS		
Fuel Tanks			
204-154	80 GALLON/302 LITER ALUMINUM FUEL TANK - LH	10	
218-006	25 INCH DIAMETER FUEL TANK(S)		
215-005	PLAIN ALUMINUM/PAINTED STEEL FUEL/HYDRAULIC TANK(S) WITH PAINTED BANDS		
212-007	FUEL TANK(S) FORWARD		
664-001	PLAIN STEP FINISH		
205-001	FUEL TANK CAP(S)		
216-020	EQUIFLO INBOARD FUEL SYSTEM		
11F-998	NO NATURAL GAS VEHICLE FUEL TANK VENT LINE/STACK		
202-016	HIGH TEMPERATURE REINFORCED NYLON FUEL LINE		
221-001	FUEL COOLER	10	
Tires			
093-0TA	MICHELIN XZY-3 385/65R22.5 18 PLY RADIAL FRONT TIRES	130	
094-1UX	MICHELIN X MULTI D 11R22.5 14 PLY RADIAL REAR TIRES		192
Hubs			
418-060	CONMET PRESET PLUS PREMIUM IRON FRONT HUBS		
450-060	CONMET PRESET PLUS PREMIUM IRON REAR HUBS		
Wheels			
502-574	ACCURIDE 29807 22.5X12.25 10-HUB PILOT 4.75 INSET 5-HAND STEEL DISC FRONT WHEELS	98	

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Data Code	Description	Weight Front	Weight Rear
505-428	ACCURIDE 28828 22.5X8.25 10-HUB PILOT 2-HAND HD STEEL DISC REAR WHEELS		104
Cab Exterior			
829-1A2	114 INCH BBC FLAT ROOF ALUMINUM CONVENTIONAL CAB		
650-008	AIR CAB MOUNTING		
648-002	NONREMOVABLE BUGSCREEN MOUNTED BEHIND GRILLE		
667-001	FRONT FENDERS		
754-002	3-1/2 INCH FENDER EXTENSIONS	15	
678-001	LH AND RH GRAB HANDLES		
646-041	STATIONARY BLACK GRILLE		
65X-004	BLACK HOOD MOUNTED AIR INTAKE GRILLE		
644-004	FIBERGLASS HOOD		
727-1AH	SINGLE 14 INCH ROUND POLISHED AIR HORN ROOF MOUNTED		
726-001	SINGLE ELECTRIC HORN		
728-001	SINGLE HORN SHIELD		
657-001	DOOR LOCKS AND IGNITION SWITCH KEYED THE SAME		
575-001	REAR LICENSE PLATE MOUNT END OF FRAME		
312-068	HALOGEN COMPOSITE HEADLAMPS WITH BLACK BEZELS		
302-001	(5) AMBER MARKER LIGHTS		
294-001	INTEGRAL STOP/TAIL/BACKUP LIGHTS		
300-015	STANDARD FRONT TURN SIGNAL LAMPS		
744-076	DUAL WEST COAST BRIGHT FINISH HEATED MIRRORS WITH LIGHTS		
797-001	DOOR MOUNTED MIRRORS		
796-001	102 INCH EQUIPMENT WIDTH		
743-204	LH AND RH 8 INCH BRIGHT FINISH CONVEX MIRRORS MOUNTED UNDER PRIMARY MIRRORS		
729-001	STANDARD SIDE/REAR REFLECTORS		
677-053	RH AFTERTREATMENT SYSTEM CAB ACCESS WITH STEEL SHIELDING		
768-043	63X14 INCH TINTED REAR WINDOW		
661-004	TINTED DOOR GLASS LH AND RH WITH TINTED OPERATING WING WINDOWS		
654-003	MANUAL DOOR WINDOW REGULATORS		
663-013	TINTED WINDSHIELD		

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Data Code	Description	Weight Front	Weight Rear
659-007	8 LITER WINDSHIELD WASHER RESERVOIR, CAB MOUNTED, WITHOUT FLUID LEVEL INDICATOR		
Cab Interior			
707-1AK	OPAL GRAY VINYL INTERIOR		
706-013	MOLDED PLASTIC DOOR PANEL		
708-013	MOLDED PLASTIC DOOR PANEL		
772-006	BLACK MATS WITH SINGLE INSULATION		
785-004	DASH MOUNTED ASH TRAY(S) WITHOUT LIGHTER		
691-008	FORWARD ROOF MOUNTED CONSOLE WITH UPPER STORAGE COMPARTMENTS WITHOUT NETTING		
694-010	IN DASH STORAGE BIN		
742-007	(2) CUP HOLDERS LH AND RH DASH		
680-006	GRAY/CHARCOAL FLAT DASH		
720-002	2-1/2 LB. FIRE EXTINGUISHER	5	
700-002	HEATER, DEFROSTER AND AIR CONDITIONER		
701-001	STANDARD HVAC DUCTING		
703-005	MAIN HVAC CONTROLS WITH RECIRCULATION SWITCH		
170-015	STANDARD HEATER PLUMBING		
130-033	DENSO HEAVY DUTY AIR CONDITIONER COMPRESSOR		
702-002	BINARY CONTROL, R-134A		
739-033	STANDARD INSULATION		
285-013	SOLID-STATE CIRCUIT PROTECTION AND FUSES		
280-007	12V NEGATIVE GROUND ELECTRICAL SYSTEM		
324-014	DOMELIGHT WITH 3-WAY SWITCH ACTIVATED BY LH AND RH DOORS		
655-001	CAB DOOR LATCHES WITH MANUAL DOOR LOCKS		
284-023	(1) 12 VOLT POWER SUPPLY IN DASH		
756-1J1	BASIC HIGH BACK NON SUSPENSION DRIVER SEAT WITH FORE AND AFT ADJUSTMENT		
760-235	2 MAN TOOL BOX MID BACK NON SUSPENSION PASSENGER SEAT	20	
711-004	LH AND RH INTEGRAL DOOR PANEL ARMRESTS		
758-036	VINYL WITH VINYL INSERT DRIVER SEAT		
761-036	VINYL WITH VINYL INSERT PASSENGER SEAT		

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Data Code	Description	Weight Front	Weight Rear
763-101	BLACK SEAT BELTS		
532-002	ADJUSTABLE TILT AND TELESCOPING STEERING COLUMN	10	
540-015	4-SPOKE 18 INCH (450MM) STEERING WHEEL		
765-002	DRIVER AND PASSENGER INTERIOR SUN VISORS		

Instruments & Controls

732-004	GRAY DRIVER INSTRUMENT PANEL		
734-004	GRAY CENTER INSTRUMENT PANEL		
87L-003	ENGINE REMOTE INTERFACE WITH PARK BRAKE AND NEUTRAL INTERLOCKS		
870-001	BLACK GAUGE BEZELS		
486-001	LOW AIR PRESSURE INDICATOR LIGHT AND AUDIBLE ALARM		
840-002	2 INCH PRIMARY AND SECONDARY AIR PRESSURE GAUGES		
198-025	INTAKE MOUNTED AIR RESTRICTION INDICATOR WITHOUT GRADUATIONS		
721-001	97 DB BACKUP ALARM		3
149-017	ELECTRONIC CRUISE CONTROL WITH SWITCHES ON AUXILIARY GAUGE PANEL (B DASH PANEL)		
156-007	KEY OPERATED IGNITION SWITCH AND INTEGRAL START POSITION; 4 POSITION OFF/RUN/START/ACCESSORY		
811-042	ICU3S, 132X48 DISPLAY WITH DIAGNOSTICS, 28 LED WARNING LAMPS AND DATA LINKED		
160-038	HEAVY DUTY ONBOARD DIAGNOSTICS INTERFACE CONNECTOR LOCATED BELOW LH DASH		
844-001	2 INCH ELECTRIC FUEL GAUGE		
845-011	FUEL FILTER RESTRICTION INDICATOR		
148-070	ENGINE REMOTE INTERFACE WITH PRESET FAST IDLE		
163-001	ENGINE REMOTE INTERFACE CONNECTOR AT BACK OF CAB		
856-001	ELECTRICAL ENGINE COOLANT TEMPERATURE GAUGE		
864-001	2 INCH TRANSMISSION OIL TEMPERATURE GAUGE		
830-017	ENGINE AND TRIP HOUR METERS INTEGRAL WITHIN DRIVER DISPLAY		



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Data Code	Description	Weight Front	Weight Rear
372-036	(1) DASH MOUNTED PTO SWITCH WITH INDICATOR LAMP - PARK BRAKE INTERLOCK	5	
852-002	ELECTRIC ENGINE OIL PRESSURE GAUGE		
746-115	AM/FM/WB WORLD TUNER RADIO WITH BLUETOOTH AND USB AND AUXILIARY INPUTS, J1939	10	
747-001	DASH MOUNTED RADIO		
750-002	(2) RADIO SPEAKERS IN CAB		
753-001	AM/FM ANTENNA MOUNTED ON FORWARD LH ROOF		
810-027	ELECTRONIC MPH SPEEDOMETER WITH SECONDARY KPH SCALE, WITHOUT ODOMETER		
817-001	STANDARD VEHICLE SPEED SENSOR		
812-001	ELECTRONIC 3000 RPM TACHOMETER		
813-1B4	VT-HU CONNECTIVITY PLATFORM HARDWARE		
8D1-002	2 YEARS DETROIT CONNECT BASE PACKAGE (VIRTUAL TECHNICIAN, DETROIT CONNECT PORTAL ACCESS) FOR VT-HU CONNECTIVITY PLATFORM		
162-002	IGNITION SWITCH CONTROLLED ENGINE STOP		
836-015	DIGITAL VOLTAGE DISPLAY INTEGRAL WITH DRIVER DISPLAY		
660-008	SINGLE ELECTRIC WINDSHIELD WIPER MOTOR WITH DELAY		
304-001	MARKER LIGHT SWITCH INTEGRAL WITH HEADLIGHT SWITCH		
882-009	ONE VALVE PARKING BRAKE SYSTEM WITH WARNING INDICATOR		
299-013	SELF CANCELING TURN SIGNAL SWITCH WITH DIMMER, WASHER/WIPER AND HAZARD IN HANDLE		
298-039	INTEGRAL ELECTRONIC TURN SIGNAL FLASHER WITH HAZARD LAMPS OVERRIDING STOP LAMPS		

Design

065-000	PAINT: ONE SOLID COLOR
---------	------------------------

Color

980-5F6	CAB COLOR A: L0006EB WHITE ELITE BC
986-020	BLACK, HIGH SOLIDS POLYURETHANE CHASSIS PAINT
962-972	POWDER WHITE (N0006EA) FRONT WHEELS/RIMS (PKWHT21, TKWHT21, W, TW)



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Data Code	Description	Weight Front	Weight Rear
966-972	POWDER WHITE (N0006EA) REAR WHEELS/RIMS (PKWHT21, TKWHT21, W, TW)		
964-020	STANDARD BLACK BUMPER PAINT		
963-003	STANDARD E COAT/UNDERCOATING		

Certification / Compliance

996-001	U.S. FMVSS CERTIFICATION, EXCEPT SALES CABS AND GLIDER KITS
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Sales Programs

NO SALES PROGRAMS HAVE BEEN SELECTED

TOTAL VEHICLE SUMMARY

Weight Summary

	Weight Front	Weight Rear	Total Weight
Factory Weight ⁺	9919 lbs	6970 lbs	16889 lbs
Total Weight ⁺	9919 lbs	6970 lbs	16889 lbs

Extended Warranty

WBB-237	TC4: HD MODERATE 5 YEARS/200,000 MILES / 322,000 KM EXTENDED TRUCK COVERAGE. FEX APPLIES
WAG-010	TOWING: 1 YEAR/UNLIMITED MILES/KM EXTENDED TOWING COVERAGE \$550 CAP FEX APPLIES
WBA-001	EXCELERATOR ROADSIDE ASSISTANCE: BREAKDOWN SERVICES AND MEMBER DISCOUNTS. ONE-TIME MEMBERSHIP FEE IS GOOD FOR DURATION OF VEHICLE OWNERSHIP

(+) Weights shown are estimates only.

If weight is critical, contact Customer Application Engineering.



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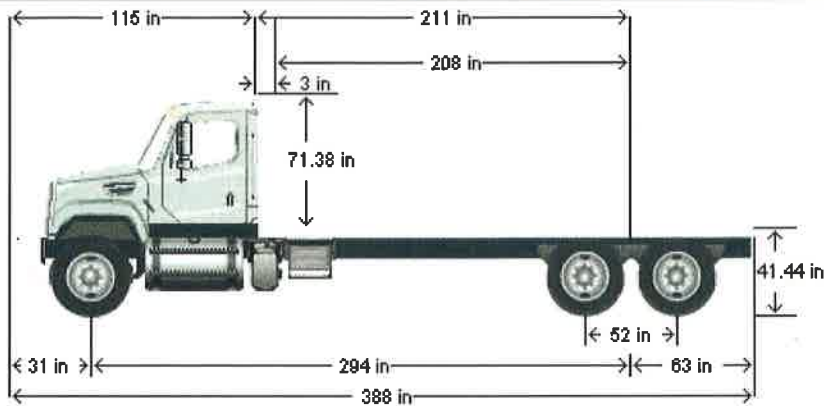
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DIMENSIONS



VEHICLE SPECIFICATIONS SUMMARY - DIMENSIONS

Model.....	114SD
Wheelbase (545)	7475MM (295 INCH) WHEELBASE
Rear Frame Overhang (552)	1600MM (63 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 HORIZONTAL TAILPIPE

TABLE SUMMARY - DIMENSIONS

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RICHLAND (JACKSON), MS
39218
Phone: 601-622-3747
Mobile:

Dimensions	Inches
Bumper to Back of Cab (BBC)	114.6
Bumper to Centerline of Front Axle (BA)	31.1
Min. Cab to Body Clearance (CB)	3.0
Back of Cab to Centerline of Rear Axle(s) (CA)	210.8
Effective Back of Cab to Centerline of Rear Axle(s) (Effective CA)	207.8
Back of Cab Protrusions (Exhaust/Intake) (CP)	0.0
Back of Cab Protrusions (Side Extenders/Trim Tab) (CP)	0.0
Back of Cab Protrusions (CNG Tank)	0.0
Back of Cab Clearance (CL)	3.0
Back of Cab to End of Frame	273.8
Cab Height (CH)	71.4
Wheelbase (WB)	294.3
Frame Overhang (OI)	63.0
Overall Length (OAL)	303.4
Rear Axle Spacing	52.0
Unladen Frame Height at Centerline of Rear Axle	41.4

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

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GVWR

VEHICLE SPECIFICATIONS SUMMARY - GVWR

Model.....	114SD
Cab Size (829).....	114 INCH BBC FLAT ROOF ALUMINUM CONVENTIONAL CAB
Expected Front Axle(s) Load (lbs).....	16000.0
Expected Pusher Axle(s) Load (lbs).....	0.0
Expected Rear Axle(s) Load (lbs).....	40000.0
Expected Tag Axle(s) Load (lbs).....	0.0
Expected GVW (lbs).....	56000
Expected GCW (lbs).....	0.0
Front Axle (400).....	DETROIT DA-F-16.0-5 16,000# FL1 71.0 KPI/3.74 DROP SINGLE FRONT AXLE
Front Suspension (620).....	16,000# TAPERLEAF FRONT SUSPENSION
Front Hubs (418).....	CONMET PRESET PLUS PREMIUM IRON FRONT HUBS
Front Disc Wheels (502).....	ACCURIDE 29807 22.5X12.25 10-HUB PILOT 4.75 INSET 5-HAND STEEL DISC FRONT WHEELS
Front Tires (093).....	MICHELIN XZY-3 385/65R22.5 18 PLY RADIAL FRONT TIRES
Front Brakes (402).....	MERITOR 16.5X6 Q+ CAST SPIDER CAM FRONT BRAKES, DOUBLE ANCHOR, FABRICATED SHOES
Steering Gear (536).....	TRW TAS-85 POWER STEERING
Rear Axle (420).....	MT-40-14XP 40,000# R-SERIES TANDEM REAR AXLE
Rear Suspension (622).....	40,000# 4-SPRING FLAT LEAF REAR SUSPENSION
Rear Hubs (450).....	CONMET PRESET PLUS PREMIUM IRON REAR HUBS
Rear Disc Wheels (505).....	ACCURIDE 28828 22.5X8.25 10-HUB PILOT 2-HAND HD STEEL DISC REAR WHEELS
Rear Tires (094).....	MICHELIN X MULTI D 11R22.5 14 PLY RADIAL REAR TIRES
Rear Brakes (423).....	MERITOR 16.5X7 Q+ CAST SPIDER CAM REAR BRAKES, DOUBLE ANCHOR, FABRICATED SHOES
Pusher / Tag Axle (443).....	NO PUSHER OR TAG AXLE
Pusher / Tag Suspension (626).....	NO PUSHER OR TAG SUSPENSION
Pusher / Tag Hubs (449).....	NO PUSHER OR TAG HUBS
Pusher/Tag Disc Wheels (509).....	NO PUSHER/TAG DISC WHEELS
Pusher / Tag Tires (095).....	NO PUSHER/TAG TIRES
Pusher / Tag Brakes (456).....	NO PUSHER/TAG BRAKES

TABLE SUMMARY - GVWR

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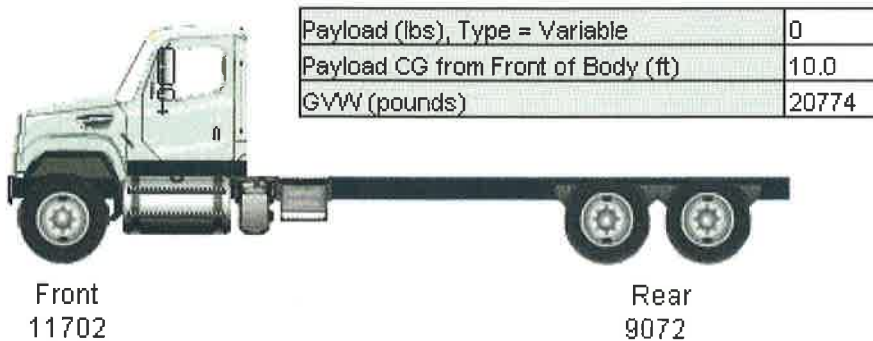
	Front	Rear 1	Rear 2
Axle Component Weight Ratings			
Axles	16000	20000	20000
Suspension	16000	20000	20000
Hubs	23000	26000	26000
Brakes	18000	21000	21000
Wheels	23000	32000	32000
Tires	18740	23360	23360
Power Steering	18000	N/A	N/A
GAWR (per axle)	16000	20000	20000
GAWR (per axle system)	16000		40000
Expected Load (per axle system)	16000		40000
Vehicle GVWR Summary			
Calculated GVWR	56000		
Expected GVWR	50000		
All weights displayed in pounds			

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

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TRUCK WEIGHT



VEHICLE SPECIFICATIONS SUMMARY - TRUCK WEIGHT

Model.....	114SD
Cab Size (829).....	114 INCH BBC FLAT ROOF ALUMINUM CONVENTIONAL CAB
Expected Front Axle(s) Load (lbs).....	16000.0
Expected Pusher Axle(s) Load (lbs).....	0.0
Expected Rear Axle(s) Load (lbs).....	40000.0
Expected Tag Axle(s) Load (lbs).....	0.0
Expected GVW (lbs).....	56000
Expected GCW (lbs).....	0.0
Wheelbase (545).....	7475MM (295 INCH) WHEELBASE
Pusher / Tag Axle (443).....	NO PUSHER OR TAG AXLE
Front Axle to Back of Cab (in).....	83.464
Cab to Body Clearance (in).....	3.0
Front Axle to Body (in).....	86.464
Truck Configuration (AA3).....	FLATBED/PLATFORM/STAKE BODY
Body Length (ft).....	20.0
Body Weight (lbs).....	2600.0
Body Horiz CG from Body Front (ft).....	10.0
Body Front to Rear Axle(s) CL (ft).....	17.32
Driver Weight (lbs).....	500.0
Driver Horizontal CG from Front Axle (in).....	55.95
Left-Hand Fuel Tank (204).....	80 GALLON/302 LITER ALUMINUM FUEL TANK - LH

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Left Fuel Tank Horizontal CG (in).....59.823
Right-Hand Fuel Tank (206).....NO RH FUEL TANK
Right Fuel Tank Horizontal CG (in).....0

TABLE SUMMARY - TRUCK WEIGHT

Item	Front(s)	Rear(s)	Total
Chassis Tare	9919	6970	16009
Fuel / Oil	002	183	785
Driver	405	95	500
Dealer Installed Options	0	0	0
Accessories Total	0	0	0
Body Tare	776	1824	2600
Truck Tare Weight	11702	9072	20774
Payload Total	0	0	0
Calculated Axle Loads	11702	9072	20774
Expected Axle Loads / GVW	16000	40000	56000
GAWR / GVWR	16000	40000	56000
Payload CG From Front of Body		10 feet	
Payload CG From Front Axle		17.2 feet	
Payload Distribution		Variable	
All weights displayed in pounds			

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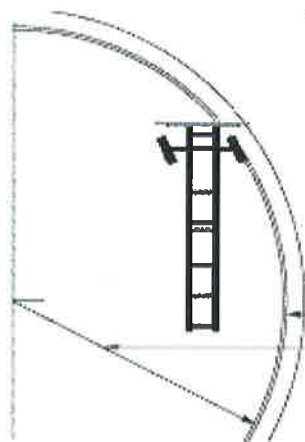
Item	Front(s)	Rear(s)	Total
Chassis Tare	9919	6970	16889
Fuel / Oil	602	183	785
Driver	405	95	500
Dealer Installed Options	0	0	0
Accessories Total	0	0	0
Body Tare	776	1824	2600
Truck Tare Weight	11702	9072	20774
Payload Total	0	0	0
Calculated Axle Loads	11702	9072	20774
Expected Axle Loads / GVW	16000	10000	56000
GAWR / GVWR	16000	10000	56000
Payload CG From Front of Body		10 feet	
Payload CG From Front Axle		17.2 feet	
Payload Distribution		Variable	
All weights displayed in pounds			

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TURNING RADIUS



Turning radius graphic and data provided strictly for comparisons between model configurations. Weather, road surfaces, and tire treads affect the results. It is strongly suggested that actual vehicles be measured before constructing any roads/driveways using this information. For specific figures regarding your configuration, please contact your CAE representative.

	Dimensions	Tolerance
Wall to Wall Diameter (ft)	79.8	+/- 3.0
Curb to Curb Diameter (ft)	77.2	+/- 3.0
Turning Radius (ft)	37.9	+/- 1.5

VEHICLE SPECIFICATIONS SUMMARY - TURNING RADIUS

Model..... 114SD
Cab Size (829)..... 114 INCH BBC FLAT ROOF ALUMINUM CONVENTIONAL CAB
Wheelbase (545) 7475MM (295 INCH) WHEELBASE
Front Tires (093) MICHELIN XZY-3 385/65R22.5 18 PLY RADIAL FRONT TIRES
Width (in) 16.1
Front Axle (400) DETROIT DA-F-16.0-5 16,000# FL1 71.0 KPI/3.74 DROP SINGLE FRONT AXLE
Kingpin Intersection (in) 71
Bumper (556) 16.5 INCH PAINTED STEEL STRAIGHT BUMPER
Width (in) 95.8
Bumper Miter to Front Axle (in) 31.1
Primary Steering Location (003)..... LH PRIMARY STEERING LOCATION
Steering Gear (536) TRW TAS-85 POWER STEERING
Dual Steering Gear NONE
Ram NONE
Rear Axle (420)..... MT-40-14XP 40,000# R-SERIES TANDEM REAR AXLE
Axle Spacing (624)..... 52 INCH AXLE SPACING

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Time and Distance Tables

1.1 Freightliner Level II (Factory Released On or After 01/07/2013)

Level II coverage is not available for vehicles in this vocation:		Mining	
Category Determinants			
Road Surface - most severe in-transit between sites		Up to 30% off-highway rough, maintained concrete/asphalt; maintained gravel/crushed rock; maintained dirt or soft soil	
		Models with limitations: Columbia, Century, or Coronado - Up to 10% off-highway rough, maintained concrete/asphalt; maintained gravel/crushed rock	
Gross Combined Weight Rating		140,000 lb/63 505 kg or less	
		-Doubles on NY turnpikes are rated 143,000 lb -Doubles on FL turnpikes are rated 147,000 lb	
Axles and Manufacturer's Gross Vehicle Weight Rating			
2-Axle Unit		49,000 lb/21 000 kg or less	
3-Axle Unit		69,000 lb/31 000 kg or less	
4-Axle Unit		89,000 lb/40 000 kg or less	
5-Axles or More		98,000 lb/44 452 kg or less	
Coverage ¹			
Description		Time ²	Distance ²
Basic Vehicle		1 Year	100,000 mi/161 000 km
Battery		1 Year	100,000 mi/161 000 km
Brightwork		6 Months	Unlimited
Cab Corrosion/Perforation		5 Years	Unlimited
Cab Structure		3 Years	150,000 mi/241 000 km
Corrosion		6 Months	Unlimited
Crossmembers		5 Years	300,000 mi/483 000 km
Emission Regulations ³			
Diesel Emission 2010 ⁴		5 Years	100,000 mi/161 000 km
GHG14/17 ⁵ (Medium Heavy Duty to Heavy Heavy Duty Trucks/Tractors)		5 Years	100,000 mi/161 000 km
GHG14/17 ⁵ Tire (File Direct)		2 Years	24,000 mi/38 400 km
Frame Rails		5 Years	300,000 mi/483 000 km
Front/Steer Axle ⁶			
Detroit ⁷		2 Years	Unlimited
Non-Detroit		2 Years	100,000 mi/161 000 km
Paint		1 Year	100,000 mi/161 000 km
Paint, Chassis		6 Months	Unlimited
Rear Axle ⁸			
Detroit ⁷		2 Years	Unlimited
Non-Detroit		2 Years	100,000 mi/161 000 km
Transfer Case		2 Years	100,000 mi/161 000 km

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Coverage ¹		
Description	Time ²	Distance ²
Transmission ⁹		
Detroit DT-12 ⁷	5 Years	750,000 mi/1 200 000 km
Non-Detroit	2 Years	100,000 mi/161 000 km

¹ Because Warranty coverage is determined by a unit's specifications, gross combination weight rating, road surface, and vocation, coverage may vary. For unit-specific coverage, Dealers should enter a product serial number or vehicle identification number on the *Coverage Info* screen in OWL; for customers without access to OWL, see ordering Dealer for more information.

² Time or distance, whichever comes first.

³ See *Emission Regulations* subsection that follows or separate engine owner's manual for regulatory information.

⁴ Applies to vehicles equipped with EPA 2010 compliant diesel engines.

⁵ Applies to models 2013 and later domiciled in the United States and Canada.

⁶ Customers will have only one (1) type of front/steer axle coverage, either Detroit or non-Detroit, depending on how the unit is spec'd. Front axle coverage is also applicable to gliders. Detroit coverage may vary due to vocation, unit specifications, etc.; table shows the minimum coverage possible. For instructions on accessing unit-specific coverage, please see footnote 1 above.

⁷ Access Detroit parchments at *DTNACONnect > Warranty Lit > Coverages > Detroit*; for customers without access, see ordering Dealer for more information.

⁸ Customers will have only one (1) type of rear axle coverage, either Detroit or non-Detroit, depending on how the unit is spec'd. Detroit coverage may vary due to vocation, unit specifications, etc.; table shows the minimum coverage possible. For instructions on accessing unit-specific coverage, please see footnote 1 above.

⁹ Customers will have only one (1) type of transmission coverage, either Detroit or non-Detroit, depending on how the unit is spec'd.

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1.2 Freightliner Level II (Factory Released Prior to 01/07/2013)

Level II coverage is not available for vehicles in this vocation:		Mining
Category Determinants		
Road Surface - most severe in-transit between sites	Up to 30% off-highway rough, maintained concrete/asphalt; maintained gravel/crushed rock; maintained dirt or soft soil	
	Models with limitations: Columbia, Century, or Coronado - Up to 10% off-highway rough, maintained concrete/asphalt; maintained gravel/crushed rock	
Gross Combined Weight Rating	140,000 lb/63 505 kg or less	
	-Doubles on NY turnpikes are rated 143,000 lb -Doubles on FL turnpikes are rated 147,000 lb	
Axles and Manufacturer's Gross Vehicle Weight Rating		
2-Axle Unit	46,000 lb/20 865 kg or less	
3-Axle Unit	66,000 lb/29 937 kg or less	
4-Axle Unit	86,000 lb/39 008 kg or less	
5-Axles or More	98,000 lb/44 452 kg or less	
Coverage ¹		
Description	Time ²	Distance ²
Basic Vehicle	1 Year	100,000 mi/161 000 km
Battery	1 Year	100,000 mi/161 000 km
Brightwork	6 Months	Unlimited
Cab Corrosion/Perforation	5 Years	Unlimited
Cab Structure	3 Years	150,000 mi/241 000 km
Corrosion	6 Months	Unlimited
Crossmembers	5 Years	300,000 mi/483 000 km
Emission Regulations ³		
Diesel Emission 2010 ⁴	5 Years	100,000 mi/161 000 km
GHG14/17 ⁵ (Medium Heavy Duty to Heavy Heavy Duty Trucks/Tractors)	5 Years	100,000 mi/161 000 km
GHG14/17 ⁵ Tire (File Direct)	2 Years	24,000 mi/38 400 km
Frame Rails	5 Years	300,000 mi/483 000 km
Front/Steer Axle ⁶		
Detroit ⁷	2 Years	Unlimited
Non-Detroit	2 Years	100,000 mi/161 000 km
Paint	1 Year	100,000 mi/161 000 km
Paint, Chassis	6 Months	Unlimited
Rear Axle ⁸		
Detroit ⁷	2 Years	Unlimited
Non-Detroit	2 Years	100,000 mi/161 000 km
Transfer Case	2 Years	100,000 mi/161 000 km

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Coverage ¹		
Description	Time ²	Distance ²
Transmission ⁹		
Detroit DT-12 ⁷	5 Years	750,000 mi/1 200 000 km
Non-Detroit	2 Years	100,000 mi/161 000 km

¹ Because Warranty coverage is determined by a unit's specifications, gross combination weight rating, road surface, and vocation, coverage may vary. For unit-specific coverage, Dealers should enter a product serial number or vehicle identification number on the *Coverage Info* screen in OWL; for customers without access to OWL, see ordering Dealer for more information.

² Time or distance, whichever comes first.

³ See *Emission Regulations* subsection that follows or separate engine owner's manual for regulatory information.

⁴ Applies to vehicles equipped with EPA 2010 compliant diesel engines.

⁵ Applies to models 2013 and later domiciled in the United States and Canada.

⁶ Customers will have only one (1) type of front/steer axle coverage, either Detroit or non-Detroit, depending on how the unit is spec'd. Front axle coverage is also applicable to gliders. Detroit coverage may vary due to vocation, unit specifications, etc.; table shows the minimum coverage possible. For instructions on accessing unit-specific coverage, please see footnote 1 above.

⁷ Access Detroit parchments at *DTNACONnect > Warranty Lit > Coverages > Detroit*; for customers without access, see ordering Dealer for more information.

⁸ Customers will have only one (1) type of rear axle coverage, either Detroit or non-Detroit, depending on how the unit is spec'd. Detroit coverage may vary due to vocation, unit specifications, etc.; table shows the minimum coverage possible. For instructions on accessing unit-specific coverage, please see footnote 1 above.

⁹ Customers will have only one (1) type of transmission coverage, either Detroit or non-Detroit, depending on how the unit is spec'd.

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Coverage Descriptions

Based on a unit's specifications, New Product Limited Warranty (Warranty) coverage applies. For unit-specific coverage information (time/distance amounts and component descriptions), enter a product serial number or vehicle identification number (VIN) on the *Check Info/Check Coverage* screen in Online Warranty Link (OWL). Use time and distance tables in conjunction with the coverage description paragraphs; if a coverage is applicable, it will be included as a row in the table.

2.1 Axles

Front/Steer Axle

Detroit

A front/steer axle can be a front powered or non-powered axle. Coverage includes all axle components supplied/manufactured by Detroit Diesel Corporation (Detroit). Warrantable components could include, but not be limited to, I-beam, steering knuckles, differential on drive steer axle, spindles, tie rod ends, kingpins, kingpin bearings, and steering arms. *Excluded components could include, but not be limited to, wheel end equipment and steering linkage components.*

Non-Detroit

A front/steer axle can be a front powered or non-powered axle. Coverage applies to factory-installed axles and includes I-beam, steering knuckles, differential on drive steer axle, spindles, kingpins, kingpin bearings, and steering arms. *Excludes wheel end equipment, tie rod ends, steering linkage components, driveline(s), U-joints, kingpin bushings, kingpin seals, tag axle(s), pusher axle(s), and any axle installed by a service location or body builder.*

Pusher Axle

A pusher axle is a non-driven, weight-bearing axle that can be raised when not required to bear a portion of the load. Since the pusher axle can be of many different configurations, Warranty coverage applies to factory-installed axles and includes all components included in the individual build specification of each individual application. *Excludes any axle installed by a service location or body builder.*

Rear Axle

Detroit

A rear axle could be a drive, non-drive, or tandem axle. Coverage includes all axle components supplied/manufactured by Detroit. Warrantable components could include, but not be limited to, axle housing, carrier assembly, differential assembly, power divider, axle shafts, and gaskets and seals. *Excluded components could include, but not be limited to, suspension and torque rod brackets, tie rod ends, wheel end equipment, wiring, yokes, and attaching hardware.*

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Non-Detroit

A rear axle could be a drive, non-drive, or tandem axle. Coverage applies to factory-installed axles and includes axle housing, carrier assembly, differential assembly, power divider, axle shafts, and gaskets and seals. *Excludes suspension and torque rod brackets, tie rod ends, wheel end equipment, wiring, yokes, driveline(s), U-joints, attaching hardware, tag axle(s), pusher axle(s), and any axle installed by a service location or body builder.*

Tag Axle

A tag axle is a non-driven, continuous weight-bearing axle. Since the tag axle can be of many different configurations, Warranty coverage applies to factory-installed axles and includes all components included in the individual build specification of each individual application. *Excludes any axle installed by a service location or body builder.*

2.2 Basic Chassis/Vehicle

Note: Basic Chassis applies to Freightliner Custom Chassis Corporation (FCCC) products; Basic Vehicle applies to Freightliner, Western Star, and Thomas Built Bus (TBB) products.

Coverage includes all factory-installed components of the chassis/vehicle that are not excluded elsewhere in the Warranty or described as having a different time, or distance, or hours, or listed separately on each new vehicle coverage table. See the Warranty Manual for a complete list of exceptions and exclusions. Also excluded are components warranted directly by component manufacturer.

2.3 Batteries

Standard Battery

Coverage includes Alliance* and NorthStar brand batteries only; claims for all other brands must be submitted directly to the supplier. Includes starting battery assemblies and factory-installed auxiliary power unit (APU) battery assemblies. *Excludes non-Alliance and non-NorthStar brand batteries, battery cables, battery mounting box, and hardware.*

Cranking Battery Only

Coverage includes Alliance* or NorthStar brand batteries only; claims for all other brands must be submitted directly to the supplier. Cranking battery warranty includes factory-installed cranking (starter) battery assemblies only. *Excludes APU battery assemblies, non-Alliance and non-NorthStar brand batteries, battery cables, battery mounting box, and hardware.*

Auxiliary Battery Only

Coverage includes Alliance* or NorthStar brand batteries only; claims for all other brands must be submitted directly to the supplier. Auxiliary battery warranty includes factory-installed APU battery assemblies only. *Excludes cranking (starter) battery assemblies, non-Alliance and non-NorthStar brand batteries, battery cables, battery mounting box, and hardware.*

*Detroit brand batteries of the same group and amperage are interchangeable with Alliance brand batteries and carry the same coverage period.

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2.4 Brightwork

Coverage includes all factory-installed components with chrome, polished aluminum, or polished stainless steel surfaces. *Excludes any damage to backside of bumpers, and concealed or inner surfaces.*

2.5 Cab Corrosion/Perforation

Coverage is limited to rust-through or perforation of the cab and integral sleeper structure and sleeper box due to corrosion from within. *Excludes all conditions of rust or corrosion that have not resulted in rust-through or perforation as well as surface rust or corrosion caused by non-adhesion and any damage to paint such as chips or scratches.*

2.6 Cab Structure

Coverage includes cab and integral sleeper structural components, structural components of factory-installed sleeper boxes, sheet metal panels, doors, and hoods. *Excludes all bolt-on components including door and hood hinges, latches, guides, and other mounting hardware.*

2.7 Corrosion

Coverage includes Warranty against corrosion to any metal or metal alloy part of the vehicle.

Excludes:

- Corrosion caused by general rust (e.g., rust on the unfinished backside of a bumper)
- Surface rust caused by chips or scratches in the paint or chrome surfaces
- Corrosion caused by severe wash solutions, cleaning solvents, detergents, compounds
- Corrosion caused by salinity in the environment or corrosive salts and/or chemicals used on the road surface
- Corrosion due to improper use, misuse, or abuse, negligence, including improper or insufficient maintenance
- Corrosion due to ocean spray
- Corrosion due to environmental damage, including airborne fallout (includes chemicals, tree sap, etc.), or other atmospheric conditions, or other acts of nature
- Corrosion due to damage caused by high-pressure washing
- Corrosion caused by acid rain or other industrial fallout
- Corrosion due to improper prevention measures during storage or use
- Corrosion or rust on tone rings, rotors, or drums

2.8 Cowl Corrosion

Coverage is limited to rust-through or perforation of the cowl due to corrosion from within. *Excludes all conditions of rust or corrosion that have not resulted in rust-through or perforation as well as surface rust or corrosion caused by non-adhesion and any damage to the paint such as chips or scratches.*

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2.9 Cowl Structure

Coverage includes cowl structural components, sheet metal panels, and hood. *Excludes all bolt-on components (e.g., hood hinges, latches, guides, or other mounting hardware).*

2.10 Crossmembers

Coverage includes crossmembers, gussets, and huck-mounting bolts that attach gussets to crossmembers and gussets/crossmembers to frame rails. *Excludes any bolt-on item attached with either conventional or huck bolts.*

2.11 Driveline

Coverage includes driveshaft tubing, U-joints, yokes, support bearings, and splines.

2.12 Frame Rails

Coverage is limited to breaking or cracking of factory-installed frame rails, frame rail liners, frame rail extensions, and any item(s) factory welded to them. *Excludes all bolt-on items attached with either conventional or huck bolts.*

2.13 Glider

A glider is a vehicle that may be ordered without major components. Coverage includes all components identified on the build specification.

2.14 Hybrid Transmission - Eaton

Eaton requires that only hybrid-authorized dealerships work on units equipped with Eaton hybrid parts. Pre-authorization is required prior to repair of these vehicles in order to obtain technical assistance and a pre-authorization number for replacement parts. Eaton hybrid parts will be shipped directly from Eaton and will not be stocked in the Parts Distribution Centers (PDCs) due to the short shelf life and low volume. The following hybrid parts are covered under this Warranty: power electronics carrier (PEC), motor generator, inverter, AC/DC converter, hybrid control module (HCM), transmission control module (TCM), clutch, and electronic clutch actuator (ECA). Coverage does NOT include oil cooler or cooling systems. Please reference Roadranger Warranty Guide TCWY0900 for more information on complete listing of limits and exclusions, as well as terms and conditions.

2.15 Paint (Body, Cab, Cowl)

Body Paint

Coverage includes all factory-painted exterior body surfaces and defects such as orange peel, peeling/delaminating, cracking/checking, or loss of gloss due to cracking, checking, or hazing. *Excludes lack of gloss issues on vehicles painted with low gloss colors; the undersides of hoods and roofs and side mounted air fairings; and any damages to the paint or painted surface such as chips and scratches.*

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Cab Paint

Coverage includes all factory-painted surfaces (except those included in chassis paint coverage) and defects such as orange peel, peeling/delaminating, cracking/checking, or loss of gloss due to cracking, checking, or hazing. *Excludes lack of gloss issues on vehicles painted with low gloss colors; the undersides of hoods and roofs and side mounted air fairings; and any damages to the paint or painted surface such as chips and scratches.*

Cowl Paint

Coverage includes all factory-painted exterior surfaces of cowl structure (except those included in chassis paint coverage) and defects such as orange peel, peeling/delaminating, cracking/checking, or loss of gloss due to cracking, checking, or hazing. *Excludes lack of gloss issues on vehicles painted with low gloss colors; the undersides of hoods and roofs and side mounted air fairings; and any damages to the paint or painted surface such as chips and scratches.*

2.16 Paint (Chassis)

Coverage includes all factory-painted surfaces on frame rails, crossmembers/gussets, front and rear bumpers, suspension components, powertrain components, drivelines, fuel tanks, air tanks, wheel end equipment, tool boxes, battery boxes, access steps, attaching brackets and hardware, and defects such as peeling or non-adhesion. *Excludes U-joints and any damages to paint or painted surface such as chips and scratches.*

2.17 Towing/Roadside Assistance

Coverage may include emergency roadside assistance or towing to the nearest Authorized Service Facility for a warrantable repair in a vehicle-down situation that prevents the safe and lawful operation of the vehicle. Verify coverage on the *Coverage Information* screen in OWL; coverage will display as a separate category. If the customer requests towing to a location beyond the distance to the nearest Authorized Service Location, the customer will be responsible for the additional charges.

2.18 Transfer Case

Coverage includes housing and all internally lubricated parts. *Excludes broken synchronizer pins, power take-offs (PTOs), airlines, gauge, clutch assemblies, driveline(s), and U-joints.*

2.19 Transmission

Detroit

Coverage includes all transmission components supplied/manufactured by Detroit. *Excludes maintenance items.*

Non-Detroit

Coverage does not include Allison transmissions or Eaton Hybrid transmissions. Coverage includes housing and all internally lubricated parts, electric/air shift/control units, valves, gaskets, and seals. *Excludes broken synchronizer pins, PTOs, airlines, gauge, clutch assemblies, driveline(s), and U-joints.*

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New Product Limited Warranty Statements

The following section outlines standard Limited Warranty (Warranty) statements for all new Daimler Trucks North America LLC (DTNA; Company) products sold by DTNA and domiciled in the USA (50 states and Washington, D.C.) and Canada. As necessary, information below may be divided by DTNA product type (vehicle and powertrain components); this information is also included in the applicable Owner's Warranty Information Booklet.

Based on a product's specifications, Warranty coverage varies. For product-specific coverage information (time/distance amounts and component descriptions), enter a product serial number or vehicle identification number (VIN) on the *Coverage Information* screen in the OWL. General time/distance amounts and coverage descriptions are available by DTNA brand at *DTNAConnect > Warranty Lit > Other Warranty Documents > [Coverages](#)*.

3.1 New Vehicle Limited Warranty Statement

Under this New Vehicle Limited Warranty, DTNA warrants that each new vehicle will be free from defects in material and workmanship that occur under normal use within the applicable Warranty period, subject to certain limitations and exclusions as specified in this document.

This Limited Warranty applies only to new vehicles sold by an Authorized DTNA Service Location or ordered directly from DTNA; vehicles sold at auction or as a result of repossession retain the Warranty coverage from the original in-service date or factory invoice date if the vehicle has not been warranty registered.

DTNA reserves the right to reduce or remove coverage on vehicles in salvage condition.

This Warranty covers all components and parts unless specifically covered by other warranties or otherwise excluded by this document.

3.2 New Powertrain Component Statements

Engine components are covered by two types of warranties, the standard Limited Warranty and the Emission Control Systems Warranty, a requirement of the U.S. (Federal) Clean Air Act and Canada Motor Vehicle Safety Act. Axle and transmission components are covered by the standard Limited Warranty.

New Powertrain Component Limited Warranty

The New Product Limited Warranty covers product repairs to correct any malfunction occurring during the Warranty period resulting from defects in material or workmanship. This Limited Warranty applies to the first retail purchaser and subsequent retail owners during the applicable Warranty period of new powertrain components manufactured by Detroit Diesel and/or supplied by Detroit Diesel or Detroit Diesel of Canada Limited (all which are collectively referred to as Detroit), subject to certain limitations and exclusions as specified in this document.

The Warranty period begins on the date the product is delivered to the first retail purchaser or put in use prior to sale at retail, whichever occurs first, and ends at the specified time or distance limits.

The cost of service supplies which are not reusable due to needed repairs is covered by this Warranty. Reasonable towing costs to the nearest authorized service facility are covered when due to warrantable failure, the powertrain component is either inoperable, cannot be safely operated, or continued operation would cause further damage to the product. Detroit will pay reasonable travel expenses for the repairing mechanic to travel to and from the repair site.

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Engine Major Component Warranty Coverage

Engine major component(s) are covered 100%, which includes the cost to repair or replace only the failed major component. Engine major components include cylinder block/head casting, crankshaft, camshaft, main bearing bolts, flywheel housing, connecting rod assemblies, oil cooler housing, water pump housing, and air inlet housing.

DTNA will pay for the cost of any major component which is progressively damaged by the failure of another major component during the Warranty period. Review the new engine Warranty parchment for specific coverages.

Engines used in the on-highway application carry longer coverage on major components:

- MBE4000, Series 60, DD13, DD15, DD16 diesel fueled engines in on-highway applications (on-highway refers to a truck or coach designed and used to carry passengers and/or cargo, primarily on streets or paved highways)

Emission Control Systems Warranty

For detailed information about product compliance with U.S. and Canadian law regarding design, build, and equipment, see the [Emission Regulations](#) section. Please note that emission-related components no longer covered under the Limited Warranty described above may still be covered under the Emission Control Systems Warranty.

Certified Engines and Engine Parts

The Warranty period shall begin on the date the vehicle is delivered to the first retail purchaser or, if the vehicle is first placed in service as a demonstrator prior to sale at retail, on the date the vehicle is first placed in such service. Emission related defects in the genuine Company components listed in the [Emission Regulations](#) section, including reasonable related diagnostic costs, are covered by this Warranty.

Covered components and component terminology varies from engine to engine. Some scheduled maintenance is required (refer to the Owner's Emission Control Maintenance Service Chart which is included in the Warranty Information booklet). Please check the specific Warranty Information Booklet to determine which components are covered by the emissions control systems warranty.

Service Locations should refer to the applicable Engine Warranty Information booklet to determine if a particular component is covered by the Emission Control Systems Warranty, as the components covered differ on each engine type as well as from year to year.

3.3 Limitations

This Warranty does not apply to products that are sold or domiciled outside of the United States (50 states and Washington, D.C.) or Canada.

This Warranty does not apply to non-Detroit engines, Allison transmissions, tires, or other components or parts that are not manufactured by Company and that are warranted directly by their respective manufacturers. Progressive damage caused by these manufacturers' components to any other parts including, but not limited to, parts installed by Company is excluded from Company warranty coverage. With respect to the foregoing, Company makes no Warranty whether express, implied, statutory or otherwise including, but not limited to, parts installed by Company is excluded from Company Warranty coverage. With respect to the foregoing, Company makes no Warranty whether express, implied, statutory, or otherwise including, but not limited to, any Warranty of merchantability or fitness for a particular purpose.

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THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES OF ANY KIND WHETHER WRITTEN, ORAL, OR IMPLIED INCLUDING, BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THIS WARRANTY SPECIFICALLY EXCLUDES ANY OTHER WARRANTIES OR CONDITIONS PROVIDED FOR BY LAW, WHETHER STATUTORY OR OTHERWISE.

COMPANY'S SOLE OBLIGATION UNDER THIS WARRANTY SHALL BE TO REPAIR OR REPLACE, IN COMPANY'S SOLE DISCRETION, ANY DEFECTIVE COMPONENT OR PART. SUCH REPAIR OR REPLACEMENT SHALL BE WITHOUT COST TO PURCHASER WHEN PERFORMED WITHIN THE APPLICABLE WARRANTY PERIOD (TIME, DISTANCE, OR HOUR LIMIT, WHICHEVER OCCURS FIRST).

Purchaser must notify Company, within the applicable Warranty period, of any failure of the product to comply with this Warranty and Purchaser must, at Purchaser's expense, promptly return the unit to an Authorized Service Facility for inspection and repair or replacement of any defect in material or workmanship occurring within the applicable Warranty period. During New Product coverage, Warranty reimbursement will not be paid on repairs performed by customers on their own vehicles without a current Customer Performed Warranty Agreement (CPWA).

The product must be maintained and serviced according to the prescribed schedules outlined in the Driver's/Operator's and Maintenance Manuals. Receipted bills and other evidence showing that required maintenance and service have been performed are required by Company as a condition of this Warranty.

After the Company's obligations under this Warranty expire, all liabilities of Company to Purchaser under this Warranty shall terminate. Repairs made under this Warranty do not constitute an extension of the original Warranty period for the vehicle or for any specific component or part.

To the extent that any provision of this Warranty contravenes the law of any jurisdiction, such provision shall be inapplicable in such jurisdiction, and the remainder of the Warranty shall not be affected.

3.4 Purchaser's Exclusive Remedy

THIS WARRANTY SHALL BE THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY AGAINST COMPANY, WHETHER IN CONTRACT, UNDER STATUTE (INCLUDING STATUTORY PROVISIONS AS TO CONDITIONS AS TO QUALITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF GOODS SUPPLIED PURSUANT TO THE CONTRACT OF SALE), WARRANTY, TORT, STRICT LIABILITY, OR ANY OTHER LEGAL THEORY.

3.5 Limitation of Liability

COMPANY'S LIABILITY UNDER THIS WARRANTY IS LIMITED TO THE COST TO REPAIR OR REPLACE, IN COMPANY'S SOLE DISCRETION, THE DEFECTIVE COMPONENT OR PART THAT IN NO EVENT SHALL EXCEED THE FAIR MARKET VALUE OF THE PRODUCT AT THE TIME THE DEFECT IS DISCOVERED.

IN NO EVENT SHALL COMPANY BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES INCLUDING, BUT NOT LIMITED TO, INJURIES TO PERSONS OR DAMAGE TO PROPERTY, LOSS OF PROFITS OR ANTICIPATED PROFITS, OR LOSS OF PRODUCT USE.

3.6 Emission Regulations

Vehicles and engines are designed, built, and equipped so as to conform, at the time of sale, with applicable regulations of the U.S. (Federal) Environmental Protection Agency (EPA), Emission Regulations under the Canada Motor Vehicle Safety Act in Canada, and the California Air Resources Board. Engines and vehicles are free from defects in material and workmanship which cause the engine to fail to conform with those regulations for the Warranty period. The Warranty period is 100,000 miles or five (5) years of engine operation, whichever occurs

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first, or the New Product Warranty, if the product warranty is longer for all emission-related components except tires and 24,000 miles or two (2) years, whichever occurs first, for the tires.

The Warranty obligations are not dependent upon the use of any particular brand of replacement parts. The Owner may elect to use non-Genuine Company Parts for replacement purposes. Use of replacement parts which are not of equivalent quality may impair the effectiveness of emission control systems. If other than Genuine Company Parts are used for maintenance replacements or for the repair of components affecting emission controls, the Owner should assure himself/herself that such parts are warranted by their manufacturer to be equivalent to Genuine Company Parts in performance and durability.

Conditions resulting from tampering, misuse, improper adjustments, alteration, accident, failure to use recommended fuel or non-performance of required maintenance services are not covered.

Warranted Components					
Unless otherwise noted, the Warranty period is 5 years/100,000 miles, whichever occurs first, or the New Product Warranty, if the product Warranty is longer for all emission-related components except tires.					
Components¹	Diesel Emission 2010		Gasoline Evaporative Emission 2011²	Greenhouse Gas (GHG) 14/17	
	Detroit Engine	DTNA Installed³	DTNA Installed	Detroit Engine	DTNA Installed⁴
Aerodynamic Roof Fairings					X
Aerodynamic Roof Fairings (Adjustable Height)					X
Aerodynamic Side Fairings					X
Aftertreatment System (ATS) Aftertreatment Control Module (ACM)	X			X	
ATS Aftertreatment Device (ATD) Wiring Harness	X			X	
ATS Diesel Exhaust Fluid (DEF) Coolant Supply Valve & DEF Coolant Lines		X			
ATS DEF Pump	X			X	
ATS DEF Fuel Rail Pressure Sensor	X			X	
ATS DEF Fuel Pressure Sensor (Low)	X			X	
ATS DEF Low Dosing Unit	X			X	
ATS DEF System Air Pressure Regulator & Associated Air Lines		X			
ATS DEF System Chassis Interface Harness		X			
ATS DEF Tank		X			
ATS DEF Tank DEF Level Gauge		X			
ATS DEF Tank DEF Temperature Sensor		X			
ATS DEF Tank Heater Tubing		X			
ATS DEF Temperature Sensor NOX Sensors	X			X	

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Components ¹	Diesel Emission 2010		Gasoline Evaporative Emission 2011 ²	Greenhouse Gas (GHG) 14/17	
	Detroit Engine	DTNA Installed ³	DTNA Installed	Detroit Engine	DTNA Installed ⁴
ATS Diesel Oxidation Catalyst (DOC) Inlet Temperature Sensor	X			X	
ATS DOC Outlet Temperature Sensor	X			X	
ATS Diesel Particulate Filter (DPF) Inlet Pressure Sensor	X			X	
ATS DPF Outlet Pressure Sensor	X			X	
ATS DPF Outlet Temperature Sensor	X			X	
ATS Doser Block Assembly	X			X	
ATS Electrically-Heated DEF Lines		X			
ATS Fuel Doser Valve	X			X	
ATS Oxidation Catalyst	X			X	
ATS Particulate Filter	X			X	
ATS Selective Catalytic Reduction (SCR) Catalyst	X			X	
Air Cleaner (Excludes Filter Element)			X		
Air Conditioning Component Leakage (Applies to Tractors Only)					X
Air Intake Pipes			X		
Air Intake Resonator			X		
Ambient Air Temperature (AAT) Sensor					X
Automatic Engine Shutdown Timer					X
Cam Sensor			X		
Camshaft Position Sensor	X			X	
Catalytic Converter			X		
Charge Air Cooler		X			
Charge Air Cooler Outlet Sensor	X			X	
Coolant Outlet Temperature Sensor	X			X	
Coolant Sensor			X		
Crank Sensor			X		
Crankshaft Position Sensor	X			X	
Data Link Connector		X	X		X
Delta P Sensor	X			X	

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Components ¹	Diesel Emission 2010		Gasoline Evaporative Emission 2011 ²	Greenhouse Gas (GHG) 14/17	
	Detroit Engine	DTNA Installed ³	DTNA Installed	Detroit Engine	DTNA Installed ⁴
Engine Coolant Temp Sensor			X		
Engine Control Module (ECM)			X		
Evap Canister & Evap Canister Vent Solenoid			X		
Exhaust Gas Piping from the Turbocharger out to the Last ATD		X			
Exhaust Gas Recirculation (EGR) Cooler	X			X	
EGR Valve & Actuator	X			X	
Exhaust Manifold & Exhaust Manifold Gaskets			X		
Exhaust Pipes (Between Exhaust Manifold & Catalyst)			X		
Fuel Injectors	X		X	X	
Fuel Lines			X		
Fuel Rail			X		
Fuel Tank			X		
Fuel Tank Fairings					X
Fuel Tank Pressure Sensor			X		
Fuel Temperature Sensor	X			X	
Gap Reducing Fairings					X
Gas Cap			X		
High Pressure Fuel Pump	X			X	
Ignition Coils			X		
Intake Manifold Pressure Sensor	X			X	
Intake Manifold Temperature Sensor	X			X	
Intake Throttle Valve & Adaptor	X			X	
Knock Sensors			X		
Malfunction Indicator Lamp (MIL)		X	X		X
Manifold Absolute Pressure (MAP) Sensor			X		
Mass Air Flow Sensor			X		
Motor Control Module (MCM)	X			X	
Oxygen (O ₂) Sensors			X		
Oil Fill Cap			X		

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Components ¹	Diesel Emission 2010		Gasoline Evaporative Emission 2011 ²	Greenhouse Gas (GHG) 14/17	
	Detroit Engine	DTNA Installed ³	DTNA Installed	Detroit Engine	DTNA Installed ⁴
Oil Temperature Sensor	X			X	
Positive Crankcase Ventilation (PCV) Hose (Engine to Air Intake Pipe)			X		
Purge Control Valve			X		
Side Extenders					X
Spark Plugs ⁵			X		
Spark Plug Wires			X		
Temperature-Barometric Air Pressure Sensor					X
Throttle Body			X		
Throttle Pedal			X		
Tires ⁶					X
Transmission Control Module			X		
Transmission Speed Sensor			X		
Turbo Speed Sensor	X			X	
Turbocharger	X			X	
Vapor Lines			X		
Vehicle Speed Limiter					X
Vehicle Speed Sensor (Transmission Main Shaft)		X			X
Wait to Start Indicator/Lamp					X

¹ Per California Emission Control Systems Warranty Statement, DTNA must warrant the emission control system components for the vehicle in accordance with either Diesel Emission 2010 or Gasoline Evaporative Emission 2011, whichever is applicable.

² Coverage period is 5 years/50,000 miles (80 500 km), whichever occurs first.

³ The following are excluded under Emissions coverage but are covered under standard New Vehicle Warranty coverage:

- ATS ACM Mounting Bracket and Protective Cover
- DEF Tank Mounting Brackets/Hardware
- DEF Pump Mounting and Protective Cover

⁴ Diesel Emission 2010 components and emission-related defects in the marked components listed are included in this coverage. Coverage duration:

- Spark-ignition vehicles and light heavy-duty vehicles – 5 years/50,000 miles (80 500 km), whichever occurs first
- Medium and heavy heavy-duty vehicles – 5 years/100,000 miles (161 000 km), whichever occurs first

⁵ Spark plugs are warranted under Basic Chassis coverage or until the first required maintenance, whichever comes first.

⁶ Coverage period is 2 years/24,000 miles, whichever occurs first.

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3.7 Coverage Exclusions

The following components, parts, or conditions are specifically excluded from coverage under this Warranty.

Note: Parts found defective prior to installation must be filed as a Parts Adjustment Request (PAR) to the PDC.

Aerodynamic Wheel Covers

Aerodynamic wheel covers are excluded from coverage under Warranty.

Air Springs

Tolerance buildup can occur during the assembly process of the rear suspension and rear cab air springs, and can cause the springs to have the appearance of being crooked, misaligned, or improperly installed. This tolerance buildup is not detrimental to the operation of the vehicle and will not have an effect on either the quality of the ride or the durability of the components or vehicle. Straightening of these springs is not covered under Warranty.

Alignment of Axles/Wheels/Steering Wheel

Each DTNA vehicle manufacturing plant uses an integrated alignment system to align axles and wheels and to center the steering wheel to DTNA specifications. Realignment or readjustment of these items, including steering stops and steering poppets, is not covered under Warranty.

Any special alignment settings at the request of the Owner must be handled between the service location and Owner after delivery from factory. These special adjustments are not covered under Warranty.

Axle Breather Vents

During the manufacturing process, an oil run or drip stain may appear at the breather vent. Removing the vent, applying pipe sealant to the threaded vent fitting and re-installing the vent is unnecessary. Removing the axle breather vent and re-sealing the threaded fitting is not covered under this Warranty.

Cab Interior Components

The repair or replacement of cab interior components that are rendered unserviceable due to normal wear or abuse are not covered under this Warranty.

These components include, but are not limited to:

- Curtains
- Floor coverings (including floor mats)
- Painted trim components
- Steering wheel
- Steering wheel wrap
- Upholstery
- Window shades

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Chrome Surfaces, Aluminum, and Stainless Steel Components

The following items ARE covered under this Warranty:

- Chrome peeling off in sheets
- Chrome cut at mounting bolts due to over-torque at the factory
- Bubbles in the chrome that are not caused by rock chips and/or general rust conditions
- Isolated rust along seams or welds

The following items are NOT covered under this Warranty:

- General rust (e.g., rust on the unfinished backside of a bumper)
- Dimpling at the mounting bolts
- Staining, bluing, and/or yellowing that can be cleaned with a quality cleaning product
- Rust, pits, and/or nicks caused by road wash or road debris breaking the chrome surface
- Streaks/stains/corrosion caused by severe wash solutions or corrosive road salts/chemicals

Claims pertaining to failures of chrome surfaces, aluminum, and stainless steel components will not be processed unless a clear digital picture is provided that adequately shows the defect.

Clutch Adjustment

Clutch adjustments are normally required due to clutch wear and are considered normal maintenance. However, if the clutch adjustment is found to be outside of Company specifications during, or prior to, product in-service, a claim will be accepted on a one-time basis.

Claims for clutch adjustments will not be accepted unless the adjustment is found to be outside of Company specifications using the special clutch adjustment measuring tools provided by Company (e.g., adjusting the clutch to satisfy feel will not be accepted as Warranty).

Competition

Warranty will become void on any product that is used in competition including, but not limited to:

- Racing
- Tractor pulls
- Other motor sports

Consumable Parts

Parts that are subject to consumption during their normal service life and are routinely replaced during normal maintenance services are covered up to 15,000 miles (24 000 km) for all DTNA vehicles except TBB bodies and chassis. TBB consumable parts are covered up to 30 calendar days from the date of in-service. These items are:

- Antennas (exception: satellite radio antennas)
- Ashtrays
- Belts
- Brake linings
- Cigarette lighter assembly

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- Clutch brake
- Clutch linings
- Data logger batteries
- Desiccant cartridges
- Fire extinguishers
- Flash tubes
- Fluorescent ballast and tubes
- Fuses
- Gladhand
- Hosetennas
- Light bulbs*
- Lower center bumper air dam
- Mattresses
- Mud flaps
- Mud flap mounting brackets
- Caps (including, but not limited to, DEF, fuel, radiator, surge tank)
- Receiver-dryer filter
- Trailer air hoses
- Trailer electrical cables
- Windshield washer nozzles
- Wiper arms and blades (TBB makes - wiper blades only)

** Sealed light and LED assemblies are not considered consumable.*

The cost of consumable parts which are not reusable due to needed warrantable repairs is covered by this Warranty; examples include but are not limited to:

- Antifreeze
- Coolant
- Filters
- Fluids
- Grease/lubricants
- Oil

Corrosion

Coverage provides Warranty against corrosion to any metal or metal alloy part of the vehicle. Rust or corrosion to specific components and/or caused by certain conditions are excluded from all Company Warranty coverage and will not be paid under Basic Vehicle, Cab Structure, Cab Corrosion, Aftermarket Parts Warranty, or Extended Service Coverage.

Exclusions to corrosion Warranty include, but are not limited to, the following:

- Corrosion caused by general rust (e.g., rust on the unfinished backside of a bumper)
- Surface rust caused by chips or scratches in the paint or chrome surfaces
- Corrosion caused by high-pressure washing, severe wash solutions, cleaning solvents, detergents, compounds

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- Corrosion caused by salinity in the environment or corrosive salts and/or chemicals used on the road surface
- Corrosion caused by acid rain or other industrial fallout
- Corrosion due to improper prevention measures during storage or use
- Corrosion or rust on tone rings, rotors, or drums
- Corrosion due to environmental damage (including ocean spray); airborne fallout (includes chemicals, tree sap, etc.), or other atmospheric conditions or other acts of nature
- Corrosion due to improper use, misuse, or abuse, negligence, including improper or insufficient maintenance

Damage

The following are not covered under Warranty:

- Damage caused by use of the vehicle in any application that is not approved or is inconsistent with build specifications
- Damage resulting from improper use or misuse or abuse, negligence, improper operation, improper or insufficient maintenance (including, but not limited to, failure to maintain vehicle as outlined in the Driver's/Operator's and Maintenance Manuals), overloading, unauthorized modifications, accidents, or operation at excessive speeds
- Environmental damage, including airborne fallout (including chemicals, tree sap, etc.), or other atmospheric conditions, hailstones, or other acts of nature
- Damage caused by road salts/chemicals or cleaning solvents, detergents, or compounds
- Storage deterioration including damage caused by improper or insufficient storage or maintenance
- Damage caused by road hazards or road conditions
- Damage caused during shipping/transport after initial delivery of vehicle
- Damages (including peeling or flaking) caused by high-pressure washing or steam cleaning
- Damages occurring after in-service (e.g., from rock chips)
- Damages caused by customer-installed sealer in air conditioning systems
- Damages caused by non-factory approved engine horsepower/torque upgrades
- Damage due to vibration associated with misapplication or improper operation of drivetrain components
- Damage due to terrorist activities
- Damage due to acts of war

Engine

Any DTNA engine in a vehicle on which odometer mileage has been changed so the mileage cannot be readily determined is excluded from Warranty.

Non-DTNA engines, including all of its components as supplied by the non-Company engine manufacturer, are excluded from Warranty but are warranted separately by the manufacturer of the engine. For non-DTNA engine warranty or service, contact the engine manufacturer's authorized sales and service facility.

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Engine Brakes, Air Compressors, and Other Proprietary Engine Components

The engine manufacturer installs most air compressors and engine brakes. Any failure of a proprietary engine component or Jake Brake® component must be filed directly to the engine manufacturer.

Failures on Company engines and non-proprietary engine components can be filed through DTNA.

Exhaust System Clamps

During the early life of the vehicle or when the engine is cold, many exhaust clamps exhibit a soot trace. This condition is self-correcting and does not require adjustment, tightening, or replacement of the clamp. Claims for adjusting or tightening will not be paid under Warranty.

Fifth Wheels

Adjustment of the locking mechanism, bushings, slide locking plungers, and the repair or replacement of lock guards are considered routine maintenance and are not covered under this Warranty.

Glass, Mirrors, Lens

Conditions excluded from Warranty include but are not limited to:

- Breakage
- Chips
- Scratches
- Cracks

Initial Operating Period

During a vehicle's Initial Operating Period (IOP), repair on components found loose and included on a scheduled maintenance table may be reimbursed by Company. The IOP for DTNA vehicles is as follows:

Make	IOP ¹
Freightliner, Western Star	Up to 15,000 miles/24 000 km ²
FCCC	Up to 25,000 miles/40 000 km ²
TBB Bodies and TBB Chassis ³	Up to 6 months from in-service date

¹ IOP does not apply to powertrain components.

² The IOP begins at zero (0) distance; the in-service distance does not affect the IOP distance limits.

³ TBB applications utilizing FCCC chassis retain the FCCC IOP separate from the TBB body.

Routine maintenance, servicing, and adjustment, as defined in the applicable Vehicle Maintenance Manual and Driver's Manual, are excluded from Warranty.

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Periodic adjustment or re-torque of wheel bearings, wheel lug nuts, and suspension U-bolts are considered maintenance adjustments and are not covered under Warranty.

Vibrations, squeaks, rattles, loose fittings/clamps, hose fitting leaks, loose nuts/bolts/screws, and loose electrical connections may develop during the initial trip(s) of the vehicle; associated repairs/adjustments are covered under Basic Warranty unless the distance at which the condition occurs exceeds the published maintenance interval for the component.

- Components included on a scheduled maintenance table that have loosened at a time or distance exceeding the first scheduled maintenance or outside the IOP, whichever is greater, are not covered under Warranty and are the responsibility of the customer.

Components Found Loose <u>and</u> Included on a Scheduled Maintenance Table	Prior to First Scheduled Maintenance	After First Scheduled Maintenance
Within IOP	File Claim	File Claim
Outside IOP	File Claim	Customer Responsibility

- Components that do not appear on scheduled maintenance tables are not subject to IOP limitations and are covered per the applicable coverage and exclusions.

Consumable items are addressed separately from IOP; see [Consumable Parts](#) elsewhere in this section for details.

Exclusions from Warranty during the IOP are:

- Cab, hood, and fender-mounted mirrors are adjusted at the factory but may be retracted by the transporter to prevent damage during transport. Subsequent adjustments and tightening of mirror mounting hardware are considered part of the routine preparation of the vehicle before Customer delivery. Claims for adjusting the mirrors or tightening of the attaching hardware will not be paid under Warranty during or after the IOP.
- Claims for re-routing of electrical wiring, hoses, or lines which meet DTNA's routing standards will not be paid under Warranty during or after the IOP. However, if during the IOP, evidence of a potential failure (e.g., rubbing or chaffing that would lead to a short in a wire or a hole in a hose/line) is found where a line, hose, or electrical wiring is mis-installed and is making contact with one of the following, a one-time claim for correcting the routing will be accepted:
 - Hot surface
 - Moving part
 - Sharp edge

Such claims should be filed with *Mis-Installed* as the *Cause* code; digital photos that clearly show evidence of rubbing or chaffing due to mis-installation must be available upon request.

Note: Preventative re-routing for other conditions not listed above is not considered warrantable. However, if a line, hose, or electrical wiring actually fails (i.e., leaks or shorts) due to rubbing or chaffing on any surface, such failures are covered per the applicable coverage and exclusions.

- Final preparation of the vehicle for Customer delivery to include cleaning/vacuuming interior of cab, washing windows, washing the exterior of the vehicle, and polishing exterior chromed or painted surfaces are considered as ordering location responsibilities. Claims for these activities will not be paid under Warranty during or after the IOP.

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Misapplication of Product

The Warranty on any product used inconsistent with its specified vocation/application will be downgraded to the Warranty that is consistent with product use. Any and all claims associated with the misapplication of the product will be subject to chargeback.

Miscellaneous Expenses

Premium charges and work not directly related to the repair or replacement of a warranted part are not covered under Warranty, unless specifically stated elsewhere in the applicable Warranty coverage. Examples include, but are not limited to:

- Federal, state, provincial, and local taxes
- Travel expenses
- Loss of revenue
- Customer labor, including overtime labor
- Downtime
- Driver's expenses
- Cost of rental equipment
- Loss of cargo, including perishable cargo
- General housekeeping supplies (e.g., shop rags, solvents, sweeping compounds, coveralls, etc.)
- Communication charges
- Towing/road call assistance
- Repair or replacement of optional items not sold or installed by company
- Removal or replacement of service location, body builder, or customer installed equipment
- Environmental fees, cleanup, or other charges
- Cost of emergency services

Modifications to Original Equipment

Company does not warrant product modifications or equipment installations unless performed at a Company Custom Truck Services (CTS) Center. In addition, the extra time necessary to remove body builder-installed items and/or equipment to work on a warrantable repair is not covered under this Warranty unless Company sells the complete chassis/body/equipment as a package.

If service locations or Customers perform any product modifications or equipment installations, to the extent these modifications or equipment installations adversely affect other vehicle components or vehicle performance, Company shall not accept any product liability or claims under the terms of the product Warranty. These claims become the sole responsibility of the person performing the modifications or equipment installations.

Paint

The following exclusions to paint warranty include, but are not limited to:

- Complete chassis re-painting to repair paint damages
- Damages occurring after in-service (e.g., from rock chips)
- Peeling/flaking caused by high-pressure washing or steam cleaning

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- Rusting of painted bumpers
- Removal and/or replacement of decals, striping, and/or lettering not applied by Company

Specific areas of the vehicle are deliberately not painted or are not painted to any standard; paint repairs are not warrantable to such areas. These areas include:

- Underside of the hood, including the inside of the wheel wells
- Underside of the roof-mounted air fairings
- Underside of the exterior sun visor
- Inside of the side-mounted air fairings
- Inside of the bumper
- Aftertreatment devices

Gloss

Gloss claims pertaining to gloss issues on vehicles painted with low-gloss colors (as identified in the Truck/Bus Sales Order) will not be covered under Warranty.

Routine Maintenance

Routine maintenance, servicing, and adjustment, as defined in the applicable Vehicle Maintenance Manual and Driver's Manual, are excluded from Warranty.

Periodic adjustment or re-torque of wheel bearings, wheel lug nuts, and suspension U-bolts are considered maintenance adjustments and are not covered under Warranty.

Vibrations, squeaks, rattles, loose fittings/clamps, hose fitting leaks, loose nuts/bolts/screws, and loose electrical connections may develop during the initial trip(s) of the vehicle and these types of repairs/adjustments are covered under Warranty one (1) time during the applicable IOP unless excluded above.

Reminder: After the IOP, these developments are the result of use and their repair/adjustment activities are considered routine maintenance and thus excluded from Warranty.

Shipped Loose Items and Components

During the manufacturing process, certain components are normally placed in the cab of the vehicle or strapped down to the chassis. It is the service location's responsibility to mount these shipped loose items in the correct location on the vehicle. Mounting the shipped loose items below will not be covered under Warranty.

These items include, but may not be limited to, the following:

- Aerodynamic wheel covers
 - Exception: Covers on Freightliner Cascadia trucks may be reimbursed
- Antennas
- Chrome lug nut covers
- Decals & paperwork
- Driver's pouch
- Fire extinguishers
- Jacks
- License plate brackets

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- Mattress
- Reflectors with flares
- Reflectors without flares
- Spare wheels/tires
- Tire inflation hoses
- Trailer cables (air/electrical)
- Winter fronts

Tampering/Misuse

Conditions resulting from tampering, misuse, improper adjustments, alteration, accident, failure to use recommended fuel or non-performance of required maintenance services are not covered.

It is a violation of U.S. federal law to alter the engine, exhaust plumbing, after treatment system, diesel exhaust fluid system, or other vehicle components in any way that would bring the engine/vehicle out of compliance with certification requirements [Ref: 42 U.S.C. §7522(a)(3)]. It is the Owner's responsibility to maintain the vehicle so that it conforms to EPA regulations.

Test Products

Any product(s) used in testing must be identified to the Warranty Department and accommodations must be made for claims that relate to the test item(s).

Any product used in endurance testing, such as the Altoona Test, are void of all Warranty, including but not limited to New Product Warranty, Aftermarket Parts Warranty, Extended Service Coverage, or any Company additional or used truck coverage.

Tires and Tire Balancing

The tires are not covered under this Warranty, but are warranted separately by the tire manufacturer. Tire balancing is not covered under Warranty.

Transmissions (Non-Company)

Allison transmissions and components are not covered under this Warranty, but are warranted separately by Allison. Information regarding Allison's warranty is provided for informational purposes only and is subject to change. For warranty or service information, contact Allison's authorized sales and service facility.

Eaton Hybrid transmissions are not covered under this Warranty.

3.8 Transfer of Warranty

This Warranty is transferable to a subsequent Owner if it has not expired.

To ensure the Owner receives proper Warranty recognition, the ownership information should be updated in OWL.

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3.9 Change of Owner Address Information

To ensure Company's ability to reach the current Owner with Recall and Field Service campaign information, the Owner's information must be updated whenever there is a change to the Owner's name or address.

3.10 Product Improvement

Company reserves the right to make improvements or changes to the product at any time without incurring any obligation to make such changes or improvements to any other vehicle.

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