



National Auto Fleet Group

A Division of Chevrolet of Watsonville

490 Auto Center Drive, Watsonville, CA 95076

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Fleet@NationalAutoFleetGroup.com

7/13/2020

Quote ID HD – 1261BR

Mr. Wally Broughton

City of Merced
1776 Grogan Avenue
Merced, CA 95341

Dear Wally Broughton,

National Auto Fleet Group is pleased to quote the following vehicle(s) for your consideration.

One (1) New/Unused (2021 Freightliner M2 106, CUM L9 Engine, Allison 3500 RDS Transmission w/PTO with American Truck and Trailer Equipment,) Provided by Mr. Jeff Lucas with American Truck and Trailer each for:

	One Unit (1)
Sub Total	\$ 90,934.00
American Truck & Trailer Quote	\$ 133,824.00
Tax (8.25%)	\$ 18,542.54
Total	\$ 243,300.54

This vehicle(s) is available under the **Sourcewell (Formerly known as NJPA) Contract Number 081716-NAF**. Please reference this Contract Number on all Purchase Orders.

Thank you in advance for your consideration. Should you have any questions, please do not hesitate to call.

Sincerely,

Ben Rodriguez

HD Contract Manager

HD@NationalAutoFleetGroup.com

Office (855) 289-6572

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AMERICAN TRUCK & TRAILER BODY CO., INC.



100 W. Valpico Road, Building "D", Tracy, CA 95376 (209) 836-8985 (800) 499-8985 Fax (209) 836-1697

CITY OF MERCED

HEAVY WATER CREW TRUCK BODY FOR MAINTENANCE, CONSTRUCTION AND SERVICE OF CITY SYSTEM

Provide and install the following line body and associated equipment in accordance with the following specifications on a city supplied chassis-cab. The chassis shall be a two (2) axle, 33,000 gvwr Freightliner M2 106 with 189"WB, 120" CA, clean frame rails with no protrusions outside of rails or above flanges, 34" frame width, frame rails 10 15/16" x 3.5" (110,000 psi rated yield strength) and top of frame 40.05 above ground. Tires to be approximately 38" diameter

Body to be 192" long by 97" high by 95" wide including a superstructure with sliding top.

All items furnished per this specifications shall comply with all applicable federal and California state laws, codes and requirements as of the date of sale

Main body details:

A. Right side first front vertical compartment

1. Approximate inside dimensions 45" w x 65" h x 24"d
2. Gortite roll-up doors with manual security lock
3. Bottom to have pull out tray on 250 pound grant slides to house a Honda generator. Generator to slide clear of compartment opening at full extension and lock in the open and closed positions. Generator to be mounted as low as possible on slide assembly. Compartment floor to be adequately reinforced for weight of generator and slide hardware.
4. Upper section to have Hannay hose reel model gh 1474 rev d with 12 vdc rewind, 100' x 3/4" air hose, ball stop, four (4) way roller guide, air supply shut-off valve and standard district air tool quick coupler reel and accessories to be supported on shelf properly mounted and supported to carry weight and driving forces
5. 3/8" airline plumbed into system under horizontal shelf, 3/8" air system to have shutoff valve, inline oilier and pressure gauge
6. Compartment front panel and interior panel to have louvers for ventilation

B. Right side second front vertical compartment

1. Dimensions and doors same as right first front vertical compartment
2. Top section to have "e-trac" for hooks
3. Upper section, below "e-trac" to have two (2) adjustable and removable shelves with removable dividers
4. Middle and lower section of compartment to have storage brackets and hold downs for the following tools:
 - A. 1 1/8", tilt down holder per dwg
 - B. 1 1/8" tilt down holder per dwg
 - C. 1 1/8", tilt down holder per d
 - D. Backfill tamper
 - E. Air drive motor
 - F. E-1 tapping machine
 - G. E-4 tapping machine

H. B-100

I. Holders for assorted gads and drill steel

5. Compartment floor to be reinforced to hold weight of tools, tilt down tool holders to be per dwg 222160 with hex to fit chucks of tool

C. Right horizontal compartment over rear axle to rear panel

1. Approximate inside dimensions 72" l x 41" h x 15" d
2. Compartment to have Gortite roll-up doors with manual security lock
3. Compartment to have steel peg board on all interior walls of complete compartment

D. Right side lower rear compartment

1. Approximate inside dimensions 18" w x 24" h x 24" d
2. Compartment to have clear interior

E. Left side first front vertical compartment

1. Approximate inside clear dimensions 42" w x 65" h x 24" d
2. Gortite roll-up door with a manual lock
3. Compartment interior to have four (4) adjustable shelves with adjustable and removable dividers floor to ceiling
4. Rear panel to have a dual 120 vac gfci protected outlet wired to generator (see electrical section in specifications for more details on wiring of outlet)

F. Left side second front vertical compartment

1. Approximate inside clear dimensions 26" w x 65" h x 24" d
2. Gortite roll-up door with a manual lock
3. Interior of compartment to have reinforced diamond plate floor with rings and clamps for oxygen/acetylene tanks
4. Upper section of compartment to have six (6) material hooks, 2-2-2
5. Hose holder with torch holder to be furnished and attached to inside of compartment door

G. Left side third lower front vertical compartment

1. Approximate inside clear dimensions 22" w x 28" h x 24" d
2. Single vertical hinged door
3. Interior of compartment to have one (1) 12" adjustable shelf with adjustable dividers

H. Left horizontal compartment over rear axle from second front vertical to rear vertical

1. Approximate inside clear dimensions 76" l x 37" h x 15" d with divider in center of compartment making two (2) separate compartments
2. Gortite roll-up doors with manual locks
3. Compartment to have three (3) adjustable shelves with adjustable dividers in each compartment
4. Adjustable dividers in bottom of compartment

I. Left side rear vertical compartment

1. Approximate inside clear dimensions 18" w x 65" h x 24" d (lower section) / 15" d (upper section).
2. Compartment to have clean interior
3. Gortite roll-up door with a manual security lock

J. Misc.

1. All compartments to have interior lights. Each light to have on/off switch with master power switch in cab. Lights to be wired per AT&TBC standards. See drawing no. 0104-11 for positions
2. All vertically hinged doors to have double spring door checks to hold them in and open position
3. All compartments to be water tight with a drain hole in the bottom with a removable plug

Bed area details:

A. Superstructure

1. Dimensions 32" h x 162" l x 95" w
2. Sliding roof installed on top of superstructure 162" long over bed area. The sliding section will have a two-point latch (one (1) left and one (1) right) with single hand release and will latch approximately every 12". The rails will be made to channel water off the front and back of the body and not into the body
3. Two (2) equal spaced material shelves each side, above side of body 162" long. Shelves to be vertically supported from roof to side racks and have interior access. Curbside shelves to have end opening doors per drawing no. 0104-11 with top shelf to have front door also. These shelves to be heavy duty for carrying pipe. Shelves both sides to have interior upward return to keep items from falling into bed area
4. Rear to have canvas curtain and chain gate. Chain gate to be removable and hinged on 1" pipe rail mounted at top of rear superstructure. Chain gate to slide on pipe left to right and hinged to fold into bed area right side. Gate to lock in closed position and have provisions for pad lock

B. Misc.

1. Rear to have 6" high removable wood tail board
2. Front of bed area to have four (4) 18" deep shelves, left to right. Shelves to be supported for loads of up to 300 pounds each. See drawing 0104-11 end view for positions
3. 24" deep side sections of bed interior to have "e-trac" full length, each side height of "e-trac" to be determined at time of construction. 100 hooks to be furnished that are compatible with "e-trac"
4. 15" deep side sections of bed to have vertical supports from bed floor to superstructure bottom shelf each side as required for structure support
5. 15" deep side sections at rear each side to have 9" panel approximately 40" h to close off bed area and attach chain gate to
6. Left interior side to have two (2) hooks to carry 120" long extension ladder
7. Right rear section of bed area behind 9" panel to be clear of obstructions.
8. Right rear section forward of wacker to have provisions to carry barricades
9. Left rear section of bed area to have provisions to carry rolls of copper pipe
10. Permanent section of bed roof to have two (2) dome lights with switches to illuminate bed area. Switches to be wired to master power switch in cab per body compartment lights
11. Furnish and install traffic control arrow stick on roof of body per direction of city
12. Furnish and install rotating water bracket on front of chassis

Rear platform details:

- A. Platform deck to extend 30" aft of compartment side racks and be 95" wide
- B. Platform to be 3/16" diamond plate and painted with gray non-skid coating
- C. Platform to incorporate step cut out for bed access
 - a. Step to be on left rear side of deck just outside the frame
 - b. Step profile to be per drawing 0104-11
 - c. Steps to be of raised grip strut
 - d. Step from the ground and from the step to the deck to be no more than 20"
 - e. Hand rail for rear step to be on left of step to body rear panel
- D. Rear platform to be welded to main body and be tied into body side sections, floor and rear crossmembers, with full width structural channel
- E. Rear platform to have underdeck storage compartment
 1. Compartment to be thru compartment full width with 10 ga expand metal/ punched bottom
 2. Compartment to be approximately 24" deep

3. Compartment to have two (2) doors, one (1) each side hinged vertically, doors to have same locks as main body doors and have no door limits
4. Compartment to have top opening lid on right side from deck as large as possible with hasp for pad lock
- F. Left side of rear platform to be reinforced for 2000 # capacity crane
- G. Two (2) fixed hooks to hold two (2) sections of ½" x 25" hydraulic hose to be installed on left rear body panel
- H. Two (2) fixed "posts" to be installed on right top of rear platform for cone storage
- I. Units stop, tail, directional, back-up and marker lights for the rear of vehicle to be flush mounted in rear platform. All lights to have back protection, see drawing 0104-11 for locations
- J. Under platform storage area to be used for shovels, digging bars and other items that will require wash off of mud and debris
- K. Right rear corner of platform to be reinforced for vise mounting, with front support
- L. Two (2) 120 vac dual receptacle gfc protected outlets shall be installed, one (1) on right side recessed and one (1) on left side. See drawing 0104-11 for exact locations

LINE CONSTRUCTION BODY GENERAL DETAILS:

- A. Minimum 16-gage galvaneal steel, or as specified, electrically welded
- B. All edges, inside and outside, ground smooth, and all exposed edges hemmed
- C. All door hinges and accessories installed with machine screws and self- locking nuts to prevent external removal. Sheet metal screws are not acceptable
- D. Hinges to be rod and socket with stainless steel rods and brass sockets
- E. All attaching hardware to incorporate elastic self-locking nuts, or either a lock washer or star washer at the minimum. Plain washers to be incorporated under the head of hex-head bolts
- F. Coat entire underside of body (floor, wheel wells, compartments) with underseal
- G. Provide offset for spring hangers based on chassis-cab specifications
- H. Rear wheel cutouts must allow sufficient room for tires minimum 6"
- I. Provide rear wheel splashguards as required per sae j682, or as specified otherwise. Splashguards to be installed immediately behind rear axle
- J. Body to be attached to chassis using minimum six-point system to comply with fmvss. Body should be shear plate mounting design and all attaching hardware shall be sae grade 8, and all chassis frame holes shall be drilled and reamed to final dimension
- K. Two chock holder in each fender panel
- L. Body material gauges as follows
 1. Floor 3/16 diamond plate
 2. Cross members structural channel
 3. Longitudinals structural channel
 4. Top panel 14 ga
 5. Rear end panel 14 ga
 6. Front end panel 14 ga
 7. Front panel 14 ga
 8. Compartment floor 14 ga
 9. Door panels 18/18 ga
 10. Fender panel 14 ga
 11. Shelves in body 18 ga
 12. Superstructure 16 ga
- M. All compartments to be waterproof
- N. Adjustable trays to be manufactured so they can be moved from one location to another without scraping paint off compartment walls
- O. Adjustable divider shelves shall incorporate adjustable slots on two -inch centers
- P. Install rubber bumpers on body to prevent doors from hitting adjacent opened doors and fender panel
- Q. Caulk and seal all non-continuously welded body seams and attaching points for body accessories

AC electrical wiring requirements:

- A. Remote electrical receptacles shall meet or exceed the following specifications,
 - 1. Commercial grade
 - 2. Receptacle rating: 120 vac, 20 amp, gfcı duplex receptacle
 - 3. Receptacle to be installed in a deep, covered, weatherproof in-use receptacle box approved for “wet” environments
- B. All 120 vac electrical wiring shall be of the appropriate gauge, considering power supply, length of run, and remote receptacle rating
- C. Electrical to be routed in “seal-tite”, or equivalent conduit. Flexible metal conduit is not acceptable

VEHICLE LIGHTING REQUIREMENTS:

- A. All vehicle lighting to be in compliance with federal lighting standard fmvss 108, as well as comply with the state of California vehicle code
- B. All vehicle lighting to be flush mounted and rubber shock-mounted
- C. All side and rear reflectors are to be combined (via a reflectorized lens) with side marker lamp(s) , where possible and within the specifications of fmvss 108. If a sole reflector is required, a dot approved reflectorized adhesive material should be used in lieu of a riveted or sheet metal screw attached armored reflector
- D. A metal guard shall protect the backside of any lighting that penetrates into rear body compartments
- E. Units will have (4) lights to the rear of the vehicle (2) brake and taillights in the face of the deck, and two back up lights
- F. All body compartments to have interior lights, each light to have on/off switch with master power switch in cab
- G. License plate light shall be furnished and installed

The following guidelines shall be adhered to as general electrical wiring practice:

- B. All wiring, internal and external, shall be loomed, and properly secured and routed in a professional manner
- C. Any necessary wire splices and/or butt connections shall be soldered and shrink-wrapped, or finished using crimped butt connectors and shrink-wrapped. **Scotchlocks are not acceptable**
- D. Wiring to be securely fastened and independently supported using properly sized cushion clamps, metal clips, or other industry accepted supporting hardware. Tie-wraps shall only be used in between primary wiring supports as necessary to aid in the securement of wire bundles. Tie-wraps **shall not** be used for the primary supporting or securing of wiring. **Stick-on/ glue-on wire retainers are not acceptable**
- E. Wiring shall not be supported by, or attached to, any other hose, electrical bundles, etc. The wiring/loom supports shall provide an independent support
- F. Provide grommets where wire passes through compartments, frame members, and bulkheads
- G. Provide positive protection or metal shielding to preclude the chaffing of wiring against frame members, chassis components, engine exhaust components, body components, or adjacent hoses/lines, etc.

Towing items:

- A. Install premier 2200 air pintel hitch with reinforcement to chassis frame
- B. Install glad hands at rear of body – below tailshelf as per photos
- C. Two (2) “d” rings for safety chain to be mounted at rear, one (1) each side of hitch
- D. Seven way plug to be installed on right side of hitch

Work lights:

- A. Install two (2) lights mounted left and right rear on top of super structure

Additional items furnished with each unit:

- A. Vanair pto driven under body compressor (see separate detailed specifications)
- B. Hydraulic tool system (see separate detailed specifications)

- C. Honda 5000 watt ac generator (see separate detailed specifications)

Paint and finish:

- A. All surfaces to be acid etched, cleaned of rust, grease, oil, dirt, millscale, etc., prior to the prime coat of paint
- B. All exterior and interior surfaces coated with minimum two coats of metal primer
- C. Body exterior painted with minimum two coats paint to match cab
- D. Body compartment interiors painted with a minimum two coats of **hammer tone** paint
- E. All installed switches and/or equipment control(s), must be properly labeled as to function and condition (i.e., on, off, etc.). All required identification labels or placards, interior or exterior, to be permanent non-fading (i.e., engraved or die-stamped) and affixed using rivets. **Adhesive labels, metal or plastic, are not acceptable**
- F. Any and all body attachments shall be installed using a rubber gasket material and attachment caulked to prevent water leakage.

MISC:

Body with equipment, air compressor, hydraulic tool system and all associated equipment to be furnished, installed and painted by one (1) vendor, supplier to be factory certified sales, installation and service center for all equipment furnished

Truck mounted power take off driven air compressor

Make/model

- A. Current model single stage rotary screw vanair model 160 udec underbody air compressor system shall be supplied and installed. Compressor shall deliver the specified volume of air to the end of tool hose at 100 psi

Drive

- A. The side-mount hot shift Chelsea pto shall be described in the manufacturer's catalog as suitable for heavy-duty continuous operation with a torque rating of 125-ft/lbs: cast iron case only hydraulic clutch pack operated, continuous gear engagement shifting types unacceptable.
- B. Maximum engine speed at 100 psi to be within 1300-rpm pto to be commensurate with compressor, speed at above engine speed
- C. 1300 series driveline, forged steel flanges and universal joints shall be of standard manufacture with sufficient torque capacity
- D. Tolerance between face of flange on compressor shall not exceed one (1) degree
- E. Drive shaft angle shall not exceed seven (7) degrees working angle
- F. Driveline set screws to be safety wired

Pto shift control

- A. Single dash, accessible to operator in drivers seat
- B. No additional manual controls will be accepted
- C. Engraved hard plastic label for control no dymo-type plastic labels
- D. Pto indicator light located in cab as per city of Merced instructions

General

- A. Install two Chelsea hot shift switch with indicator light in the cab to have either or both operation of the compressor and hydraulic tool circuit

Engine speed control

- A. As supplied by manufacturer: designed to interface with engine ecm to provide two speed operation.

- B. Vendor to have transmission reprogrammed by allison dealer to match compressor requirements to prevent operator input

Compressor oil

- A. Atf type "dexron" 111"

Compressor oil cooler Vanair #6001-001

- A. Factory supplied electrically driven fan system for compressor oil cooling system. Fan to be cycled by factory thermal temperature switch
- B. Unit to be mounted at rear of truck
- C. Electric fan: exhaust air is not to be deflected to rear of chassis
- D. No portion of installation to rear of cab shall extend more than 2" above vehicle frame
- E. No portion of cooler shall extend below differential
- F. No abs formed plastic

Air receiver & oil separator Vanair #60004-001b

- A. Visual type sight glasses or gauge incorporated in receiver and visible from curbside
- B. Tank to be positioned for access to oil separator without removing tank from truck
- C. Designed so that unit can be mounted between right frame member and running board under cab with access to oil level gauge and oil fill lug on curb side
- D. Oil fill to be extended if necessary to allow oil to be added conveniently
- E. Drain valve required on tank
- F. Air receiving to be **asme** and nation board
- G. Connected to air receiver and located so that valve can be checked manually from curb side of truck
- H. Remote pull cable to safety valve for testing operation is acceptable
- I. To automatically blow don air system when air compressor is disengaged or stopped
- J. Blow down air is to be directed downward with necessary piping
- K. Tank to have bolt on lid with internal coalescing element

Air filter

- A. Complete with factory standard dry-type air filter including fittings with clamps for relocating air filter above floor of body
- B. Air filter plate that is attached to the air intake tube of compressor must be completely sealed off to prevent dirty air bypassing the filter

Minimum pressure orifice

- A. Incorporate at discharge of receiver system

Compressor mounting

- A. To be mounted back of cab between frame members
- B. no part of compressor accessories to extend more than 2" above truck frame or 11" below lowest point on frame channels

Hydraulic cooler lines

- A. Aeroquip fc-300 or equal
- B. Must exceed sae 100rs standards

Flexible lines

- A. Aeroquip fc-300 reusable ends
- B. Speed controls lines to be aeroquip #2807 (teflon) with reusable end (no substitute)**
- C. Air line to service valves to be not less than 1" id with flexible connection at forward end made of aeroquip #fc300-20 hose (no substitute) and the following fittings per installation 2-each 411-20s hose ends, 1 each 2024-20-203 comp
- D. All hoses are to be secured with rubber coated steel clamps (plastic ties are not acceptable)
- E. Safety velocity valves

Compressor protection

- A. Compressor must be protected by high temperature cut-off switch tested for proper operation before delivery of compressor
- B. Thermal switch must be murphy switch gauge #20-to-300, 15 feet
- C. Must include a temperature indicator, no lights
- D. Thermal switch must include a reset button
- E. Thermal switch shutdown to be wired to pto electronic engagement system, **not the vehicle ignition system**
- F. Temperature gauge dial for switch to be mounted in dash

Safety alarm circuit

- A. Compressor must be equipped with an alarm system to indicate when compressor has quit running. Tie vel-vac alarm system into the trucks dual electronic horn system

Electrical wiring

- A. All electrical wiring used in connection with compressor must be adequately secured for protection of wire (scotch lock type electrical connectors are not acceptable)

Instruments panel Vanair #060414

- A. Compressor must be complete with air gauge, temperature gauge and direct reading engler or hobbs hour meter mounted in instrument panel
- B. Hour meter is to be actuated automatically when compressor ins engaged and is to be shock mounted
- C. Hour meter is to have an in line fuse between meter and battery
- D. Instrument panel to be mounted in right front compartment

Paint

- A. All new work must be primed and painted

Miscellaneous

- A. To be complete with one part manual and one maintenance manual per unit
- B. Overhaul and parts manual for air end assemble
- C. If parts manuals do not show all parts used, a separate list shall be provided
- D. Parts and service manuals to be given to city's representative (not left in vehicles)**
- E. Installation of compressor and necessary components must reflect good workmanship
- F. If the compressor is installed by other than the compressor manufacturer, the work must be performed by factory authorized and trained instillation center
- G. Vendor to operate unit for at least four (4) hours
- H. Air hose reel to be Hannay gh 1474 revd with 12 vdc rewind, 4-way roller guide, 100" x 3/4" air hose ball stop and thor coupler installed in first front vertical compartment curbside top area, unit to have osha 1/4 turn on/off valve mounted at inlet or reel and be plumbed to compressor outlet port with inline oiler

Warranty

- A. As stipulated compressor, pto and installation to be warranted against defects in material and workmanship **from date vehicles placed in service:** air end 36 months all other components 12 months
- B. Warranty to cover all parts and labor
- C. Repairs during warranty to be performed at authorized dealer and location

The above constitutes our basic compressor and includes all of the above equipment

Truck mounted 10 gpm, 2000 psi pto driven hydraulic tool system

Hose sizes

- A. Suction hoses, wire braid 1 1/4" id
 - B. Pressure hoses, wire braid 1/2" id
 - C. Return hoses, wire braid 3/4"
- All hoses to be two (2) wire braid with a 5 to 1 burst safety factor

Components

- 1. 20 gallon hydraulic oil reservoir with filler breather cap, sight level gauge internal baffle and return deflector
- 2. 1-1/4" shut off valve
- 3. 100-mesh wire suction line strainer
- 4. P3100 series hydraulic gear pump sae flange mount

Rpm	flow	psi
900	9	2000
1300	12	2000

- 5. Chelsea hot shift power take off with switch and indicator light in cab. See "truck mounted 125 cfm side mount power take-off driven compressor" section for additional specifications on power take off
- 6. Hedland 0-15 gallon flow meter
- 7. 0-3000 psi glycerin filled pressure gauge, stem mounted
- 8. Four (4) way selector valve with built in pressure relief. Relief to be adjustable to 2500 psi and set at 2200 psi. Valve to be open center so pressure cannot be trapped in tool circuit and have detent in control handle one (1) pressure port to be plumbed to quick coupler, at front of unit and one (1) pressure port to be plumbed to quick coupler at rear of unit
- 9. Flush face htma interchange hydraulic couplers, two (2) sets, connected to swivels so coupler will rotate- located above the front bumper and at the rear of the truck on the curbside as per photo.
- 10. Hydraulic oil cooler to keep oil between 90 degrees fahrenheit and 130 degrees fahrenheit
- 11. 10 micron return line oil filter. Filter to have built-in bypass condition gauge and be spin-on replaceable type
- 12. 3/4" shut-off valve
- 13. Adjustable flow control valve with relief

All pressure fittings to be steel and have 5-1 safety factor. All suction or return fittings to be either steel or black iron with a 5 to 1 safety factor. No galvanized fittings are to be used anywhere in the system, system to be plumbed and installed so back pressure is kept to a minimum. Back pressure shall not exceed 250 psi

No deviations from the system will be allowed, system to be filled with ep-32 hydraulic oil and tested. Controls to be plumbed to right rear of body. Controls to include four (4) way selector valve, adjustable flow control valve, flow meter pressure gauge and htma couplers

Truck mounted 110vac system

- A. A EB5000 X31 watt Honda generator is to be furnished and installed
- B. Generator electrical connections to be a weatherproof quick-disconnect pin style
- C. Remote covered gfci outlet to be hard-wired with electrical conduit (min. 10awg size, or as dictated by generator output) to rear body side pack panel and left side first front vertical compartment. Male three-prong pigtail at generator end of truck wiring, for plugging into generator gfci outlet. Gfci outlet to be permanently labeled with receptacle rating
- D. Compartment to house 5000-watt generator (approximate dimensions: 25.8" l x 25.8" w x 22.6" h) mounted on 250# rated "grant" slides (or equivalent 250#. Rated steel roller ball bearing side mechanism. Generator to slide clear of compartment opening at full extension, and lock in the open and closed position. Generator to be mounted as low as possible on slide assemble. Compartment floor to be adequately reinforced for weight of (cantilevered) generator and slide hardware.

Model LA6K crane

Capacity: Moment rating of 6,500 Ft.-Lbs. with capacities as follows:

*2,000 Lbs. at 3 Ft.	812 Lbs. at 8 Ft.
*1,300 Lbs. at 5 Ft.	565 Lbs. at 11.5 Ft.

*Use traveling block double line, for loads above **1000 Lbs.**

Hoist winch: The hoist winch uses a planetary gear drive for most efficient operation. The winch is powered by a permanent magnet electric motor. The single line capacity of the winch is 1200 Lbs. An integral mechanical brake is included with the winch. Winch performance is as follows:

Load (Lbs.)	Hook Speed(Ft./Min.)	Amp Draw
0	26	25
500	22	70
1000	18	115

Wire rope and sheaves: The crane is supplied with 50 Ft. of 3/16 In. galvanized aircraft cable with a 4200 Lb. breaking strength. All sheaves meet ANSI requirements. A traveling block is supplied for two part wire line use

Hydraulic system: A 12 Volt electric-hydraulic pump powers boom elevation, boom extension and crane rotation. Four way open center directional control valves are used to control all functions. A gear type pump with 1.2 GPM capacity at 500 PSI is used. Hydraulic functions are controlled through four way spring centered, solenoid activated valves. Valves actuate at a minimum of 10 volts, have manual over-ride capabilities and are mounted on a manifold for easy access. The reservoir capacity is 1 gallon. The relief valve on the pump is set for 1800 PSI.

Rotation: The hydraulic powered rotation is unlimited. The crane rotates on an external gear rotation slewing ring bearing. A high torque, low speed hydraulic motor drives the rotation through a 73:1 ratio self locking worm gear.

Boom elevation: The boom is capable of moving from a vertical down storage position to +75 degrees above horizontal. It is elevated by a 2.50 In. bore double acting cylinder. The cylinder has an integral

counterbalance valve with relief set at **2000 PSI**. The counterbalance valve has two vital purposes. This valve will hold the cylinder in the event of hose failure and it controls the rate of boom descent.

Boom extension: Boom extends under power from 5.5 Ft. to 8.5 Ft. by a 2.0 In. bore hydraulic cylinder, A 4 Ft. manual extension is supplied for a total reach of 11.5 Ft.. The cylinder is mounted inside the boom for protection. The cylinder has a counterbalance valve integrally mounted with relief set at **2000 PSI**. The counterbalance valve will hold the cylinder in the event of hose failure and also controls the rate of cylinder retraction.

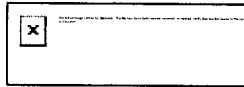
Load sensor: A load limiting sensor is installed in the elevation cylinder. This sensor will shut down hoist up, boom out (power extension only), when an overload is detected. The sensor will reset after the load is lowered.

Pendant control: An 18 Ft. remote pendant control is supplied with each crane. For safest possible use, The pendant control is removable from the crane and each function is controlled by a momentary contact toggle switch.

Accessories: An outrigger or jackstand is necessary to keep the truck as level as possible as well as reducing the load on the crane's rotation mechanism and the truck's suspension components. Liftmoore can supply all of these options.

Mounting: Installed on the left side of the rear platform.

Prepared for:
Jeff Jeff
City of Merced
678 W 18th street
Merced, CA 95340
Phone: 209402-0551



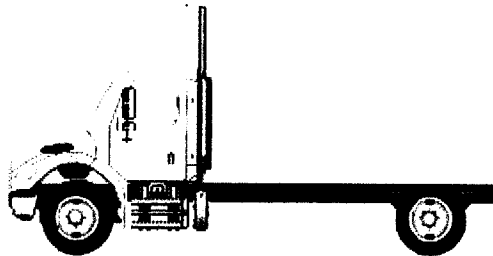
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GOLDEN GATE TRUCK CENTER
8200 BALDWIN STREET
OAKLAND, CA 94621
Phone: 5106323535

A proposal for
City of Merced

Prepared by
GOLDEN GATE TRUCK CENTER
Russ Gebhard

Jul 10, 2020

Freightliner M2 106



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



Prepared for:
Jeff Jeff
City of Merced
678 W 18th street
Merced, CA 95340
Phone: 209402-0551



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SPECIFICATION PROPOSAL

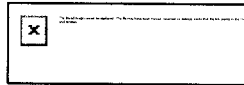
	Description	Weight Front	Weight Rear
Price Level			
	M2 PRL-23M (EFF:01/21/20)		
Data Version			
	SPECPRO21 DATA RELEASE VER 024		
Vehicle Configuration			
	M2 106 CONVENTIONAL CHASSIS	5,709	3,503
	2021 MODEL YEAR SPECIFIED		
	SET BACK AXLE - TRUCK		
	TRAILER TOWING PROVISION AT END OF FRAME FOR TRUCK	10	10
	LH PRIMARY STEERING LOCATION		
General Service			
	TRUCK/TRAILER CONFIGURATION		
	DOMICILED, USA 50 STATES (INCLUDING CALIFORNIA AND CARB OPT-IN STATES)		
	UTILITY/REPAIR/MAINTENANCE SERVICE		
	GOVERNMENT BUSINESS SEGMENT		
	FIXED LOAD COMMODITY		
	TERRAIN/DUTY: 100% (ALL) OF THE TIME, IN TRANSIT, IS SPENT ON PAVED ROADS		
	MAXIMUM 8% EXPECTED GRADE		
	SMOOTH CONCRETE OR ASPHALT PAVEMENT - MOST SEVERE IN-TRANSIT (BETWEEN SITES)		
	ROAD SURFACE		
	MEDIUM TRUCK WARRANTY		
	EXPECTED FRONT AXLE(S) LOAD : 12000.0 lbs		
	EXPECTED REAR DRIVE AXLE(S) LOAD : 21000.0 lbs		
	EXPECTED GROSS VEHICLE WEIGHT CAPACITY : 33000.0 lbs		
	EXPECTED GROSS COMBINATION WEIGHT : 50000.0 lbs		

Application Version 11.2.313
Data Version PRL-23M.024
City of Merced crew truck



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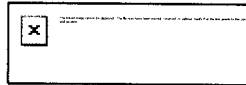


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Description	Weight Front	Weight Rear
Truck Service		
UTILITY BODY		
AMERICAN TRUCK AND TRAILER BODY COMPANY		
EXPECTED BODY/PAYLOAD CG HEIGHT ABOVE FRAME "XX" INCHES : 32.0 in		
Tractor Service		
FLATBED TRAILER		
SINGLE (1) TRAILER		
Engine		
CUM L9 330 HP @ 2000 RPM, 2200 GOV RPM, 1000 LB/FT @ 1400 RPM	640	30
Electronic Parameters		
66 MPH ROAD SPEED LIMIT		
CRUISE CONTROL SPEED LIMIT SAME AS ROAD SPEED LIMIT		
PTO MODE BRAKE OVERRIDE - SERVICE BRAKE APPLIED		
PTO RPM WITH CRUISE SET SWITCH - 700 RPM		
PTO RPM WITH CRUISE RESUME SWITCH - 800 RPM		
PTO MODE CANCEL VEHICLE SPEED - 5 MPH		
PTO GOVERNOR RAMP RATE - 250 RPM PER SECOND		
PTO MINIMUM RPM - 700		
REGEN INHIBIT SPEED THRESHOLD - 5 MPH		
Engine Equipment		
2016-2019 ONBOARD DIAGNOSTICS/2010 EPA/CARB/FINAL GHG17 CONFIGURATION		
2008 CARB EMISSION CERTIFICATION - CLEAN IDLE (INCLUDES 6X4 INCH LABEL ON LOWER FORWARD CORNER OF DRIVER DOOR)		
STANDARD OIL PAN		
ENGINE MOUNTED OIL CHECK AND FILL		
ONE PIECE VALVE COVER		
SIDE OF HOOD AIR INTAKE WITH FIREWALL MOUNTED DONALDSON AIR CLEANER		
DR 12V 160 AMP 28-SI QUADRAMOUNT PAD ALTERNATOR WITH REMOTE BATTERY VOLT SENSE		
(2) DTNA GENUINE, FLOODED STARTING, MIN 2000CCA, 370RC, THREADED STUD BATTERIES	10	



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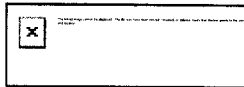


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Description	Weight Front	Weight Rear
BATTERY BOX FRAME MOUNTED		
STANDARD BATTERY JUMPERS		
SINGLE BATTERY BOX FRAME MOUNTED LH SIDE UNDER CAB		
WIRE GROUND RETURN FOR BATTERY CABLES WITH ADDITIONAL FRAME GROUND RETURN		
NON-POLISHED BATTERY BOX COVER		
CAB AUXILIARY POWER CABLE	5	
POSITIVE LOAD DISCONNECT WITH CAB MOUNTED CONTROL SWITCH MOUNTED OUTBOARD DRIVER SEAT	8	
POSITIVE AND NEGATIVE POSTS FOR JUMPSTART CHASSIS MOUNTED LH BACK OF CAB	4	
CUMMINS TURBOCHARGED 18.7 CFM AIR COMPRESSOR WITH INTERNAL SAFETY VALVE		
STANDARD MECHANICAL AIR COMPRESSOR GOVERNOR		
AIR COMPRESSOR DISCHARGE LINE		
ELECTRONIC ENGINE INTEGRAL SHUTDOWN PROTECTION SYSTEM		
C-BRAKE BY JACOBS WITH HIGH MED LOW BRAKE WITH BRAKE LAMPS	80	
RH OUTBOARD UNDER STEP MOUNTED HORIZONTAL AFTERTREATMENT SYSTEM ASSEMBLY WITH RH B-PILLAR MOUNTED VERTICAL TAILPIPE	30	25
ENGINE AFTERTREATMENT DEVICE, AUTOMATIC OVER THE ROAD REGENERATION AND DASH MOUNTED REGENERATION REQUEST SWITCH		
10 FOOT 06 INCH (126 INCH+0/-5.9 INCH) EXHAUST SYSTEM HEIGHT		
RH CURVED VERTICAL TAILPIPE B-PILLAR MOUNTED ROUTED FROM STEP		
6 GALLON DIESEL EXHAUST FLUID TANK		
100 PERCENT DIESEL EXHAUST FLUID FILL		
LH MEDIUM DUTY STANDARD DIESEL EXHAUST FLUID TANK LOCATION		
STANDARD DIESEL EXHAUST FLUID PUMP MOUNTING		
STANDARD DIESEL EXHAUST FLUID TANK CAP		
ALUMINUM AFTERTREATMENT DEVICE/MUFFLER/TAILPIPE SHIELD(S)		
HORTON DRIVEMASTER ADVANTAGE ON/OFF FAN DRIVE		



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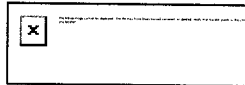


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Description	Weight Front	Weight Rear
AUTOMATIC FAN CONTROL WITHOUT DASH SWITCH, NON ENGINE MOUNTED		
CUMMINS SPIN ON FUEL FILTER		
COMBINATION FULL FLOW/BYPASS OIL FILTER		
900 SQUARE INCH ALUMINUM RADIATOR	15	
ANTIFREEZE TO -34F, OAT (NITRITE AND SILICATE FREE) EXTENDED LIFE COOLANT		
GATES BLUE STRIPE COOLANT HOSES OR EQUIVALENT		
CONSTANT TENSION HOSE CLAMPS FOR COOLANT HOSES		
RADIATOR DRAIN VALVE		
LOWER RADIATOR GUARD		
ALUMINUM FLYWHEEL HOUSING		
ELECTRIC GRID AIR INTAKE WARMER		
DELCO 12V 38MT HD STARTER WITH INTEGRATED MAGNETIC SWITCH		
Transmission		
ALLISON 3500 RDS AUTOMATIC TRANSMISSION WITH PTO PROVISION	200	60
Transmission Equipment		
ALLISON VOCATIONAL PACKAGE 223 - AVAILABLE ON 3000/4000 PRODUCT FAMILIES WITH VOCATIONAL MODELS RDS, HS, MH AND TRV		
ALLISON VOCATIONAL RATING FOR ON/OFF HIGHWAY APPLICATIONS AVAILABLE WITH ALL PRODUCT FAMILIES		
PRIMARY MODE GEARS, LOWEST GEAR 1, START GEAR 1, HIGHEST GEAR 6, AVAILABLE FOR 3000/4000 PRODUCT FAMILIES ONLY		
SECONDARY MODE GEARS, LOWEST GEAR 1, START GEAR 1, HIGHEST GEAR 6, AVAILABLE FOR 3000/4000 PRODUCT FAMILIES ONLY		
PRIMARY SHIFT SCHEDULE RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE		
SECONDARY SHIFT SCHEDULE RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE		
PRIMARY SHIFT SPEED RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE		
SECONDARY SHIFT SPEED RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE		



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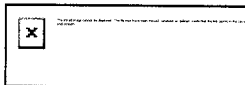
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ENGINE BRAKE RANGE PRESELECT RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE		
ENGINE BRAKE RANGE ALTERNATE PRESELECT RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE		
FUEL SENSE 2.0 DISABLED - PERFORMANCE - TABLE BASED		
DRIVER SWITCH INPUT - DEFAULT - NO SWITCHES		
VEHICLE INTERFACE WIRING CONNECTOR WITH BLUNT CUTS, AT END OF FRAME		
ELECTRONIC TRANSMISSION CUSTOMER ACCESS CONNECTOR FIREWALL MOUNTED		
CUSTOMER INSTALLED CHELSEA 280 SERIES PTO		
PTO MOUNTING, LH SIDE OF MAIN TRANSMISSION		
MAGNETIC PLUGS, ENGINE DRAIN, TRANSMISSION DRAIN, AXLE(S) FILL AND DRAIN		
PUSH BUTTON ELECTRONIC SHIFT CONTROL, DASH MOUNTED		
TRANSMISSION PROGNOSTICS - ENABLED 2013		
WATER TO OIL TRANSMISSION COOLER, IN RADIATOR END TANK		
TRANSMISSION OIL CHECK AND FILL WITH ELECTRONIC OIL LEVEL CHECK		
SYNTHETIC TRANSMISSION FLUID (TES-295 COMPLIANT)		

Front Axle and Equipment

MFS-12-143A 12,000# FF1 71.5 INCH KPI/3.74 INCH DROP SINGLE FRONT AXLE	-5
MERITOR 15X5 Q+ CAST SPIDER CAM FRONT BRAKES, DOUBLE ANCHOR, FABRICATED SHOES	
NON-ASBESTOS FRONT BRAKE LINING	
CONMET CAST IRON FRONT BRAKE DRUMS	
FRONT OIL SEALS	
VENTED FRONT HUB CAPS WITH WINDOW, CENTER AND SIDE PLUGS - OIL	
STANDARD SPINDLE NUTS FOR ALL AXLES	
MERITOR AUTOMATIC FRONT SLACK ADJUSTERS	
TRW THP-60 POWER STEERING	



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Description	Weight Front	Weight Rear
POWER STEERING PUMP 2 QUART SEE THROUGH POWER STEERING RESERVOIR CURRENT AVAILABLE SYNTHETIC 75W-90 FRONT AXLE LUBE		
Front Suspension		
12,000# DUAL TAPERLEAF FRONT SUSPENSION MAINTENANCE FREE RUBBER BUSHINGS - FRONT SUSPENSION FRONT SHOCK ABSORBERS	42	
Rear Axle and Equipment		
RS-21-160 21,000# R-SERIES SINGLE REAR AXLE 5.63 REAR AXLE RATIO IRON REAR AXLE CARRIER WITH STANDARD AXLE HOUSING MXL 17T MERITOR EXTENDED LUBE MAIN DRIVELINE WITH HALF ROUND YOKES DRIVER CONTROLLED TRACTION DIFFERENTIAL - SINGLE REAR AXLE (1) DRIVER CONTROLLED DIFFERENTIAL LOCK REAR VALVE FOR SINGLE DRIVE AXLE BLINKING LAMP WITH EACH MODE SWITCH, DIFFERENTIAL UNLOCK WITH IGNITION OFF, ACTIVE <5 MPH MERITOR 16.5X7 Q+ CAST SPIDER HEAVY DUTY CAM REAR BRAKES, DOUBLE ANCHOR, FABRICATED SHOES NON-ASBESTOS REAR BRAKE LINING BRAKE CAMS AND CHAMBERS ON REAR SIDE OF DRIVE AXLE(S) CONMET CAST IRON REAR BRAKE DRUMS REAR OIL SEALS WABCO TRISTOP D LONGSTROKE 1-DRIVE AXLE SPRING PARKING CHAMBERS MERITOR AUTOMATIC REAR SLACK ADJUSTERS CURRENT AVAILABLE SYNTHETIC 75W-90 REAR AXLE LUBE		180
Rear Suspension		
23,000# FLAT LEAF SPRING REAR SUSPENSION WITH HELPER AND RADIUS ROD SPRING SUSPENSION - NO AXLE SPACERS		120



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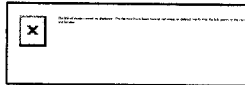


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	Description	Weight Front	Weight Rear
Brake System	STANDARD AXLE SEATS IN AXLE CLAMP GROUP		
	FORE/AFT CONTROL RODS		
Brake System	AIR BRAKE PACKAGE		
	WABCO 4S/4M ABS		
	REINFORCED NYLON, FABRIC BRAID AND WIRE BRAID CHASSIS AIR LINES		
	FIBER BRAID PARKING BRAKE HOSE		
	STANDARD BRAKE SYSTEM VALVES		
	STANDARD AIR SYSTEM PRESSURE PROTECTION SYSTEM		
	STD U.S. FRONT BRAKE VALVE		
	RELAY VALVE WITH 5-8 PSI CRACK PRESSURE, NO REAR PROPORTIONING VALVE		
	WABCO SYSTEM SAVER HP WITH INTEGRAL AIR GOVERNOR AND HEATER		
	AIR DRYER FRAME MOUNTED		
	STEEL AIR BRAKE RESERVOIRS		
	PULL CABLE ON WET TANK, PETCOCK DRAIN VALVES ON ALL OTHER AIR TANKS		
Trailer Connections	AIR CONNECTIONS TO END OF FRAME WITH GLAD HANDS FOR TRUCK AND NO DUST COVERS		
	PRIMARY CONNECTOR/RECEPTACLE WIRED FOR SEPARATE STOP/TURN, ABS CENTER PIN POWERED THROUGH IGNITION		
	SAE J560 7-WAY PRIMARY TRAILER CABLE RECEPTACLE MOUNTED END OF FRAME		
	UPGRADED CHASSIS MULTIPLEXING UNIT		
	UPGRADED BULKHEAD MULTIPLEXING UNIT		
Wheelbase & Frame	4800MM (189 INCH) WHEELBASE		
	9/32X3-7/16X10-1/16 INCH STEEL FRAME (7.14MMX255.6/0.281X10.06 INCH) 80KSI		
	1900MM (75 INCH) REAR FRAME OVERHANG		
	FRAME OVERHANG RANGE: 71 INCH TO 80 INCH	-20	80
	CALC'D BACK OF CAB TO REAR SUSP C/L (CA) : 123.43 in		
	CALCULATED EFFECTIVE BACK OF CAB TO REAR SUSPENSION C/L (CA) : 120.43 in		



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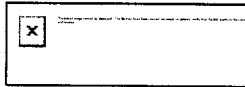


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Description	Weight Front	Weight Rear
CALC'D FRAME LENGTH - OVERALL : 302.75		
CALCULATED FRAME SPACE LH SIDE : 88.91 in		
CALCULATED FRAME SPACE RH SIDE : 193.76 in		
CALC'D SPACE AVAILABLE FOR DECKPLATE : 123.45 in		
SQUARE END OF FRAME		
FRONT CLOSING CROSSMEMBER		
STANDARD WEIGHT ENGINE CROSSMEMBER		
STANDARD CROSSMEMBER BACK OF TRANSMISSION		
STANDARD MIDSHIP #1 CROSSMEMBER(S)		
STANDARD REARMOST CROSSMEMBER		
STANDARD SUSPENSION CROSSMEMBER		
Chassis Equipment		
THREE-PIECE 14 INCH PAINTED STEEL BUMPER WITH COLLAPSIBLE ENDS	30	
FRONT TOW HOOKS - FRAME MOUNTED BUMPER MOUNTING FOR SINGLE LICENSE PLATE	15	
FENDER AND FRONT OF HOOD MOUNTED FRONT MUDFLAPS		
GRADE 8 THREADED HEX HEADED FRAME FASTENERS		
Fuel Tanks		
42 GALLON/159 LITER SHORT RECTANGULAR ALUMINUM FUEL TANK - LH	10	
RECTANGULAR FUEL TANK(S)		
PLAIN ALUMINUM/PAINTED STEEL FUEL/HYDRAULIC TANK(S) WITH PAINTED BANDS		
FUEL TANK(S) FORWARD		
BLACK STEP FINISH		
FUEL TANK CAP(S)		
DETROIT FUEL/WATER SEPARATOR WITH WATER IN FUEL SENSOR	-5	
EQUIFLO INBOARD FUEL SYSTEM		
HIGH TEMPERATURE REINFORCED NYLON FUEL LINE		
Tires		
MICHELIN XZE2 275/80R22.5 14 PLY RADIAL FRONT TIRES	2	



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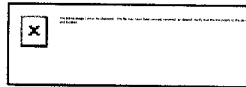


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	Description	Weight Front	Weight Rear
	MICHELIN XDN2 275/80R22.5 14 PLY RADIAL REAR TIRES		44
Hubs	CONMET PRESET PLUS PREMIUM IRON FRONT HUBS CONMET PRESET PLUS PREMIUM IRON REAR HUBS		
Wheels	MAXION WHEELS 90541 22.5X8.25 10-HUB PILOT 6.20 INSET 2-HAND STEEL DISC FRONT WHEELS MAXION WHEELS 90541 22.5X8.25 10-HUB PILOT 6.20 2-HAND STEEL DISC REAR WHEELS FRONT WHEEL MOUNTING NUTS REAR WHEEL MOUNTING NUTS		
Cab Exterior	106 INCH BBC FLAT ROOF ALUMINUM CONVENTIONAL CAB AIR CAB MOUNTING NONREMOVABLE BUGSCREEN MOUNTED BEHIND GRILLE LH AND RH GRAB HANDLES MOLD-IN COLOR GRILLE MOLD-IN COLOR HOOD MOUNTED AIR INTAKE GRILLE FIBERGLASS HOOD SINGLE 14 INCH ROUND HADLEY AIR HORN UNDER LH DECK DUAL ELECTRIC HORNS SINGLE HORN SHIELD DOOR LOCKS AND IGNITION SWITCH KEYED THE SAME KEY QUANTITY OF 4 REAR LICENSE PLATE MOUNT END OF FRAME INTEGRAL HEADLIGHT/MARKER ASSEMBLY LED AERODYNAMIC MARKER LIGHTS DAYTIME RUNNING LIGHTS TRUCK-LITE 40 STOP/TAIL WITH SEPARATE BACKUP LIGHTS GROMMET MOUNTED STANDARD FRONT TURN SIGNAL LAMPS DUAL WEST COAST MOLDED-IN COLOR HEATED MIRRORS	4	5

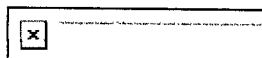


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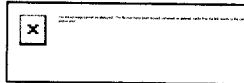


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Description	Weight Front	Weight Rear
DOOR MOUNTED MIRRORS		
102 INCH EQUIPMENT WIDTH		
LH AND RH 8 INCH MOLDED-IN COLOR CONVEX MIRRORS MOUNTED UNDER PRIMARY MIRRORS		
STANDARD SIDE/REAR REFLECTORS		
DUAL LEVEL CAB ENTRY STEPS ON BOTH SIDES		
63X14 INCH TINTED REAR WINDOW		
TINTED DOOR GLASS LH AND RH WITH TINTED NON-OPERATING WING WINDOWS		
RH AND LH ELECTRIC POWERED WINDOWS	4	
1-PIECE SOLAR GREEN GLASS WINDSHIELD		
2 GALLON WINDSHIELD WASHER RESERVOIR WITHOUT FLUID LEVEL INDICATOR, FRAME MOUNTED		
Cab Interior		
OPAL GRAY CLOTH INTERIOR		
MOLDED PLASTIC DOOR PANEL WITHOUT VINYL INSERT WITH ALUMINUM KICKPLATE LOWER DOOR		
MOLDED PLASTIC DOOR PANEL WITHOUT VINYL INSERT WITH ALUMINUM KICKPLATE LOWER DOOR		
BLACK MATS WITH SINGLE INSULATION		
FORWARD ROOF MOUNTED CONSOLE WITH UPPER STORAGE COMPARTMENTS WITHOUT NETTING		
IN DASH STORAGE BIN		
(2) CUP HOLDERS LH AND RH DASH		
GRAY/CHARCOAL FLAT DASH		
SMART SWITCH EXPANSION MODULE		
2-1/2 LB. FIRE EXTINGUISHER	5	
FIRST AID KIT	2	
HEATER, DEFROSTER AND AIR CONDITIONER		
STANDARD HVAC DUCTING		
MAIN HVAC CONTROLS WITH RECIRCULATION SWITCH		
STANDARD HEATER PLUMBING		
VALEO HEAVY DUTY A/C REFRIGERANT COMPRESSOR		
BINARY CONTROL, R-134A		
STANDARD INSULATION		



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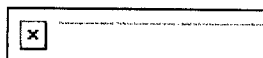


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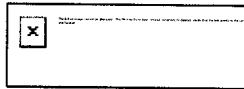
Description	Weight Front	Weight Rear
SOLID-STATE CIRCUIT PROTECTION AND FUSES		
12V NEGATIVE GROUND ELECTRICAL SYSTEM		
DOME LIGHT WITH 3-WAY SWITCH ACTIVATED BY LH AND RH DOORS		
LH AND RH ELECTRIC DOOR LOCKS		
(2) 12 VOLT POWER RECEPTACLES MOUNTED IN DASH		
TRIANGULAR REFLECTORS WITHOUT FLARES	10	
BASIC HIGH BACK AIR SUSPENSION DRIVER SEAT WITH MECHANICAL LUMBAR AND INTEGRATED CUSHION EXTENSION	30	
2 MAN TOOL BOX MID BACK NON SUSPENSION PASSENGER SEAT	20	
INBOARD DRIVER SEAT ARMREST, NO PASSENGER SEAT ARMREST	2	
LH AND RH INTEGRAL DOOR PANEL ARMRESTS		
VINYL WITH VINYL INSERT DRIVER SEAT		
VINYL WITH VINYL INSERT PASSENGER SEAT		
BLACK SEAT BELTS		
ADJUSTABLE TILT AND TELESCOPING STEERING COLUMN	10	
4-SPOKE 18 INCH (450MM) STEERING WHEEL		
DRIVER AND PASSENGER INTERIOR SUN VISORS		

Instruments & Controls

GRAY DRIVER INSTRUMENT PANEL	
GRAY CENTER INSTRUMENT PANEL	
BLACK GAUGE BEZELS	
LOW AIR PRESSURE INDICATOR LIGHT AND AUDIBLE ALARM	
2 INCH PRIMARY AND SECONDARY AIR PRESSURE GAUGES	
INTAKE MOUNTED AIR RESTRICTION INDICATOR WITHOUT GRADUATIONS	
97 DB BACKUP ALARM	3
ELECTRONIC CRUISE CONTROL WITH SWITCHES IN LH SWITCH PANEL	
KEY OPERATED IGNITION SWITCH AND INTEGRAL START POSITION; 4 POSITION OFF/RUN/START/ACCESSORY	
ICU3S, 132X48 DISPLAY WITH DIAGNOSTICS, 28 LED WARNING LAMPS AND DATA LINKED	

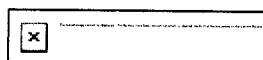


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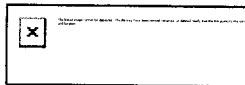


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Description	Weight Front	Weight Rear
HEAVY DUTY ONBOARD DIAGNOSTICS INTERFACE CONNECTOR LOCATED BELOW LH DASH		
2 INCH ELECTRIC FUEL GAUGE		
PROGRAMMABLE RPM CONTROL - ELECTRONIC ENGINE		
ELECTRICAL ENGINE COOLANT TEMPERATURE GAUGE		
2 INCH TRANSMISSION OIL TEMPERATURE GAUGE		
ENGINE AND TRIP HOUR METERS INTEGRAL WITHIN DRIVER DISPLAY		
(1) DASH MOUNTED PTO SWITCH WITH INDICATOR LAMP	10	
ELECTRIC ENGINE OIL PRESSURE GAUGE		
AM/FM/WB WORLD TUNER RADIO WITH AUXILIARY INPUT, J1939	10	
DASH MOUNTED RADIO		
(2) RADIO SPEAKERS IN CAB		
AM/FM ANTENNA MOUNTED ON FORWARD LH ROOF		
ELECTRONIC MPH SPEEDOMETER WITH SECONDARY KPH SCALE, WITHOUT ODOMETER		
STANDARD VEHICLE SPEED SENSOR		
ELECTRONIC 3000 RPM TACHOMETER		
IDLE LIMITER, ELECTRONIC ENGINE		
FOUR ON/OFF ROCKER SWITCHES IN THE DASH WITH INDICATOR LIGHTS AND WIRE ROUTED TO CHASSIS AT BACK OF CAB, LABEL OPT		
BW TRACTOR PROTECTION VALVE		
TRAILER HAND CONTROL BRAKE VALVE		
DIGITAL VOLTAGE DISPLAY INTEGRAL WITH DRIVER DISPLAY		
SINGLE ELECTRIC WINDSHIELD WIPER MOTOR WITH DELAY		
MARKER LIGHT SWITCH INTEGRAL WITH HEADLIGHT SWITCH		
TWO VALVE PARKING BRAKE SYSTEM WITH WARNING INDICATOR		
SELF CANCELING TURN SIGNAL SWITCH WITH DIMMER, WASHER/WIPER AND HAZARD IN HANDLE		



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	Description	Weight Front	Weight Rear
	INTEGRAL ELECTRONIC TURN SIGNAL FLASHER WITH HAZARD LAMPS OVERRIDING STOP LAMPS		

Design

PAINT: ONE SOLID COLOR

Color

CAB COLOR A: L0006EY WHITE ELITE EY
BLACK, HIGH SOLIDS POLYURETHANE CHASSIS
PAINT
POWDER WHITE (N0006EA) FRONT
WHEELS/RIMS (PKWHT21, TKWHT21, W, TW)
POWDER WHITE (N0006EA) REAR
WHEELS/RIMS (PKWHT21, TKWHT21, W, TW)
BUMPER PAINT: FP24812 ARGENT SILVER
DUPONT FLEX
STANDARD E COAT/UNDERCOATING

Certification / Compliance

U.S. FMVSS CERTIFICATION, EXCEPT SALES
CABS AND GLIDER KITS

Raw Performance Data

CALC'D FRAME LENGTH - OVERALL : 302.75
CALCULATED EFFECTIVE BACK OF CAB TO
REAR SUSPENSION C/L (CA) : 120.43 in
CALC'D SPACE AVAILABLE FOR DECKPLATE :
123.45 in

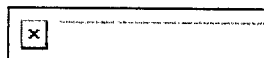
Sales Programs

NO SALES PROGRAMS HAVE BEEN SELECTED

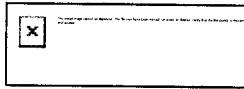
TOTAL VEHICLE SUMMARY

Weight Summary

	Weight Front	Weight Rear	Total Weight
Factory Weight ⁺	6887 lbs	4060 lbs	10947 lbs
Total Weight ⁺	6887 lbs	4060 lbs	10947 lbs



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(+) Weights shown are estimates only.

If weight is critical, contact Customer Application Engineering.

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

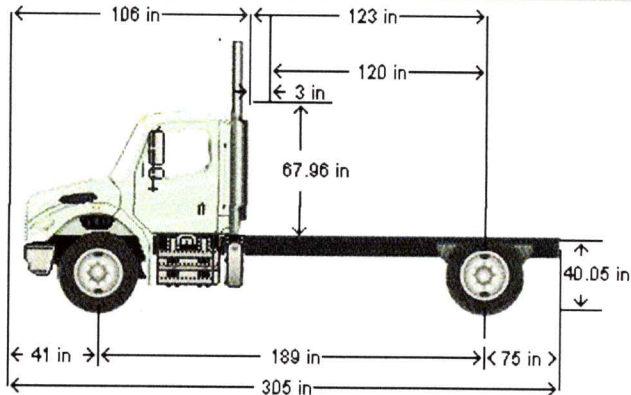


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DIMENSIONS



VEHICLE SPECIFICATIONS SUMMARY - DIMENSIONS

Model M2106
Wheelbase (545) 4800MM (189 INCH) WHEELBASE
Rear Frame Overhang (552) 1900MM (75 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) 106 INCH BBC FLAT ROOF ALUMINUM CONVENTIONAL CAB
Sleeper (682) NO SLEEPER BOX/SLEEPER CAB
Exhaust System (016) RH OUTBOARD UNDER STEP MOUNTED HORIZONTAL AFTERTREATMENT SYSTEM ASSEMBLY
WITH RH B-PILLAR MOUNTED VERTICAL TAILPIPE



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TABLE SUMMARY - DIMENSIONS

Dimensions	Inches
Bumper to Back of Cab (BBC)	106.3
Bumper to Centerline of Front Axle (BA)	40.7
Min. Cab to Body Clearance (CB)	3.0
Back of Cab to Centerline of Rear Axle(s) (CA)	123.4
Effective Back of Cab to Centerline of Rear Axle(s) (Effective CA)	120.4
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	198.2
Cab Height (CH)	68.0
Wheelbase (WD)	109.0
Frame Overhang (OI)	74.0
Overall Length (OAL)	304.5
Rear Axle Spacing	0.0
Unladen Frame Height at Centerline of Rear Axle	40.0

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 M2106
Cab Size (829) 106 INCH BBC FLAT ROOF ALUMINUM CONVENTIONAL CAB
Expected Front Axle(s) Load (lbs) 12000.0
Expected Pusher Axle(s) Load (lbs) 0.0
Expected Rear Axle(s) Load (lbs) 21000.0
Expected Tag Axle(s) Load (lbs) 0.0
Expected GVW (lbs) 33000
Expected GCW (lbs) 50000.0
Front Axle (400) MFS-12-143A 12,000# FF1 71.5 INCH KPI/3.74 INCH DROP SINGLE FRONT AXLE
Front Suspension (620) 12,000# DUAL TAPERLEAF FRONT SUSPENSION
Front Hubs (418) CONMET PRESET PLUS PREMIUM IRON FRONT HUBS
Front Disc Wheels (502) MAXION WHEELS 90541 22.5X8.25 10-HUB PILOT 6.20 INSET 2-HAND STEEL DISC FRONT WHEELS
Front Tires (093) MICHELIN XZE2 275/80R22.5 14 PLY RADIAL FRONT TIRES
Front Brakes (402) MERITOR 15X5 Q+ CAST SPIDER CAM FRONT BRAKES, DOUBLE ANCHOR, FABRICATED SHOES
Steering Gear (536) TRW THP-60 POWER STEERING
Rear Axle (420) RS-21-160 21,000# R-SERIES SINGLE REAR AXLE
Rear Suspension (622) 23,000# FLAT LEAF SPRING REAR SUSPENSION WITH HELPER AND RADIUS ROD
Rear Hubs (450) CONMET PRESET PLUS PREMIUM IRON REAR HUBS
Rear Disc Wheels (505) MAXION WHEELS 90541 22.5X8.25 10-HUB PILOT 6.20 2-HAND STEEL DISC REAR WHEELS
Rear Tires (094) MICHELIN XDN2 275/80R22.5 14 PLY RADIAL REAR TIRES
Rear Brakes (423) MERITOR 16.5X7 Q+ CAST SPIDER HEAVY DUTY 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



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TABLE SUMMARY - GVWR

	Front	Rear
Axle Component Weight Ratings		
Axles	12000	21000
Suspension	12000	23000
Hubs	14700	26000
Brakes	13200	22000
Wheels	14800	29600
Tires	12350	22700
Power Steering	13300	N/A
GAWR (per axle)	12000	21000
GAWR (per axle system)	12000	21000
Expected Load (per axle system)	12000	21000
GVWR due to Frame	33000	
GVWR due to Transmission	80000	
Vehicle GVWR Summary		
Calculated GVWR	33000	
Expected GVWR	33000	
All weights displayed in pounds		

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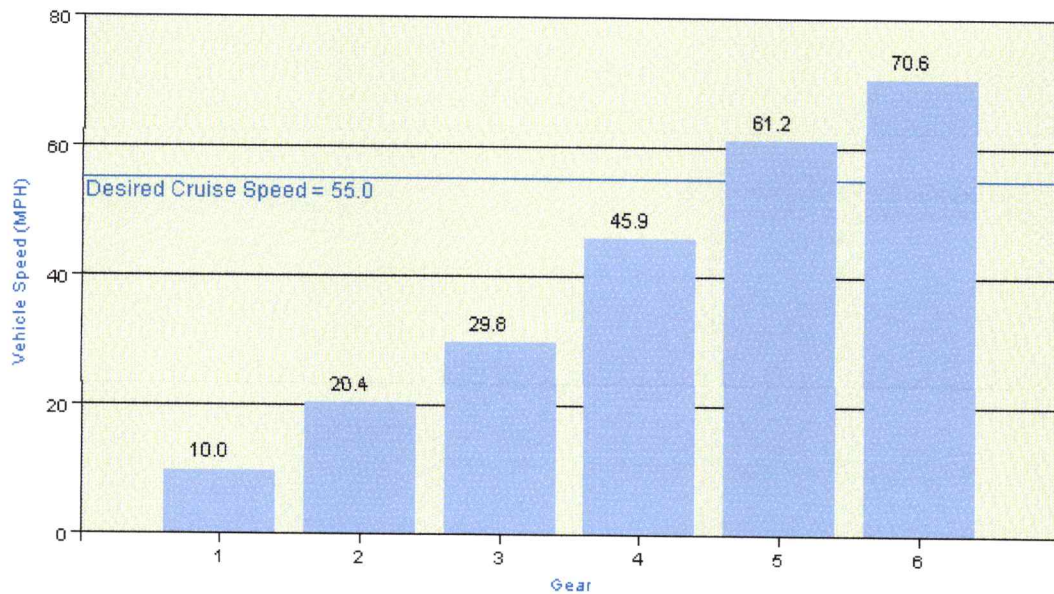


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OPERATING SPEED



Rear Axle Ratio = 5.63

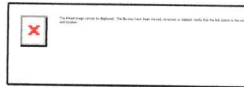
Engine RPM = 2200

VEHICLE SPECIFICATIONS SUMMARY - OPERATING SPEED

Model M2106
Cab Size (829) 106 INCH BBC FLAT ROOF ALUMINUM CONVENTIONAL CAB
Top Speed (mph) 70.6
Engine RPM 2200.0
Desired Cruise Speed (mph) 55.0
Engine (101)..... CUM L9 330 HP @ 2000 RPM, 2200 GOV RPM, 1000 LB/FT @ 1400 RPM



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Governed RPM..... 2200
 Transmission (342)..... ALLISON 3500 RDS AUTOMATIC TRANSMISSION WITH PTO PROVISION
 Rear Axle (420)..... RS-21-160 21,000# R-SERIES SINGLE REAR AXLE
 Number of Speeds..... 1
 Rear Axle Gear Ratio(s)..... 5.63 REAR AXLE RATIO
 Rear Tires (094)..... MICHELIN XDN2 275/80R22.5 14 PLY RADIAL REAR TIRES
 Revolutions per Mile..... 511
 Auxiliary Transmission (352)..... NO AUXILIARY TRANSMISSION
 High Gear Ratio..... N/A
 Low Gear Ratio..... N/A
 Transfer Case (373)..... NO TRANSFER CASE
 High Gear Ratio..... N/A
 Low Gear Ratio..... N/A

TABLE SUMMARY - OPERATING SPEED

Transmission Gear	Transmission Gear Ratio	Overall Gear Ratio	Vehicle Speed (MPH)
1	4.59	25.84	10.0
2	2.25	12.67	20.4
3	1.54	8.67	29.8
4	1.00	5.63	45.9
5	0.75	4.22	61.2
6	0.65	3.66	70.6
Desired Cruise Speed (mph)			55.0
Engine RPM			2200
Rear Axle Ratio			5.03
*Blue background represents values input by user.			

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