SHUTTLEWAGON
MOBILE RAILCAR MOVERS

NAVIGATOR
NVX5025

NVX5025
Specifications

Up to
3,800 TON
Pushing/Pulling Capacity

Tractive Effort: 38,000 lbs (169kN)* single coupled without weight transfer to loaded or empty railcar.

The **Navigator Series Shuttlewagon** stands alone as the highest capacity railcar mover in North America. It defines railcar switching operations for today's needs. Powerful, versatile, and dependable. It incorporates the most advanced technologies available to ensure safety nd reliability are never compromised.

180-degree rotating console with a multifunction display. Dual four-way air suspension seats for operation from either side of cab when in rail mode.

Wide range AAR sliding couplers are air released and hydraulically positioned to improve pulling performance on curves and grades.

Pull out sander boxes with wide mouth lids for easy loading. Air activated sanders for smooth dispensing.

Patented rail guidance system: two independent drive wheel trucks supported on rotating bearing with eight 16" AAR profile guide wheels. ABS & traction assist provide more control while reducing maintenance costs.

Powerful air-knife increases capacities up to 50% in adverse weather.

For Narrow or wide applications: Please consult with factory.
*Note: Tractive effort may vary with rail and weather conditions.
Dimensions and Weight do not include optional equipment.
Specifications are subject to change without notice.

NVX5025 General Specifications	
Fuel Capacity	90 gallons (340.69 ltr)
Hydraulic Reservoir Capacity	50 gallons (189.27 ltr)
Air Tank Capacity (Rail Brakes)	30 gallons (113.56 ltr)
Air Tank Capacity (Vehicle Brakes)	10.5 gallons (39.74 ltr)
Air Filter	Dry replacement element
Oil & Fuel Filters	Replacement element
Wheel Base	168" (4267mm)
Width	120" (3048mm)
Height	143.5" (3645mm)
Length	296" (6604 mm)
Ground Clearance	9" (228.5mm)
Weight	60,600 lbs (33,112kg)
First Gear	0 to 3mph/4.8kmh
Second Gear	0 to 7mph/11.2kmh
Third Gear	0 to 13 mph/21 kmph

Standard Features	Optional Features
90 gallon fuel tank	Air bell
ABS vehicle brakes	Air knife
Anti-slip traction control	Cab air pressurizer
CAN-bus electrical system	Cold weather package
Door mounted windshield wipers	Corrosion Resistance package
Engine diagnostic adapter: console	Extended warranties
Shuttle Track: machine telematics	Heated mirrors
Exterior mounted cameras with color monitor on operator's console	High output 160 CFM air compressor
Full width cab; 360 degree visibility	Hydraulic broom
Speed based rail guidance pressure	LED work lights
Three 12 volt power receptacles	On board DVR with cameras
Tinted cab glass	Radio remote control
Two air ride operator seats	Snow plow
	Additional options available

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Wabtec CORPORATION

SHUTTLEWAGON
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Engine	**Model**	Cummins diesel engine model QSB 6.7 L (electronic)
	EPA	Tier 4 Final
	Horsepower	260hp @ 2500 RPM
	Torque	730 ft lbs @ 1500 RPM Charge air-cooled
	Electronic controlled diesel engine	Electronics programmed to shut engine down if "High Water Temperature" or "Low Oil Pressure" occurs
	Radiator	Charge air cooler across the top, engine radiator in the middle, and transmission oil cooler across the bottom. (engine temp controlled, reversing hydraulic driven fan).
	D.E.F. Tank	Accessible via retracting cover.
	Exhaust	Vertically mounted away from cab.
Transmission	**ZF-210**	Three speeds forward and reverse both on rail and on road. Constant mesh spur gearing electronically controlled. Flex plate connects torque converter directly to engine flywheel. Automatic or manual gear selection. Shift protected (downshift and forward/reverse). Operator panel shows gear, direction, and transmission diagnostics.
Drive Lines	**Constant Velocity Universal Shafts**	Transmission to Axle
Axles	**Axle Tech™ (formerly Rockwell)**	Heavy duty planetary-type drive axles; mechanically locked differentials in both front and rear.
Frame	**Fabricated from A-36 cold rolled steel plate.**	Multiple weldments complete a single assembly, balanced for 50/50 distribution of weight over both drive axles.
Rail Gear	**Eight, 16" (406mm) diameter**	AAR profile austempered ductile iron guide wheels; one each at the front and rear of each drive wheel. Rail gauge; 56 ½ " (1435mm). Rail guide wheels designed to guide pivoting drive axles around track curvatures. Each rail wheel equipped with graphite lubricating stick that may be consumed over time.
Brakes	**Service**	Air over hydraulic actuated high-pressure disk brakes with dual caliper on rear disc and dual master cylinders. Foot control located at drivers station for road travel. Hand vehicle brake control located on instrument panel for vehicle brake control on rail. Vehicle brakes use ABS (Antilock Brake System) while on rail.
	Parking	Disc brake running in oil located internally on output shaft of transmission. Transmission cannot be shifted into forward or reverse with parking brake engaged.
	Rail	AAR Glad hand connections located front and rear. Lever operated pressure control and emergency stop on dash panel. Rail brake valve protected with safety filter for harsh environments.
Antilock Brakes (ABS) & Traction Control (ATC)	**An electronic controller monitors rail wheels and tires to detect tire slip on the rail.**	The ABS valve controls vehicle brake pressure to minimize brake lock up. Engine speed is automatically adjusted to reduce wheel spin when starting a move, while maintaining the maximum drawbar pull. The operator panel message window alerts the operator if the tires are slipping. ABS and ATC are used in rail mode only.
Steering	**Hydraulic power steering controlling both front and rear trucks**	Steering is in float position when on rail. Straight ahead steering indicator provided on instrument panel to align steerable trucks while in road mode.
Couplers	**Front and Rear Couplers**	Cast steel full size AAR coupler with automatic latch, cab controlled air unlatch. NON-WEIGHT TRANSFER design, wide range AAR sliding couplers with buffer system to reduce shock load to railcar mover during coupling operation. Couplers are hydraulically positioned from side to side with controls located on instrument panel inside cab. A float position allows coupler to slide freely while negotiating tighter track curvatures.
Hydraulic System	**Constant pressure hydraulic system**	Five gallon, piston-type accumulator back-up.
Pneumatic System	**Engine driven compressor**	Shares engine cooling and lubrication. AAR Glad hand connections located front and rear. Lever operated pressure control and emergency stop on dash panel. Rail brake valve protected with safety filter for harsh environments.
Cab	**10' full width cab constructed of "galvanneal" steel, mounted on rubber isolation bushings, at opposite end from engine to reduce noise.**	Cab has two doors located at rear. Four electric wipers, two on front windshield and one each on rear doors. Console is mounted in the center of the cab and can be swiveled to allow operation from either side of the cab. Hand throttle, hand vehicle brake, and train brake conveniently located on console. Console extends to operator as desired and allows easy reach when looking out the side windows. Air ride seats on both sides have side travel to allow easy viewing out side windows. Tilt steering column adjusts out of the way for rail operation. 360-degree cab visibility with filtered outside air supply and 46,000 BTU/hr heater and Optional air conditioner. Defroster fans at each corner. All glass tinted, with darker tint on side windows to reduce solar heat gain. Padded rubber floor mat.
Instrumentation	**Heavy-duty operator panel with color display, push buttons, and warning light.**	Additional color video monitor to display view from (4) exterior mounted cameras. CAN-Bus system allows direct communication with engine and transmission, for display of all operating conditions and alarms. Main operating screen displays fuel level, transmission gear, rail pressure, engine speed, vehicle speed, oil pressure, coolant temperature, transmission temperature, battery voltage, and a message window. The message window, with light and buzzer, alerts operator of important events and alarms. Rail gear is controlled with operator panel push buttons. Duplex rail brake reservoir and brake pipe gauge.
Electrical	**12 Volt starting and lighting with 160-ampere alternator.**	Two Heavy-duty maintenance-free batteries rated at 950 CCA. Batteries located in self-contained battery box located on Shuttlewagon deck. Two amber strobe lights, one mounted on each side of cab. LED corner markers. Cab interior dome lights to illuminate instrument panel. Automotive fuses and circuit breakers provide protection for each electrical circuit.
Rail Guidance System	**Automatic Speed Induced**	Equipped with automatic speed induced rail guidance system to provide necessary hydraulic pressure at higher rail speeds.
Warning Signals	**Two dual blast type air horns.**	One air horn facing forward and one facing rearward. Back up alarm for on road operation.
Tires & Rims	**Four 14.00R x 24 tubeless tires.**	Mounted on solid disc three-piece construction type rims.
Sanders	**Air operated, electrically controlled from cab.**	Eight sanders two for each drive wheel, front and rear. Four removable polyethylene sander boxes that hold a total of 800 pounds of sand. These sand boxes can be pulled out to allow easy filling.
Ladders	**One ladder per side.**	Ladders have inclined steps with breakaway lower step.