

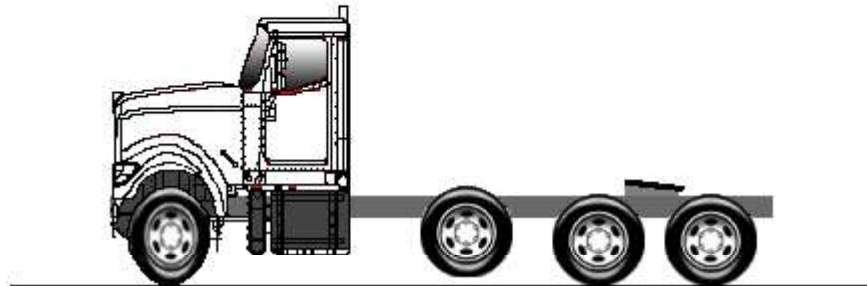
**Prepared For:**

NTA CONTRACTING  
 JASON ASHE  
 14118 SE 35th St.  
 Vancouver, WA 98683-3900  
 (503)775 - 0196  
 Reference ID: 605 X15 18 spd

**Presented By:**

PETERSON TRUCKS, INC  
 Roy Burchett  
 61 NE COLUMBIA BLVD.  
 PORTLAND OR 97211 - 1413  
 (503)285-9300

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**  
**2025 HX520 SFA (HX520)**

<b>AXLE CONFIG:</b>	6X4
<b>APPLICATION:</b>	Logging Tractor
<b>MISSION:</b>	Requested GCWR: 120000. Calc. GCWR: 150000. Calc. GVWR: 84000 Calc. Start / Grade Ability: 14.72% / 1.34% @ 55 MPH Calc. Geared Speed: 83.9 MPH
<b>DIMENSION:</b>	Wheelbase: 242.00, CA: 152.00, Axle to Frame: 59.00
<b>ENGINE, DIESEL:</b>	{Cummins X15 605V} Productivity Series, EPA 2024, 605HP @ 1950 RPM, 1850 lb-ft Torque @ 1150 RPM, 2000 RPM Governed Speed, 605 Peak HP (Max)
<b>TRANSMISSION, MANUAL:</b>	{Fuller RTLOF-20918B} 18-Speed Manual, Double Overdrive, Air Shift, Internal Lube Oil Pump
<b>CLUTCH:</b>	{Eaton Fuller Advantage} Self-Adjusting, 15.5" Dia Two-Plate, Cast Angle Spring, Ceramic, 7-Spring Coaxial VCT Plus Damper with Pre-Damper, 2"-10 Tooth Spline, Mechanical Pull Type Control, 6-Button Disc, 2050 lb-ft Torque Capacity
<b>AXLE, FRONT NON-DRIVING:</b>	{Meritor MFS-20-135A} Wide Track, I-Beam Type, with 5" Drop, 20,000-lb Capacity
<b>AXLE, REAR, TANDEM:</b>	{Meritor RT-46-164P} Single Reduction, Standard Width, 46,000-lb Capacity, with Lube Oil Pump, Driver Controlled Locking Differential in Forward-Rear and Rear-Rear Axle, 200 Wheel Ends Gear Ratio: 4.10
<b>CAB:</b>	Conventional, Day Cab
<b>TIRE, FRONT:</b>	(2) 425/65R22.5 Load Range L XZY-3 (MICHELIN), 465 rev/mile, 65 MPH, All-Position
<b>TIRE, REAR:</b>	(8) 12R22.5 Load Range H ARMOR MAX MSD (GOODYEAR), 478 rev/mile, 68 MPH, Drive
<b>SUSPENSION, REAR, AIR, TANDEM:</b>	{Hendrickson PRIMAAX EX} 46,000-lb Capacity, 56" Axle Spacing, 9.0" Ride Height, with Shock Absorbers
<b>PAINT:</b>	Cab schematic 21CLY Location 1: 9219, Winter White (Std) Location 2: 0032, Black (Custom) Chassis schematic N/A

<b>Code</b>	<b>Description</b>
HX52000	Base Chassis, Model HX520 SFA with 242.00 Wheelbase, 152.00 CA, and 59.00 Axle to Frame.
1616	FRAME RAILS WITH TAPERED REAR
1832	DECK PLATE Aluminum, (2) Sections, 15" Wide
1AMS	CROSSMEMBER, FRAME TIE for Heavy Duty
1AND	AXLE CONFIGURATION {Navistar} 6x4
	<u>Notes</u>
	: Pricing may change if axle configuration is changed.
1CGD	FRAME RAILS Heat Treated Alloy Steel (120,000 PSI Yield); 12.50" x 3.750" x 0.500" (317.5mm x 95.25mm x 12.7mm); 480.8" (12212mm) Maximum OAL
1LEL	LICENSE PLATE HOLDER 3-Plate, Swing Type, Mounted Below Front Bumper
1LPH	BUMPER, FRONT "TEXAS Style", Aluminum, Stainless Steel Clad
1VBC	TOW PIN, FRONT Heavy Duty; 150,000-lb. Total Capacity
1WXD	WHEELBASE RANGE 211" (535cm) Through and Including 256" (650cm)
2AVC	AXLE, FRONT NON-DRIVING {Meritor MFS-20-135A} Wide Track, I-Beam Type, with 5" Drop, 20,000-lb Capacity
3772	SHOCK ABSORBERS, FRONT for Suspensions 20,000-lb Capacity and Above
3ADJ	SUSPENSION, FRONT, SPRING Parabolic Taper Leaf, Shackle Type, 20,000-lb Capacity, Steel Springs 18K Capacity and (2) Rubber Auxiliary Springs 2K Capacity, Less Shock Absorbers
4092	BRAKE SYSTEM, AIR Dual System for Tractor Applications
	<u>Includes</u>
	: BRAKE LINES Color and Size Coded Nylon
	: GLAD HANDS (2) One for Service and One for Emergency; Trailer Hoses from Cab
	: HAND CONTROL VALVE, AIR Mounted in Instrument Panel
	: PARKING BRAKE CONTROL Yellow and Red Knobs, Located on Instrument Panel
	: PARKING BRAKE VALVE Combination Valve for Tractor and Trailer
	: QUICK RELEASE VALVE On Rear Axle for Spring Brake Release: 1 for Forward Rear Axle
	: TRACTOR PROTECTION VALVE
4803	TRAILER HOSES AND CABLES {Phillips} Straight, Rubber Hose, 14' Working Length, Aluminum Glad Hands with Rubber Seals, Lighting Cable with Nylon Plug
4808	HOSE TENDER Slide Bar with Single Spring Bracket, Bar Extended 4" from Cab
4AZY	AIR BRAKE ABS {Bendix AntiLock Brake System} 6-Channel (6 Sensor/6 Modulator) Electronic Stability Program, with Automatic Traction Control
4EDM	AIR DRYER {Bendix AD-HF} with Heater, Includes Pressure Protection Circuits, Safety Valve, Integral Purge Tank, Governor Pressure Settings 110 psi Cut-In/130 psi Cut-Out, Integrated PuraGuard Coalescing Filtration
4EXR	BRAKE CHAMBERS, REAR AXLE {Bendix EverSure} 30/36 SqIn Spring Brake
4GBM	BRAKE, PARKING Manual Push-Pull Pneumatic Parking Brake
4JDH	BRAKES, AIR CAM, PUSHER AXLE S-Cam; 16.5" x 6.0"; Includes 24 Sq.In. Brake Chambers; Furnished with One Pusher Lift Axle
4LGG	SLACK ADJUSTERS, REAR {Gunite} Automatic
4SPA	AIR COMPRESSOR {Cummins} 18.7 CFM
4VGN	AIR TANK Painted Aluminum, with Straight Thread O-Ring Ports

<u>Code</u>	<u>Description</u>
4VKC	AIR DRYER LOCATION Mounted Inside Left Rail, Back of Cab
4WXR	DRAIN VALVE (2) {Berg} with Pull Chains, for Air Tanks
4XCC	AIR TANK LOCATION (2) Stacked, Outside Right Rail, Back of Cab, Perpendicular to Rail
4XCR	BRAKES, FRONT {Meritor EX+H} Air Disc Type, Size 22.5", 23,000-lb Capacity
4XDS	BRAKES, REAR {Meritor 16.5X8.625 Q-PLUS CAST} Air S-Cam Type, Cast Spider, Fabricated Shoe, Double Anchor Pin, Size 16.5" X 8.625", 23,000-lb Capacity per Axle
4XDY	BRAKE CHAMBERS, FRONT AXLE 24 Sqn, for Air Disc Brakes
4XEE	PARK BRAKE CHAMBERS, ADDITIONAL (2) Spring Brake Type
5710	STEERING COLUMN Tilting and Telescoping
5CBE	STEERING WHEEL 4-Spoke; 18" Dia., Black Leather Wrapped
5PUB	STEERING GEAR (2) {Sheppard M100/HD94} Dual Power
6DGU	DRIVELINE SYSTEM {Dana Spicer} SPL250 Main Driveline with SPL170 Interaxle Shaft, for 6x4
7BES	AFTERTREATMENT COVER Polished Aluminum
7DXW	EXHAUST SYSTEM Horizontal Aftertreatment System, Frame Mounted Right Side Under Cab, for Dual Vertical Tail Pipes, Cab Mounted, Left Side Pipe is Non-Functional/Aesthetic Only
7MAY	TAIL PIPE (2) Turnback Type, Chrome, 6" Diameter Belled Down to 5" at Muffler
7SAP	ENGINE COMPRESSION BRAKE {Cummins} Interbrake For Cummins Signature/ISX/X15 Engines; Furnished with Engine
7WDL	MUFFLER/TAIL PIPE GUARD (2) Bright Stainless Steel
7WDM	EXHAUST HEIGHT 10'
7WZX	SWITCH, FOR EXHAUST 3 Position, Momentary, Lighted Momentary, ON/CANCEL, Center Stable, INHIBIT REGEN, Mounted in IP Inhibits Diesel Particulate Filter Regeneration When Switch is Moved to ON While Engine is Running, Resets When Ignition is Turned OFF
8000	ELECTRICAL SYSTEM 12-Volt, Standard Equipment
	<u>Includes</u>
	: HAZARD SWITCH Push On/Push Off, Located on Instrument Panel to Right of Steering Wheel
	: HEADLIGHT DIMMER SWITCH Integral with Turn Signal Lever
	: PARKING LIGHT Integral with Front Turn Signal and Rear Tail Light
	: STARTER SWITCH Electric, Key Operated
	: STOP, TURN, TAIL & B/U LIGHTS Dual, Rear, Combination with Reflector
	: WINDSHIELD WIPER SWITCH 2-Speed with Wash and Intermittent Feature (5 Pre-Set Delays), Integral with Turn Signal Lever
	: WINDSHIELD WIPERS Single Motor, Electric, Cowl Mounted
8541	HORN, ELECTRIC (2) Disc Style
8899	JUMP START STUD (2) Remote Mounted
8ACE	BEACON LIGHT WIRING for (2) Customer Installed Beacons, Includes 2-Way Switch
8GXJ	ALTERNATOR {Leece-Neville AVI160P2013} Brush Type, 12 Volt, 160 Amp Capacity, Pad Mount
8MMZ	BATTERY SYSTEM {Fleetrite AGM-GP31} Maintenance-Free, (3) AGM 12-Volt 2475CCA Total, Top Threaded Stud
8RBZ	SPEAKER, AUXILIARY, CB RADIO with Jack for CB; Mounted Left Side Above Driver's Door

<u>Code</u>	<u>Description</u>
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
8RMZ	SPEAKERS (2) 6.5" Dual Cone Mounted in Both Doors, (2) 5.25" Dual Cone Mounted in Both B-Pillars
8RNC	CB RADIO Accommodation Package, Header Mounted, Feeds from Accessory Side of Ignition Switch, Includes Power Source, Two Antennas and Antenna Bases with Wiring on Both Side Mirrors
8RPB	RADIO, AUXILIARY CONTROLS Mounted in Steering Wheel, Radio Function Control Switch, Includes Volume Up/Down, Mute, Forward/Back and Bluetooth Answer/Disconnect
8RPR	ANTENNA for Increased Roof Clearance Applications
8RPS	RADIO AM/FM/WB/Clock/Bluetooth/USB Input/Auxiliary Input
8TKC	STOP, TURN, TAIL & B/U LIGHTS {Truck Lite} Super 44, with LED Lights for Stop, Turn and Tail Lights, Truck Lite Super 40 Lamps for Backup Lights, Less Power Module, Includes Incandescent License Plate Light, with Separate Rear Reflectors, Less Rubber Mount
8TMN	TRAILER CONNECTION SOCKET {Phillips STA-DRY} (2) 7-Way, One Equipped with ABS Feed Mounted at Back of Cab, One Mounted at Rear of Frame
8WDG	BACK-UP ALARM {Preco 1059} Electronic; Solid State, Dual Function, 112 dBA
8WEZ	TURN SIGNAL SWITCH Self-Canceling
8WHJ	HORN, AIR (2) Rectangular Bell, Chrome
8WJC	FLOOR LIGHT Red; Mounted in Lower Center Console, Switch in Cluster Right Switch Pack
8WPZ	TEST EXTERIOR LIGHTS Pre-Trip Inspection will Cycle all Exterior Lamps Except Back-up Lights
8WRB	HEADLIGHTS ON W/WIPERS Headlights Will Automatically Turn on if Windshield Wipers are turned on
8WXB	HEADLIGHT WARNING BUZZER Sounds When Head Light Switch is on and Ignition Switch is in "Off" Position
8WXG	STARTING MOTOR {Mitsubishi Electric Automotive America 105P} 12-Volt, with Soft-Start
8XAH	CIRCUIT BREAKERS Manual-Reset (Main Panel) SAE Type III with Trip Indicators, Replaces All Fuses
8XBK	SWITCH, AUXILIARY Switch 40 amp Circuit for Customer Use; Includes Wiring Connection at Power Distribution Center (PDC) and Control in Cab
8XDZ	BATTERY BOX Steel, 2-3 Battery Capacity, Mounted Inside the Cab, Under Passenger Seat
8XGN	LIGHT, WORK (2) LED, Pedestal Mounted, Back of Cab in Upper Cab Corners, with Switch on Instrument Panel
8XHX	SWITCH, MARKER INTERRUPT for Marker Lights and Headlights, Located in Steering Wheel
8XJH	FOG LIGHTS (2) Clear Lens, LED, Rectangular, with White Light Source
8XKC	HEADLIGHTS Halogen, with Daytime Running Lights, Automatic Twilight Controlled
8XKG	DOME LIGHT, CAB with Red Reading Lights
8XNB	BATTERY DISCONNECT SWITCH 300 Amp, Disconnects Power to Power Distribution Center (PDC), Does Not Disconnect Charging Circuits, Locks with Padlock, Cab Mounted
8XPK	POWER SOURCE, ADDITIONAL Auxiliary Power Outlet (APO) with USB-A Port and USB-C Port, Located in the Instrument Panel
8XPN	USB PORT One USB-A Port and One USB-C Port, Located in Instrument Panel
9585	FENDER EXTENSIONS Rubber
9AAB	LOGOS EXTERIOR Model Badges

<u>Code</u>	<u>Description</u>
9AAE	LOGOS EXTERIOR, ENGINE Badges
9ASE	FRONT END Tilting, Composite
9HCN	GRILLE Chrome Vertical Accent Bars, with Black Mesh
9WAC	BUG SCREEN Mounted Behind Grille
10761	PAINT TYPE Base Coat/Clear Coat, 1-2 Tone
10771	PAINT CLASS Single Custom Color
10AEM	FLEET HEALTH MONITOR REPORTING for 24 Months
10AGB	COMMUNICATIONS MODULE Telematics Device with Over the Air Programming; Includes Five Year Data Plan and International 360
10JPS	FIFTH WHEEL, AIR SLIDE {Holland FW70R936NL00} 36" Severe Duty Slide, 9" Above Top of Frame, Left Hand Release
10NWE	OVER WIDTH IDENTITY Customer Approval, This Combination will Result in Vehicle Width Over 102"
10NZT	SPECIAL RATING, GVWR Limited to 84,000-lb GVWR
10WCY	SAFETY TRIANGLES
10WKL	KEYS - ALL ALIKE, ID I-1604 Compatible with Z-150
10WPU	MUD FLAP HOLDER Spring Loaded, Bright Finish, 45-Degree End, with Red and White Reflective Tape, Less Flaps
10WSX	MUD FLAPS, REAR Black Poly, with International Logo, Less Holders
11MRV	CLUTCH {Eaton Fuller Advantage} Self-Adjusting, 15.5" Dia Two-Plate, Cast Angle Spring, Ceramic, 7-Spring Coaxial VCT Plus Damper with Pre-Damper, 2"-10 Tooth Spline, Mechanical Pull Type Control, 6-Button Disc, 2050 lb-ft Torque Capacity
11WAK	CLUTCH EFFECTS Hydraulic Clutch Actuation System, with Air Assist
12703	ANTI-FREEZE Red, Extended Life Coolant; To -40 Degrees F/ -40 Degrees C, Freeze Protection
12864	BLOCK HEATER, ENGINE {Phillips} 120V/1500W
	<u>Includes</u> : BLOCK HEATER SOCKET Receptacle Type; Mounted below Drivers Door
12EXB	ENGINE, DIESEL {Cummins X15 605V} Productivity Series, EPA 2024, 605HP @ 1950 RPM, 1850 lb-ft Torque @ 1150 RPM, 2000 RPM Governed Speed, 605 Peak HP (Max)
12THT	FAN DRIVE {Horton Drivemaster} Two-Speed Type, Direct Drive, with Residual Torque Device for Disengaged Fan Speed
	<u>Includes</u> : FAN Nylon
12VBA	AIR CLEANER Dual, Polished Stainless Steel, One Mounted on Each Side of Cowl Ahead of The Doors
12VGU	ENGINE CONTROL, REMOTE MOUNTED for X15 Engines
12VJT	EMISSION, CALENDAR YEAR {Cummins X15} EPA, OBD and GHG Certified for Calendar Year 2024
12WBR	FAN OVERRIDE Manual; with Electric Switch on Instrument Panel, (Fan On with Switch On)
12WGA	HOSE CLAMPS, RADIATOR HOSES , Mechanical Type; with Constant-Tension Functionality
12WTA	FAN DRIVE SPECIAL EFFECTS Fan Cooling Ring with Fan Shroud Effects, Engine Mounted

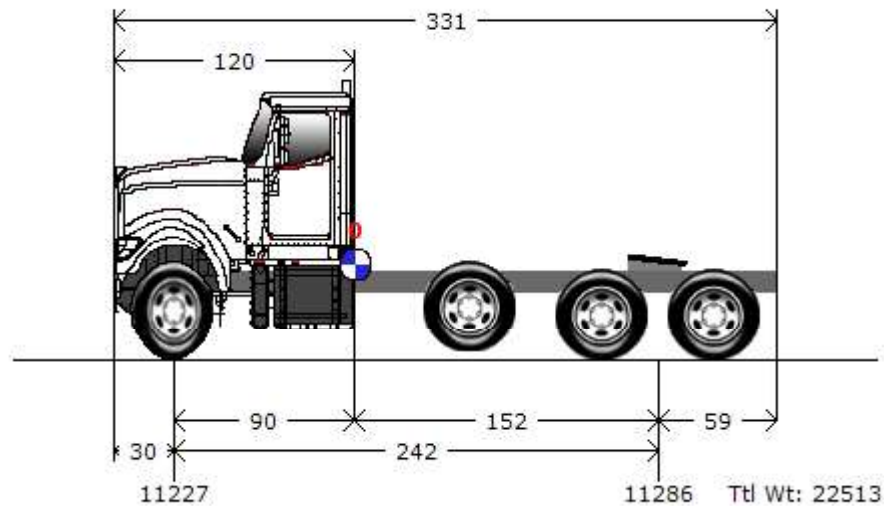
<u>Code</u>	<u>Description</u>
12WVG	EPA IDLE COMPLIANCE Low NOx Idle Engine, Complies with EPA Clean Air Regulations; Includes "Certified Clean Idle" Decal on Hood
12WYZ	RADIATOR DRAIN & FILL FITTING SPECIAL; To Vacuum Out or Fill the Cooling System from the Bottom of Radiator, for Use with Quick-Connect Radiator Drain Tool or Shop Coolant Evacuation-Fill System
12WZE	CARB IDLE COMPLIANCE Does Not Comply with California Clean Air Idle Regulations
12XBC	RADIATOR Aluminum, Welded, Down Flow, Front to Back System, 1325 SqIn, with 806 SqIn Charge Air Cooler  <u>Includes</u> : RADIATOR HOSES Premium, Rubber
12XCS	CARB EMISSION WARR COMPLIANCE Does Not Comply with CARB Emission Warranty
13GYK	TRANSMISSION, MANUAL {Fuller RTLOF-20918B} 18-Speed Manual, Double Overdrive, Air Shift, Internal Lube Oil Pump
13WAS	CLUTCH HOUSING Aluminum; Available with 1350 to 2050 lb-ft Capacity Fuller Transmissions
13WGJ	OIL COOLER, TRANSMISSION Water to Oil Type Included in Radiator End Tank (REQUIRES TRANSMISSION LUBE PUMP)
13WGP	INPUT SHAFT Heavy Duty Roller Bearing; Spline Size 2.00" with 1.18" Pilot, Use with Eaton 13/18 Speed Manual Transmissions, with Transmission Mounted, 6 or 8 bolt PTO's with Up to the Total PTO Output of 500 lb. ft.
13WLX	TRANSMISSION OIL {EmGard 40W} Synthetic; 22 thru 33.99 Pints
13XAA	PTO CONTROL, DASH MOUNTED For Customer Provided PTO; Includes Switch, Electric/Air Solenoid, Piping and Wiring
14862	PDL WARNING BUZZER Power Divider Lock
14899	SUSPENSION AIR CONTROL VALVE Pressure Release Control In Cab
14AJX	SHIELD, TEMPERATURE SENSOR Mounted to Rear Axle
14HRE	AXLE, REAR, TANDEM {Meritor RT-46-164P} Single Reduction, Standard Width, 46,000-lb Capacity, with Lube Oil Pump, Driver Controlled Locking Differential in Forward-Rear and Rear-Rear Axle, 200 Wheel Ends . Gear Ratio: 4.10
14RAR	AXLE, LIFT, CONTROLS for One Lift Axle; Controls Inside and Outside Cab; Includes Lift/Lower Switch Inside Cab on Dash; Pressure Gauge and Pressure Regulator Outside Cab
14UNX	SUSPENSION, REAR, AIR, TANDEM {Hendrickson PRIMAAAX EX} 46,000-lb Capacity, 56" Axle Spacing, 9.0" Ride Height, with Shock Absorbers
14VKR	AXLE SPACING, FIRST PUSHER 66" Ahead of Drive Axle
14WBA	LIFT AXLE ENGR REVIEW Special Quotation to Allow Engineering Review of Lift Axle Configurations
14WBN	DIFF. SWITCH CONTROLS Two Independent Switches for Control Traction Differentials on Tandem Rear Axles, Mounted on Dash
14WBS	TRANSVERSE TORQUE RODS {Clevite} Standard, Transverse Rod Only
14WMK	AXLE, REAR, LUBE {EmGard FE-75W-90} Synthetic Oil; 65 thru 89.99 Pints
14WNB	AXLE, REAR, LIFT, LUBE {EmGard FE-75W-90} Synthetic Oil; 1 thru 10.99 Pints
14WNM	AXLE, PUSHER, LIFT TYPE {Watson & Chalin SL-2065 Tru-Track} 20,000-lb Capacity, One Self-Steer Axle
15BAA	DEF TANK COVER Stainless Steel
15LNA	FUEL HEATER {Cummins} Plumbing for Thermal Recirculation Valve (TRV) Mounted to Cummins X15 Engines, Thermostatically Controlled

<u>Code</u>	<u>Description</u>
15LPU	FUEL/WATER SEPARATOR {Racor 6600} Pre-Filter and Filter Base, Includes Water-in-Fuel Sensor
15SWJ	FUEL TANK Top Draw, Polished Aluminum, 26" Dia, 120 US Gal (454L), Mounted Left Side, Under Cab
15WAJ	FUEL TANK CAP Chrome, Locking Type
15WEY	DEF TANK 10.8 US Gal (41L) Capacity, Frame Mounted Outside Left Rail, Under Cab
16030	CAB Conventional, Day Cab
	<u>Includes</u>
	: CAB REAR SUSPENSION Air
	: CLEARANCE/MARKER LIGHTS (5) LED Roof Mounted
	: COAT HOOK, CAB Located on Rear Wall, Centered Above Rear Window
	: CONSOLE, CENTER Includes Two Cup Holders and One Additional Storage Area
	: CONSOLE, OVERHEAD Molded Plastic with Dual Storage Pockets, Retainer Nets and CB Radio Pocket; Located Above Driver and Passenger
	: COURTESY LIGHT (2) Driver and Passenger Door Mounted
	: DOME LIGHT, CAB Rectangular, Door and Instrument Panel Mounted Switch Activated, Timed Theater Dimming, Center Mounted, Integral to Console
	: FLOOR COVERING Rubber, Black
	: GLASS, ALL WINDOWS Tinted
	: GRAB HANDLE, CAB INTERIOR (1) "A" Pillar Mounted, Passenger Side
	: GRAB HANDLE, CAB INTERIOR (4) "B" Pillar and Door Mounted, Two Each Side
	: READING LIGHT, CAB Located in Overhead Console
	: STORAGE POCKET, DOOR (2) Full Length, Driver and Passenger Door
16564	HEATER SHUT-OFF VALVES (1) Ball Valve Type, Supply Line
16AAG	VIRTUAL GAUGE, AIR PRESSURE for Pressure in Rear Air Suspension, Requires Premium Cluster
16AAH	GAUGE, AIR PRESSURE for Pressure in Rear Air Suspension, Mounted in Instrument Center Panel
16BAM	AIR CONDITIONER with Integral Heater and Defroster
	<u>Includes</u>
	: HOSE CLAMPS, HEATER HOSE Mubea Constant Tension Clamps
16GEG	GAUGE CLUSTER Premium Level; English with English Electronic Speedometer
	<u>Includes</u>
	: GAUGE CLUSTER DISPLAY: Base Level (3" Monochromatic Display), Premium Level (5" LCD Color Display); Odometer, Voltmeter, Diagnostic Messages, Gear Indicator, Trip Odometer, Total Engine Hours, Trip Hours, MPG, Distance to Empty/Refill for
	: GAUGE CLUSTER Speedometer, Tachometer, Engine Coolant Temp, Fuel Gauge, DEF Gauge, Oil Pressure Gauge, Primary and Secondary Air Pressure
	: WARNING SYSTEM Low Fuel, Low DEF, Low Oil Pressure, High Engine Coolant Temp, Low Battery Voltage (Visual and Audible), Low Air Pressure (Primary and Secondary)
16GHY	GRAB HANDLE, CAB INTERIOR (2) Chrome, B-pillar
16HCS	GAUGE, TEMPERATURE, AMBIENT Sensor Wiring with Display Unit Mounted in Cluster
16HGG	GAUGE, OIL TEMP, ENGINE
16HGJ	GAUGE, OIL TEMP, MANUAL TRAN for Manual Transmission
16HGN	GAUGE, AIR APPLICATION
16HHE	GAUGE, AIR CLEANER RESTRICTION {Filter-Minder} Mounted in Instrument Panel
16HKB	GAUGE, MANIFOLD PRESSURE Data Link Driven; Mounted in Instrument Panel, Includes Controller Module
16HKE	GAUGE, LOAD INDICATING REAR Text Message in Cluster Display, for use with Rear Air Suspension

<b><u>Code</u></b>	<b><u>Description</u></b>
16HKT	IP CLUSTER DISPLAY On Board Diagnostics Display of Fault Codes in Gauge Cluster
16HLS	VIRTUAL GA,OIL TEMP,REAR AXLE Requires Premium Cluster
16HLT	VIRTUAL GAUGE, MANIFOLD PRESS Data Link Driven; Mounted in Instrument Panel, Includes Controller Module. Requires Premium Cluster
16HLV	VIRTUAL GA,OIL TEMP,MANL XMSN for Manual Transmission, Requires Premium Cluster
16HLW	VIRTUAL GAUGE, OIL TEMP, ENG Requires Premium Cluster
16LWU	SEAT, DRIVER {ISRI} Series 500, Air Suspension, High Back, Synthetic Leather, Adjustable Bolsters, Double Chamber Lumbar, Heat, Ventilation, Inboard Armrest, Adjustable Shocks, Suspension Cover, Fore/Aft Isolator, Cushion Extension, Seat Tilt, Memory Quickdown
16SDC	GRAB HANDLE, EXTERIOR (2) Chrome, Towel Bar Type, with Anti-Slip Rubber Inserts, for Cab Entry Mounted Left and Right Side at B-Pillar
16SNV	MIRRORS (2) Aero Pedestal, Power Adjust, Heated, Turn Signals, Bright Heads, Black Arms, 6.5" x 14" Flat Glass, Includes 6.5" x 6" Convex Mirrors, for 102" Load Width
	<b><u>Notes</u></b> : Mirror Dimensions are Rounded to the Nearest 0.5"
16SNX	MIRROR, CONVEX, LOOK DOWN Right Side, Bright, 6" x 10.5"
16SRK	SEAT, PASSENGER {Seats, Inc.} Non Suspension, High Back, Fixed Back, Integral Headrest, Synthetic Leather, for Use with Batteries in Cab
16UZJ	STORAGE, REAR WALL Storage Pocket, Located on Back Wall Between Driver and Passenger Seats
16VCN	KEYLESS ENTRY SYSTEM REMOTE with Panic Alarm and Horn Beep Lock Confirmation, with Auxiliary Button for Work Light Function Includes One Key Fob
16VLV	MONITOR, TIRE PRESSURE Omit
16VVB	CAB INTERIOR TRIM Diamond Elite, for Day Cab
	<b><u>Includes</u></b> : DOOR TRIM, INTERIOR Bright Handle : INSTRUMENT PANEL TRIM Black with Woodgrain Accent, Black Gauges with Chrome Bezels : SUN VISOR (4) Padded Vinyl, 2 Moveable (Front-to-Side) Primary Visors and 2 Flip-down Auxiliary Visors; Vanity Mirrors and Toll Ticket Straps Driver and Passenger Sides
16WCE	SUNSHADE, EXTERIOR Bright Stainless Steel, 13" Drop Sun Visor, with Amber Lights
16WHJ	HOSE CLAMPS, HEATER HOSE {Breeze} Belleville Washer Type
16WJU	WINDOW, POWER (2) and Power Door Locks, Left and Right Doors, Includes Express Down Feature
16WLM	HOURLMETER, PTO for Customer Provided PTO; with Indicator Light and Hourmeter in Gauge Cluster Includes Return Wire for PTO Feedback Switch
16WLS	FRESH AIR FILTER Attached to Air Intake Cover on Cowl Tray in Front of Windshield Under Hood
16XCM	CAB DOOR LOCKS Power, Driver Side Only; Non-Locking When Door Open
16XJP	INSTRUMENT PANEL Wing Panel
16XRD	MODESTY PANEL Chrome, with Amber Lens LED Lights, for Day Cab
16XYW	CAB SOUND INSULATION Day Cab Interior Noise Reduction Package
16ZHU	ACCESS, CAB AND FRAME Aluminum, Driver & Passenger Sides, Two Steps per Door; Left Side Frame Access Step, Includes One Deck Plate and Grab Handle, for use with Day Cab or Sleeper Cab



<u>Code</u>	<u>Description</u>
27DVB	WHEELS, FRONT {Accuride 29683} DISC; 22.5x12.25 Rims, Extra Polish Aluminum, 10-Stud, 285.75mm BC, Hub-Piloted, Flanged Nut, with Steel Hubs, Offset 4.00"
28DWU	WHEELS, REAR {Accuride 43644} DUAL DISC; 22.5x8.25 Rims, Extra Polish Aluminum, 10-Stud, 285.75mm BC, Hub-Piloted, Flanged Nut, with Aluminum Hubs
29WLK	WHEEL BEARING, FRONT, LUBE {EmGard FE-75W-90} Synthetic Oil
34ACA	WHEELS, LIFT AXLE PUSHER {Accuride 29683} Single Wheels, For One Lift Axle; 22.5x12.25 Rims, Extra Polish Aluminum, 10-Stud, 285.75mm BC, Hub-Piloted, Flanged Nut, Offset 4.00" << Pricing Includes Standard Tires >>
35100	PAINT, CAB Single Color for 2,3 or 4-Tone Special Schematics
35207	PAINT HOOD, CONVENTIONAL CAB Two-Tone, with 1-2 Breaks on Hood.
7382158133	(8) TIRE, REAR 12R22.5 Load Range H ARMOR MAX MSD (GOODYEAR), 478 rev/mile, 68 MPH, Drive
7652663208	(2) TIRE, FRONT 425/65R22.5 Load Range L XZY-3 (MICHELIN), 465 rev/mile, 65 MPH, All-Position
7752665441	(2) TIRE, PUSHER 425/65R22.5 Load Range L HAC 3 (CONTINENTAL), 465 rev/mile, 68 MPH, All-Position
810000	FIFTH WHEEL LOCATION On Rear Axle Centerline
	Cab schematic 21CLY
	Location 1: 9219, Winter White (Std)
	Location 2: 0032, Black (Custom)
	Chassis schematic N/A
	<b>Services Section:</b>
40132	WARRANTY Standard for HX520, HX620, Effective with Vehicles Built January 1, 2021 or Later, CTS-2015B
1	Headache Rack, and wet kit with pintle hitch and plate install



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)	30.0	Body Length	(BL)	N/A	Tractor Front Axle:	11,227
Wheelbase	(WB)	242.00				Tractor Rear Axle:	11,286
Axle to Frame	(AF)	59.00					
Axle to Back Cab	(ABC)	90					
Cab to Axle	(CA)	152					
Usable CA		152					
CA Reduction Adjustment		0.00					
Fuel-Diesel(Gals)		0					
DEF(Gals)		0					

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

Loads			Lift Axle			Weight Distribution		
Payload Weight:	0		Weight	Applied Lift	Space Value	Total Front Axle:	11,227	
Driver:	0					Total Rear Axle:	11,286	
Fuel-Diesel(Lbs):	0					Total Weight:	22,513	
DEF(Lbs):	0	P #1	0	0	66			

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.

	<u>Truck</u>		<b>Total</b>
	Front	Rear	
<b><u>Chassis Weight</u></b>			
Chassis Weight:	11,227	11,286	<b>22,513</b>
Fuel:	0	0	<b>0</b>
DEF:	0	0	<b>0</b>
<b>(Curb Weight):</b>	<b>11,227</b>	<b>11,286</b>	<b>22,513</b>

**Loads**

Payloads:	0	0	<b>0</b>
Driver:	0	0	<b>0</b>

**Lift Axle (lift effect)**

**Axle Totals (Gross Weight):** 11,227 11,286 22,513

**Weight Ratings**

	<u>Truck</u>	
	Front	Rear
Axle(axle capacity)	20,000	46,000
Tire(tire capacity)	22,800	54,240
Suspension(suspension capacity)	20,000	46,000
Spring:	0	
Fed Bridge Law (axle spread):	20,000	34,000 (56")
<b>Wheel Combination</b>	<b>Load</b>	<b>Limit</b>
1 - 3	22,513	52,500

Federal Total Vehicle Weight Limit: 80,000

Maximum Gross Vehicle Weight Rating (GVWR) 84,000 - Gross Vehicle Weight(GVW) 22,513 = 61,487 Reserves

**Weight Summary**

\* Distributed weights are within capacity limits

## GVWR Component Rating(s)

Ratings	Primary			Adjusted By			GAWR* (lbf)	GVWR** (lbf)
	ATA Class	Feature	Rating (lbf)	ATA Class	Feature	Rating (lbf)		
Front Component Ratings	AXLE, FRONT NON-DRIVING	0002AVC	20000					
	BRAKES, FRONT	0004XCR	23000					
	SUSPENSION, FRONT, SPRING	0003ADJ	20000					
	WHEELS, FRONT	0027DVB	22800	TIRE, FRONT	0765266	22800		
Front GAWR							20000	
Pusher Component Ratings	WHEELS, LIFT AXLE PUSHER	0034ACA	22800	TIRE, PUSHER LIFT AXLE	0775266	22700		
	AXLE, PUSHER, LIFT TYPE	0014WN M	20000					
Pusher GAWR							20000	
Rear Component Ratings	BRAKES, REAR	0004XDS	46000					
	BRAKE SYSTEM, AIR	0004092	40000	BRAKES, REAR	0004XDS	46000		
	SUSPENSION, REAR, AIR, TANDEM	0014UNX	46000					
	WHEELS, REAR	0028DW U	59120	TIRE, REAR	0738215	54240		
	AXLE, REAR, TANDEM	0014HRE	46000					
Rear GAWR							46000	
Overall Vehicle Limitations	SPECIAL RATING, GVWR	0010NZT	84000					
	TRANSMISSION, MANUAL	0013GYK	150000					
GVWR Based on Axle Ratings***								86000
Calculated GVWR								84000

## GCWR Component Rating(s)

Ratings	Primary			Adjusted By			GCWR**** (lbf)
	ATA Class	Feature	Rating (lbf)	ATA Class	Feature	Rating (lbf)	
GCWR Component Rating	AXLE, REAR, TANDEM	0014HRE	160000				
	TRANSMISSION, MANUAL	0013GYK	150000				
	ENGINE, DIESEL	0012EXB	999999				
	FIFTH WHEEL, AIR SLIDE	0010JPS	200000				
Calculated GCWR							150000

\* GAWR (Gross Axle Weight Rating) is the rating capacity of an axle system which include wheels, tires, axles, brakes, springs, and suspensions.

\*\* GVWR (Gross Vehicle Weight Rating) is the maximum amount that a loaded vehicle can weight.

\*\*\* GVWR Based on Axle Ratings = Front GAWR + Rear GAWR. Overall vehicle weight limitations are not taken into account.

\*\*\*\* GCWR (Gross Combined Weight Rating) is the maximum weight of a tractor and trailer.

(0012EXB)

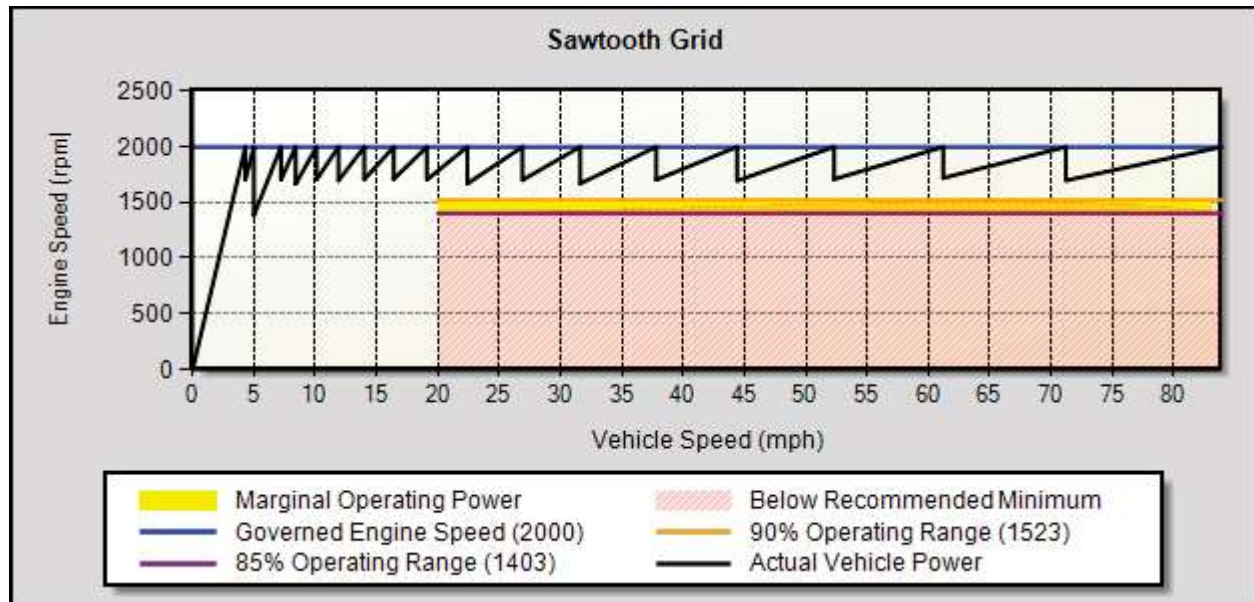
ATTACHMENTS: 0012WBR 0012THT 0007WZX 0007SAP 0016030

<u>Parameter</u>	<u>Value</u>	<u>UOM</u>
Max Accelerator Vehicle Speed	65	MPH
Road Speed Governor Upper Droop	0	MPH
Road Speed Governor Lower Droop	3.0	MPH
Driver Initiated Override (DIO)	N, DISABLE FEATURE OR FUNCTION	N/A
DIO Maximum Road Speed Delta	3	MPH
DIO Maximum Distance	30	MILES
Max Engine Speed No Veh Speed Sensr	1526	RPM
Road Speed Governor Type	1, TRADITIONAL	N/A
Gear Down Protection Enable	N, DISABLE FEATURE OR FUNCTION	N/A
GDP - Heavy Load Vehicle Speed	62	MPH
GDP - Light Load Vehicle Speed	57	MPH
Driver Reward Enable	N, DISABLE FEATURE OR FUNCTION	N/A
Driver Reward Mode	2, ROAD SPEED GOVERNOR & CRUISE CONTROL	N/A
Fuel Economy - Expected Level	7.00	MPG
Fuel Economy - Good Level	7.25	MPG
Fuel Economy - Best Level	7.50	MPG
% Idle Time - Expected Level	20	%
% Idle Time - Good Level	15	%
% Idle Time - Best Level	10	%
Speed Reward - Expected Level	0	MPH
Speed Reward - Good Level	0	MPH
Speed Reward - Best Level	0	MPH
Speed Reward - Penalty Level	0	MPH
Idle Speed Adjustment Enable	N, DISABLE FEATURE OR FUNCTION	N/A
Low Idle Speed	650	RPM
Idle Shutdown Enable	Y, ENABLE FEATURE OR FUNCTION	N/A
ISD Time Before Shutdown	5.0	MIN
ISD Percent Engine Loading	50	%
ISD In PTO	N, DISABLE FEATURE OR FUNCTION	N/A
ISD Manual Override	N, DISABLE FEATURE OR FUNCTION	N/A
ISD With Parking Brake Set	N, DISABLE FEATURE OR FUNCTION	N/A
ISD Ambient Temperature Override	N, DISABLE FEATURE OR FUNCTION	N/A
ISD Cold Ambient Air Temperature	30	F
ISD Intermediate Ambient Air Temp	40	F
ISD Hot Ambient Air Temperature	81	F
ISD Manual Override Inhibit Zone En	N, DISABLE FEATURE OR FUNCTION	N/A
ISD Hot Ambient Automatic Override	Y, ENABLE FEATURE OR FUNCTION	N/A
ISD Engine Coolant Temp Threshold	53	F
Cruise Control Enable	Y, ENABLE FEATURE OR FUNCTION	N/A
CC Maximum Vehicle Speed	65	MPH
CC Save Set Speed	N, DISABLE FEATURE OR FUNCTION	N/A
CC Upper Droop	0.0	MPH
CC Lower Droop	3.0	MPH
CC Auto Resume	N, DISABLE FEATURE OR FUNCTION	N/A
CC Ovrspd Retard Activation Enable	Y, ENABLE FEATURE OR FUNCTION	N/A
CC Overspeed for Max Retarder	5.0	MPH
CC Overspeed for Min Retarder	3.0	MPH
CC Engine Brake Swtch Bypass Enable	N, DISABLE FEATURE OR FUNCTION	N/A
Retarder - Min Vehicle Speed	2	MPH
Retarder - Delay Time	1.0	SEC
Retarder - Service Brake Activation	Y, ENABLE FEATURE OR FUNCTION	N/A
Force Fan On With Retarder	N, DISABLE FEATURE OR FUNCTION	N/A
Engine Fan Min On Time For AC	30	SEC
Remote Accelerator Enable	N, DISABLE FEATURE OR FUNCTION	N/A

Remote Accelerator Mode	1, REMOTE ACCELERATOR PEDAL OR LEVER WITH TRANS VERIFICATION	N/A
PTO Enable	N, DISABLE FEATURE OR FUNCTION	N/A
PTO In Cab Mode	Y, ENABLE FEATURE OR FUNCTION	N/A
Remote PTO Enable	N, DISABLE FEATURE OR FUNCTION	N/A
Remote Station PTO Enable	N, DISABLE FEATURE OR FUNCTION	N/A
PTO Max Engine Speed	2000	RPM
PTO Min Engine Speed	600	RPM
PTO Maximum Engine Load	800	LB-FT
PTO Max Vehicle Speed	2	MPH
PTO Accelerator Override	N, DISABLE FEATURE OR FUNCTION	N/A
PTO Accel Override Max Engine Speed	2030	RPM
PTO Clutch Override	N, DISABLE FEATURE OR FUNCTION	N/A
PTO Service Brake Override	Y, ENABLE FEATURE OR FUNCTION	N/A
PTO Parking Brake Interlock Mode	3, PTO PRK BRK INT TYPE SET TO ALL	N/A
PTO Transmission Neutral Interlock	N, DISABLE FEATURE OR FUNCTION	N/A
PTO Eng Spd Limit w/VSS Limit	N, DISABLE FEATURE OR FUNCTION	N/A
PTO Ignore Vehicle Speed Sensor	N, DISABLE FEATURE OR FUNCTION	N/A
PTO Resume Switch Speed	925	RPM
PTO Set Switch Speed	850	RPM
PTO Additional Switch Speed	1000	RPM
PTO Ramp Rate	100	RPM/SEC
Remote PTO Number of Speed Settings	1	N/A
Remote PTO Speed Setting 1	600	RPM
Remote PTO Speed Setting 2	600	RPM
Remote PTO Speed Setting 3	600	RPM
Remote PTO Speed Setting 4	600	RPM
Remote PTO Speed Setting 5	600	RPM
Remote Station PTO Resume Sw Spd	750	RPM
Remote Station PTO Set Switch Speed	700	RPM
Remote Station PTO Addition Sw Spd	800	RPM
Transmission Driven PTO	N, DISABLE FEATURE OR FUNCTION	N/A
Transmission Driven PTO Type	2, TRANSMISSION DRIVEN IRREGULAR LOAD	N/A
Powertrain Protection Enable	N, DISABLE FEATURE OR FUNCTION	N/A
Max Torque Allow By Axle/Driveshaft	32744	LB-FT
Max Torque in Top Gear Range	5000	LB-FT
Max Torque in Int. Gear Range	5000	LB-FT
Max Torque in Low Gear Range	5000	LB-FT
Max Torque w/o Vehicle Speed	5000	LB-FT
Lowest Gear of Top Gear Range	2.00	N/A
Lowest Gear of Int. Gear Range	10.00	N/A
Lowest Gear of Low Gear Range	16.00	N/A
Engine Protection Shutdown	Y, ENABLE FEATURE OR FUNCTION	N/A
Engine Protection Restart Inhibit	Y, ENABLE FEATURE OR FUNCTION	N/A
Engine Prot Coolant Level Shutdown	N, DISABLE FEATURE OR FUNCTION	N/A
Sudden Veh Speed Decel Threshold	6.96	MPH
Trip Information Vehicle Ovrsped1	72	MPH
Trip Information Vehicle Ovrsped2	74	MPH
Veh Speed Sensor Anti Tamper Level	1, HIGH LEVEL	N/A
Master Password	000000	N/A
Adjustment Password	000000	N/A
Reset Password	000000	N/A

These Electronic Parameters have been successfully finalized

## 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	4.3	2000	17.17	43	31	@
2	12.29	4.3	1707	5.0	2000	44.42	43	31	@
3	8.51	5.0	1385	7.2	2000	17.22	43	31	
4	7.26	7.2	1706	8.4	2000	20.00	43	31	
5	6.05	8.4	1667	10.1	2000	17.25	43	31	
6	5.16	10.1	1706	11.9	2000	17.81	43	31	
7	4.38	11.9	1698	14.0	2000	17.11	43	31	
8	3.74	14.0	1708	16.4	2000	16.88	43	31	
9	3.20	16.4	1711	19.1	2000	17.22	43	31	
10	2.73	19.1	1706	22.4	2000	19.74	43	31	
11	2.28	22.4	1670	26.9	2000	17.53	43	31	
12	1.94	26.9	1702	31.6	2000	19.75	43	31	
13	1.62	31.6	1670	37.8	2000	17.39	43	31	
14	1.38	37.8	1704	44.4	2000	17.95	43	31	
15	1.17	44.4	1696	52.3	2000	17.00	43	31	
16	1.00	52.3	1709	61.2	2000	16.28	43	31	
17	0.86	61.2	1720	71.2	2000	17.81	43	31	
18	0.73	71.2	1698	83.9	2000	0.00	43	31	

@ - 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	84.1	2005	*****	0.00	
HI GEAR SPEED @ RATED RPM	18	83.9	2000	*****	0.35	
55.0 MPH STEADY-STATE	18	55.0	1311	*****	1.34	
TYPICAL OPERATING SPEED	18	70.0	1669	*****	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 : \*\*\*\*\* GALS/HR @ 650.0 RPM

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

Key Fuel Economy Information	City	Suburban	Highway	Notes
MILES PER GALLON	*****	*****	*****	
AVERAGE MPH	18.0	39.0	54.5	
MISSION MINUTES	31.32	53.11	173.67	

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	1.5	700	95.31	19.83	@	14.72	- Calculated Start Ability
			2.1	1000	136.15	19.83	@		
			4.3	2000	272.33	19.83	@		
2	12.29	44.42	1.7	700	111.67	19.83	@	10.97	
			2.5	1000	159.53	19.83	@		
			4.3	1707	272.33	19.83	@		
3	8.51	17.22	5.0	2000	319.10	19.83	@	4.31	
			2.5	700	118.68	14.31	@		
			3.6	1000	230.40	19.83	@		
4	7.26	20.00	5.0	1385	319.10	19.83	@	2.13	
			7.2	2000	460.94	19.83	@		
			3.0	700	119.02	12.13	@		
5	6.05	17.25	4.2	1000	270.08	19.83	@	0.02	
			7.2	1706	460.94	19.83	@		
			8.4	2000	531.54	19.49			
6	5.16	17.81	3.5	700	119.33	10.02		0.02	
			5.1	1000	316.96	19.37			
			8.4	1667	528.14	19.35			
7	4.38	17.11	10.1	2000	532.96	16.09			
			5.9	1000	317.61	16.38			
			10.1	1706	540.11	16.32			
8	3.74	16.88	11.9	2000	533.95	13.61			
			7.0	1000	318.15	13.79			
			11.9	1698	539.87	13.77			
9	3.20	17.22	14.0	2000	534.73	11.44			
			8.2	1000	318.55	11.67			
			14.0	1708	541.73	11.60			
10	2.73	19.74	16.4	2000	535.27	9.66			
			9.6	1000	318.84	9.89			
			16.4	1711	542.39	9.80			
11	2.28	17.53	19.1	2000	535.62	8.16			
			19.1	1706	542.35	8.27			
			22.4	2000	535.77	6.85			
12	1.94	19.75	22.4	1670	532.61	6.80			
			26.9	2000	535.68	5.58			
			26.9	1702	541.99	5.65			
13	1.62	17.39	31.6	2000	535.34	4.60			
			31.6	1670	531.96	4.57			
			37.8	2000	534.62	3.65			
14	1.38	17.95	37.8	1704	540.95	3.71			
			44.4	2000	533.61	2.91			
			44.4	1696	538.28	2.94			
15	1.17	17.00	52.3	2000	532.13	2.22			
			52.3	1709	546.47	2.30			
			61.2	2000	537.51	1.63			
16	1.00	16.28	61.2	1720	535.62	1.62			
			71.2	2000	525.51	1.00			
			71.2	1698	530.64	1.02			
17	0.86	17.81	71.6	1708	531.75	1.00			
			81.7	1947	531.06	0.50			
			83.9	2000	521.36	0.35			
18	0.73	0.00	84.1	2005	431.71	0.00			

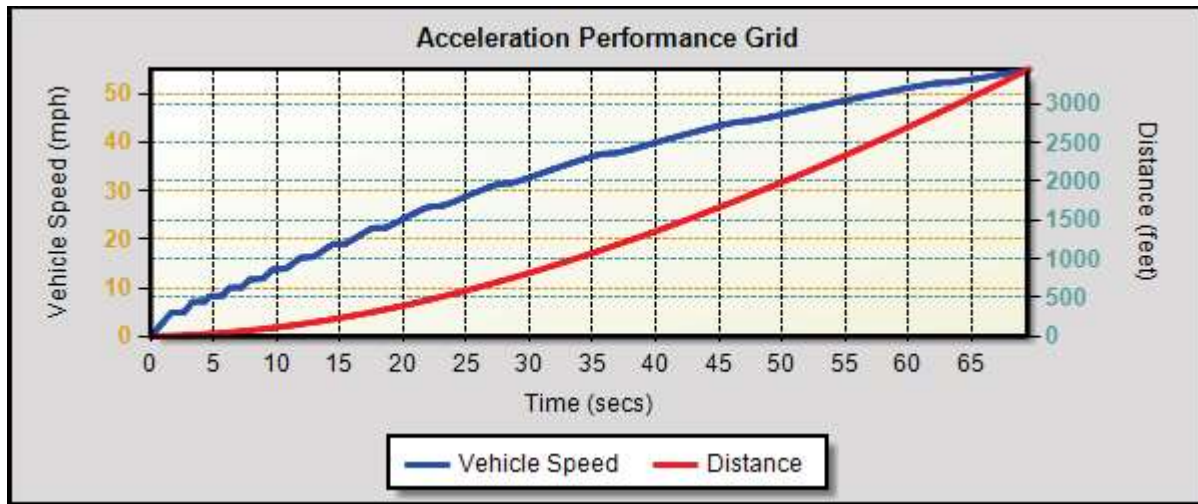
## STARTING / TOP GEAR PERFORMANCE

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	1.5		95.31	19.83	@	14.72	- Calculated Start Ability
2	12.29	44.42	1.7		111.67	19.83	@	10.97	
3	8.51	17.22	2.5		118.68	14.31		4.31	
4	7.26	20.00	3.0		119.02	12.13		2.13	
5	6.05	17.25	3.5		119.33	10.02		0.02	

@ - 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 69.56 (SECS)

## Acceleration Performance Details

Gear	Time (secs)	Distance (feet)	Speed (mph)	Notes
2	0.33	0.2	1.0	
	0.67	1.0	2.0	
	1.00	2.2	3.0	
	1.33	3.9	4.0	
	1.66	6.1	5.0	
	2.66	13.3	4.9	
3	2.94	15.6	5.9	
	3.23	18.2	6.9	
	3.32	19.2	7.2	
	4.32	29.6	7.1	
4	4.60	32.7	8.1	
	4.70	33.9	8.4	
	5.70	46.2	8.3	
5	5.98	49.8	9.3	
	6.23	53.3	10.1	
	7.23	68.1	10.0	
6	7.55	73.1	11.0	
	7.86	78.2	11.9	
	8.86	95.5	11.7	
7	9.23	102.2	12.7	
	9.63	110.1	13.7	
	9.74	112.2	14.0	
	10.74	132.6	13.8	
8	11.17	141.7	14.8	
	11.64	152.1	15.8	
	11.90	158.3	16.4	
	12.90	182.2	16.2	
9	13.40	194.6	17.2	
	13.94	208.5	18.2	
	14.45	222.7	19.1	
	15.45	250.6	19.0	
10	16.05	267.6	20.0	

Gear	Time (secs)	Distance (feet)	Speed (mph)	Notes
11	16.67	286.3	21.0	
	17.33	307.1	22.0	
	17.63	316.9	22.4	
	18.63	349.6	22.3	
	19.34	373.4	23.3	
	20.07	398.9	24.3	
	20.84	426.7	25.3	
	21.64	457.1	26.3	
12	22.12	475.8	26.9	
	23.12	515.1	26.7	
	23.98	549.3	27.7	
	24.86	585.9	28.7	
	25.78	625.5	29.7	
	26.75	668.1	30.7	
	27.61	707.6	31.6	
	28.61	753.8	31.4	
13	29.66	802.8	32.4	
	30.73	854.3	33.4	
	31.83	909.2	34.4	
	32.98	967.8	35.4	
	34.16	1030.4	36.4	
	35.40	1097.5	37.4	
	35.91	1125.6	37.8	
	36.91	1180.9	37.6	
14	38.21	1253.2	38.6	
	39.54	1329.6	39.6	
	40.91	1410.5	40.6	
	42.33	1496.2	41.6	
	43.81	1587.3	42.6	
	45.34	1684.2	43.6	
	46.54	1761.3	44.4	
	47.54	1826.2	44.2	
15	49.16	1932.7	45.2	
	50.83	2044.3	46.2	
	52.54	2161.7	47.2	
	54.31	2285.6	48.2	
	56.15	2416.5	49.2	
	58.05	2555.0	50.2	
	60.02	2701.6	51.2	
	62.08	2858.0	52.2	
16	62.41	2883.3	52.3	
	63.41	2959.9	52.1	
	65.49	3119.9	53.1	
	67.62	3287.8	54.1	
	69.56	3443.0	55.0	

## REQUIRED TCAPE INFORMATION

TCAPE Factors For Vehicle

Selected Rear Axle Gear Ratio(s):	4.1
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> ):	88
Speed Limit on Route (MPH):	61.0
Relative Drag Coefficient:	105
Alternator (A):	40
Steering Gear (HP):	2.60
Air Conditioner (HP):	2.20
Vehicle Width (IN):	96
Acceleration Start Gear:	2
Vehicle Height (IN):	132
Weight on Drive Axle (LBF):	34000
Acceleration Vehicle Spd (MPH):	55.0
Ambient Temperature (F):	70.0
Air Compressor (HP):	2.20
TIRE, FRONT	2 - RADIAL WIDEBASE
TIRE, REAR	8 - RADIAL NORMAL

TCAPE Factors For Trailer

Cab Trailer Space (IN):	60
Tires On Vehicle:Quantity:	18 - RADIAL NORMAL

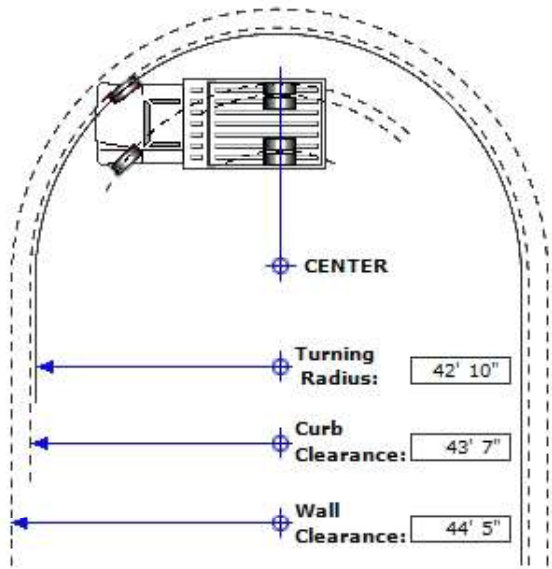
Components

0001AND	AXLE CONFIGURATION {Navistar} 6x4
0002AVC	AXLE, FRONT NON-DRIVING {Meritor MFS-20-135A} Wide Track, I-Beam Type, with 5" Drop, 20,000-lb Capacity
0004SPA	AIR COMPRESSOR {Cummins} 18.7 CFM
0005PUB	STEERING GEAR (2) {Sheppard M100/HD94} Dual Power
0008GXJ	ALTERNATOR {Leece-Neville AVI160P2013} Brush Type, 12 Volt, 160 Amp Capacity, Pad Mount
0012EXB	ENGINE, DIESEL {Cummins X15 605V} Productivity Series, EPA 2024, 605HP @ 1950 RPM, 1850 lb-ft Torque @ 1150 RPM, 2000 RPM Governed Speed, 605 Peak HP (Max)
0012THT	FAN DRIVE {Horton Drivemaster} Two-Speed Type, Direct Drive, with Residual Torque Device for Disengaged Fan Speed
0013GYK	TRANSMISSION, MANUAL {Fuller RTLOF-20918B} 18-Speed Manual, Double Overdrive, Air Shift, Internal Lube Oil Pump
0014HRE	AXLE, REAR, TANDEM {Meritor RT-46-164P} Single Reduction, Standard Width, 46,000-lb Capacity, with Lube Oil Pump, Driver Controlled Locking Differential in Forward-Rear and Rear-Rear Axle, 200 Wheel Ends
0016030	CAB Conventional, Day Cab
0016BAM	AIR CONDITIONER with Integral Heater and Defroster
0016WCE	SUNSHADE, EXTERIOR Bright Stainless Steel, 13" Drop Sun Visor, with Amber Lights
07382158133	TIRE, REAR 12R22.5 Load Range H ARMOR MAX MSD (GOODYEAR), 478 rev/mile, 68 MPH, Drive 12R22.5 Load Range H ARMOR MAX MSD (GOODYEAR), 478 rev/mile, 68 MPH, Drive
07652663208	TIRE, FRONT 425/65R22.5 Load Range L XZY-3 (MICHELIN), 465 rev/mile, 65 MPH, All-Position 425/65R22.5 Load Range L XZY-3 (MICHELIN), 465 rev/mile, 65 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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Series: HX  
Model: HX520  
Description: HX520 SFA  
Model Year: 2025

**Calculation Factors**

Wheelbase: 242  
Front Axle: 0002AVC  
Description: AXLE, FRONT NON-DRIVING, {Meritor MFS-20-135A} Wide Track, I-Beam Type, with 5" Drop, 20,000-lb Capacity  
Front Wheel: 0027DVB  
Description: WHEELS, FRONT, {Accuride 29683} DISC; 22.5x12.25 Rims, Extra Polish Aluminum, 10-Stud, 285.75mm BC, Hub-Piloted, Flanged Nut, with Steel Hubs, Offset 4.00"  
Front Tire: 07652663208  
Description: TIRES, 425/65R22.5 Load Range L XZY-3 (MICHELIN), 465 rev/mile, 65 MPH, All-Position  
Steering Gear: 0005PUB  
Description: STEERING GEAR, (2) {Sheppard M100/HD94} Dual Power

**Turning Radius Statistics**General Information

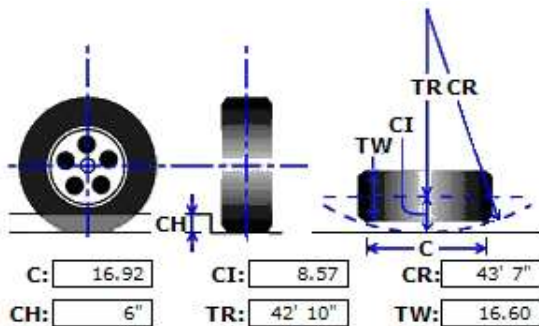
Inside Turn Angle: 33 Degrees  
Radial Overhang: 18.6

Axle Information

KingPin Inclination: 6.25 Degrees  
KingPin Center: 71

**Turning Radius - Curb View**

C - Curb Contact Length: 16.92  
CI - Curb Clearance Increment: 8.57  
CR - Curb Clearance Radius: 43'7"  
CH - Curb Height: 6"  
TR - Turning Radius: 42'10"  
TW - Tire Width: 16.60



\* 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.