

Specification Sheet

ES351 SWEEPER

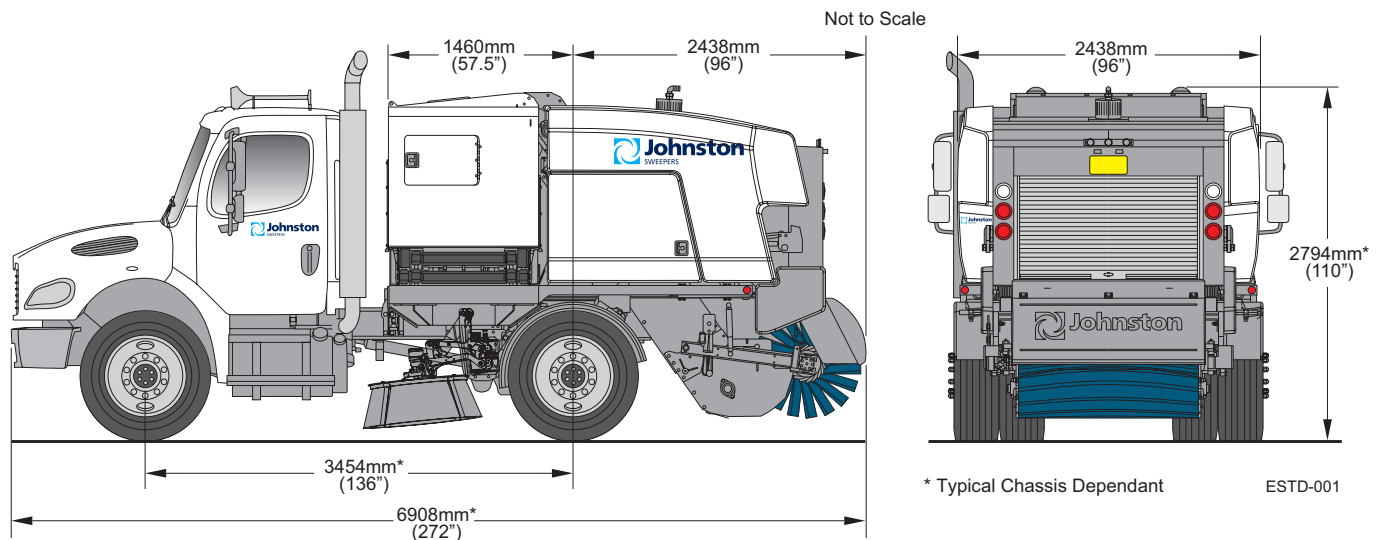
Series ES351 Mechanical Sweeper

Sheet 1 of 1

Revision: A

Subject Technical Information and Data

Date: 06/07/2015



Data and Performance Information

Capacities	
Hopper voided volume	3.4 ³ m nominal (4.5yd ³)
Payload capacity	5400 kg (12,000lb.)*
Fuel tank	190 litres (50 US gal)*
Water tank	1400 litres (360 US gal)
Tank construction	Polyethylene
Hydraulic System	85 litres (22.5 US gal)

*Chassis Dependent

Engine Data	
Model	Cummins ISB 6.7 - 250 H.P.
Cubic capacity	8.3 litres
No. of cylinders	Six
Gross rated power	250HP @ 2200 rpm
Maximum torque	660 lb. ft. @ 1600 rpm
Aspiration	Turbo Charged
Operational rpm	Variable between 950-1800 rpm
Transmission	Allison 3500 RDS
Alternator	160 Amp
Electrical System	12 Volt Negative Ground System
Battery	(2) Group 31, 1850 CCA
Two Speed Rear	Ratio: 6.14/8.38

Sweeping Equipment	
Gutter Broom	1100 mm (44") - Leading Arm/Digger Type
Main Broom	870 x 1470 mm (34.5" x 58")
Drives	Direct Coupled Hydraulic Motor
Speed Adjustment	Variable Hydraulic, In-cab
Digging Pressure	Variable Pneumatic, In-cab

General Data	
Chassis requirement	33,000GVW - Class 7
Wheelbase	3454 mm (136") *
Dump height	3800 mm (150") *
Dump angle	54°
Sweep Path, Main Broom	1470 mm (58")
Sweep Path MB & (1) SB	2280 mm (90")
Sweep Path MB & (2) SB	3050 mm (120")
	Extended Reach 3650 mm (144")
Conveyor Type	Squeegee, 12 Flights
Conveyor 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 Specification

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 insure 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 stripbrush 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 50 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 manoeuvrability 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 over the main broom. An optional front mounted spray bar is also 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 colour coded and numbered. All internal and external wiring conforms to IP65 and IP67 standards - waterproof and dustproof.