

AGENDA ITEM FOR ADMINISTRATIVE MEETING ( ) Discussion only  
( X ) Action

FROM (DEPT/ DIVISION): County Counsel

SUBJECT: Truck Purchase

<p>Background: The Public Works Department is seeking to purchase two replacement trucks--a dump truck and a low-boy tractor (transporter). These were both on the list for replacement. The trucks will be purchased utilizing the NJPA/SourceWell contract. Funds are available to cover the cost.</p>	<p>Requested Action: Authorize purchase of 2019 International construction dump truck from Woodpecker Truck for \$143,841.60 and 2019 International low-boy tractor from Woodpecker Truck for \$118,909.82</p>
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ATTACHMENTS: Quotes

Date: (December 12, 2018) Submitted By: Douglas R. Olsen

\*\*\*\*\*For Internal Use Only\*\*\*\*\*

Checkoffs:

- ( ) Dept. Heard (copy)
- ( ) Budget (copy)
- ( ) Fiscal
- ( X ) Legal (copy)
- ( ) (Other - List:)

To be notified of Meeting:  
Tom Fellows

Needed at Meeting:

\*\*\*\*\*

Scheduled for meeting on: December 19, 2018

Action taken:

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Follow-up:



# **HV513 SFA**

Sales Proposal For:

**Umatilla County Road Dept**

Presented By:

**WOODPECKER TRK & EQUIP**

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**Prepared For:**

Umatilla County Road Dept  
 Bob Nooy  
 3920 Westgate  
 Pendleton, OR 97801-4044  
 (541)278 - 5424  
 Reference ID: N/A

**Presented By:**

WOODPECKER TRK & EQUIP  
 Lane B Porter  
 P.O. BOX 1306  
 PENDLETON OR 97801  
 541-276-5515

Thank you for the opportunity to provide you with the following quotation on a new International truck. I am sure the following detailed specification will meet your operational requirements, and I look forward to serving your business needs.

**Model Profile**  
**2019 HV513 SFA (HV513)**

**AXLE CONFIG:** 6X4  
**APPLICATION:** Construction Dump  
**MISSION:** Requested GVWR: 54000. Calc. GVWR: 54780  
 Calc. Start / Grade Ability: 51.85% / 3.86% @ 55 MPH  
 Calc. Geared Speed: 80.9 MPH

**DIMENSION:** Wheelbase: 207.00, CA: 123.50, Axle to Frame: 63.00  
**ENGINE, DIESEL:** {International A26} EPA 2017, 475HP @ 1700 RPM, 1700 lb-ft Torque @ 1000 RPM, 2100 RPM  
 Governed Speed, 475 Peak HP (Max)

**TRANSMISSION, MANUAL:** {Fuller RTLO(F)-18918B} 18-Speed Manual, with Double Overdrive & Double-Lo, Internal Lube  
 Oil Pump and Air Shift

**CLUTCH:** {Eaton Fuller Easy-Pedal Advantage} Manual Adjust, Two-Plate, Cast Angle Spring; Ceramic,  
 15.5" Diameter, 7-Spring with Pre-Damper (Soft Rate) Mechanical Pull-Type Control, 6-Button  
 Disc, 1850 lb-ft Torque Capacity

**AXLE, FRONT NON-DRIVING:** {Meritor MFS-16-143A} Wide Track, I-Beam Type, 16,000-lb Capacity  
**AXLE, REAR, TANDEM:** {Meritor MT-40-14X-4DER} Single Reduction, 40,000-lb Capacity, w/.433"(11mm) Wall Housing  
 Thickness, Driver Controlled Locking Differential in Rear-Rear Axle, R Wheel Ends Gear Ratio:  
 4.33

**CAB:** Conventional  
**TIRE, FRONT:** (2) 12R22.5 Load Range H HSC1 (CONTINENTAL), 482 rev/mile, 75 MPH, All-Position  
**TIRE, REAR:** (8) 11R22.5 Load Range H ARMOR MAX MSD (GOODYEAR), 493 rev/mile, 68 MPH, Drive  
**SUSPENSION, REAR, TANDEM:** {Hendrickson HMX-400-52} Walking Beam, 40,000-lb Capacity, 52" Axle Spacing, Rubber  
 Springs, with Transverse Torque Rods, Rubber End Bushings

**PAINT:** Cab schematic 100WM  
 Location 1: 9219, Winter White (Std)  
 Chassis schematic N/A

<u>Code</u>	<u>Description</u>	<u>F/R Wt</u> (lbs)	<u>Tot Wt</u> (lbs)	<u>List</u> (US DOLLAR)
HV51300	Base Chassis, Model HV513 SFA with 207.00 Wheelbase, 123.50 CA, and 63.00 Axle to Frame.	7997/4333	12330	\$156,971.00
1570	TOW HOOK, FRONT (2) Frame Mounted	8/0	8	\$118.00
1AND	AXLE CONFIGURATION {Navistar} 6x4	0/0	0	\$0.00
	<u>Includes</u> : DRIVESHAFT 1810 Series Transmission to Rear Axle : INNER-AXLE SHAFT 1710 Series Forward Rear Axle to Rear Rear Axle			
	<u>Notes</u> : Pricing may change if axle configuration is changed.			
1CAJ	FRAME RAILS Heat Treated Alloy Steel (120,000 PSI Yield); 10.866" x 3.622" x 0.433" (276.0mm x 92.0mm x 11.1mm); 456.0" (11582mm) Maximum OAL	176/373	549	\$665.00
1LLA	BUMPER, FRONT Steel, Swept Back	0/0	0	\$0.00
1WDS	FRAME EXTENSION, FRONT Integral; 20" In Front of Grille	140/-35	105	\$590.00
1WDU	CROSSMEMBER, FRONT for Hydraulic Pump, Mounting Flange to Accommodate Pump	41/4	45	\$90.00
1WTX	WHEELBASE RANGE 199" (505cm) Through and Including 264" (670cm)	0/0	0	\$817.00
2ARU	AXLE, FRONT NON-DRIVING {Meritor MFS-16-143A} Wide Track, I-Beam Type, 16,000-lb Capacity	148/0	148	\$1,827.00
3770	SPRINGS, FRONT AUXILIARY Rubber	10/0	10	\$111.00
3ADE	SUSPENSION, FRONT, SPRING Parabolic Taper Leaf, Shackle Type, 16,000-lb Capacity, with Shock Absorbers	44/0	44	\$283.00
4091	BRAKE SYSTEM, AIR Dual System for Straight Truck Applications	0/0	0	\$0.00
4193	BRAKES, FRONT, AIR CAM 16.5" x 6", Includes 24 SqIn Long Stroke Brake Chambers	26/0	26	\$265.00
4619	TRAILER CONNECTIONS Four-Wheel, with Hand Control Valve and Tractor Protection Valve, for Straight Truck	0/0	0	\$542.00
4732	DRAIN VALVE {Berg} with Pull Chain, for Air Tank	0/0	0	\$0.00
4AZA	AIR BRAKE ABS {Bendix AntiLock Brake System} Full Vehicle Wheel Control System (4-Channel)	0/0	0	\$0.00
4EBS	AIR DRYER {Bendix AD-9} with Heater	22/5	27	\$450.00
4EXU	BRAKE CHAMBERS, REAR AXLE {Bendix EverSure} 30/30 Spring Brake	0/78	78	\$0.00
4EXV	BRAKE CHAMBERS, FRONT AXLE {Bendix} 24 SqIn	18/0	18	\$0.00
4LAA	SLACK ADJUSTERS, FRONT {Haldex} Automatic	0/0	0	\$138.00
4LGA	SLACK ADJUSTERS, REAR {Haldex} Automatic	0/0	0	\$376.00
4NDB	BRAKES, REAR, AIR CAM S-Cam; 16.5" x 7.0"; Includes 30/30 Sq.In. Long Stroke Brake Chamber and Spring Actuated Parking Brake	0/52	52	\$0.00

<u>Code</u>	<u>Description</u>	<u>F/R Wt</u> (lbs)	<u>Tot Wt</u> (lbs)	<u>List</u> (US DOLLAR)
4SPM	AIR COMPRESSOR {Bendix BA-921 Head Unload} 15.9 CFM Capacity, Single Cylinder	0/0	0	\$0.00
4VKC	AIR DRYER LOCATION Mounted Inside Left Rail, Back of Cab	0/0	0	\$0.00
4VKK	AIR TANK LOCATION (2) Mounted Under Battery Box, Outside Right Rail, Back of Cab, Perpendicular to Rail	0/0	0	\$50.00
4WDW	BRAKE CHAMBERS, SPRING on Rear/Rear Axle Located Inside Rear Tire Envelope (Meets Asphalt Spreader/Paver Clearance Requirements)	0/0	0	\$48.00
5708	STEERING COLUMN Tilting	10/5	15	\$125.00
5CAW	STEERING WHEEL 4-Spoke; 18" Dia., Black	0/0	0	\$0.00
5PTB	STEERING GEAR (2) {Sheppard M100/M80} Dual Power	77/-3	74	\$1,169.00
6DDC	DRIVESHAFT SYSTEM SPL250XL Driveshaft and SPL170XL Interaxle Shaft in lieu of 1810 Driveshaft and 1710 Interaxle Shaft	0/0	0	\$532.00
7BEV	AFTERTREATMENT COVER Steel, Black	0/0	0	\$0.00
7BKS	EXHAUST SYSTEM Single Horizontal Aftertreatment Device, Frame Mounted Right Side Under Cab; for Single Vertical Tail Pipe, Frame Mounted Right Side Back of Cab	30/47	77	\$1,210.00
7SDK	ENGINE COMPRESSION BRAKE by Jacobs; for N13/A26 Engines, with Selector Switch and On/Off Switch	48/1	49	\$2,158.00
7WBA	TAIL PIPE (1) Turnback Type, Bright, for Single Exhaust	0/0	0	\$208.00
7WBS	MUFFLER/TAIL PIPE GUARD (1) Bright Stainless Steel	0/0	0	\$133.00
7WDM	EXHAUST HEIGHT 10'	2/0	2	\$0.00
8000	ELECTRICAL SYSTEM 12-Volt, Standard Equipment	0/0	0	\$0.00
8GXJ	ALTERNATOR {Leece-Neville AVI160P2013} Brush Type; 12 Volt 160 Amp. Capacity, Pad Mount	0/0	0	\$0.00
8HAE	BODY BUILDER WIRING Rear of Frame; Includes Sealed Connectors for Tail/Amber Turn/Marker/ Backup/Accessory Power/Ground and Sealed Connector for Stop/Turn	0/3	3	\$209.00
8MSG	BATTERY SYSTEM {Fleetrite} Maintenance-Free, (3) 12-Volt 1980CCA Total	0/0	0	\$0.00
8REA	2-WAY RADIO Wiring Effects; Wiring with 20 Amp Fuse Protection, Includes Ignition Wire with 5 Amp Fuse, Wire Ends Heat Shrink and 10' Coil Taped to Base Harness	2/0	2	\$163.00
8RML	RADIO AM/FM/WB/Clock/Bluetooth/USB Input/3.5MM Auxiliary Input, MP3, Apple Device Play & Control, Bluetooth for Phone & Music	2/0	2	\$483.00
8RMZ	SPEAKERS (2) 6.5" Dual Cone Mounted in Both Doors, (2) 5.25" Dual Cone Mounted in Both B-Pillars	7/1	8	\$138.00
8THJ	AUXILIARY HARNESS 3.0' for Auxiliary Front Head Lights and Turn Signals for Front Plow Applications	2/0	2	\$158.00
8TME	TRAILER CONNECTION SOCKET 7-Way; Mounted at Rear of Frame, Wired for Turn Signals Independent of Stop, Compatible with Trailers That Have Amber or Side Turn Lamps	0/7	7	\$439.00

<u>Code</u>	<u>Description</u>	<u>F/R Wt</u> (lbs)	<u>Tot Wt</u> (lbs)	<u>List</u> (US DOLLAR)
8VAY	HORN, ELECTRIC Disc Style	0/0	0	\$0.00
8VUJ	BATTERY BOX Steel with Plastic Cover, 18" Wide, 2, 3, or 4 Battery Capacity, Mounted Right Side Back of Cab	0/0	0	\$101.00
8WDG	BACK-UP ALARM {Preco 1059} Electronic; Solid State, Dual Function, 112 dBA	0/1	1	\$211.00
8WPH	CLEARANCE/MARKER LIGHTS (5) {Truck Lite} Amber LED Lights, Flush Mounted on Cab or Sunshade	0/0	0	\$0.00
8WTT	SWITCH, TOGGLE, FOR WORK LIGHT Lighted; on Instrument Panel and Wiring Effects for Customer Furnished End of Frame Light	1/0	1	\$66.00
8WXG	STARTING MOTOR {Mitsubishi Electric Automotive America 105P} 12-Volt, with Soft-Start	0/0	0	\$0.00
8XAH	CIRCUIT BREAKERS Manual-Reset (Main Panel) SAE Type III with Trip Indicators, Replaces All Fuses	0/0	0	\$0.00
8XBK	SWITCH, AUXILIARY Switch 40 amp Circuit for Customer Use; Includes Wiring Connection at PDC and Control in Cab	0/0	0	\$84.00
8XGT	TURN SIGNALS, FRONT Includes LED Side Turn Lights Mounted on Fender	0/0	0	\$0.00
8XHN	HORN, AIR Black, Single Trumpet, with Lanyard Pull Cord	0/0	0	\$94.00
9585	FENDER EXTENSIONS Rubber	0/0	0	\$0.00
9AAB	LOGOS EXTERIOR Model Badges	0/0	0	\$0.00
9AAE	LOGOS EXTERIOR, ENGINE Badges	0/0	0	\$0.00
9HBM	GRILLE Stationary, Chrome	0/0	0	\$0.00
9HBN	INSULATION, SPLASH PANELS for Sound Abatement	3/0	3	\$76.00
9WBK	FRONT END Tilting, Fiberglass, with Three Piece Construction Includes Long Hood	0/0	0	\$0.00
9WBT	GRILLE EMBER SCREEN Mounted to Grille and Cowl Tray to Keep Hot Embers out of Engine and HVAC Air Intake System	0/0	0	\$201.00
10060	PAINT SCHEMATIC, PT-1 Single Color, Design 100  <u>Includes</u> : PAINT SCHEMATIC ID LETTERS "WM"	0/0	0	\$0.00
10761	PAINT TYPE Base Coat/Clear Coat, 1-2 Tone	0/0	0	\$0.00
10ARN	CUSTOMER SERVICES {Navistar} OnCommand Repair Advocate Services; 24-Month Subscription, Must Have a Telematics Device, Does not Include Telematic Fees that May Apply, Consult with Your Telematics Company for Additional Details, Complete Vehicle Enrollment Form at DTU	0/0	0	\$516.00
10JPA	CUSTOMER IDENTITY for National Joint Powers Alliance	0/0	0	\$0.00
10SLV	PROMOTIONAL PACKAGE Government Silver Package	0/0	0	\$0.00

<u>Code</u>	<u>Description</u>	<u>F/R Wt</u> (lbs)	<u>Tot Wt</u> (lbs)	<u>List</u> (US DOLLAR)
11MHP	CLUTCH {Eaton Fuller Easy-Pedal Advantage} Manual Adjust, Two-Plate, Cast Angle Spring; Ceramic, 15.5" Diameter, 7-Spring with Pre-Damper (Soft Rate) Mechanical Pull-Type Control, 6-Button Disc, 1850 lb-ft Torque Capacity	0/0	0	\$77.00
12703	ANTI-FREEZE Red, Extended Life Coolant; To -40 Degrees F/-40 Degrees C, Freeze Protection	0/0	0	\$0.00
12850	PTO EFFECTS, ENGINE FRONT for N13/A26 Engines, Less PTO, Unit, Includes Adapter Plate on Engine Front Mounted	0/0	0	\$257.00
12BED	ENGINE, DIESEL {International A26} EPA 2017, 475HP @ 1700 RPM, 1700 lb-ft Torque @ 1000 RPM, 2100 RPM Governed Speed, 475 Peak HP (Max)	0/0	0	\$1,678.00
12THT	FAN DRIVE {Horton Drivemaster} Direct Drive Type, Two Speed with Residual Torque Device for Disengaged Fan Speed	0/0	0	\$0.00
12VBB	AIR CLEANER Dual Element	4/0	4	\$108.00
12VHC	FEDERAL EMISSIONS {International A26} EPA, OBD and GHG Certified for Calendar Year 2019	0/0	0	\$500.00
12WBR	FAN OVERRIDE Manual; with Electric Switch on Instrument Panel, (Fan On with Switch On)	0/0	0	\$29.00
12WGA	HOSE CLAMPS, RADIATOR HOSES , Mechanical Type; with Constant-Tension Functionality	0/0	0	\$54.00
12WTA	FAN DRIVE SPECIAL EFFECTS Fan Cooling Ring with Fan Shroud Effects, Engine Mounted	0/0	0	\$0.00
12WZJ	EMISSION COMPLIANCE Low NOx Idle Engine, Complies with California Clean Air Regulations; Includes "Certified Clean Idle" Decal located on Driver Door	0/0	0	\$62.00
12XBD	RADIATOR Aluminum; Welded, Front to Back CrossFlow System, 1292 Sqli, 1008 Sqli CAC	0/0	0	\$0.00
12XBR	BLOCK HEATER, ENGINE {Phillips} 120V/1150W	0/0	0	\$89.00
13GKM	TRANSMISSION, MANUAL {Fuller RTLO(F)-18918B} 18-Speed Manual, with Double Overdrive & Double-Lo, Internal Lube Oil Pump and Air Shift	83/45	128	\$6,245.00
13WAS	CLUTCH HOUSING Aluminum; Available with 1350 to 2050 lb-ft Capacity Fuller Transmissions	-36/-17	-53	\$57.00
13WGJ	OIL COOLER MANUAL TRANSMISSION Water to Oil Type Included in Radiator End Tank (REQUIRES TRANSMISSION LUBE PUMP)	0/0	0	\$0.00
13WLX	TRANSMISSION OIL {EmGard 40W} Synthetic; 22 thru 33.99 Pints	0/0	0	\$153.00
13XAN	PTO LOCATION No PTO	0/0	0	\$0.00
14GVR	AXLE, REAR, TANDEM {Meritor MT-40-14X-4DER} Single Reduction, 40,000-lb Capacity, w/.433"(11mm) Wall Housing Thickness, Driver Controlled Locking Differential in Rear-Rear Axle, R Wheel Ends . Gear Ratio: 4.33	0/1901	1901	\$8,242.00

<u>Code</u>	<u>Description</u>	<u>F/R Wt</u> (lbs)	<u>Tot Wt</u> (lbs)	<u>List</u> (US DOLLAR)
14UMB	SUSPENSION, REAR, TANDEM {Hendrickson HMX-400-52} Walking Beam, 40,000-lb Capacity, 52" Axle Spacing, Rubber Springs, with Transverse Torque Rods, Rubber End Bushings	0/483	483	\$4,320.00
14WMJ	AXLE, REAR, LUBE {EmGard FE-75W-90} Synthetic Oil; 50 thru 64.99 Pints	0/0	0	\$364.00
15DYP	DEF TANK 9.5 U.S. Gal. 35.9L Capacity, Frame Mounted Outside Left Rail, Under Cab	0/0	0	\$0.00
15LKU	FUEL/WATER SEPARATOR {Racor} Fuel Pre-Filter and Filter Base, Includes Water-In-Fuel Sensor	0/0	0	\$0.00
15LNH	LOCATION FUEL/WATER SEPARATOR Mounted Outside Left Rail, 27" Back of Cab	0/0	0	\$50.00
15SJR	FUEL TANK Top Draw, Non-Polished Aluminum, 26" Dia, 100 US Gal (379L), Mounted Left Side, Under Cab	25/49	74	\$298.00
16030	CAB Conventional	0/0	0	\$0.00
16BAM	AIR CONDITIONER with Integral Heater & Defroster	51/5	56	\$1,187.00
16GDC	GAUGE CLUSTER Base Level; English with English Speedometer and Tachometer, for Air Brake Chassis, Includes Engine Coolant Temperature, Primary and Secondary Air Pressure, Fuel and DEF Gauges, Oil Pressure Gauge, Includes 3 Inch Monochromatic Text Display	0/0	0	\$0.00
16HKT	IP CLUSTER DISPLAY On Board Diagnostics Display of Fault Codes in Gauge Cluster	0/0	0	\$0.00
16JNT	SEAT, DRIVER {National 2000} Air Suspension, High Back with Integral Headrest, Vinyl, Isolator, 1 Chamber Lumbar, with 2 Position Front Cushion Adjust, -3 to +14 Degree Angle Back Adjust	0/0	0	\$0.00
16LUM	SEAT, PASSENGER {National} Non Suspension, High Back with Integral Headrest, Vinyl, with Fixed Back, with Under Seat Storage	23/18	41	\$518.00
16SEE	GRAB HANDLE Chrome; Towel Bar Type with Anti-Slip Rubber Inserts; for Cab Entry Mounted Left Side Only at "B" Pillar	3/0	3	\$118.00
16SNP	MIRRORS (2) Power Adjust, Thermostatically Controlled Heated Heads, Black Heads, Brackets and Arms, 7.55" x 14.1" Flat Glass, 7.48" x 6.77" Convex Glass Both Sides	0/0	0	\$321.00
16VKB	CAB INTERIOR TRIM Classic, for Day Cab	0/0	0	\$0.00
	<u>Includes</u>			
	: CONSOLE, OVERHEAD Molded Plastic with Dual Storage Pockets, Retainer Nets and CB Radio Pocket; Located Above Driver and Passenger			
	: DOME LIGHT, CAB Door Activated and Push On-Off at Light Lens, Timed Theater Dimming, Integral to Overhead Console, Center Mounted			
	: SUN VISOR (2) Padded Vinyl; 2 Moveable (Front-to-Side) Primary Visors, Driver Side with Toll Ticket Strap			
16WJU	WINDOW, POWER (2) and Power Door Locks, Left and Right Doors, Includes Express Down Feature	5/0	5	\$367.00



<u>Code</u>	<u>Description</u>	<u>F/R Wt</u> (lbs)	<u>Tot Wt</u> (lbs)	<u>List</u> (US DOLLAR)
16WSK	CAB REAR SUSPENSION Air Bag Type	0/0	0	\$0.00
16XJN	INSTRUMENT PANEL Flat Panel	0/0	0	\$0.00
16XWD	SUNSHADE, EXTERIOR Aerodynamic, Painted Roof Color; Includes Integral Clearance/Marker Lights	14/3	17	\$253.00
16XXC	COWL TRAY LID	8/2	10	\$200.00
16ZBT	ACCESS, CAB Steel, Driver & Passenger Sides, Two Steps Per Door, for use with Regular and Extended Cabs	0/0	0	\$0.00
27DUR	WHEELS, FRONT {Accuride 41730} DISC; 22.5x9.00 Rims, Standard Polish Aluminum, 10-Stud, 285.75mm BC, Hub- Piloted, Flanged Nut, with Steel Hubs	-18/0	-18	\$777.00
28DTT	WHEELS, REAR {Accuride 28828} DUAL DISC; 22.5x8.25 Rims, Powder Coat Steel, 2-Hand Hole, 10-Stud, 285.75mm BC, Hub-Piloted, Flanged Nut, with .472" Thick Increased Capacity Disc and with Steel Hubs	0/96	96	\$462.00
60AKG	BDY INTG, PTO ACCOMMODATION for (3) Latched Rocker Switches, (1) PTO Switch, (2) Generic Switches to Control (3) 30 amp relays, with Programmable Interlocks, for Body Builder Hook up in the Engine Compartment Left Side, Recommended for Automatic Transmissions	0/0	0	\$148.00
7382138133	(8) TIRE, REAR 11R22.5 Load Range H ARMOR MAX MSD (GOODYEAR), 493 rev/mile, 68 MPH, Drive	0/160	160	\$1,136.00
7382155419	(2) TIRE, FRONT 12R22.5 Load Range H HSC1 (CONTINENTAL), 482 rev/mile, 75 MPH, All-Position	34/0	34	\$430.00
<b>Total of Product Features</b>				<b>\$200,315.00</b>
Cab schematic 100WM				
Location 1: 9219, Winter White (Std)				
Chassis schematic N/A				
<b>Services Section:</b>				
40127	WARRANTY Standard for HV513, HV613 Models, Effective with Vehicles Built July 1, 2017 or Later, CTS-2030A	0/0	0	\$0.00
40PKA	SRV CONTRACT, EXT VEH COVERAGE {Navistar} To 36- Month/200,000 Miles (320,000 km), Excludes Extended Warranty for Engine and Transmission, for Rear Axle Rating of 52,000 lbs or less	0/0	0	\$6,000.00
<b>Total of Service Features</b>				<b>\$6,000.00</b>
<b>Total Component Weight:</b>		<b>9010/7617</b>	<b>16627</b>	
<b>Total List Price Including Options:</b>				<b>\$206,315.00</b>
2	New 15 ft Workman Workhorse dump box installed with front PTO, Rear hitch, with hydraulics to the rear for dump pup.	0/0	0	\$29,445.00

<u>Code</u>	<u>Description</u>	<u>F/R Wt</u> (lbs)	<u>Tot Wt</u> (lbs)	<u>List</u> (US DOLLAR)
4	Two Additional Hydraulic Valve Banks	0/0	0	\$2,200.00
5	Rotary Style Asphalt/Coal Door	0/0	0	\$495.00
6	Body Admin Fee	0/0	0	\$1,607.00
	<b>Total Body Allied:</b>	<b>0/0</b>	<b>0</b>	<b>\$33,747.00</b>
	Raw Material Surcharge	0/0	0	\$1,150.00
	<b>Total Goods Purchased:</b>	<b>0/0</b>	<b>0</b>	<b>\$1,150.00</b>

The weight calculations included in this proposal are an estimate of future vehicle weight. The actual weight as manufactured may be different from the estimated weight. Navistar, Inc. shall not be liable for any consequences resulting from any differences between the estimated weight of a vehicle and the actual weight.

<u>Description</u>	<u>(US DOLLAR)</u>	<u>Price</u>
Factory List Prices:		
Product Items	\$200,315.00	
Service Items	\$6,000.00	
Total Factory List Price Including Options:		\$206,315.00
Total Goods Purchased:		\$1,150.00
Freight	\$2,200.00	
Freight from Valley Fabrication Brooks Oregon to Pendleton Oregon	\$400.00	
Total Freight:		\$2,600.00
Total Factory List Price Including Freight:		\$210,065.00
Less Customer Allowance:		(\$99,970.40)
Total Vehicle Price:		\$110,094.60
Total Body/Allied Equipment:		\$33,747.00
Total Sale Price:		\$143,841.60
Total Per Vehicle Sales Price:		\$143,841.60
Net Sales Price:		\$143,841.60

Please feel free to contact me regarding these specifications should your interests or needs change. I am confident you will be pleased with the quality and service of an International vehicle.

**Approved by Seller:**

**Accepted by Purchaser:**

\_\_\_\_\_  
**Official Title and Date**

\_\_\_\_\_  
**Firm or Business Name**

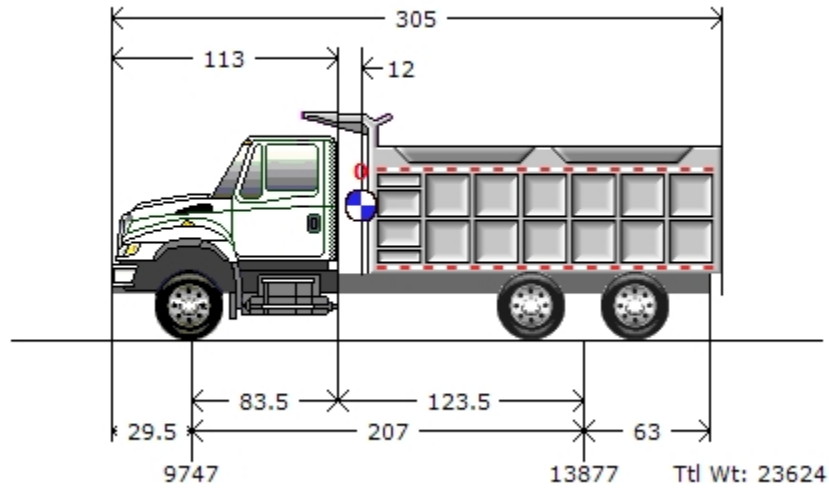
\_\_\_\_\_  
**Authorized Signature**

\_\_\_\_\_  
**Authorized Signature and Date**

**This proposal is not binding upon the seller without  
Seller's Authorized Signature**

\_\_\_\_\_  
**Official Title and Date**

**The TOPS FET calculation is an estimate for reference purposes only. The seller or retailer is responsible for calculating and reporting/paying appropriate FET to the IRS.**



Graphics are provided as visual aids only and are not intended to represent the actual scale, shape, or color of the truck or its components. All weights are represented in lbs.

Truck			Body/Trailer			Chassis/Empty Weights	
Bumper to Axle	(BA)	29.5	Body Length	(BL)	180	Tractor Front Axle:	9,010
Wheelbase	(WB)	207.00				Tractor Rear Axle:	7,617
Axle to Frame	(AF)	63.00					
Axle to Back Cab	(ABC)	83.5					
Cab to Axle	(CA)	123.5					
Usable CA		123.5					
CA Reduction Adjustment		0.00					
Fuel-Diesel(Gals)		100					
DEF(Gals)		10					

Before the Cab			Cab			Payloads Chassis			Body			After the Body		
#	Weight	CG	#	Weight	CG	#	Weight	CG	#	Weight	CG	#	Weight	CG
									1	0	0			

Loads	
Payload Weight:	0
Driver:	200
Fuel-Diesel(Lbs):	710
DEF(Lbs):	87

Weight Distribution	
Total Front Axle:	9,747
Total Rear Axle:	13,877
Total Weight:	23,624

Weights and clearances in this proposal are estimates only. Navistar, Inc. is not liable for any consequences resulting from any differences between the estimated weights and clearances and the actual manufactured weights and clearances.

**Weight Distribution**

All weights are represented in lbs.

	<b>Truck</b>		
	Front	Rear	Total
<b><u>Chassis Weight</u></b>			
Chassis Weight:	9,010	7,617	<b>16,627</b>
Fuel:	355	355	<b>710</b>
DEF:	44	43	<b>87</b>
Empty Body:	188	5,812	<b>6,000</b>
<b>(Curb Weight):</b>	<b>9,597</b>	<b>13,827</b>	<b>23,424</b>

**Loads**

Payloads:	0	0	<b>0</b>
Driver:	150	50	<b>200</b>
<b>Axle Totals (Gross Weight):</b>	<b>9,747</b>	<b>13,877</b>	<b>23,624</b>

**Weight Ratings**

	<b>Truck</b>	
	Front	Rear
Axle(axle capacity)	16,000	40,000
Tire(tire capacity)	14,780	48,040
Suspension(suspension capacity)	16,000	40,000
Spring:	0	
Fed Bridge Law (axle spread):	20,000	34,000 (52")

<b>Wheel Combination</b>	<b>Load</b>	<b>Limit</b>
1 - 3	23,624	50,000

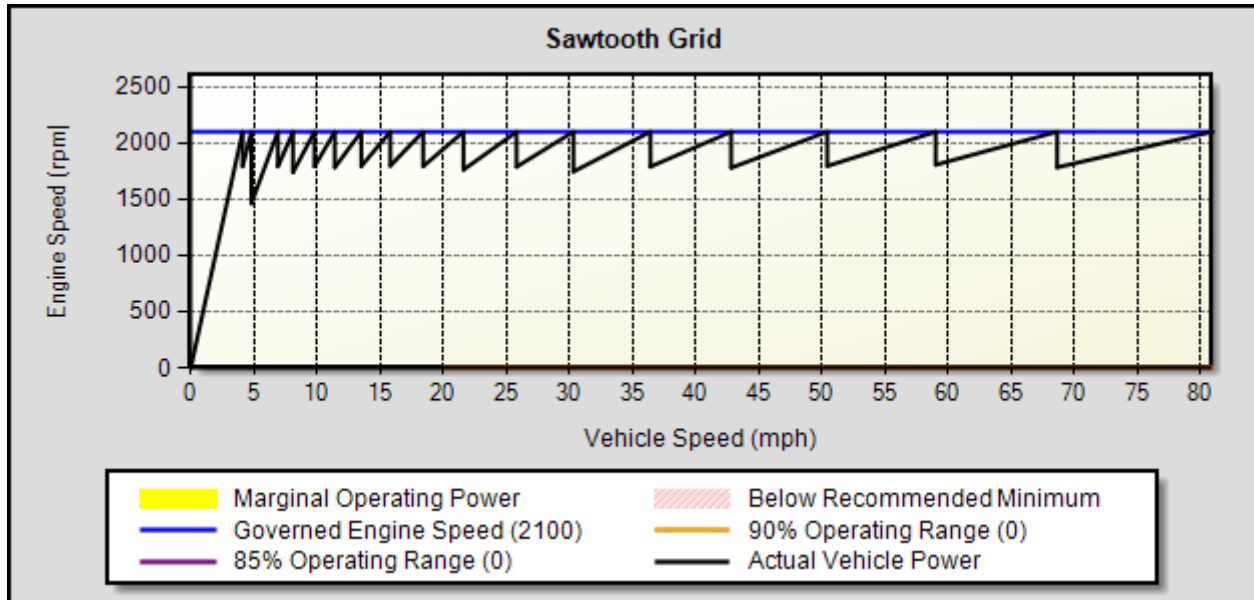
Federal Total Vehicle Weight Limit: 80,000

Maximum Gross Vehicle Weight Rating (GVWR) 54,780 - Gross Vehicle Weight(GVW) 23,624 = 31,156 Reserves

**Weight Summary**

\* Distributed weights are within capacity limits

ENGINE/TRANSMISSION MATCHING



Sawtooth Details

Gear	Trans Ratio	Upshift Power Avail		Govern Power Avail		Peak Power Comparison			Warn Msg
		Veh Spd (MPH)	Eng Spd (RPM)	Veh Spd (MPH)	Eng Spd (RPM)	Gear Step (%)	85% Range (%)	90% Range (%)	
1	14.40	0.0	0	4.1	2100	17.17	N/A	N/A	@
2	12.29	4.1	1792	4.8	2100	43.57	N/A	N/A	@
3	8.56	4.8	1463	6.9	2100	17.26	N/A	N/A	
4	7.30	6.9	1791	8.1	2100	20.66	N/A	N/A	
5	6.05	8.1	1740	9.8	2100	17.25	N/A	N/A	
6	5.16	9.8	1791	11.4	2100	17.81	N/A	N/A	
7	4.38	11.4	1783	13.5	2100	17.11	N/A	N/A	
8	3.74	13.5	1793	15.8	2100	16.88	N/A	N/A	
9	3.20	15.8	1797	18.4	2100	17.22	N/A	N/A	
10	2.73	18.4	1792	21.6	2100	19.21	N/A	N/A	
11	2.29	21.6	1762	25.8	2100	17.44	N/A	N/A	
12	1.95	25.8	1788	30.3	2100	20.37	N/A	N/A	
13	1.62	30.3	1745	36.4	2100	17.39	N/A	N/A	
14	1.38	36.4	1789	42.8	2100	17.95	N/A	N/A	
15	1.17	42.8	1780	50.4	2100	17.00	N/A	N/A	
16	1.00	50.4	1795	59.0	2100	16.28	N/A	N/A	
17	0.86	59.0	1806	68.6	2100	17.81	N/A	N/A	
18	0.73	68.6	1783	80.9	2100	0.00	N/A	N/A	

@ - WHEELSLIP CAN OCCUR AT THE GRADE SHOWN. THE VEHICLE IS CAPABLE OF INCREASED GRADEABILITY IF MORE WEIGHT IS PLACED ON THE DRIVE AXLES.

## STEADY STATE PERFORMANCE

Performance Results	Gear	Veh Spd (mph)	Eng Spd (rpm)	Fuel Econ (mpg)	Grade (%)	Notes
LEVEL ROAD MAXIMUM SPEED	18	81.8	2124	5.45	0.00	
HI GEAR SPEED @ RATED RPM	18	80.9	2100	5.52	0.79	
55.0 MPH STEADY-STATE	18	55.0	1428	8.64	3.86	
TYPICAL OPERATING SPEED	18	60.0	1558	8.00	3.45	- Calculated Grade Ability/Fuel Economy

VEHICLE ORDER CODING ERRORS MAY RESULT IF THE "LEVEL ROAD MAX SPEED" VALUE EXCEEDS THE "HI GEAR SPEED @ RATED RPM" AND IS USED AS THE ENGINE PROGRAMMABLE VEHICLE SPEED LIMIT.

IF THE RESULTS CONTAIN "----", VEHICLE CANNOT ATTAIN THAT SPEED.

IF THE RESULTS CONTAIN "\*\*\*\*\*", THE ENGINE USED DOES NOT HAVE A FUEL MAP. FUEL ECONOMY CANNOT BE PREDICTED.

**Recommendations / General Information**

IDLE FUEL RATE : 0.54 GALS/HR @ 600.0 RPM

**Fuel Economy Route: Normal Route - City, Suburban, and Highway**

Key Fuel Economy Information	City	Suburban	Highway	Notes
MILES PER GALLON	4.36	6.64	7.84	
AVERAGE MPH	18.3	39.3	54.5	
MISSION MINUTES	30.92	52.71	173.55	

IF THE RESULTS CONTAIN "\*\*\*\*\*", THE ENGINE USED DOES NOT HAVE A FUEL MAP. FUEL ECONOMY CANNOT BE PREDICTED.

**GRADEABILITY PERFORMANCE**

**Grade Ability Table**

<b>Gear</b>	<b>Trans Ratio</b>	<b>Gear Step</b>	<b>Veh Spd (mph)</b>	<b>Eng Spd (rpm)</b>	<b>Whl Pwr (hp)</b>	<b>Grade (%)</b>	<b>Warn Msg</b>	<b>Start Grade (%)</b>	<b>Notes</b>
1	14.40	17.17	1.6	800	105.10	51.85	@	51.85	- Calculated Start Ability
			2.0	1000	131.37	51.85	@		
			4.1	2100	275.90	51.85	@		
2	12.29	43.57	1.8	800	123.14	51.85	@	44.26	
			2.3	1000	153.93	51.85	@		
			4.1	1792	275.90	51.85	@		
3	8.56	17.26	4.8	2100	323.28	51.85	@	25.32	
			2.6	800	128.65	35.32			
			3.3	1000	221.01	51.85	@		
4	7.30	20.66	4.8	1463	323.28	51.85	@	19.59	
			6.9	2100	345.74	36.28			
			3.1	800	129.02	29.59			
5	6.05	17.25	3.9	1000	259.16	51.85	@	14.13	
			6.9	1791	431.15	47.22			
			8.1	2100	346.63	30.36			
6	5.16	17.81	3.7	800	129.36	24.13		10.35	
			4.6	1000	293.39	47.82			
			8.1	1740	430.63	38.91			
7	4.38	17.11	9.8	2100	347.45	24.73		7.08	
			4.4	800	129.58	20.35			
			5.4	1000	293.99	39.53			
8	3.74	16.88	9.8	1791	433.13	31.57		4.43	
			11.4	2100	347.96	20.83			
			5.1	800	129.75	17.08			
9	3.20	17.22	6.4	1000	294.48	32.78		2.21	
			11.4	1783	433.51	26.46			
			13.5	2100	348.32	17.46			
10	2.73	19.21	6.0	800	129.85	14.43		0.29	
			7.5	1000	294.84	27.51			
			13.5	1793	434.24	22.16			
11	2.29	17.44	15.8	2100	348.52	14.73		2.21	
			7.0	800	129.91	12.21			
			8.8	1000	295.10	23.21			
12	1.95	20.37	15.8	1797	434.59	18.68		2.21	
			18.4	2100	348.55	12.44			
			8.2	800	129.92	10.29			
13	1.62	17.39	10.3	1000	295.27	19.55		0.29	
			18.4	1792	434.55	15.77			
			21.6	2100	348.42	10.44			
14	1.38	17.95	12.3	1000	295.34	16.18		0.29	
			21.6	1762	433.56	13.24			
			25.8	2100	348.06	8.56			
15	1.17	17.00	14.4	1000	295.30	13.60		0.29	
			25.8	1788	434.06	10.91			
			30.3	2100	347.49	7.09			
16	1.00	16.28	17.4	1000	295.12	11.11		0.29	
			30.3	1745	432.09	9.05			
			36.4	2100	346.48	5.63			
17	1.00	16.28	20.4	1000	294.83	9.30		0.29	
			36.4	1789	432.58	7.28			
			42.8	2100	345.24	4.52			
18	1.00	16.28	42.8	1780	431.11	5.92		0.29	
			50.5	2100	343.48	3.49			
			50.5	1795	435.78	4.77			



			59.0	2100	345.57	2.64
17	0.86	17.81	59.0	1806	426.19	3.59
			68.6	2100	336.40	1.72
18	0.73	0.00	68.6	1783	422.32	2.59
			79.7	2069	348.17	1.00
			80.9	2100	331.98	0.79
			81.2	2109	300.82	0.50
			81.8	2125	246.22	0.00

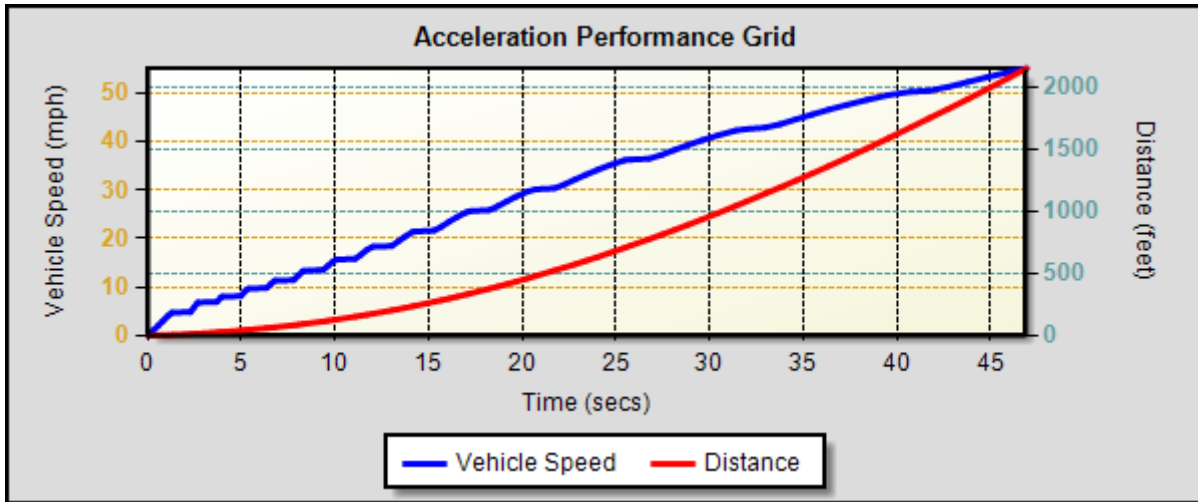
## STARTING / TOP GEAR PERFORMANCE

Gear	Trans Ratio	Gear Step	Veh Spd (mph)	Eng Spd (rpm)	Whl Pwr (hp)	Grade (%)	Warn Msg	Start Grade (%)	Notes
1	14.40	17.17	1.6		105.10	51.85	@	51.85	- Calculated Start Ability
2	12.29	43.57	1.8		123.14	51.85	@	44.26	
3	8.56	17.26	2.6		128.65	35.32		25.32	
4	7.30	20.66	3.1		129.02	29.59		19.59	
5	6.05	17.25	3.7		129.36	24.13		14.13	
6	5.16	17.81	4.4		129.58	20.35		10.35	
7	4.38	17.11	5.1		129.75	17.08		7.08	
8	3.74	16.88	6.0		129.85	14.43		4.43	
9	3.20	17.22	7.0		129.91	12.21		2.21	
10	2.73	19.21	8.2		129.92	10.29		0.29	

@ - WHEELSLIP CAN OCCUR AT THE GRADE SHOWN. THE VEHICLE IS CAPABLE OF INCREASED GRADEABILITY IF MORE WEIGHT IS PLACED ON THE DRIVE AXLES.

ACCELERATION PERFORMANCE RESULTS

Acceleration Performance Grid



Acceleration Performance: TIME TO ACCELERATE ON A GRADE TO 55.0 (MPH) IS 46.93 (SECS)

Acceleration Performance Details

Gear	Time (secs)	Distance (feet)	Speed (mph)	Notes
2	0.28	0.2	1.0	
	0.55	0.8	2.0	
	0.81	1.7	3.0	
	1.07	3.1	4.0	
	1.28	4.5	4.8	
3	2.28	11.4	4.7	
	2.45	12.8	5.7	
	2.65	14.6	6.7	
	2.69	15.0	6.9	
4	3.69	25.0	6.8	
	3.89	27.2	7.8	
	3.97	28.0	8.1	
5	4.97	39.8	8.0	
	5.16	42.2	9.0	
	5.35	44.9	9.8	
6	6.35	59.1	9.6	
	6.57	62.3	10.6	
	6.79	65.8	11.4	
7	7.79	82.5	11.3	
	8.02	86.5	12.3	
	8.30	91.7	13.3	
8	8.36	92.9	13.5	
	9.36	112.5	13.3	
	9.61	117.8	14.3	
	9.91	124.2	15.3	
9	10.08	128.0	15.8	
	11.08	151.0	15.6	
	11.37	157.9	16.6	
10	11.69	166.1	17.6	
	12.02	174.6	18.4	
	13.02	201.5	18.3	
	13.35	210.7	19.3	

Gear	Time (secs)	Distance (feet)	Speed (mph)	Notes
	13.71	221.1	20.3	
	14.13	233.9	21.3	
	14.30	239.1	21.6	
11	15.30	270.7	21.4	
	15.68	283.1	22.4	
	16.08	296.6	23.4	
	16.52	312.1	24.4	
	17.03	330.6	25.4	
	17.22	337.9	25.8	
	18.22	375.6	25.6	
12	18.68	393.0	26.6	
	19.16	411.9	27.6	
	19.67	433.2	28.6	
	20.26	458.0	29.6	
	20.71	478.0	30.3	
	21.71	522.3	30.1	
13	22.25	546.5	31.1	
	22.81	572.3	32.1	
	23.39	599.9	33.1	
	24.01	630.3	34.1	
	24.69	665.0	35.1	
	25.46	704.9	36.1	
	25.77	721.8	36.4	
	26.77	775.1	36.2	
14	27.44	810.8	37.2	
	28.12	848.6	38.2	
	28.83	889.1	39.2	
	29.60	933.8	40.2	
	30.44	984.1	41.2	
	31.38	1041.2	42.2	
	31.96	1077.5	42.8	
	32.96	1140.1	42.5	
15	33.77	1191.1	43.5	
	34.60	1244.8	44.5	
	35.46	1301.3	45.5	
	36.36	1361.9	46.5	
	37.33	1428.8	47.5	
	38.38	1503.2	48.5	
	39.55	1586.8	49.5	
	40.75	1675.2	50.4	
	41.75	1749.0	50.2	
16	42.75	1823.2	51.2	
	43.78	1900.9	52.2	
	44.83	1982.4	53.2	
	45.94	2069.3	54.2	
	46.93	2148.6	55.0	

## REQUIRED TCAPE INFORMATION

TCAPE Factors For Vehicle

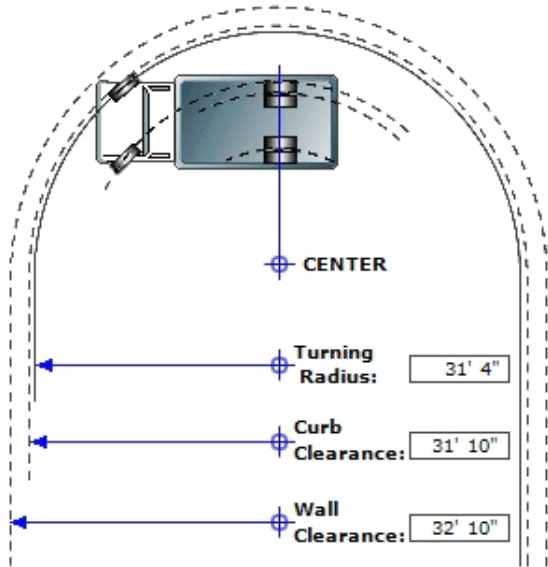
Selected Rear Axle Gear Ratio(s):	4.33
Engine Fan Type:	VISCOUS
Parked PTO:	NO
Enroute PTO:	NO
ID Wheel Slip Conditions:	Yes
Road Governor/Cruise Ctrl:	No
Road Surface Type:	TYPICAL
Fuel Economy Route:	Normal Route - City, Suburban, and Highway
Vehicle Vocation:	MODERATE ON/OFF HIGHWAY
Acceleration Grade (%):	0.0
Frontal Area (FT <sup>2</sup> ):	76
Speed Limit on Route (MPH):	61.0
Relative Drag Coefficient:	85
Alternator (A):	40
Steering Gear (HP):	2.60
Air Conditioner (HP):	3.20
Vehicle Width (IN):	96
Acceleration Start Gear:	2
Vehicle Height (IN):	115
Weight on Drive Axle (LBF):	40000
Acceleration Vehicle Spd (MPH):	55.0
Air Compressor (HP):	2.20
TIRE, FRONT	2 - RADIAL NORMAL
TIRE, REAR	8 - RADIAL NORMAL

Components

0002ARU	AXLE, FRONT NON-DRIVING {Meritor MFS-16-143A} Wide Track, I-Beam Type, 16,000-lb Capacity
0004SPM	AIR COMPRESSOR {Bendix BA-921 Head Unload} 15.9 CFM Capacity, Single Cylinder
0005PTB	STEERING GEAR (2) {Sheppard M100/M80} Dual Power
0008GXJ	ALTERNATOR {Leece-Neville AVI160P2013} Brush Type; 12 Volt 160 Amp. Capacity, Pad Mount
0012BED	ENGINE, DIESEL {International A26} EPA 2017, 475HP @ 1700 RPM, 1700 lb-ft Torque @ 1000 RPM, 2100 RPM Governed Speed, 475 Peak HP (Max)
0012THT	FAN DRIVE {Horton Drivemaster} Direct Drive Type, Two Speed with Residual Torque Device for Disengaged Fan Speed
0013GKM	TRANSMISSION, MANUAL {Fuller RTLO(F)-18918B} 18-Speed Manual, with Double Overdrive & Double-Lo, Internal Lube Oil Pump and Air Shift
0014GVR	AXLE, REAR, TANDEM {Meritor MT-40-14X-4DER} Single Reduction, 40,000-lb Capacity, w/.433"(11mm) Wall Housing Thickness, Driver Controlled Locking Differential in Rear-Rear Axle, R Wheel Ends
0016030	CAB Conventional
0016BAM	AIR CONDITIONER with Integral Heater & Defroster
0016XWD	SUNSHADE, EXTERIOR Aerodynamic, Painted Roof Color; Includes Integral Clearance/Marker Lights
07382138133	TIRE, REAR 11R22.5 Load Range H ARMOR MAX MSD (GOODYEAR), 493 rev/mile, 68 MPH, Drive 11R22.5 Load Range H ARMOR MAX MSD (GOODYEAR), 493 rev/mile, 68 MPH, Drive
07382155419	TIRE, FRONT 12R22.5 Load Range H HSC1 (CONTINENTAL), 482 rev/mile, 75 MPH, All-Position 12R22.5 Load Range H HSC1 (CONTINENTAL), 482 rev/mile, 75 MPH, All-Position

**TCAPE HAS BEEN DESIGNED TO GIVE ECONOMY AND PERFORMANCE PREDICTIONS WHICH HAVE BEEN SHOWN TO BE TYPICAL FOR MOST OPERATIONS. HOWEVER, DUE TO OPERATING CONDITIONS, DRIVER INFLUENCES, AND OTHER FACTORS, YOUR RESULTS MAY VARY FROM THOSE PREDICTED. ALSO, BECAUSE OF FUEL MAPPING PROCEDURES USED BY VARIOUS ENGINE MANUFACTURERS, COMPARISONS OF FUEL ECONOMY RESULTS FOR DIFFERENT BRANDS OF ENGINES MAY VARY FROM THOSE SHOWN.**

**NAVISTAR, INC. SHALL NOT BE LIABLE FOR ANY LOSS OF PROFITS, LOSS OF USE, INTERRUPTION OF BUSINESS OR INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND THAT ARE INCURRED BY DEALER OR BY DEALER'S CUSTOMERS AS A RESULT OF RELIANCE ON TCAPE, WHETHER THE CLAIM IS IN CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY OR OTHERWISE.**



Series: HV  
 Model: HV513  
 Description: HV513 SFA  
 Model Year: 2019

**Calculation Factors**

Wheelbase: 207  
 Front Axle: 0002ARU  
 Description: AXLE, FRONT NON-DRIVING, {Meritor MFS-16-143A} Wide Track, I-Beam Type, 16,000-lb Capacity  
 Front Wheel: 0027DUR  
 Description: WHEELS, FRONT, {Accuride 41730} DISC; 22.5x9.00 Rims, Standard Polish Aluminum, 10-Stud, 285.75mm BC, Hub-Piloted, Flanged Nut, with Steel Hubs  
 Front Tire: 07382155419  
 Description: TIRES, 12R22.5 Load Range H HSC1 (CONTINENTAL), 482 rev/mile, 75 MPH, All-Position  
 Steering Gear: 0005PTB  
 Description: STEERING GEAR, (2) {Sheppard M100/M80} Dual Power

**Turning Radius Statistics**

General Information

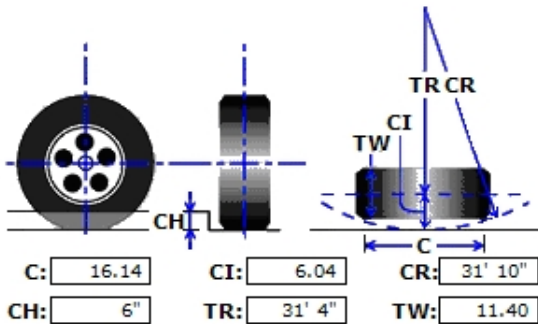
Inside Turn Angle: 43 Degrees  
 Radial Overhang: 18

Axle Information

KingPin Inclination: 6.25 Degrees  
 KingPin Center: 71.5

**Turning Radius - Curb View**

C - Curb Contact Length: 16.14  
 CI - Curb Clearance Increment: 6.04  
 CR - Curb Clearance Radius: 31'10"  
 CH - Curb Height: 6"  
 TR - Turning Radius: 31'4"  
 TW - Tire Width: 11.40



\* All Measurements are in inches, unless otherwise specified.

This information is based on engineering information available at this time. Actual figures may vary. Navistar, Inc. cannot accept liability for consequences due to this variance.



# **HV513 SFA**

Sales Proposal For:

**Umatilla County Road Dept**

Presented By:

**WOODPECKER TRK & EQUIP**

---

**Prepared For:**

Umatilla County Road Dept  
 Bob Nooy  
 3920 Westgate  
 Pendleton, OR 97801-4044  
 (541)278 - 5424  
 Reference ID: N/A

**Presented By:**

WOODPECKER TRK & EQUIP  
 Lane B Porter  
 P.O. BOX 1306  
 PENDLETON OR 97801  
 541-276-5515

Thank you for the opportunity to provide you with the following quotation on a new International truck. I am sure the following detailed specification will meet your operational requirements, and I look forward to serving your business needs.

**Model Profile**  
**2019 HV513 SFA (HV513)**

**AXLE CONFIG:** 6X4  
**APPLICATION:** Low-Boy Tractor  
**MISSION:** Requested GCWR: 120000. Calc. GVWR: 54780  
 Calc. Start / Grade Ability: 15.61% / 1.27% @ 55 MPH  
 Calc. Geared Speed: 80.9 MPH  
**DIMENSION:** Wheelbase: 207.00, CA: 123.50, Axle to Frame: 67.00  
**ENGINE, DIESEL:** {International A26} EPA 2017, 475HP @ 1700 RPM, 1700 lb-ft Torque @ 1000 RPM, 2100 RPM  
 Governed Speed, 475 Peak HP (Max)  
**TRANSMISSION, MANUAL:** {Fuller RTLO(F)-18918B} 18-Speed Manual, with Double Overdrive & Double-Lo, Internal Lube  
 Oil Pump and Air Shift  
**CLUTCH:** {Eaton Fuller Easy-Pedal Advantage} Manual Adjust, Two-Plate, Cast Angle Spring; Ceramic,  
 15.5" Diameter, 7-Spring with Pre-Damper (Soft Rate) Mechanical Pull-Type Control, 6-Button  
 Disc, 1850 lb-ft Torque Capacity  
**AXLE, FRONT NON-DRIVING:** {Meritor MFS-16-133A} Wide Track, I-Beam Type, 16,000-lb Capacity  
**AXLE, REAR, TANDEM:** {Meritor MT-40-14X-4DER} Single Reduction, 40,000-lb Capacity, w/.433"(11mm) Wall Housing  
 Thickness, Driver Controlled Locking Differential in Rear-Rear Axle, R Wheel Ends Gear Ratio:  
 4.33  
**CAB:** Conventional  
**TIRE, FRONT:** (2) 12R22.5 Load Range H HSC1 (CONTINENTAL), 482 rev/mile, 75 MPH, All-Position  
**TIRE, REAR:** (8) 11R22.5 Load Range H ARMOR MAX MSD (GOODYEAR), 493 rev/mile, 68 MPH, Drive  
**SUSPENSION, REAR, AIR, TANDEM:** {Hendrickson PRIMAAX EX} 46,000-lb Capacity, 55" Axle Spacing, 10.5" Ride Height, with Shock  
 Absorbers  
**PAINT:** Cab schematic 100WM  
 Location 1: 9219, Winter White (Std)  
 Chassis schematic N/A

<u>Code</u>	<u>Description</u>	<u>F/R Wt</u> (lbs)	<u>Tot Wt</u> (lbs)	<u>List</u> (US DOLLAR)
HV51300	Base Chassis, Model HV513 SFA with 207.00 Wheelbase, 123.50 CA, and 67.00 Axle to Frame.	7997/4333	12330	\$156,971.00
1616	FRAME RAILS WITH TAPERED REAR	0/0	0	\$87.00
1AND	AXLE CONFIGURATION {Navistar} 6x4	0/0	0	\$0.00
	<u>Includes</u> : DRIVESHAFT 1810 Series Transmission to Rear Axle : INNER-AXLE SHAFT 1710 Series Forward Rear Axle to Rear Rear Axle			
	<u>Notes</u> : Pricing may change if axle configuration is changed.			
1CAJ	FRAME RAILS Heat Treated Alloy Steel (120,000 PSI Yield); 10.866" x 3.622" x 0.433" (276.0mm x 92.0mm x 11.1mm); 456.0" (11582mm) Maximum OAL	170/395	565	\$665.00
1LLA	BUMPER, FRONT Steel, Swept Back	0/0	0	\$0.00
1WAC	BUMPER EXTENSION, FRONT 4.0"	20/0	20	\$50.00
1WPL	RECOVERY SHACKLE FRONT (2) Frame Mounted	24/-3	21	\$290.00
1WTX	WHEELBASE RANGE 199" (505cm) Through and Including 264" (670cm)	0/0	0	\$817.00
2AUR	AXLE, FRONT NON-DRIVING {Meritor MFS-16-133A} Wide Track, I-Beam Type, 16,000-lb Capacity	186/0	186	\$2,717.00
3770	SPRINGS, FRONT AUXILIARY Rubber	10/0	10	\$111.00
3ADE	SUSPENSION, FRONT, SPRING Parabolic Taper Leaf, Shackle Type, 16,000-lb Capacity, with Shock Absorbers	44/0	44	\$283.00
4092	BRAKE SYSTEM, AIR Dual System for Tractor Applications	1/0	1	\$346.00
4732	DRAIN VALVE {Berg} with Pull Chain, for Air Tank	0/0	0	\$0.00
4AAU	BRAKE CHAMBERS, ADDITIONAL (2) {Bendix} Spring Brake Type; 30/30 SqIn	0/36	36	\$220.00
4AZU	AIR BRAKE ABS {Bendix AntiLock Brake System} Full Vehicle Wheel Control System (6-Channel; 6 Sensor/6 Modulator)	16/10	26	\$559.00
4EBS	AIR DRYER {Bendix AD-9} with Heater	22/5	27	\$450.00
4EXU	BRAKE CHAMBERS, REAR AXLE {Bendix EverSure} 30/30 Spring Brake	0/78	78	\$0.00
4JDD	BRAKES, FRONT, AIR DISC 22.5 Dia, Includes 24" Sq. In. Brake Chambers	1/0	1	\$2,979.00
4LGA	SLACK ADJUSTERS, REAR {Haldex} Automatic	0/0	0	\$376.00
4NDB	BRAKES, REAR, AIR CAM S-Cam; 16.5" x 7.0"; Includes 30/30 Sq.In. Long Stroke Brake Chamber and Spring Actuated Parking Brake	0/52	52	\$0.00
4SPM	AIR COMPRESSOR {Bendix BA-921 Head Unload} 15.9 CFM Capacity, Single Cylinder	0/0	0	\$0.00
4VKC	AIR DRYER LOCATION Mounted Inside Left Rail, Back of Cab	0/0	0	\$0.00



<u>Code</u>	<u>Description</u>	<u>F/R Wt</u> (lbs)	<u>Tot Wt</u> (lbs)	<u>List</u> (US DOLLAR)
4VKK	AIR TANK LOCATION (2) Mounted Under Battery Box, Outside Right Rail, Back of Cab, Perpendicular to Rail	0/0	0	\$50.00
4WZK	BRAKE PACKAGE, FRONT {Meritor EX225H2} Air, Disc Type, 22.5"	40/0	40	\$0.00
5708	STEERING COLUMN Tilting	10/5	15	\$125.00
5CAW	STEERING WHEEL 4-Spoke; 18" Dia., Black	0/0	0	\$0.00
5PTB	STEERING GEAR (2) {Sheppard M100/M80} Dual Power	77/-3	74	\$1,169.00
6DDC	DRIVESHAFT SYSTEM SPL250XL Driveshaft and SPL170XL Interaxle Shaft in lieu of 1810 Driveshaft and 1710 Interaxle Shaft	0/0	0	\$532.00
7BEV	AFTERTREATMENT COVER Steel, Black	0/0	0	\$0.00
7BKS	EXHAUST SYSTEM Single Horizontal Aftertreatment Device, Frame Mounted Right Side Under Cab; for Single Vertical Tail Pipe, Frame Mounted Right Side Back of Cab	30/47	77	\$1,210.00
7SDK	ENGINE COMPRESSION BRAKE by Jacobs; for N13/A26 Engines, with Selector Switch and On/Off Switch	48/1	49	\$2,158.00
7WBA	TAIL PIPE (1) Turnback Type, Bright, for Single Exhaust	0/0	0	\$208.00
7WBS	MUFFLER/TAIL PIPE GUARD (1) Bright Stainless Steel	0/0	0	\$133.00
7WDM	EXHAUST HEIGHT 10'	2/0	2	\$0.00
8000	ELECTRICAL SYSTEM 12-Volt, Standard Equipment	0/0	0	\$0.00
8GXJ	ALTERNATOR {Leece-Neville AV1160P2013} Brush Type; 12 Volt 160 Amp. Capacity, Pad Mount	0/0	0	\$0.00
8HAA	BODY BUILDER WIRING To Rear of Frame, with Stop, Tail, Turn, and Marker Lights Circuits, Ignition Controlled Auxiliary Feed and Ground, Less Trailer Socket	2/0	2	\$327.00
8MSG	BATTERY SYSTEM {Fleetrite} Maintenance-Free, (3) 12-Volt 1980CCA Total	0/0	0	\$0.00
8REA	2-WAY RADIO Wiring Effects; Wiring with 20 Amp Fuse Protection, Includes Ignition Wire with 5 Amp Fuse, Wire Ends Heat Shrink and 10' Coil Taped to Base Harness	2/0	2	\$163.00
8RML	RADIO AM/FM/WB/Clock/Bluetooth/USB Input/3.5MM Auxiliary Input, MP3, Apple Device Play & Control, Bluetooth for Phone & Music	2/0	2	\$483.00
8RMZ	SPEAKERS (2) 6.5" Dual Cone Mounted in Both Doors, (2) 5.25" Dual Cone Mounted in Both B-Pillars	7/1	8	\$138.00
8VAY	HORN, ELECTRIC Disc Style	0/0	0	\$0.00
8VUJ	BATTERY BOX Steel with Plastic Cover, 18" Wide, 2, 3, or 4 Battery Capacity, Mounted Right Side Back of Cab	0/0	0	\$101.00
8WAA	LIGHT, WORK {Truck Lite 81 Series} LED, Pedestal Mounted BOC with Switch on Instrument Panel	4/1	5	\$248.00
8WDG	BACK-UP ALARM {Preco 1059} Electronic; Solid State, Dual Function, 112 dBA	0/1	1	\$211.00

<u>Code</u>	<u>Description</u>	<u>F/R Wt</u> (lbs)	<u>Tot Wt</u> (lbs)	<u>List</u> (US DOLLAR)
8WPH	CLEARANCE/MARKER LIGHTS (5) {Truck Lite} Amber LED Lights, Flush Mounted on Cab or Sunshade	0/0	0	\$0.00
8WXG	STARTING MOTOR {Mitsubishi Electric Automotive America 105P} 12-Volt, with Soft-Start	0/0	0	\$0.00
8XAH	CIRCUIT BREAKERS Manual-Reset (Main Panel) SAE Type III with Trip Indicators, Replaces All Fuses	0/0	0	\$0.00
8XBK	SWITCH, AUXILIARY Switch 40 amp Circuit for Customer Use; Includes Wiring Connection at PDC and Control in Cab	0/0	0	\$84.00
8XGT	TURN SIGNALS, FRONT Includes LED Side Turn Lights Mounted on Fender	0/0	0	\$0.00
8XHN	HORN, AIR Black, Single Trumpet, with Lanyard Pull Cord	0/0	0	\$94.00
9585	FENDER EXTENSIONS Rubber	0/0	0	\$0.00
9AAB	LOGOS EXTERIOR Model Badges	0/0	0	\$0.00
9AAE	LOGOS EXTERIOR, ENGINE Badges	0/0	0	\$0.00
9HBM	GRILLE Stationary, Chrome	0/0	0	\$0.00
9HBN	INSULATION, SPLASH PANELS for Sound Abatement	3/0	3	\$76.00
9WBK	FRONT END Tilting, Fiberglass, with Three Piece Construction Includes Long Hood	0/0	0	\$0.00
9WBT	GRILLE EMBER SCREEN Mounted to Grille and Cowl Tray to Keep Hot Embers out of Engine and HVAC Air Intake System	0/0	0	\$201.00
10060	PAINT SCHEMATIC, PT-1 Single Color, Design 100 <u>Includes</u> : PAINT SCHEMATIC ID LETTERS "WM"	0/0	0	\$0.00
10761	PAINT TYPE Base Coat/Clear Coat, 1-2 Tone	0/0	0	\$0.00
10ARN	CUSTOMER SERVICES {Navistar} OnCommand Repair Advocate Services; 24-Month Subscription, Must Have a Telematics Device, Does not Include Telematic Fees that May Apply, Consult with Your Telematics Company for Additional Details, Complete Vehicle Enrollment Form at DTU	0/0	0	\$516.00
10GYJ	FIFTH WHEEL, AIR SLIDE {Holland FW35A824XL00} 24" Slide, 7.7" Above Top of Frame, Left Hand Release	0/504	504	\$2,789.00
10JPA	CUSTOMER IDENTITY for National Joint Powers Alliance	0/0	0	\$0.00
10SLV	PROMOTIONAL PACKAGE Government Silver Package	0/0	0	\$0.00
10WCY	SAFETY TRIANGLES	11/1	12	\$29.00
10WPT	MUD FLAP HOLDER Spring Loaded, Painted Black; with 45-Degree End, with Red and White Reflective Tape; Less Flaps	0/34	34	\$103.00
10WSX	MUD FLAPS, REAR Black Poly, with International Logo; Less Holders	0/8	8	\$58.00
10WTR	QUARTER FENDERS for Rear Wheels, Black Plastic; Frame Mounted	0/18	18	\$188.00

<u>Code</u>	<u>Description</u>	<u>F/R Wt</u> (lbs)	<u>Tot Wt</u> (lbs)	<u>List</u> (US DOLLAR)
11MHP	CLUTCH {Eaton Fuller Easy-Pedal Advantage} Manual Adjust, Two-Plate, Cast Angle Spring; Ceramic, 15.5" Diameter, 7-Spring with Pre-Damper (Soft Rate) Mechanical Pull-Type Control, 6-Button Disc, 1850 lb-ft Torque Capacity	0/0	0	\$77.00
12703	ANTI-FREEZE Red, Extended Life Coolant; To -40 Degrees F/ -40 Degrees C, Freeze Protection	0/0	0	\$0.00
12850	PTO EFFECTS, ENGINE FRONT for N13/A26 Engines, Less PTO, Unit, Includes Adapter Plate on Engine Front Mounted	0/0	0	\$257.00
12BED	ENGINE, DIESEL {International A26} EPA 2017, 475HP @ 1700 RPM, 1700 lb-ft Torque @ 1000 RPM, 2100 RPM Governed Speed, 475 Peak HP (Max)	0/0	0	\$1,678.00
12THT	FAN DRIVE {Horton Drivemaster} Direct Drive Type, Two Speed with Residual Torque Device for Disengaged Fan Speed	0/0	0	\$0.00
12VBB	AIR CLEANER Dual Element	4/0	4	\$108.00
12VHC	FEDERAL EMISSIONS {International A26} EPA, OBD and GHG Certified for Calendar Year 2019	0/0	0	\$500.00
12WBR	FAN OVERRIDE Manual; with Electric Switch on Instrument Panel, (Fan On with Switch On)	0/0	0	\$29.00
12WEG	COLD STARTING EQUIPMENT Automatic; with Engine ECM Control	0/0	0	\$168.00
12WGA	HOSE CLAMPS, RADIATOR HOSES , Mechanical Type; with Constant-Tension Functionality	0/0	0	\$54.00
12WTA	FAN DRIVE SPECIAL EFFECTS Fan Cooling Ring with Fan Shroud Effects, Engine Mounted	0/0	0	\$0.00
12WZJ	EMISSION COMPLIANCE Low NOx Idle Engine, Complies with California Clean Air Regulations; Includes "Certified Clean Idle" Decal located on Driver Door	0/0	0	\$62.00
12XBD	RADIATOR Aluminum; Welded, Front to Back CrossFlow System, 1292 SqIn, 1008 SqIn CAC	0/0	0	\$0.00
12XBR	BLOCK HEATER, ENGINE {Phillips} 120V/1150W	0/0	0	\$89.00
13GKM	TRANSMISSION, MANUAL {Fuller RTLO(F)-18918B} 18-Speed Manual, with Double Overdrive & Double-Lo, Internal Lube Oil Pump and Air Shift	83/45	128	\$6,245.00
13WAS	CLUTCH HOUSING Aluminum; Available with 1350 to 2050 lb-ft Capacity Fuller Transmissions	-36/-17	-53	\$57.00
13WGJ	OIL COOLER MANUAL TRANSMISSION Water to Oil Type Included in Radiator End Tank (REQUIRES TRANSMISSION LUBE PUMP)	0/0	0	\$0.00
13WLX	TRANSMISSION OIL {EmGard 40W} Synthetic; 22 thru 33.99 Pints	0/0	0	\$153.00
13XAR	PTO LOCATION Bottom of Transmission	0/0	0	\$0.00
14GVR	AXLE, REAR, TANDEM {Meritor MT-40-14X-4DER} Single Reduction, 40,000-lb Capacity, w/.433"(11mm) Wall Housing Thickness, Driver Controlled Locking Differential in Rear-Rear Axle, R Wheel Ends . Gear Ratio: 4.33	0/1901	1901	\$8,242.00

<u>Code</u>	<u>Description</u>	<u>F/R Wt</u> (lbs)	<u>Tot Wt</u> (lbs)	<u>List</u> (US DOLLAR)
14UPL	SUSPENSION, REAR, AIR, TANDEM {Hendrickson PRIMAAAX EX} 46,000-lb Capacity, 55" Axle Spacing, 10.5" Ride Height, with Shock Absorbers	0/728	728	\$7,167.00
14WMJ	AXLE, REAR, LUBE {EmGard FE-75W-90} Synthetic Oil; 50 thru 64.99 Pints	0/0	0	\$364.00
15DYP	DEF TANK 9.5 U.S. Gal. 35.9L Capacity, Frame Mounted Outside Left Rail, Under Cab	0/0	0	\$0.00
15LKU	FUEL/WATER SEPARATOR {Racor} Fuel Pre-Filter and Filter Base, Includes Water-In-Fuel Sensor	0/0	0	\$0.00
15LNK	LOCATION FUEL/WATER SEPARATOR Mounted Above Right Rail, Back of Cab	0/0	0	\$50.00
15SJR	FUEL TANK Top Draw, Non-Polished Aluminum, 26" Dia, 100 US Gal (379L), Mounted Left Side, Under Cab	25/49	74	\$298.00
16030	CAB Conventional	0/0	0	\$0.00
16BAM	AIR CONDITIONER with Integral Heater & Defroster	51/5	56	\$1,187.00
16GDC	GAUGE CLUSTER Base Level; English with English Speedometer and Tachometer, for Air Brake Chassis, Includes Engine Coolant Temperature, Primary and Secondary Air Pressure, Fuel and DEF Gauges, Oil Pressure Gauge, Includes 3 Inch Monochromatic Text Display	0/0	0	\$0.00
16HKT	IP CLUSTER DISPLAY On Board Diagnostics Display of Fault Codes in Gauge Cluster	0/0	0	\$0.00
16JNT	SEAT, DRIVER {National 2000} Air Suspension, High Back with Integral Headrest, Vinyl, Isolator, 1 Chamber Lumbar, with 2 Position Front Cushion Adjust, -3 to +14 Degree Angle Back Adjust	0/0	0	\$0.00
16LUM	SEAT, PASSENGER {National} Non Suspension, High Back with Integral Headrest, Vinyl, with Fixed Back, with Under Seat Storage	23/18	41	\$518.00
16SEE	GRAB HANDLE Chrome; Towel Bar Type with Anti-Slip Rubber Inserts; for Cab Entry Mounted Left Side Only at "B" Pillar	3/0	3	\$118.00
16SNP	MIRRORS (2) Power Adjust, Thermostatically Controlled Heated Heads, Black Heads, Brackets and Arms, 7.55" x 14.1" Flat Glass, 7.48" x 6.77" Convex Glass Both Sides	0/0	0	\$321.00
16VKB	CAB INTERIOR TRIM Classic, for Day Cab	0/0	0	\$0.00
	<u>Includes</u>			
	: CONSOLE, OVERHEAD Molded Plastic with Dual Storage Pockets, Retainer Nets and CB Radio Pocket; Located Above Driver and Passenger			
	: DOME LIGHT, CAB Door Activated and Push On-Off at Light Lens, Timed Theater Dimming, Integral to Overhead Console, Center Mounted			
	: SUN VISOR (2) Padded Vinyl; 2 Moveable (Front-to-Side) Primary Visors, Driver Side with Toll Ticket Strap			
16WJU	WINDOW, POWER (2) and Power Door Locks, Left and Right Doors, Includes Express Down Feature	5/0	5	\$367.00

<u>Code</u>	<u>Description</u>	<u>F/R Wt</u> (lbs)	<u>Tot Wt</u> (lbs)	<u>List</u> (US DOLLAR)
16WSK	CAB REAR SUSPENSION Air Bag Type	0/0	0	\$0.00
16XJP	INSTRUMENT PANEL Wing Panel	0/0	0	\$333.00
16XWD	SUNSHADE, EXTERIOR Aerodynamic, Painted Roof Color; Includes Integral Clearance/Marker Lights	14/3	17	\$253.00
16XXC	COWL TRAY LID	8/2	10	\$200.00
16ZBT	ACCESS, CAB Steel, Driver & Passenger Sides, Two Steps Per Door, for use with Regular and Extended Cabs	0/0	0	\$0.00
27DUR	WHEELS, FRONT {Accuride 41730} DISC; 22.5x9.00 Rims, Standard Polish Aluminum, 10-Stud, 285.75mm BC, Hub- Piloted, Flanged Nut, with Steel Hubs	-18/0	-18	\$777.00
28DTT	WHEELS, REAR {Accuride 28828} DUAL DISC; 22.5x8.25 Rims, Powder Coat Steel, 2-Hand Hole, 10-Stud, 285.75mm BC, Hub-Piloted, Flanged Nut, with .472" Thick Increased Capacity Disc and with Steel Hubs	0/96	96	\$462.00
60AKG	BDY INTG, PTO ACCOMMODATION for (3) Latched Rocker Switches, (1) PTO Switch, (2) Generic Switches to Control (3) 30 amp relays, with Programmable Interlocks, for Body Builder Hook up in the Engine Compartment Left Side, Recommended for Automatic Transmissions	0/0	0	\$148.00
7382138133	(8) TIRE, REAR 11R22.5 Load Range H ARMOR MAX MSD (GOODYEAR), 493 rev/mile, 68 MPH, Drive	0/160	160	\$1,136.00
7382155419	(2) TIRE, FRONT 12R22.5 Load Range H HSC1 (CONTINENTAL), 482 rev/mile, 75 MPH, All-Position	34/0	34	\$430.00
810000	FIFTH WHEEL LOCATION On Rear Axle Centerline	0/0	0	\$0.00
<b>Total of Product Features</b>				<b>\$210,163.00</b>
Cab schematic 100WM				
Location 1: 9219, Winter White (Std)				
Chassis schematic N/A				
<b>Services Section:</b>				
40127	WARRANTY Standard for HV513, HV613 Models, Effective with Vehicles Built July 1, 2017 or Later, CTS-2030A	0/0	0	\$0.00
40PKA	SRV CONTRACT, EXT VEH COVERAGE {Navistar} To 36- Month/200,000 Miles (320,000 km), Excludes Extended Warranty for Engine and Transmission, for Rear Axle Rating of 52,000 lbs or less	0/0	0	\$6,000.00
<b>Total of Service Features</b>				<b>\$6,000.00</b>
<b>Total Component Weight:</b>		<b>8925/8514</b>	<b>17439</b>	
<b>Total List Price Including Options:</b>				<b>\$216,163.00</b>

<u>Code</u>	<u>Description</u>	<u>F/R Wt</u> (lbs)	<u>Tot Wt</u> (lbs)	<u>List</u> (US DOLLAR)
1	Install new head rack w/ window & center tool box. Install(2) frame steps and deck cat walk. Install (2) LED beacon lights	0/0	0	\$4,320.00
	<b>Total Body Allied:</b>	<b>0/0</b>	<b>0</b>	<b>\$4,320.00</b>
	Raw Material Surcharge	0/0	0	\$1,150.00
	<b>Total Goods Purchased:</b>	<b>0/0</b>	<b>0</b>	<b>\$1,150.00</b>

The weight calculations included in this proposal are an estimate of future vehicle weight. The actual weight as manufactured may be different from the estimated weight. Navistar, Inc. shall not be liable for any consequences resulting from any differences between the estimated weight of a vehicle and the actual weight.

<u>Description</u>	<u>(US DOLLAR)</u>	<u>Price</u>
Factory List Prices:		
Product Items	\$210,163.00	
Service Items	\$6,000.00	
Total Factory List Price Including Options:		\$216,163.00
Total Goods Purchased:		\$1,150.00
Freight	\$2,250.00	
Total Freight:		\$2,250.00
Total Factory List Price Including Freight:		\$219,563.00
Less Customer Allowance:		(\$104,973.18)
Total Vehicle Price:		\$114,589.82
Total Body/Allied Equipment:		\$4,320.00
Total Sale Price:		\$118,909.82
Total Per Vehicle Sales Price:		\$118,909.82
Net Sales Price:		\$118,909.82

Please feel free to contact me regarding these specifications should your interests or needs change. I am confident you will be pleased with the quality and service of an International vehicle.

**Approved by Seller:**

**Accepted by Purchaser:**

\_\_\_\_\_  
Official Title and Date

\_\_\_\_\_  
Firm or Business Name

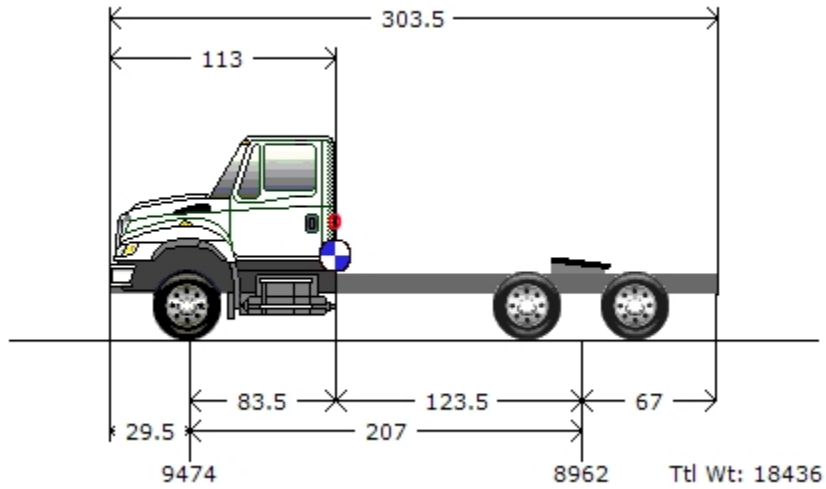
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Authorized Signature

\_\_\_\_\_  
Authorized Signature and Date

**This proposal is not binding upon the seller without Seller's Authorized Signature**

\_\_\_\_\_  
Official Title and Date

**The TOPS FET calculation is an estimate for reference purposes only. The seller or retailer is responsible for calculating and reporting/paying appropriate FET to the IRS.**



Graphics are provided as visual aids only and are not intended to represent the actual scale, shape, or color of the truck or its components. All weights are represented in lbs.

Truck			Body/Trailer			Chassis/Empty Weights	
Bumper to Axle	(BA)	29.5	Body Length	(BL)	N/A	Tractor Front Axle:	8,925
Wheelbase	(WB)	207.00				Tractor Rear Axle:	8,514
Axle to Frame	(AF)	67.00					
Axle to Back Cab	(ABC)	83.5					
Cab to Axle	(CA)	123.5					
Usable CA		123.5					
CA Reduction Adjustment		0.00					
Fuel-Diesel(Gals)		100					
DEF(Gals)		10					

Before the Cab			Cab			Payloads			Body			After the Body		
#	Weight	CG	#	Weight	CG	#	Weight	CG	#	Weight	CG	#	Weight	CG
						1	0	0						

Loads	
Payload Weight:	0
Driver:	200
Fuel-Diesel(Lbs):	710
DEF(Lbs):	87

Weight Distribution	
Total Front Axle:	9,474
Total Rear Axle:	8,962
Total Weight:	18,436

Weights and clearances in this proposal are estimates only. Navistar, Inc. is not liable for any consequences resulting from any differences between the estimated weights and clearances and the actual manufactured weights and clearances.



**Weight Distribution**

All weights are represented in lbs.

	<b>Truck</b>		
	Front	Rear	Total
<b><u>Chassis Weight</u></b>			
Chassis Weight:	8,925	8,514	<b>17,439</b>
Fuel:	355	355	<b>710</b>
DEF:	44	43	<b>87</b>
<b>(Curb Weight):</b>	<b>9,324</b>	<b>8,912</b>	<b>18,236</b>

**Loads**

Payloads:	0	0	<b>0</b>
Driver:	150	50	<b>200</b>
<b>Axle Totals (Gross Weight):</b>	<b>9,474</b>	<b>8,962</b>	<b>18,436</b>

**Weight Ratings**

	<b>Truck</b>	
	Front	Rear
Axle(axle capacity)	16,000	40,000
Tire(tire capacity)	14,780	48,040
Suspension(suspension capacity)	16,000	46,000
Spring:	0	
Fed Bridge Law (axle spread):	20,000	34,000 (55")

<b>Wheel Combination</b>	<b>Load</b>	<b>Limit</b>
1 - 3	18,436	50,000

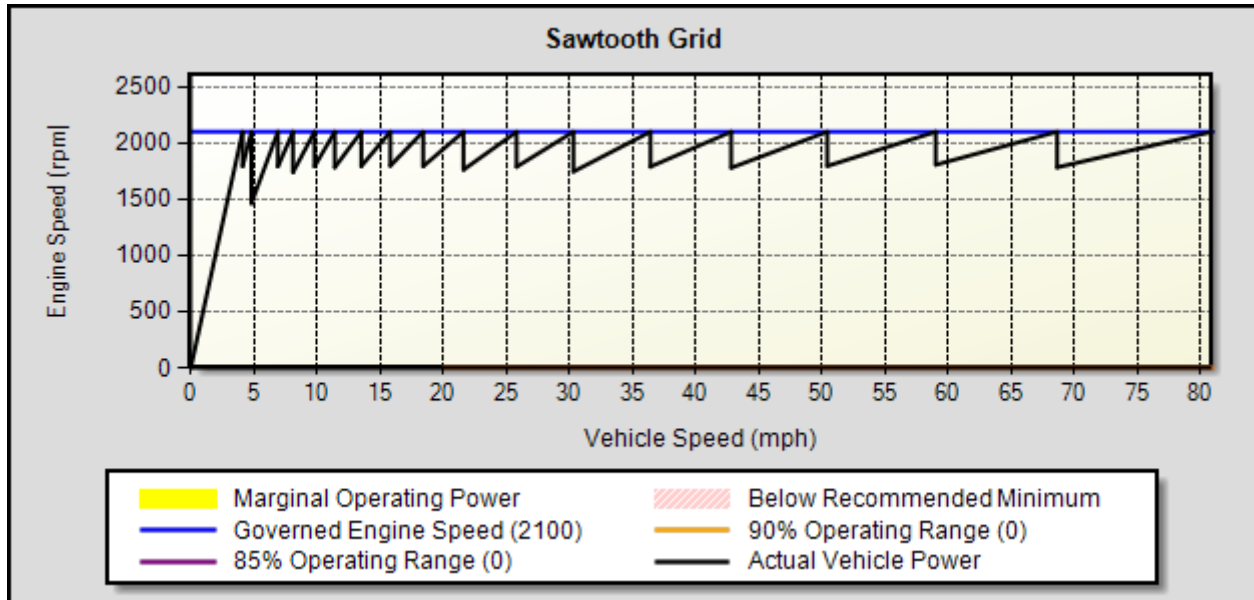
Federal Total Vehicle Weight Limit: 80,000

Maximum Gross Vehicle Weight Rating (GVWR) 54,780 - Gross Vehicle Weight(GVW) 18,436 = 36,344 Reserves

**Weight Summary**

\* Distributed weights are within capacity limits

ENGINE/TRANSMISSION MATCHING



Sawtooth Details

Gear	Trans Ratio	Upshift Power Avail		Govern Power Avail		Peak Power Comparison			Warn Msg
		Veh Spd (MPH)	Eng Spd (RPM)	Veh Spd (MPH)	Eng Spd (RPM)	Gear Step (%)	85% Range (%)	90% Range (%)	
1	14.40	0.0	0	4.1	2100	17.17	N/A	N/A	@
2	12.29	4.1	1792	4.8	2100	43.57	N/A	N/A	@
3	8.56	4.8	1463	6.9	2100	17.26	N/A	N/A	
4	7.30	6.9	1791	8.1	2100	20.66	N/A	N/A	
5	6.05	8.1	1740	9.8	2100	17.25	N/A	N/A	
6	5.16	9.8	1791	11.4	2100	17.81	N/A	N/A	
7	4.38	11.4	1783	13.5	2100	17.11	N/A	N/A	
8	3.74	13.5	1793	15.8	2100	16.88	N/A	N/A	
9	3.20	15.8	1797	18.4	2100	17.22	N/A	N/A	
10	2.73	18.4	1792	21.6	2100	19.21	N/A	N/A	
11	2.29	21.6	1762	25.8	2100	17.44	N/A	N/A	
12	1.95	25.8	1788	30.3	2100	20.37	N/A	N/A	
13	1.62	30.3	1745	36.4	2100	17.39	N/A	N/A	
14	1.38	36.4	1789	42.8	2100	17.95	N/A	N/A	
15	1.17	42.8	1780	50.4	2100	17.00	N/A	N/A	
16	1.00	50.4	1795	59.0	2100	16.28	N/A	N/A	
17	0.86	59.0	1806	68.6	2100	17.81	N/A	N/A	
18	0.73	68.6	1783	80.9	2100	0.00	N/A	N/A	

@ - WHEELSLIP CAN OCCUR AT THE GRADE SHOWN. THE VEHICLE IS CAPABLE OF INCREASED GRADEABILITY IF MORE WEIGHT IS PLACED ON THE DRIVE AXLES.

## STEADY STATE PERFORMANCE

Performance Results	Gear	Veh Spd (mph)	Eng Spd (rpm)	Fuel Econ (mpg)	Grade (%)	Notes
LEVEL ROAD MAXIMUM SPEED	18	77.1	2002	3.71	0.00	
HI GEAR SPEED @ RATED RPM	----	----	----	----	----	
55.0 MPH STEADY-STATE	18	55.0	1428	5.59	1.27	
TYPICAL OPERATING SPEED	18	60.0	1558	5.16	1.05	- Calculated Grade Ability/Fuel Economy

VEHICLE ORDER CODING ERRORS MAY RESULT IF THE "LEVEL ROAD MAX SPEED" VALUE EXCEEDS THE "HI GEAR SPEED @ RATED RPM" AND IS USED AS THE ENGINE PROGRAMMABLE VEHICLE SPEED LIMIT.

IF THE RESULTS CONTAIN "----", VEHICLE CANNOT ATTAIN THAT SPEED.

IF THE RESULTS CONTAIN "\*\*\*\*\*", THE ENGINE USED DOES NOT HAVE A FUEL MAP. FUEL ECONOMY CANNOT BE PREDICTED.

**Recommendations / General Information**

IDLE FUEL RATE : 0.54 GALS/HR @ 600.0 RPM

**Fuel Economy Route: Normal Route - City, Suburban, and Highway**

Key Fuel Economy Information	City	Suburban	Highway	Notes
MILES PER GALLON	2.89	4.45	5.09	
AVERAGE MPH	17.7	38.6	54.5	
MISSION MINUTES	31.87	53.63	173.84	

IF THE RESULTS CONTAIN "\*\*\*\*\*", THE ENGINE USED DOES NOT HAVE A FUEL MAP. FUEL ECONOMY CANNOT BE PREDICTED.

## GRADEABILITY PERFORMANCE

Grade Ability Table

Gear	Trans Ratio	Gear Step	Veh Spd (mph)	Eng Spd (rpm)	Whl Pwr (hp)	Grade (%)	Warn Msg	Start Grade (%)	Notes
1	14.40	17.17	1.6	800	100.06	19.83	@	15.61	- Calculated Start Ability
			2.0	1000	125.07	19.83	@		
			4.1	2100	262.68	19.83	@		
2	12.29	43.57	1.8	800	117.23	19.83	@	11.70	
			2.3	1000	146.55	19.83	@		
			4.1	1792	262.68	19.83	@		
3	8.56	17.26	4.8	2100	307.79	19.83	@	4.90	
			2.6	800	128.65	14.90	@		
			3.3	1000	210.41	19.83	@		
4	7.30	20.66	6.9	2100	345.74	15.27	@	2.62	
			3.1	800	129.02	12.62	@		
			3.9	1000	246.74	19.83	@		
5	6.05	17.25	6.9	1791	431.15	19.31	@	0.36	
			8.1	2100	346.63	12.92	@		
			3.7	800	129.36	10.36	@		
6	5.16	17.81	4.6	1000	293.39	19.52	@		
			8.1	1740	430.63	16.27	@		
			9.8	2100	347.45	10.60	@		
7	4.38	17.11	5.4	1000	293.99	16.51	@		
			9.8	1791	433.13	13.41	@		
			11.4	2100	347.96	8.95	@		
8	3.74	16.88	6.4	1000	294.48	13.90	@		
			11.4	1783	433.51	11.32	@		
			13.5	2100	348.32	7.50	@		
9	3.20	17.22	7.5	1000	294.84	11.76	@		
			13.5	1793	434.24	9.51	@		
			15.8	2100	348.52	6.30	@		
10	2.73	19.21	8.8	1000	295.10	9.97	@		
			15.8	1797	434.59	8.02	@		
			18.4	2100	348.55	5.29	@		
11	2.29	17.44	18.4	2100	348.55	6.75	@		
			21.6	2100	348.42	4.39	@		
			21.6	1762	433.56	5.63	@		
12	1.95	20.37	25.8	2100	348.06	3.54	@		
			25.8	1788	434.06	4.59	@		
			30.3	2100	347.49	2.87	@		
13	1.62	17.39	30.3	1745	432.09	3.74	@		
			36.4	2100	346.48	2.19	@		
			36.4	1789	432.58	2.92	@		
14	1.38	17.95	42.8	2100	345.24	1.65	@		
			42.8	1780	431.11	2.28	@		
			50.5	2100	343.48	1.14	@		
15	1.17	17.00	50.5	1795	435.78	1.71	@		
			57.0	2026	382.87	1.00	@		
			59.0	2100	345.57	0.69	@		
16	1.00	16.28	59.0	1806	426.19	1.12	@		
			61.0	1866	426.97	1.00	@		
			66.0	2019	376.93	0.50	@		
17	0.86	17.81	68.6	2100	336.40	0.19	@		
			60.7	1577	422.85	1.00	@		
			68.6	1783	422.32	0.58	@		
18	0.73	0.00	70.4	1828	423.00	0.50	@		
			60.7	1577	422.85	1.00	@		
			77.1	2003	380.11	0.00	@		

80.9      2100      331.98      -0.36

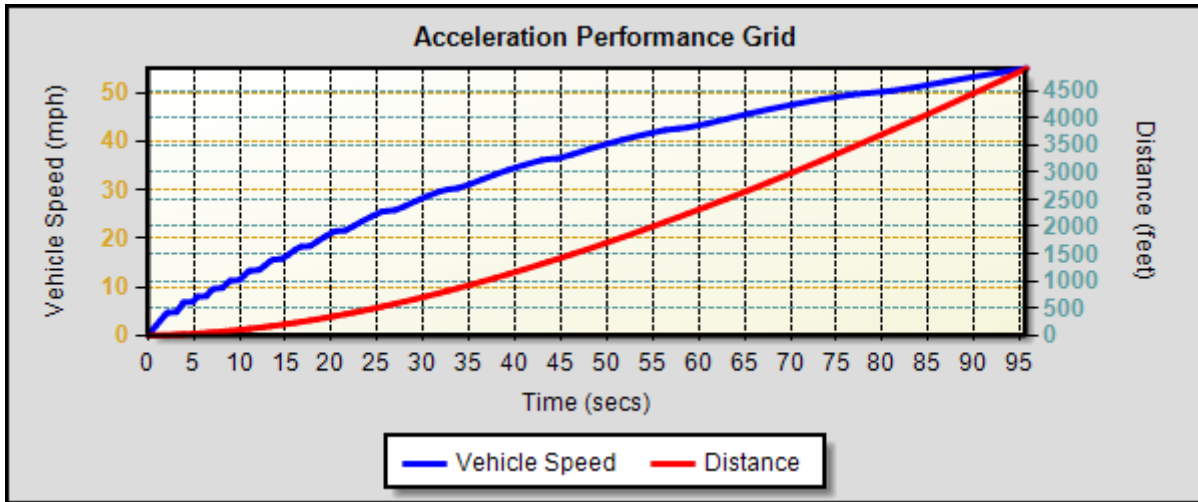
**STARTING / TOP GEAR PERFORMANCE**

<b>Gear</b>	<b>Trans Ratio</b>	<b>Gear Step</b>	<b>Veh Spd (mph)</b>	<b>Eng Spd (rpm)</b>	<b>Whl Pwr (hp)</b>	<b>Grade (%)</b>	<b>Warn Msg</b>	<b>Start Grade (%)</b>	<b>Notes</b>
1	14.40	17.17	1.6		100.06	19.83	@	15.61	- Calculated Start Ability
2	12.29	43.57	1.8		117.23	19.83	@	11.70	
3	8.56	17.26	2.6		128.65	14.90		4.90	
4	7.30	20.66	3.1		129.02	12.62		2.62	
5	6.05	17.25	3.7		129.36	10.36		0.36	

@ - WHEELSLIP CAN OCCUR AT THE GRADE SHOWN. THE VEHICLE IS CAPABLE OF INCREASED GRADEABILITY IF MORE WEIGHT IS PLACED ON THE DRIVE AXLES.

ACCELERATION PERFORMANCE RESULTS

Acceleration Performance Grid



Acceleration Performance: TIME TO ACCELERATE ON A GRADE TO 55.0 (MPH) IS 95.73 (SECS)

Acceleration Performance Details

Gear	Time (secs)	Distance (feet)	Speed (mph)	Notes
2	0.44	0.3	1.0	
	0.89	1.3	2.0	
	1.33	2.9	3.0	
	1.78	5.2	4.0	
	2.14	7.5	4.8	
3	3.14	14.5	4.7	
	3.48	17.1	5.7	
	3.84	20.5	6.7	
	3.92	21.2	6.9	
4	4.92	31.2	6.8	
	5.27	35.0	7.8	
	5.40	36.5	8.1	
5	6.40	48.3	8.0	
	6.77	52.9	9.0	
	7.13	57.8	9.8	
6	8.13	72.1	9.6	
	8.56	78.4	10.6	
	8.98	85.3	11.4	
7	9.98	101.9	11.3	
	10.46	110.2	12.3	
	11.03	121.0	13.3	
8	11.14	123.1	13.5	
	12.14	142.8	13.3	
	12.69	154.0	14.3	
	13.33	167.8	15.3	
9	13.66	175.4	15.8	
	14.66	198.4	15.6	
	15.29	213.5	16.6	
	16.01	231.4	17.6	
10	16.69	249.5	18.4	
	17.69	276.4	18.3	
	18.43	296.8	19.3	

Gear	Time (secs)	Distance (feet)	Speed (mph)	Notes
	19.24	320.4	20.3	
	20.18	349.2	21.3	
	20.53	359.9	21.6	
	21.53	391.5	21.5	
11	22.40	419.7	22.5	
	23.32	450.8	23.5	
	24.34	486.5	24.5	
	25.52	529.9	25.5	
	25.92	544.8	25.8	
	26.92	582.5	25.6	
12	27.98	623.2	26.6	
	29.10	667.6	27.6	
	30.32	718.0	28.6	
	31.71	777.6	29.6	
	32.74	822.7	30.3	
	33.74	866.9	30.1	
13	35.03	924.8	31.1	
	36.37	986.9	32.1	
	37.77	1053.7	33.1	
	39.27	1128.0	34.1	
	40.96	1213.8	35.1	
	42.89	1314.4	36.1	
	43.59	1351.7	36.4	
	44.59	1405.0	36.3	
14	46.23	1493.6	37.3	
	47.94	1587.9	38.3	
	49.73	1689.9	39.3	
	51.69	1804.0	40.3	
	53.88	1934.7	41.3	
	56.35	2086.5	42.3	
	57.78	2175.2	42.8	
	58.78	2237.8	42.6	
15	60.88	2370.4	43.6	
	63.05	2511.0	44.6	
	65.31	2660.1	45.6	
	67.71	2822.6	46.6	
	70.36	3005.7	47.6	
	73.33	3214.8	48.6	
	76.70	3457.3	49.6	
	80.08	3705.1	50.4	
	81.08	3779.0	50.2	
16	83.87	3986.4	51.2	
	86.76	4206.3	52.2	
	89.78	4439.9	53.2	
	93.01	4693.7	54.2	
	95.73	4911.7	55.0	

## REQUIRED TCAPE INFORMATION

TCAPE Factors For Vehicle

Selected Rear Axle Gear Ratio(s):	4.33
Engine Fan Type:	VISCOUS
Parked PTO:	NO
Enroute PTO:	NO
ID Wheel Slip Conditions:	Yes
Road Governor/Cruise Ctrl:	No
Road Surface Type:	TYPICAL
Fuel Economy Route:	Normal Route - City, Suburban, and Highway
Vehicle Vocation:	MODERATE ON/OFF HIGHWAY
Acceleration Grade (%):	0.0
Frontal Area (FT <sup>2</sup> ):	108
Speed Limit on Route (MPH):	61.0
Relative Drag Coefficient:	105
Alternator (A):	40
Steering Gear (HP):	2.60
Air Conditioner (HP):	3.20
Vehicle Width (IN):	96
Acceleration Start Gear:	2
Vehicle Height (IN):	162
Weight on Drive Axle (LBF):	34000
Acceleration Vehicle Spd (MPH):	55.0
Air Compressor (HP):	2.20
TIRE, FRONT	2 - RADIAL NORMAL
TIRE, REAR	8 - RADIAL NORMAL

TCAPE Factors For Trailer

Cab Trailer Space (IN):	31
Tires On Vehicle:Quantity:	18 - RADIAL NORMAL

Components

0002AUR	AXLE, FRONT NON-DRIVING {Meritor MFS-16-133A} Wide Track, I-Beam Type, 16,000-lb Capacity
0004SPM	AIR COMPRESSOR {Bendix BA-921 Head Unload} 15.9 CFM Capacity, Single Cylinder
0005PTB	STEERING GEAR (2) {Sheppard M100/M80} Dual Power
0008GXJ	ALTERNATOR {Leece-Neville AVI160P2013} Brush Type; 12 Volt 160 Amp. Capacity, Pad Mount
0012BED	ENGINE, DIESEL {International A26} EPA 2017, 475HP @ 1700 RPM, 1700 lb-ft Torque @ 1000 RPM, 2100 RPM Governed Speed, 475 Peak HP (Max)
0012THT	FAN DRIVE {Horton Drivemaster} Direct Drive Type, Two Speed with Residual Torque Device for Disengaged Fan Speed
0013GKM	TRANSMISSION, MANUAL {Fuller RTLO(F)-18918B} 18-Speed Manual, with Double Overdrive & Double-Lo, Internal Lube Oil Pump and Air Shift
0014GVR	AXLE, REAR, TANDEM {Meritor MT-40-14X-4DER} Single Reduction, 40,000-lb Capacity, w/.433"(11mm) Wall Housing Thickness, Driver Controlled Locking Differential in Rear-Rear Axle, R Wheel Ends
0016030	CAB Conventional
0016BAM	AIR CONDITIONER with Integral Heater & Defroster
0016XWD	SUNSHADE, EXTERIOR Aerodynamic, Painted Roof Color; Includes Integral Clearance/Marker Lights
07382138133	TIRE, REAR 11R22.5 Load Range H ARMOR MAX MSD (GOODYEAR), 493 rev/mile, 68 MPH, Drive 11R22.5 Load Range H ARMOR MAX MSD (GOODYEAR), 493 rev/mile, 68 MPH, Drive
07382155419	TIRE, FRONT 12R22.5 Load Range H HSC1 (CONTINENTAL), 482 rev/mile, 75 MPH, All-Position 12R22.5 Load Range H HSC1 (CONTINENTAL), 482 rev/mile, 75 MPH, All-Position

**TCAPE HAS BEEN DESIGNED TO GIVE ECONOMY AND PERFORMANCE PREDICTIONS WHICH HAVE BEEN SHOWN TO BE TYPICAL FOR MOST OPERATIONS. HOWEVER, DUE TO OPERATING CONDITIONS, DRIVER INFLUENCES, AND OTHER FACTORS, YOUR RESULTS MAY VARY FROM THOSE PREDICTED. ALSO, BECAUSE OF FUEL MAPPING PROCEDURES USED BY VARIOUS ENGINE MANUFACTURERS, COMPARISONS OF FUEL ECONOMY RESULTS FOR DIFFERENT BRANDS OF ENGINES MAY VARY FROM THOSE SHOWN.**



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Error creating report. Navistar.ST.TurningRadiusStudy.BL.Classes.TRCalculationException: Turning Radius cannot be calculated.  
Database information used in the calculation process was not found for Tie Rod.<BR>Key information: Model - HV513, Front Axle - 0002AUR , Wheelbase - 207 , Front Tire - 07382155419 , Tire Size - 215R at  
Navistar.ST.TurningRadiusStudy.BL.Components.BLLTRCalculation.performTRCalculation() at  
Navistar.ST.TurningRadiusStudy.BL.Components.BLLTRCalculation.getTRData(TRData inTR) at  
Navistar.ST.TurningRadiusReport.BL.Components.CBLLTurningRadiusReport.GetTRData()