

Specification Sheet

ES351 SWEEPER

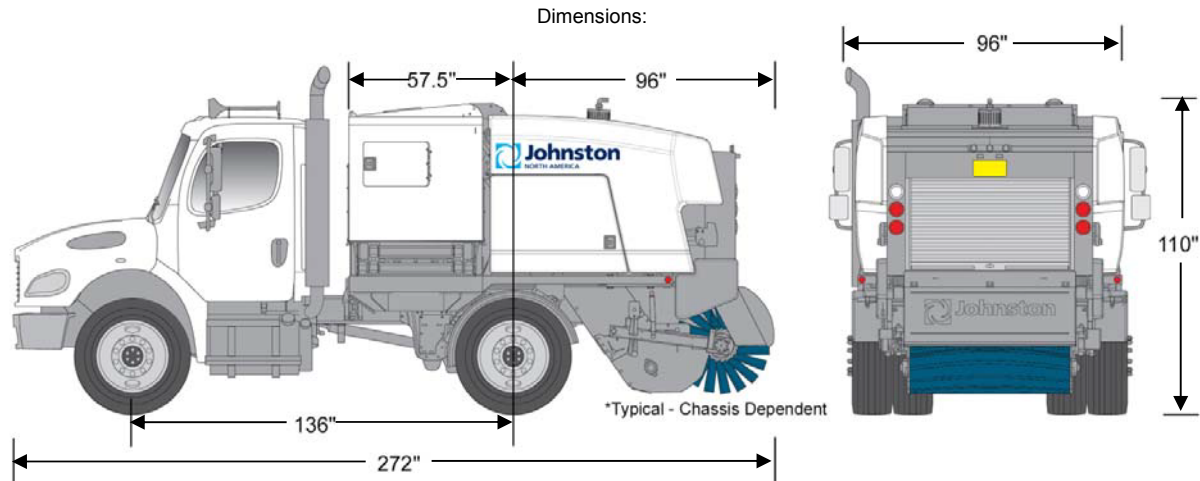
Series ES351 Mechanical Sweeper

Sheet 1 of 1

Issue Number: 01-14

Subject Technical Information and Data

Date: 03.03.15



Data and Performance Information

Capacities	
Hopper voided volume	4.5yd ³ nominal
Payload capacity	12,000lb. *Chassis Dependent
Fuel tank	50 Gallon
Water tank	360 Gallon
Tank Construction	Polyethylene

Sweeping Equipment	
Side Broom	44 Inch - Leading Arm/Digger Type
Main Broom	34.5 X 58 Inch
Drives	Direct Coupled Hydraulic Motor
Side Brooms	Un-handed Design - 44" dia.
Speed Adjustment	Variable Hydraulic, In-cab
Digging Pressure	Variable Pneumatic, In-cab

Engine Data	
Model	Cummins 6.7 – 260 H.P.
Cubic capacity	8.3 litres
No. of cylinders	Six
Gross rated power	260 H.P. @ 2300 rpm
Maximum torque	660 lb. ft. @ 1600 rpm
Aspiration	Turbo Charged
Operational rpm	Variable between 1200-2000rpm
Transmission	Allison 3500 RDS
Alternator	160 Amp
Electrical System	12 Volt Negative Ground System
Battery	(2) Group 31, 2250 CCA
Two Speed Rear	Ratio: 6.17/8.42

General Data	
Chassis requirement	33,000 GVW - Class 7
Wheelbase	136 inch *Chassis Dependent
Dump height	12.5 Feet *Chassis Dependent
Dump angle	54° Degrees
Sweep Path, Main Broom	58 Inch
Sweep Path MB & (1) SB	90 Inch
Sweep Path MB & (2) SB	120 Inch – Extended Reach 144"
Conveyor Type	Squeegee, 12 Flights
Conveyor Wear Plate Material	Nirosta® Stainless Steel
Drive	Hydraulic, Forward/Reverse
Lift Control	Hydraulic 2 stage scissors
Sweeping speeds	2-15 MPH *Chassis Dependent

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Technical Information :

Commercial Chassis/Single Engine:

The Johnston Easy Sweep mechanical sweeper is mated with a Freightliner M2 Class 7 chassis. Combined they make for one of the best looking, hardest working and most reliable machines in the industry.

Its simple single engine design allows for fuel efficiency and easy maintenance.

Power Train:

Utilizing an Allison 3500RDS automatic transmission, a 10,000lb front axle and a 23,000lb two speed rear axle geared for proper over the road and sweep speeds, the Johnston Easy Sweep is transporting its load quickly and safely.

Side Brooms:

Large 44 inch, hydraulic driven, leading arm, digger type, free floating side brooms with in-cab adjustable speed and down pressure to ensure aggressive cleaning of curbs and gutters.

The side brooms feature a heavy duty steel disc, drilled for either four or five segment broom sections. The broom material is tempered steel tines, 26 inches long.

At the operator's discretion, from in-the cab, the dual brooms can extend out to achieve a 144 inch total reach to facilitate cul-de-sac and curve sweeping.

Main Broom:

Our aggressive 34.5 X 58 inch polypropylene tube main broom is direct hydraulically driven and attached to two fully floating trailing arms to allow for changing road surfaces.

Optional strip brooms are available on request.

Dirt Shoes:

Sweeper can be fitted with standard T-Plate steel skid dirt shoes with carbide inserts or new maintenance free strip-brush type dirt shoes.

Variable Dump Height Hopper:

Choose to unload at ground level or into a dump truck with side boards or anywhere in between. The stainless steel 4.5 yard hopper is raised and lowered via a heavy duty, two stage scissors lift with hydraulic cylinders.

All lift and dump controls are hydraulic and located in-cab. Lift capacity is rated at 12,000lb and hopper dump angle is 54 degrees for efficient off-loading of debris.

Conveyor/Elevator:

Utilizing a chain driven, 12 flight- squeegee type conveyor over polyurethane sprockets, the Johnston Easy Sweep effectively captures and moves all street debris up its all stainless steel conveyor and into its all stainless steel debris hopper.

Conveyor speed is constant and matched to the main broom speed for effective loading. The conveyor height can be adjusted from in-cab to accommodate different sweeping requirements. The conveyor bearings are sealed and self-aligning.

Hydraulic System:

The Johnston Easy Sweep features a 20 gallon hydraulic reservoir supplying oil to a variable displacement hydraulic pump in a load sensing hydraulic system. This system will adjust flow based on hydraulic demand from the sweeping gear so as to maximize efficiency and reduce heat.

All hydraulic valves are equipped with light emitting diodes to signal function and feature manual overrides. All hydraulics are centrally located in their own system locker for ease of access and maintenance.

Wheelbase/Truck:

The Johnston Easy Sweep mechanical sweeper delivers a tight 18.6" turning radius from a truck with a 136 inch wheelbase. This dramatically increases maneuverability on tight streets and cul-de-sacs.

Water System/Dust Control:

A 360 gallon baffled, polyethylene water tank provides the necessary water to supply a run-dry centrifugal pump delivering water to multiple water spray nozzles, strategically located at each side broom and front bumper. An optional rear broom spray bar is available.

Instrumentation/Controls:

The Johnston Easy Sweep Mechanical Sweeper features all the necessary warning lamps and buzzers...

- Low Hydraulic Oil
- Conveyor Stall Alarm
- Hydraulic Oil Temperature
- Hydraulic Oil Filter Restriction Indicator
- Low Water Alarm
- Hopper Up Alarm

All wiring is color coded and numbered. All internal and external wiring conforms to IP65 and IP67 standards - waterproof and dustproof.