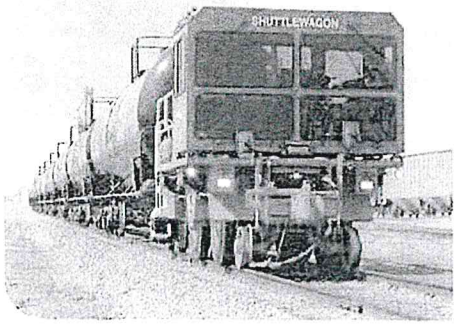
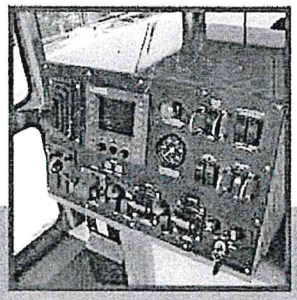
COMMANDER SWX525



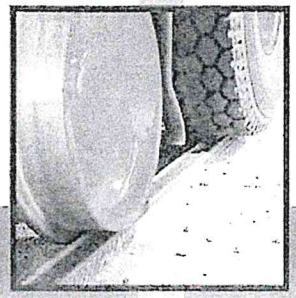
The Commander series Shuttlewagon® defines railcar switching operations for today's needs. Powerful, versatile, and dependable, it incorporates the most advanced technologies available to ensure that safety and reliability are never compromised.

BY SHUTTLEWAGON
MOBILE RAILCAR MOVERS

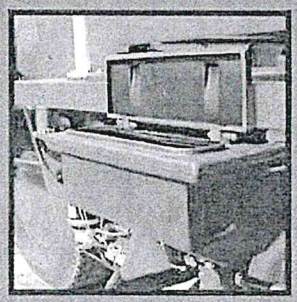
180° rotating console with color multifunction display. Dual four way air suspension operator seats for either side on-rail operator control.



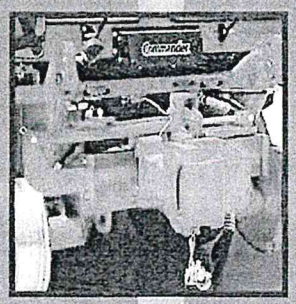
Independently actioned railwheels and Pneumatically supported rubber drive tires for greater traction and reduced rail movement shock loading.



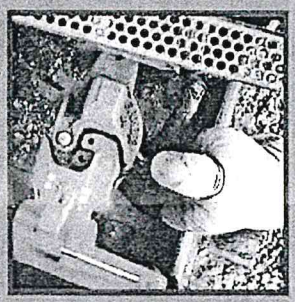
Pull out sander boxes with wide mouth lids for easy loading. Air activated sanders for smooth dispensing.



Wide range AAR sliding couplers are air released and hydraulically positioned. Improves pulling performance in curves and grades.



Safely attach glad hand hoses with ease; Shuttlewagon offers industry leading space between railcar and mobile railcar mover.



Large high density cross linked polyethylene (HDXLPE) 90 gallon fuel tank for extended operational capacity.

SHUTTLEWAGON, INC.
4116 Dr. Greaves Road Grandview, MO 64030
(816) 767-0300 www.shuttlewagon.com

A Nordco COMPANY
Service from the Ground Up®

Nordco
MOBILE RAILCAR MOVERS
HOME OF THE SHUTTLEWAGON

COMMANDER SERIES

8/11/2014

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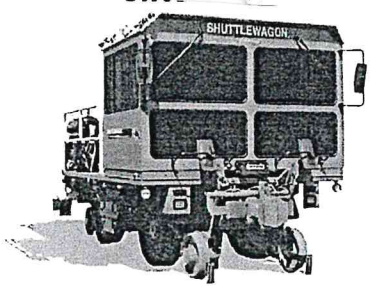

SWX525

Last Rev Date: Mar 20, 2014

POWERTRAIN:

Engine:

Cummins diesel engine model QSB 6.7 L (electronic), EPA Tier 3
215 HP @ 2500 RPM, Torque 655 @ 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.

Exhaust:
Vertically mounted away from cab to reduce noise.

Transmission: ZF – WG210, three speeds forward and reverse both on rail and on road. Constant mesh helical low noise 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: Heavy Duty 7C Series

Axles: Front: Heavy Duty Planetary drive steer axle. Rear: Heavy Duty Planetary non-steer axle. Mechanically locked differentials in both front and rear.

FRAMES

All welded steel plate construction. 3 ½" full width and full length deck plate. Frame rails are 1" plate connecting 4" coupler base plates to the deck plate. Front axle is mounted on oscillating bracket and is controlled by urethane blocks that allow oscillation to both sides and reduce shock loads. Frame layout allows for easy access to both sides of engine compartment

BRAKES

Service:

Air over hydraulic actuated high-pressure disk brakes with Haldex pressure converter (master cylinder). 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:

80 cfm Compressor. 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.

RAIL GEAR

24-3/4" (629mm) diameter cast steel heat-treated rail guide wheels. AAR standard 56.5" (1435 mm) rail gauge, mounted to 4" coupler base with four bolt pillow block style clamps. Control of guide wheels is from four hydraulic cylinders, controlled from the cab. Rail suspension and vehicle suspension are independent, allowing ample travel for adverse track conditions and providing smooth quiet ride.

COUPLERS

Front & Rear Coupler: 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.

HYDRAULIC SYSTEM

Single Eaton Vickers load sensing (62 cc) pump driven from transmission. Centrally located Eaton Vickers manifold is two-pressure design electric operated and detent maintained (provides the safety of manual valves). All solenoid valves have manual overrides. Hydraulic tank has excess capacity for cooling and large clean out flanges. Rail gear is dual pressure with extra traction momentary switch.

PNEUMATIC SYSTEM

80 cfm engine mounted Wabco compressor with 30 gallon air tank. Heated air dryer and desiccant cartridge with single mounting bolt for easy maintenance. All reservoirs equipped with drain valves.

STEERING

Hydraulic power steering controlling front axle. Steering is locked out when on rail. Straight ahead steering indicator provided on instrument panel to insure the position of the steer axle.

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 is "Diamond" design for easy cleaning.

INSTRUMENTATION

Heavy-duty operator panel with color display, push buttons, and warning light. 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.

ANTILOCK BRAKES (ABS) AND 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.

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.

WARNING SIGNALS

Two dual blast type air horns, one facing forward and one facing rearward. Back up alarm for on road operation.

TIRES & RIMS

Four 14.00 x 24 radial steel belted tube type 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, with crossover walkway at rear end. Ladders have inclined steps with breakaway lower step.

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	98" (2489 mm)
WIDTH	120" (3048 mm)
HEIGHT	141" (3581 mm)
LENGTH	260" (6604 mm)
GROUND CLEARANCE	10½"(266.7 mm)
WEIGHT	56,000 lbs (25,400 kg)
FIRST GEAR	0 to 3mph/4.8kmh
SECOND GEAR	0 to 7mph/11.2kmh
THIRD GEAR	0 to 9mph/27.3km/h

Draw Bar Pull Rated* (without weight transfer) 35,000 lbs (155kn)

Drawbar pull is developed from a single coupler without any weight transfer from railcar.

INVESTMENT	**New SWX525 w/ above stated standard features**	$297,500
	Pricing includes additional [redacted] discount for up-front purchase of 5 yr / 5000 hr Service plan.	
INCLUDED OPTIONS:	***Consult with factory for all available options.*** *The following options are **ARE INCLUDED** in the total price*	
	AIR - KNIFE (rail clearing system)	No Cost
	CAMERA - REAR HAND RAIL MTD. - One camera with interior Console mtd. Monitor.	$1,740
	LUBRICATION SYSTEM - Single Point Hi Pressure	$2,500
	RADIO REMOTE CONTROL; Cattron	$31,320
TOTAL	**Applicable freight and taxes not included**	**$333,060**
FREIGHT	**Est. FOB Memphis, TN**	$4,500

TRAINING: A factory representative will provide operational training and review maintenance procedures of the Shuttlewagon at initial start-up for a period of up to two (2) eight hour days at no additional cost.

TERMS: Net 30 days.
Quote valid for 30 days.
Prices do not include and sales tax, duty tax or export fees.

DELIVERY: Consult with factory representative. (Current lead times amount to 1-2 months)

WARRANTY: Shuttlewagon Warranty:
1 year or 2,000 hours (whichever occurs first).

Cummins Engine Warranty:
2 year or 2,000 hours (whichever occurs first). Warranty covers all Cummins branded components, including electrics such as starters and alternators. Unlimited hours in year 1, up to 2000 hours year 2, hours are cumulative from when engine goes into service. Major components; block, crankshaft, camshaft and rods for the third year up to 10,000 hours of operation from the time the engine goes into service.