



2445 S. Afton Rd.
Beloit, WI 53511
608.364.2980 Phone
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MEMORANDUM

5/8/2024

TO: Town of Beloit Board of Supervisors
FROM: Joe Rose, Public Works Director
RE: Discussion and possible action on purchase of sewer pumper truck

STAFF RECOMMENDATION

I would recommend that we move forward with the purchase of the sewer pumper Truck as submitted in the packet.

RECOMMENDED MOTION

I move to approve the purchase of a sewer pumper truck from Imperial Industries as presented.

BACKGROUND

One of our current pumper trucks that we use for a multitude of tasks including hauling sludge and cleaning lift stations is currently experiencing some issues that would be costly to repair. We are already scheduled in the capital budget to replace this 2001 truck in the capital budget next year with \$250,000 allocated to that purchase. We called to check on the availability of a truck for future purchase, and we were told they have some availability to build to suit on a couple chassis they have coming in. This opportunity is surprising to say the least, as we have been waiting for 2 years to procure one for a plow vehicle. The quote is for \$162,194.89 with our municipal pricing for the build. That does not include any delivery charges. This money will come from the Sewer replacement fund, which has the money available this year to purchase the unit.

ANALYSIS

I would not recommend passing this chance to purchase a unit that is available, for one that will probably be more expensive next year, if we can even procure one. After factoring in that the repairs to the 2001 truck could be costly, only to sell the truck next year, it seems to be fiscally responsible to move forward with the purchase.

CC: Tim Wellnitz, Town Administrator
Karry DeVault, Town Clerk
John Malizio, Finance Director/Treasurer

TECHNICAL SPECIFICATION

MD7 42R



			WEIGHT (LB)		LIST PRICE USD
CUSTOMER/VEHICLE INFO	DESCRIPTION	FRONT	REAR		
S	CHASSIS (BASE MODEL)	MD742 - 42R MEDIUM DUTY, CLASS 7 w/ 6.7L, (MAX 33,000lbs GVWR)	2,095	552	0
S	ASSEMBLY PLANT	FACTORY USA (RV, MACK)	0	0	0
	VEHICLE USE & BODY/TRAILER TYPE	TANKER or PUMPER TRUCK	0	0	0
	VEHICLE VOCATION	PICKUP & DELIVERY / SHORT HAUL SERVICE	0	0	0
	CUSTOMER FLEET SIZE	REGIONAL FLEET 25 OR MORE VEHICLES IN OWN FLEET OF ANY VEHICLE BRAND	0	0	0
S	TYPE OF SERVICE	COMMERCIAL	0	0	0
S	WARRANTY REGISTRATION LOCATION	USA - WARRANTY REGISTRATION LOCATION	0	0	0
	EMISSION WARRANTY CERTIFICATION	CARB + EPA for Cummins Diesel	0	0	1,700
S	INITIAL REGISTRATION LOCATION	USA REGISTRATION	0	0	0
S	LANGUAGE- PUBS/DECAL/SIGNS	ENGLISH	0	0	0
S	TERRAIN GRADE	CITY, STARTING GRADES<6%	0	0	0
S	LOADING SURFACE	ASPHALT LOADING AND / OR UNLOADING SURFACE	0	0	0
S	OPERATING CLASS	OPERATING CLASS 7; 33000lb GVWR	0	0	0

			WEIGHT (LB)		LIST PRICE USD
ENGINE & TRANSMISSION	DESCRIPTION	FRONT	REAR		
S	EMISSION ON BOARD DIAG CONTROL	EMISSION OBD, DISPLAY ONLY, USA2016	0	0	0
	ENGINE / MOTOR	ISB6.7-300 DIESEL CUMMINS 300HP @ 2600RPM (GOV) 660 LB-FT, US21	1,586	-28	2,437
	TRANSMISSION	2500 RDS 6 SP-ALLISON RUGGED DUTY SERIES GEN 6 (WITH PTO PROVISIONS)	333	67	208
S	FUELSENSE CALIBRATION	ALLISON FUELSENSE, NEUTRAL AT STOP	0	0	0
S	TRANSM AUTO NEUTRAL ON P-BRAKE	AUTO NEUTRAL SINGLE INPUT WITH SHIFT SELECTOR OVERRIDE	0	0	0

			WEIGHT (LB)		LIST PRICE USD
ENGINE & TRANSMISSION EQUIPMENT	DESCRIPTION	FRONT	REAR		
	ENGINE BRAKE TYPE	ENGINE BRAKE	0	0	0
	CRUISE CONTROL	CRUISE CONTROL	0	0	0
S	ALTERNATOR	DELCO 12V 160A (28SI) BRUSH-TYPE	0	0	0
S	STARTER MOTOR	12 VOLT MELCO STARTER (MITSUBISHI ELECTRIC)	0	0	0
	ENGINE BLOCK HEATER	120 VOLT / 0.75 KW, ENGINE BLOCK HEATER	3	0	124
	POWER TAKE OFF CONTROL	POWER TAKE OFF TRANSMISSION CONTROL, PREP KIT F/SINGLE PTO	0	0	141

			WEIGHT (LB)		LIST PRICE USD
AXLE & SUSPENSION	DESCRIPTION	FRONT	REAR		
S	FRONT AXLE	12,000LB MERITOR MFS+ 5400 KG	1,142	0	0
S	SPRINGS - FRONT	MACK TAPERLEAF 12300# (5500 KG) GROUND LOAD RATING	0	0	0

TECHNICAL SPECIFICATION *(cont.)*



			WEIGHT (LB)		LIST PRICE USD
AXLE & SUSPENSION	DESCRIPTION	FRONT	REAR		
S	FRONT AXLE BRAKES	MERITOR "S" CAM TYPE 16.5" x 5" Q+	0	0	0
	REAR AXLE - SINGLE	21000# (9525 kg) MERITOR MS-21-14X, (W/ DIFF LOCK) CASING 11.0mm	0	1,189	779
	REAR SUSPENSION - SINGLE	AL210 AIR-MACK 21000LB 9525KG	0	424	1,745
	SUSPENSION LEVELLING DEVICE (CA in PC29 only)	SUSPENSION LEVELLING AIR DUMP	0	0	143
S	BRAKES - REAR	MERITOR "S" CAM 16.5"x7" Q+	0	0	0
S	REAR AXLE RATIO	RATIO 5.57, REAR AXLE	0	0	0

			WEIGHT (LB)		LIST PRICE USD
CHASSIS EQUIPMENT	DESCRIPTION	FRONT	REAR		
S	IDLE EMISSION CERTIFICATION	IDLE EMISSION CERTIFICATION, CARB 08	0	0	0
	DPF DIESEL PARTICULATE FILTER	CUMMINS SINGLE MODULE E.A.T.S. RH SIDE UNDER CAB US17 (7L over 271HP only!!)	91	71	0
S	EXHAUST	UNDERFRAME RIGHT SIDE INBOARD MOUNTED (Diesel engines only)	0	0	0

			WEIGHT (LB)		LIST PRICE USD
FRAME EQUIPMENT & FUEL TANKS	DESCRIPTION	FRONT	REAR		
	WHEELBASE	206" Wheelbase (143" CA) 65" After-frame	563	501	0
S	FRAME RAILS	STEEL - 260MM X 70MM X 8MM -- (10.24" X 2.75" X 0.31"); RBM 1,580,000 LB-IN	0	0	0
	PRIMARY FUEL FILTER	FUEL FILTER, WATER SEPARATOR, FUEL EL.HEATER, GENERIC (Diesel engines only)	7	0	230
S	FUEL TANK - LH	50 GALLON (190 L) 22" ALUMINUM ROUND	131	40	0

			WEIGHT (LB)		LIST PRICE USD
CAB INTERIOR	DESCRIPTION	FRONT	REAR		
S	SPEEDOMETER &- GAUGES - UNIT(S) OF MEASURE	U.S. UNITS (PREDOMINANT)	0	0	0
S	BACK-UP ALARM	WITHOUT BACK-UP ALARM	0	0	0
S	AIR RESTRICTION INDICATOR	MECHANICAL, GRADUATED, ON FILTER	0	0	0
S	DAYTIME RUNNING LIGHTS	DRL WHEN ENGINE RUNNING & PARK BRAKE OFF	0	0	0
S	FIRE EXTINGUISHER	HAND FIRE EXTINGUISHER 1.1 KG (2.5LB) ENGLISH DECAL, ABC	0	0	0
S	AUDIO SYSTEM	RADIO, AM/FM, MP3, WEATHER BAND	0	0	0
S	AUDIO INTEGRAT. PHONE HANDSFRE	AUDIO INTEGRATED HANDSFREE PHONE, BLUETOOTH	0	0	0
S	AUDIO COMMUNICATION CONNECTOR	AUDIO COMMUNICATION CONNECTOR, USB AUDIO	0	0	0
S	COMMUNICATION EQUIPMENT	FACTORY INSTALLED GEOTAB FLEET MANAGEMENT SYSTEM	0	0	0
S	DRIVER SEAT	MACK DRIVERS SEAT, AIR SUSPENDED	0	0	0
S	DRIVERS SEAT UPHOLSTERY	DRIVERS SEAT UPHOLSTERY, VINYL	0	0	0
	PASSENGER SEAT	FIXED BENCH SEAT SUPPORT, INTEGRATED STORAGE BOX	51	0	173
S	PASSENGERS SEAT UPHOLSTRY	PASSENGERS SEAT UPHOLSTERY, VINYL	0	0	0
S	SEAT BELT(S)	ALL SEAT BELTS, BLACK	0	0	0

PRICELIST DATE
20220523

QUOTATION
KRIE2022000120D617

DATE
1/27/2023

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TECHNICAL SPECIFICATION (cont.)



CAB EXTERIOR	DESCRIPTION	WEIGHT (LB)		LIST PRICE USD
		FRONT	REAR	
HOOD RADIATOR GRILLE, FINISH	HOOD RADIATOR GRILLE FINISH, BRIGHT CHROME	0	0	97
FRONT BUMPER FINISH	FRONT BUMPER FINISH BRIGHT	0	0	400
MIRRORS - EXTERIOR	HEATED AND MOTORIZED MIRRORS BOTH SIDES, BLACK (Anthem mirror)	29	0	237

WHEELS & TIRES	DESCRIPTION	WEIGHT (LB)		LIST PRICE USD
		FRONT	REAR	
TIRES BRAND/TYPE - FRONT	11R22.5 H BRIDGESTONE R268 ECOPIA (13220 lbs) (Total for QTY = 2)	247	0	198
WHEELS - FRONT	22.5x8.25 ACCURIDE, POLISHED ALUMINUM DISC (Total for QTY = 2)	80	0	294
FRONT AXLE TIRE & WHEEL QUANTITY	TWO FRONT TIRES & WHEELS	0	0	0
TIRES BRAND/TYPE - REAR	11R22.5 G BRIDGESTONE M760 ECOPIA (23360 lbs) (DRIVE ONLY) (Total for QTY = 4)	0	538	312
WHEELS - REAR	22.5x8.25 ACCURIDE, POLISHED ALUMINUM DISC (Total for QTY = 4)	0	159	588
REAR AXLE TIRE & WHEEL QUANTITY	FOUR REAR AXLE TIRES & WHEELS	0	0	0

PAINT	DESCRIPTION	WEIGHT (LB)		LIST PRICE USD
		FRONT	REAR	
S PAINT COLOR - FIRST COLOR	GLACIER WHITE; P3029	0	0	0

BASE WARRANTY & PURCHASED COVERAGES	DESCRIPTION	WEIGHT (LB)		LIST PRICE USD
		FRONT	REAR	
S ENGINE TOWING WARRANTY	CUMMINS ENGINES (Contact Cummins for Standard Warranty and Extended Coverage Details)	0	0	0
S MACK ONECALL BUNDLE	12 MONTH - ASIST AND MACK ONECALL	0	0	0
S MACK ULTRA SERVICE	NO SERVICE CONTRACT INCLUDED	0	0	0
S VEHICLE WARRANTY TYPE	NORMAL DUTY WARRANTY CLASSIFICATION	0	0	0
S BASIC CHASSIS COVERAGE	CHASSIS PLAN 24 MO/UNLIMITED MI NORMAL DUTY PROTECTION PLAN	0	0	0
S ENGINE WARRANTY	CUMMINS ENGINES B6.7 (Contact Cummins for Standard Warranty and Extended Coverage Details)	0	0	0
S EMISSION COMPONENT COVERAGE	CUMMINS ENGINES (Contact Cummins for Standard Warranty and Extended Coverage Details)	0	0	0
S TRANSMISSION WARRANTY	ALLISON TRANSMISSIONS (Contact Allison Transmission for standard warranty and extended coverage data)	0	0	0
S AIR CONDITIONING WARRANTY	AIR CONDITIONING STANDARD COVERAGE (Sealed System Only) 24 MONTHS UNLIMITED MILEAGE	0	0	0
S CHASSIS TOWING WARRANTY	STANDARD CHASSIS TOWING 90 DAYS OR 5,000 MILES	0	0	0
S PARTNERED SERVICES	GEOTAB FOR MACK TRUCKS - 12 MONTH	0	0	0

FRONT / REAR AXLE WEIGHTS (LB) 6352 3508
TOTAL WEIGHT (LB) 9,860

PERFORMANCE - PREDICTOR



Inputs Required	Inputs	UOM
Vehicle Type	Aero Muscle Hood - Roof Fairing (0.60)	MPH
Performance Level	>67 MPH / >108KPH	MPH
Frontal Area	110.0	FEET ²
Accessory Power Loss	11.0	HP

VEHICLE SPECIFICATION SUMMARY

Model		CS 42R MEDIUM DUTY, CLASS 7
Gross Combination Weight		TRUCK ONLY - NO TRAILER TOWING PROVISIONS PROVIDED
Vehicle Application		CITY, STARTING GRADES<6%
Body/Trailer Type		TANKER or PUMPER TRUCK
Loading/Unloading Surface Type		ASPHALT LOADING AND / OR UNLOADING SURFACE
Engine		ISB6.7-300 DIESEL CUMMINS 300HP @ 2600RPM (GOV) 660 LB-FT, US21
Peak Power	HP	300.0 @ 2450 - 2650
Peak Torque	Newton Meters	896 @ 1600
Transmission		2500 RDS 6 SP-ALLISON RUGGED DUTY SERIES GEN 6 (WITH PTO PROVISIONS)
Rear Axle		21000# (9525 kg) MERITOR MS-21-14X, (W/ DIFF LOCK) CASING 11.0mm
Rear Axle Ratio		5.57
Rear Tire		11R22.5 G BRIDGESTONE M760 ECOPIA (23360 lbs) (DRIVE ONLY)
Tire Revolutions per	Mile	493
Total Reduction		3.56

CALCULATED PERFORMANCE SUMMARY

	Speed	UOM	RPM	Desired / Recommended Value	Status
Engine RPM @ 65 MPH	65.2	MPH	1909		
Engine RPM @ Desired Cruise Speed	70.2	MPH	2054	1500 - 2600 rpm	OK
Engine RPM @ Road Speed Limit (RSL)	70.2	MPH	2054	< 2600 rpm	OK
Sweet Spot Cruise Speed Range in Top Gear	51.3 - 88.9	MPH	1500 - 2600		
Top Gear Speed Range	51.3 - 88.9	MPH	1500 - 2600	74.6 MPH	OK
Minimum Practical Speed In Reverse	2.6	MPH	600		
Maximum Practical Speed in Reverse	11.2	MPH	2600		
Minimum Practical Speed In Lowest Forward Gear	2.2	MPH	600		
Maximum Practical Speed In Lowest Forward Gear	9.4	MPH	2600		
	Concrete / Asphalt		UOM		
Wheel HP Required at (65 MPH) Cruise Speed	204.8 / 216.6		HP		
Wheel HP Required at (75 MPH) Road Speed Limit	204.8 / 216.6		HP		
Wheel HP Required at (92 MPH) Top Speed	374.7 / 390.6		HP		

PERFORMANCE - PREDICTOR *(cont.)*



VEHICLE SPECIFICATION SUMMARY			
Gradeability		Recommended Min. Gradeability in Top Gear	
Maximum in Top Gear (Concrete)	2.4%	1.9%	OK
Maximum in Top Gear (Asphalt)	2.2%	1.9%	OK
Startability		Recommended Min. Startability	
In Lowest Gear	25.1%	6.0%	CHECK
Loading/Unloading Surface Type	ASPHALT LOADING AND / OR UNLOADING SURFACE		
		Recommended Speed on 1.5% Grade	
Speed on a 1.5% Grade (Concrete)	60.7 MPH	>67 MPH	CHECK
	@1775 rpm in 7th gear	PL5	
Suggested Value for Gear Down Vehicle Speed	RSL - 10		
Driveability Rating		Status	
100% Max Power available after shift	CAUTION!		
>95% Very Good >90% Acceptable			
Performance Level	Recommended Speed on 1.5% Grade	Min. Gradeability in Top Gear	
PL5 - High Performance	>67 MPH	1.9%	
PL4 - Performance	61 - 67 MPH	1.7%	
PL3 - Economy	54 - 60 MPH	1.5%	
PL2 - Fleet / Construction	47 - 53 MPH	1.3%	
PL1 - Heavy Haul	40 - 46 MPH	1.1%	



RPM at 65 MPH



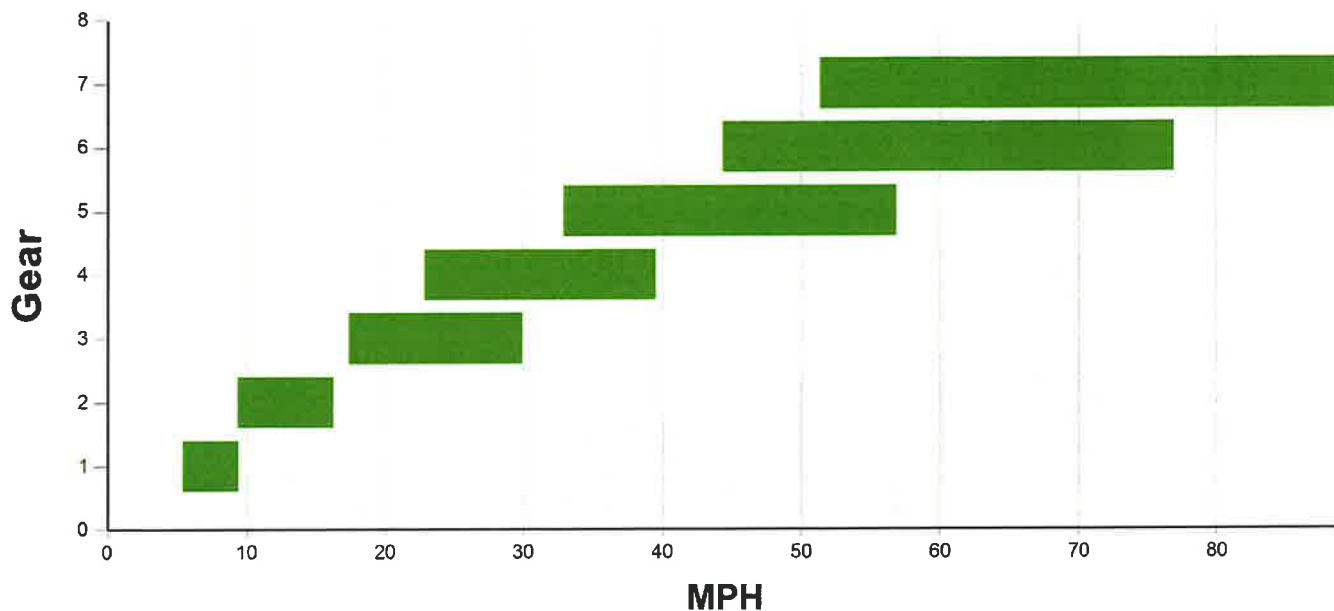
RPM at Cruise Speed



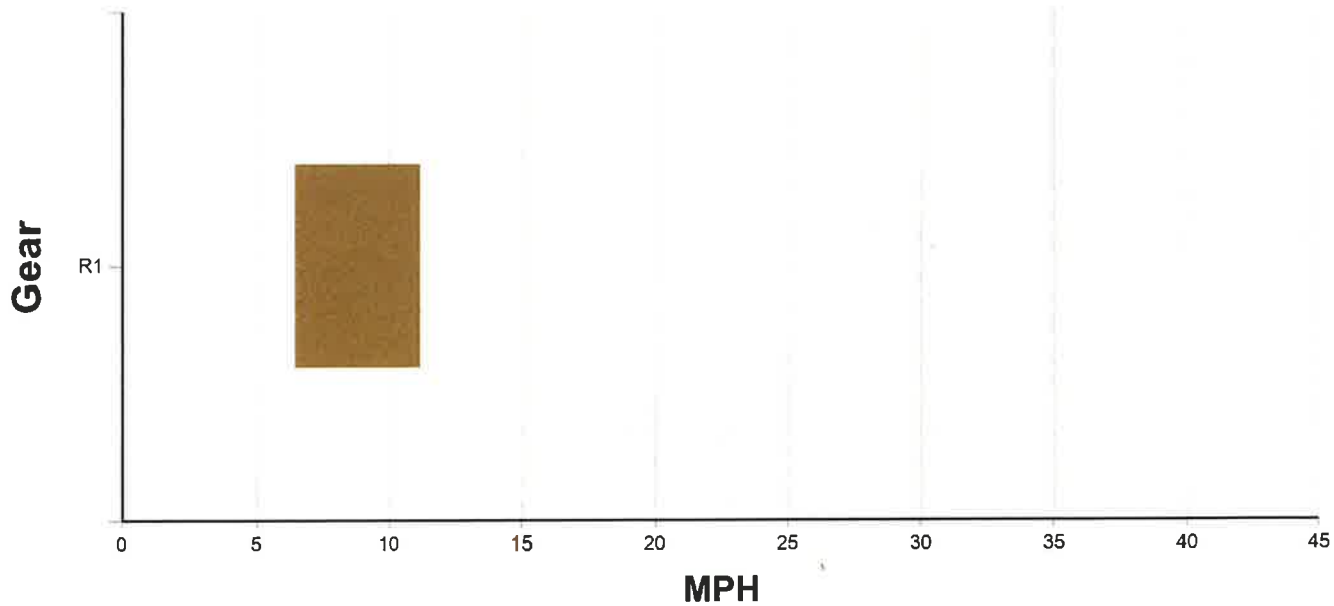
	MPH	RPM
Minimum of Engine Range	51.3	1500.00
Minimum of Economy Range	51.3	1500.00
Cruise Speed	70.2	2054.39
Maximum of Economy Range	88.9	2600.00
Road Speed Limit	70.2	2054.39
Maximum of Engine Range	88.9	2600.00



Forward Geared Speed

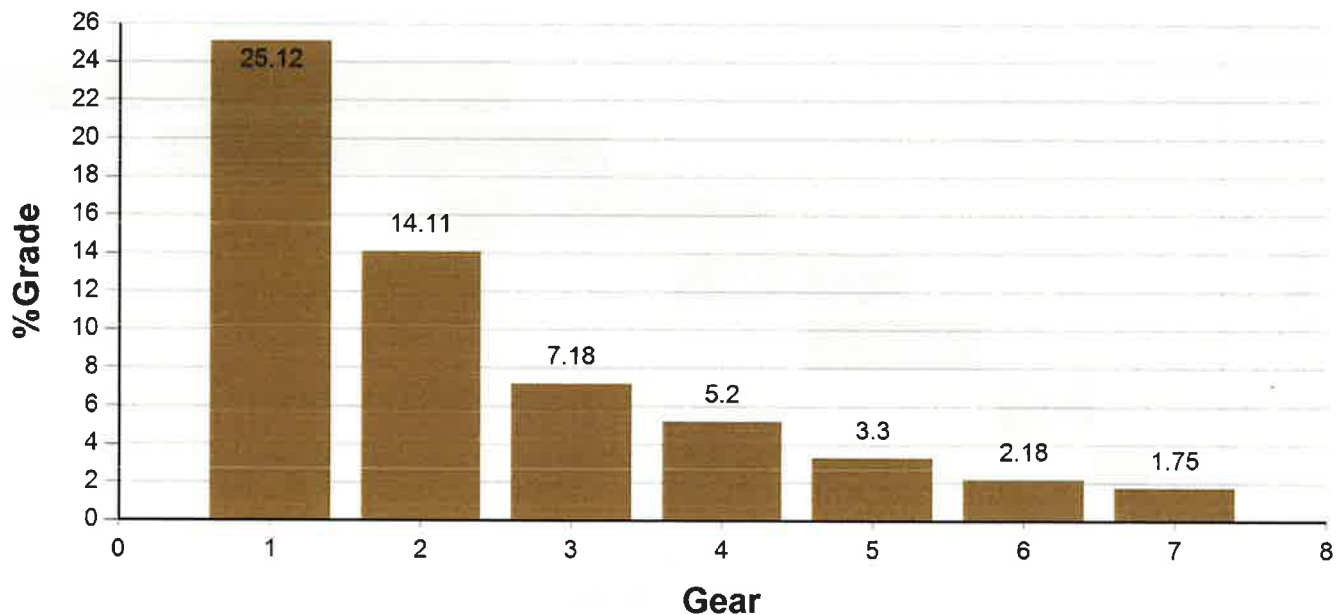


Reverse Geared Speed

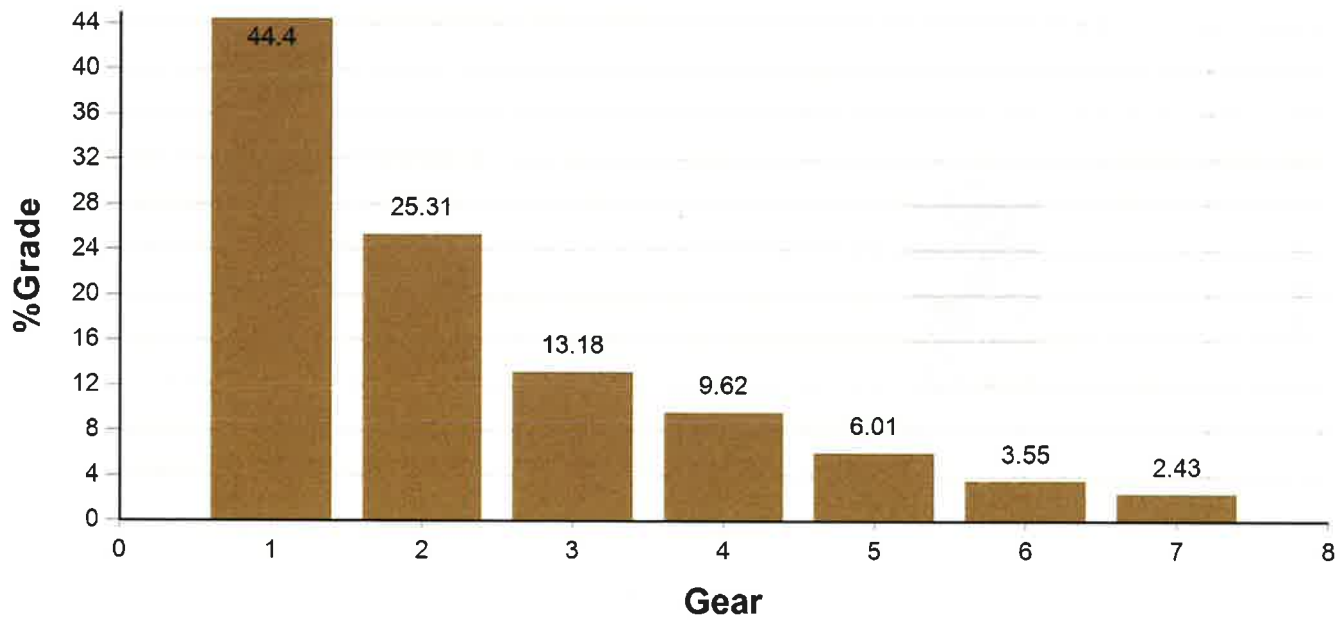




Startability

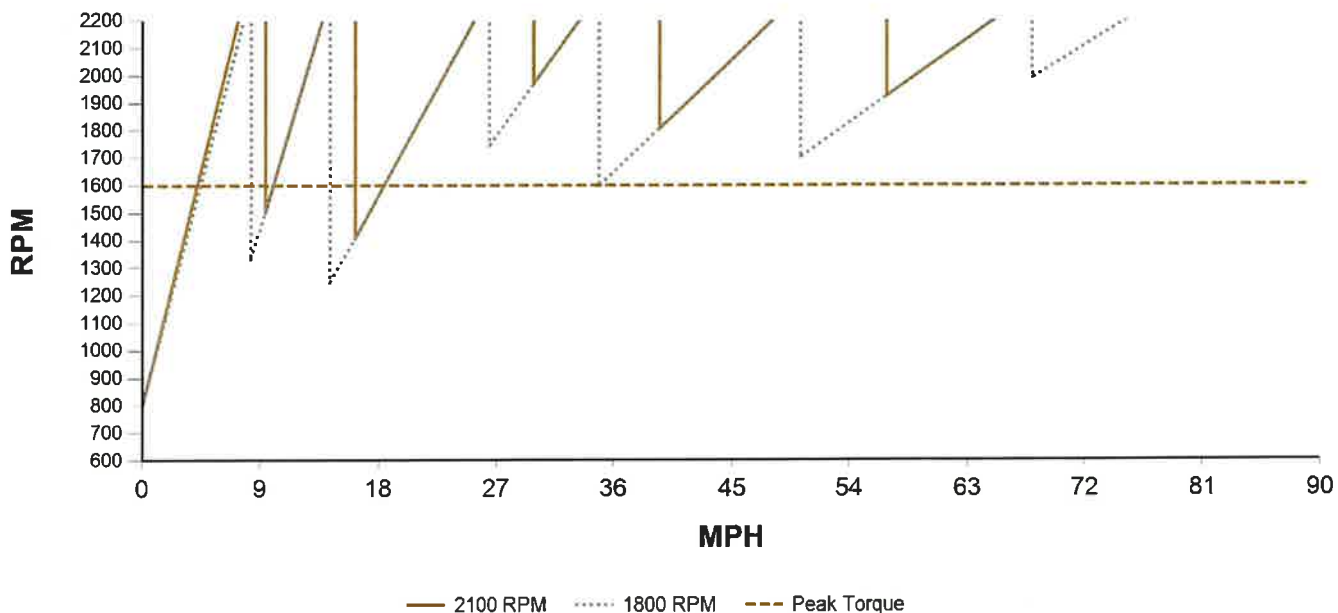


Gradeability at Max Torque

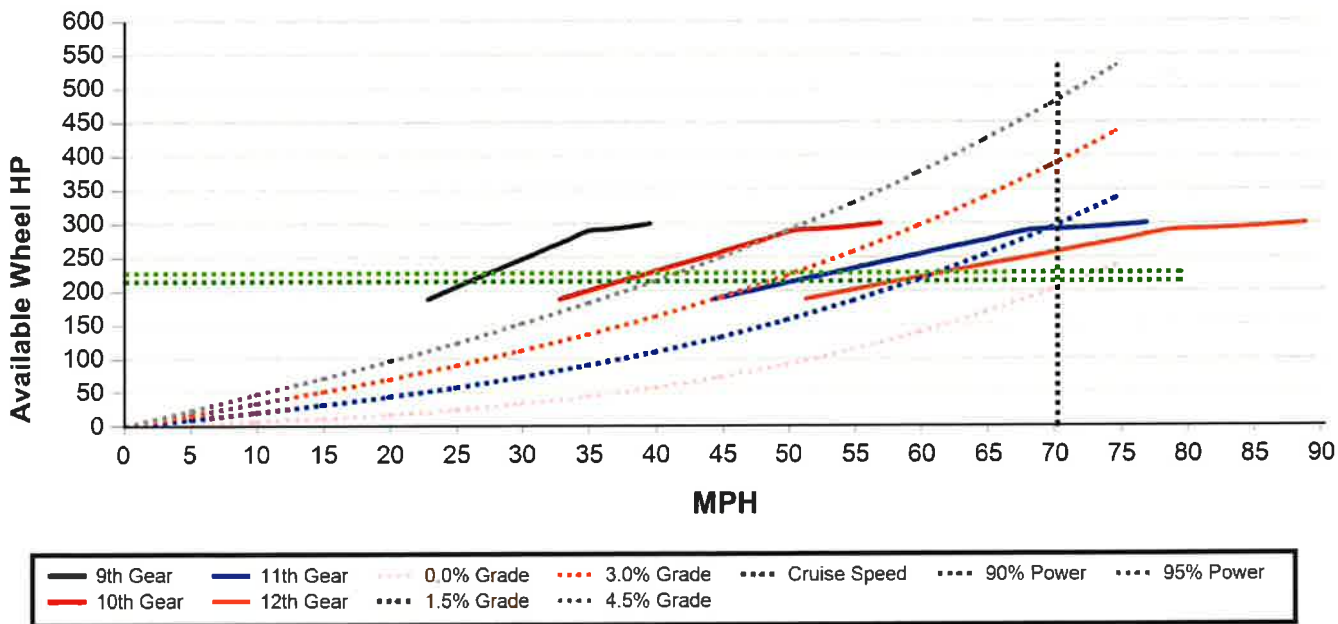




Shift Chart



Horsepower VS. Speed





AERO AND FUEL ECONOMY SUMMARY				
Sub-Category	Sales Code	Description	List Price USD	Rating
Model	MP12U1	CS 42R MEDIUM DUTY, CLASS 7	0	
Vehicle Application	0051H5	TANKER or PUMPER TRUCK	0	
Cab Roof Fairing	001AA3	TRUCK	0	
ROOF FAIRING AND TRAILER HEIGHT COMBINATION RATING			0	
Front Bumper	001AA3	TRUCK	0	
Cab Side Fairing			0	
Chassis Fairing			0	
Mirror Arms Shrouds	002GI2	MD742 - 42R MEDIUM DUTY, CLASS 7 w/ 6.7L, (MAX 33,000lbs GVWR)	0	
Tire Package Front	900AT0	11R22.5 H BRIDGESTONE R268 ECOPIA (13220 lbs)	99	
Tire Package Rear	901090	11R22.5 G BRIDGESTONE M760 ECOPIA (23360 lbs) (DRIVE ONLY)	78	
Bug Deflector/Hood Mounted			0	
Fan Clutch Package	DPXA7X	6.7 L CUMMINS ENGINE	0	
CAB/TRAILER GAP FROM BACK WALL OF CAB FORWARDMOST POSITION 107.1 (in)			0	
CAB/TRAILER GAP FROM BACK WALL OF CAB REARMOST POSITION 107.1 (in)			0	
TOTAL			177	

KEY-AERO ADVANTAGE RATING						
NONE		SMALL		GOOD		MAX
						++

Fuel Economy Facts

Good vehicle aerodynamics is ESSENTIAL to achieving excellent fuel economy! Many factors affect a truck's fuel efficiency including tire tread depth, engine rating, rear axle gearing, idle time, speed, weather conditions, driver habits and more. It is important to understand the fuel savings achieved with the addition of each aerodynamic device is not cumulative. The more aerodynamic features on the truck, the less each contributes as an individual percentage of the overall savings.

Roof Fairing and Extensions - Provide an approximate 1% to 1.5% increase in fuel economy by reducing drag between the cab and the trailer.

Roof Height and Trailer Combination Rating - This value reflects the combination of the chosen Model, available Roof Fairings, and the selected Customer Trailer. **With the introduction of Greenhouse gas rules, it is important for all tractor roof heights to closely match the trailers they are pulling to ensure the best aerodynamic combinations.**

Aerodynamic Bumper - Aerodynamic bumper is designed to provide optimal airflow under the vehicle. An optional extension can be added to prevent airflow from hitting obstructions under the vehicle.

Cab Side Deflectors - Cab side deflectors have a complex, flared contour, unlike the flat deflectors used by competitors. Their unique shape minimizes drag and optimizes performance, particularly in crosswind situations. The use of both roof and side extensions can contribute to a fuel economy improvement.

Partial and Full Chassis Fairings - Partial chassis fairings can improve fuel economy between 2% and 3%. Full fairings offer some additional improvement and are often specified because of their aesthetically pleasing appearance.

Mirror Arm Shrouds - The A-pillar air-flow device improves the air attachment from the windshield, around the A-pillar and to the side window. Together with the A-pillar air-flow device, the mirror arm shroud reduces soiling of the mirrors and side windows as well as improving the air flow around the mirror arms.

Trailer Gap - The length of the trailer gap plays a significant role in aerodynamic drag. For best fuel economy, always spec the shortest trailer gap possible to accommodate the specific application while still providing adequate swing clearance. **Never select a gap based on competitive specs.**

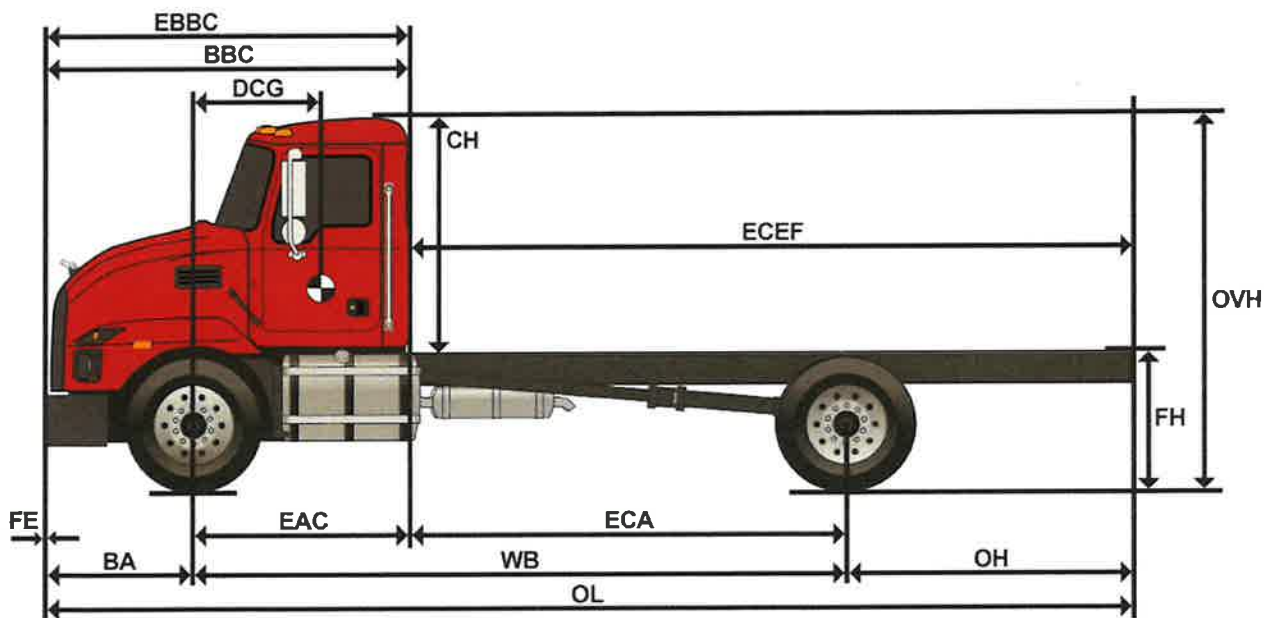
Tires - Tire brand, tread pattern and compound selection can significantly impact fuel economy. When selecting a tire, consider cost, traction; wear characteristics, load capacity as well as differences in tire rolling resistance.

Avoid Add-on Devices - Devices such as bug deflectors and other "cosmetic" features disrupt airflow across the entire truck. Bug deflectors, for example, can reduce fuel economy by as much as 2%.

Fan Drive - Under normal circumstances a cooling fan is unloaded most of the time. Since on/off type fan drives consume less power when unloaded than viscous drives, an on/off type fan drive is recommended for maximum fuel economy.

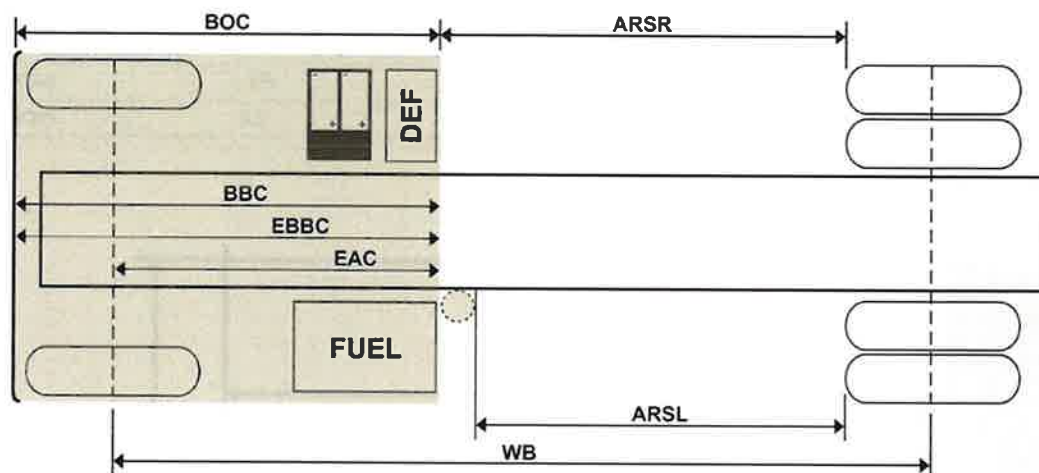
VEHICLE SPECIFICATION/CALCULATED PERFORMANCE SUMMARY

Description	Sales Code	Dwg Ref	Length	UOM
Front Frame Extension	N/A	FE	0.0	INCHES
Bumper to Front Axle	N/A	BA	40.0	INCHES
Wheelbase	N/A	WB	206.1	INCHES
Rear Overhang	N/A	OH	65.0	INCHES
Overall Length	N/A	OL	311.1	INCHES
Bumper to Back of Cab	N/A	BBC	103.0	INCHES
Eff. Bumper to Back of Cab	N/A	EBBC	103.0	INCHES
Eff. Cab to Rear Axle	N/A	ECA	143.1	INCHES
Eff. Front Axle to Back of Cab	N/A	EAC	63.0	INCHES
Eff. Cab to End of Frame	N/A	ECEF	208.1	INCHES
Unladen 5th Wheel Height	001AA3	5W	0.0	INCHES
Unladen Frame Height	N/A	FH	40.6	INCHES
Cab Height	N/A	CH	69.1	INCHES
Overall Height	N/A	OVH	109.7	INCHES
Driver CG	N/A	DCG	59.1	INCHES
Second Front Axle Spacing	001AA3	SFAS	0.0	INCHES



VEHICLE SPECIFICATION/CALCULATED PERFORMANCE SUMMARY

Description	Sales Code	Dwg Ref	Left Value(in)	Right Value(in)
Wheelbase	N/A	WB	206.1	206.1
Available Rail Space Right	N/A	ARSR	N/A	124.0
Available Rail Space Left	N/A	ARSL	114.0	N/A
Eff. Front Axle to Back of Cab	N/A	REF	63.0	63.0
Front Axle To Fender	001AA3	N/A	30.0	30.0
Battery Box	001AA3	N/A	0.0	25.0
50 GALLON (190 L) 22" ALUMINUM ROUND / TRUCK	288AC2 / 001AA3	N/A	41.0	0.0
Ad-Blue Tank	001AA3	N/A	0.0	6.0
Drive Tire Radius	901090	N/A	21.1	21.1



Top View image is intended for illustration purposes only and is not presented to scale. Wheelbase, Axle Spacing and After frame are not shown as specified, but are a representation. Customer Adaptation (CA) options and relocated components are not represented in these images. Most CA options impact the variation of the image, thus an image may not populate. Calculations are approximate to a tolerance of ± 4 inches due to component mounting variation. Certain chassis component options are NOT represented in the Top View image, such as, but not exclusive to, Front Frame Extensions, Fuel Water Separators, Air Dryers, PTOs, Fifth Wheels, Chassis Fairings, Toolboxes, Trailer Connections. For further information on these items and their respective locations on your specification, please refer to the data sheets associated with those items in the configurator.



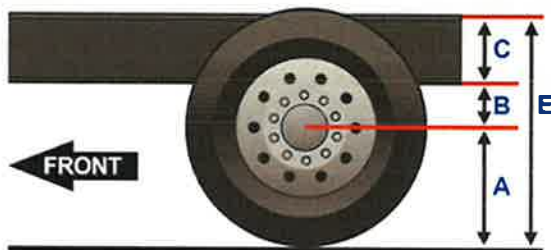
Inputs Required	Inputs	UOM
Trailer Width	102.0	INCHES
Corner Radius	6.0	INCHES
Landing Gear Location	120.0	INCHES
Trailer Dip Clearance	3.0	INCHES
Kingpin Location from front of Trailer	36.0	INCHES

VEHICLE SPECIFICATION SUMMARY			
	Length	UOM	Sales Code
Wheelbase	206.1	INCHES	N/A
BOC Exhaust Space	0.0	INCHES	130AA9
Fifth Wheel Rearmost Position	0.0	INCHES	
Fifth Wheel Travel	0.0	INCHES	
Rear Overhang	65.0	INCHES	N/A

CALCULATED PERFORMANCE SUMMARY						
	Sales Code	Dwg Ref	Fifth Wheel Settings			
			Forwardmost		Rearmost	
Trailer Swing Clearance	N/A	A	80.1	INCHES	80.1	INCHES
Trailer Swing Radius	N/A	B	60.0	INCHES	60.0	INCHES
Fifth Wheel Setting	N/A	C	0.0	INCHES	0.0	INCHES
Landing Gear Radius	N/A	D	82.4	INCHES	82.4	INCHES
Landing Gear Clearance	N/A	E	1.6	INCHES	1.6	INCHES
Cab/Trailer Gap (when straight ahead) - from rear edge of cab side fairings	N/A	F	107.1	INCHES	107.1	INCHES
Cab/Trailer Gap (when straight ahead) - from back wall of cab	N/A	G	107.1	INCHES	107.1	INCHES
Cab/Trailer Gap (when turned 90 degrees) - from rear edge of cab side fairings	N/A	H	92.1	INCHES	92.1	INCHES

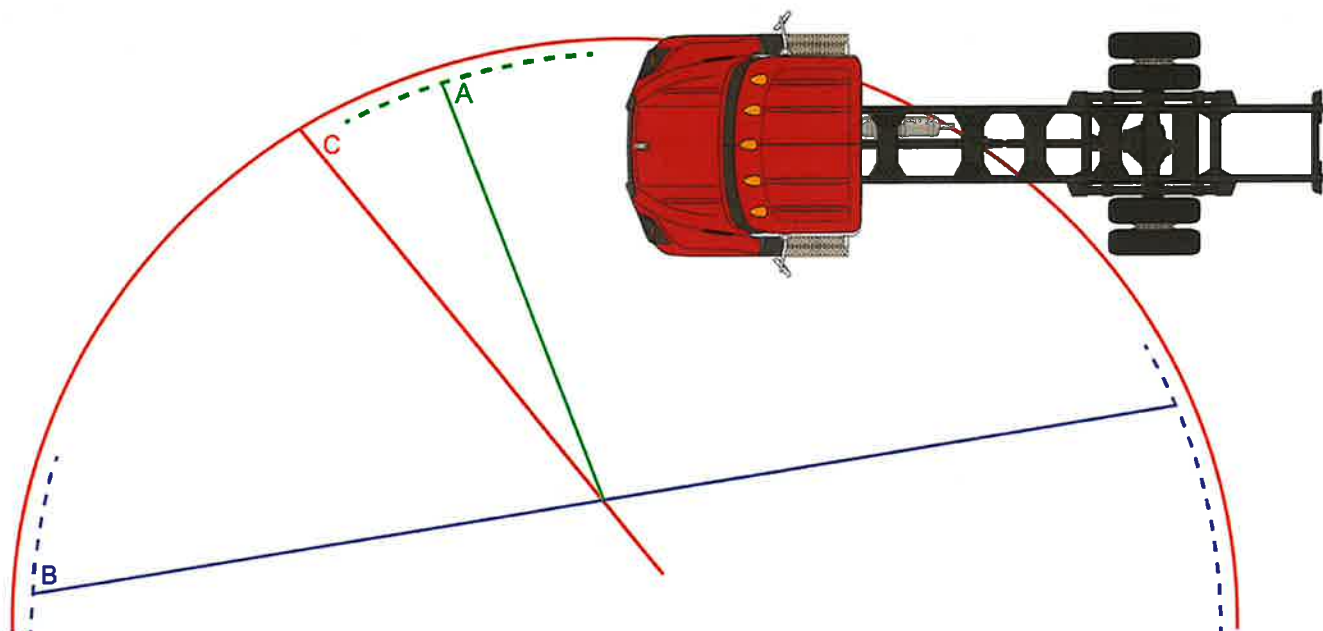
VEHICLE SPECIFICATION/CALCULATED PERFORMANCE SUMMARY

Description	Sales Code	Dwg Ref	Rear		UOM
			Unladen	Laden	
Requested Fifth Wheel Height	001AA3		0.0	0.0	INCHES
Tire Radius	901090	A	21.1	19.6	INCHES
Suspension Height	260AS0	B	9.3	9.2	INCHES
Frame Depth	YBXD1X	C	10.2	10.2	INCHES
Closest Available Fifth Wheel Leg Height	N/A	D	0.0	0.0	INCHES
Total Height	N/A	E	40.6	39.0	INCHES



VEHICLE SPECIFICATION/CALCULATED PERFORMANCE SUMMARY

Description	Sales Code	Dwg Ref	Length	UOM
SAE Turning Radius	N/A	A*	30.1	FEET
Adjusted Turning Radius	N/A	A	31.0	FEET
Curb-to-Curb Diameter	N/A	B	62.9	FEET
Wall-to-Wall Diameter	N/A	C	74.0	FEET



Tests have shown that the true location of the turning center is further to the rear than midway between drive axle sets (where applicable)

The actual location of the turning center depends on:

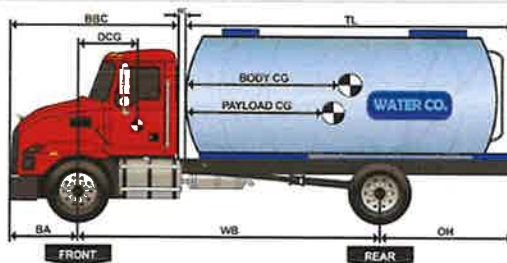
- Whether the drive tire equipment is single or dual.
- The overall load distribution for the vehicle (front/rear, between drive axles) in a loaded condition
- Manufacturing tolerances within the steering components



Inputs Required	Inputs	UOM
Driver(s) & Equipment Weight	201	LB
Total Body Length	16.4	FEET
Body Tare Weight	3501	LB
Front of Body to Body CG	96.0	INCHES
Additional Clearance from Back of Exhaust to Front of Body	6.0	INCHES

VEHICLE SPECIFICATION SUMMARY

Description	Description	Dwg Ref	Length	UOM
Bumper to Front Axle	N/A	BA	40.0	INCHES
Wheelbase	N/A	WB	206.1	INCHES
Rear Overhang	N/A	OH	65.0	INCHES
Bumper to Back of Cab	N/A	BBC	103.0	INCHES
BOC Exhaust Space	130AA9	N/A	0.0	INCHES
Driver CG from Front Axle	N/A	DCG	59.1	INCHES
First Pusher Axle Spacing			0.0	INCHES



CALCULATED PERFORMANCE SUMMARY

Tare Weights	Front Axle	Rear Axle (s)	Total	UOM
Chassis	6352	3508	9860	LB
Driver	144	58	201	LB
Fuel	313	30	342	LB
Body/Trailer	698	2804	3501	LB
Total Tare	7505	6398	13903	LB
Payloads				
First Body Payload	3805	15294	19098	LB
Total - Lift Axles Down	11309	21691	33000	LB
GAWR	12000	21000	33000	LB

**VEHICLE SPECIFICATION/CALCULATED PERFORMANCE SUMMARY**

Sub-Category	Sales Code	Sales Code Description	Value	UOM
Front Axle	2400S0	12,000LB MERITOR MFS+ 5400 KG	12000	LB
Front Suspension	2440C4	MACK TAPERLEAF 12300# (5500 KG) GROUND LOAD RATING	12000	LB
Front Tires	900AT0	11R22.5 H BRIDGESTONE R268 ECOPIA (13220 lbs)	13220	LB
Front Wheels	5310Z1	22.5x8.25 ACCURIDE, POLISHED ALUMINUM DISC	14800	LB
		Front GAWR	12000	LB
Rear Axle	2520O2	21000# (9525 kg) MERITOR MS-21-14X, (W/ DIFF LOCK) CASING 11.0mm	21000	LB
Rear Suspension	260AS0	AL210 AIR-MACK 21000LB 9525KG	21000	LB
Rear Tires	901090	11R22.5 G BRIDGESTONE M760 ECOPIA (23360 lbs) (DRIVE ONLY)	23369	LB
Rear Wheels	346186	22.5x8.25 ACCURIDE, POLISHED ALUMINUM DISC	29600	LB
		Rear GAWR	21000	LB
		Truck GVWR	33000	LB
		Gross Combination Weight Rating	0	LB
		Tax Value GVWR (USA FET Only)	33000	LB

MACK®



Mack Trucks
www.macktrucks.com



**IMPERIAL
INDUSTRIES INC**

(800) 558-2945 / www.imperialind.com
 Mailing Address: P.O. Box 1685, Wausau, WI 54402
 Shipping Address: 505 Industrial Park Ave., Rothschild, WI 54474
Sales Person: Schreiber, Cory
P: (715) 359-0200 Extension: 426 F: N/A
EMAIL: Cory@imperialind.com

QUOTE: 532793-01

Customer:
TOWN OF БЕЛОIT
ADDRESS:

Ship To:
TOWN OF БЕЛОIT
ADDRESS:

CONTACT:
JOE ROSE
M: (608) 473-0512
jrose@town.beloit.wi.us

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Job #	Order #	Quote #	Customer PO#	Project#
		532793-01		

Requested Date	Site Location
5/7/2024	IMPERIAL MAIN LOCATION

Reference: TMV2500A

QUOTATION REMAINS VALID FOR 15 DAYS FROM QUOTE DATE UNLESS OTHERWISE NOTED.

Accessories						
Item	Part Number	Quantity	UOM	Description	Price Each	Price Total
10	TANK ASSM	1	EA	TM2500 WELDMENT (ALUM) 66"DIA W/ 4"INTERNAL AIRLINE <i>Ref 802053.4 without 20" Top Manway, See Level Prep, and Front Intake Prep</i> <i>Includes:</i> - Rib Free Exterior. - 1/4" 5454 Barrel. - 5/16" 5454 ASME Dished Heads. - Full Length Skids. - (2) Full Flanged & Dished Heads For Baffles. - (3) 6" Interior Channel Ribs. - Full Doubler Plate (Bottom 1/3rd of Tank Double Plated) - Hose Trays W.Rear Tail Light Sections. - Primary 12" x 4" With Internal Airline. - 20" Rear Manway . - 6" Discharge Port, Flanged. - 4" Intake Port, Flanged. - (2) Hose Hooks. - (2) Hose Guards. - Ladder. - (3) 5" Sight Glasses. - Rubber Sills.		
20	801193	1	EA	AIR HATCH ASSEMBLY (20 1/2"ID) **FIELD INSTALLATION** <i>Install Top Rear with Hinge to the Passenger Side</i>		
30	801193.1	1	EA	AIRHATCH WIRING/AIRLINE HOOK UP SCHEMATIC <i>Wire to Switch in Cab</i>		
40	503017A	1	EA	VALVE, 4"LEVER ASS'Y FOR TTMA FLANGE		
50	809039	1	EA	VALVE, 6" HEATABLE PISTON GATE ASSY FOR MNPTW/6" NPT X SQ FLG ADAPTER		

QUOTE: 532793-01

P.O. Box 1685 / Wausau, WI 54402-1685
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Date: Tuesday, May 7, 2024
 Page 1 of 3



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Accessories

Item	Part Number	Quantity	UOM	Description	Price Each	Price Total
60	800366.2	1	EA	AIR CYLINDER (6") ASS'Y W/ CAB CONTROLLED SWITCH		
70	800736.C	1	EA	TRUCK MOUNT COMPLETE STANDARD WIRING ASSEMBLY SALES KIT ONLY Includes: - Junction Box - (2) LED Work Light - Wiring Harness Kit - Back Up Alarm - Switch Box - LED DOT Light Kit - Lighted License Plate Bracket		
80	809001.5	1	EA	PTO WIRE KIT FOR MACK		
90	121727.16	1	EA	PTO,CHELSEA (1750/2500RDS) (104%) (NVE304/HXL4/MACK W/B500)		
100	800462.50	1	EA	DRIVE SHAFT ASS'Y, 3" TUBULAR W/COMPANION FLANGE ENDS(49"-51" LENGTH)		
110	121830.13	1	EA	NVE B500 PORTABLE BLOWER PKG. W/GEARBOX AND SILENCER		
120	801898.4X3	1	EA	AIRLINE ASSEMBLY KIT FOR 4" TO 3"		
130	PROGRAMMING	1	EA	PROGRAMMING AND/OR DIAGNOSTICS		
140	121181	1	EA	TOOL BOX,24"X24"X36" ALUMINUM W/DROP DOWN DOOR		
150	809002	1	EA	TOOLBOX FRAME MOUNT (RIGHT HAND)		
160	809002.1	1	EA	TOOLBOX FRAME MOUNT (LEFT HAND)		
170	801495.6	1	EA	TRUCK FRAME REAR END CAP CUT OUT (ALUM)		
180	800180A	1	EA	MUDFLAP KIT FOR (ALUM) TRUCK MOUNT (4 MUDFLAP ASSEMBLIES)		
190	800444.2KIT	1	EA	REAR BUMPER (ADJUSTABLE) INSTALLATION KIT		
200	800297A	1	EA	TM, 4 MOUNT KIT (ALL SPRING LOADED) ALUM		
210	TRUCK	1	EA	TRUCK Mack MD7 4x2 Cummins B 300 HP (33000 GVWR) Color White Interior Color Gray Wheelbase 206" GVWR 33,000 Tire Size 11R22.5 Aluminum Wheels Steel Painted Bumper Cruise Control Air Conditioning Full Locker Engine Cummins B 300 HP Engine Exhaust Brake Transmission Model Allison 2500 RDS FA Weight 12,000 RA Weight 21,000 Suspension Air Left Fuel Tank 50 Gallons		



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QUOTE: 532793-01

Accessories						
Item	Part Number	Quantity	UOM	Description	Price Each	Price Total
220	809168.TM	1	EA	DOT KIT FOR SEPTIC TRUCK MOUNT		

Quote Sub Total: \$162,194.89

Quote Sub Total Non-FET: \$162,194.89

Fet Tax: \$0.00

Sales Tax: \$0.00

Estimated Total Freight: \$0.00

Quote Total: \$162,194.89

Note:

- For painted tanks - Color other than white and white to match - **Extra**
- Freight charges will be confirmed at time of completion if no value is included in original quote. Any and all freight charges are the end users responsibility.
- At the time of signed order and deposit, Imperial Industries Inc will order long lead time item(s) listed on the signed quote with lead times longer than 10 weeks. This will ensure item(s) will arrive on time for the project. In the case your project is changed from the original, leading to certain long lead time item(s) to be cancelled or revised, customer is responsible for all restock or cancellation fees. If an item(s) cannot be cancelled or restocked, customer will be charged and take delivery of said item(s).
- Customer will be charged additional fees for relocating existing equipment on chassis and any frame alterations.
- As an industry standard, combination units with both water and waste compartments have weight distribution calculations based upon the industry standard of 100% full capacity on waste and 10% - 20% capacity on water. These calculations are used to assist in the proper selection of the GVW necessary and for selecting the proper chassis. Anyone that is not abiding by these industry guidelines, could possibly incur over weight issues and or ground clearance issues. Imperial Industries, Inc. will not be held responsible if proper guidelines that were established by the industry, are not upheld by the owner/customer.

- State and Local Taxes will apply if applicable - Current Registered States:

AL, AR, AZ, CA, CO, CT, FL, GA, IA, IL, IN, KS, KY, MA, MI, MN, MO, MS, NC, ND, NE, NJ, NM, NV, NY, OH, OK, PA, RI, SC, SD, TN, TX, UT, VA, VT, WA, WI, WV, WY

SALES CONTRACT

By signing below, I agree to the specifications provided within this Sales Order. I have thoroughly reviewed the quotation and hereby authorize Imperial Industries, Inc. to enter this as an order and proceed.

Approval Drawings will follow this acceptance of an order. Upon signing the Approval Drawings, the manufacturing of your order will take place.

(All chassis are subject to chassis surcharges at any time per chassis manufacture increase to Imperial Industries, Inc. & All material and components are subject to a surcharge at anytime.)

TERMS

All deposits are non-refundable

10% At Time Of Order, 90% Prior To Shipping

F.O.B. Wausau, WI 54402-1685

CUSTOMER AUTHORIZED REPRESENTATIVE
DATE SIGNED:

IMPERIAL INDUSTRIES AUTHORIZED REPRESENTATIVE
QUOTE DATE: 5/7/2024

