

ES351 Sweeper

SERIES ES351 Mechanical Sweeper

ISSUE NUMBER 01-19

REFERENCE JSA 0119



136" WB

272"

122"



96"

Data & Performance

Sweeping Equipment

| | |
|------------------|-----------------------------------|
| Gutter broom | 44" dia - leading arm/digger type |
| Main broom | 34.5 x 58" |
| Drives | Direct coupled hydraulic motor |
| Gutter brooms | Un-handed design |
| Speed adjustment | Variable hydraulic, in-cab |
| Digging pressure | Variable pneumatic, in cab |

Engine Data

| | |
|-------------------|--------------------------------|
| Model | Cummins 6.7 - 260 HP |
| Cubic capacity | 6.7 liters |
| No. of Cylinders | 6 |
| Gross rated power | 260 HP @ 2300 RPM |
| Maximum torque | 660 LB/FT @ 1600 RPM |
| Aspiration | Turbo-charged |
| Operational RPM | Variable between 1200-2000 RPM |
| Transmission | Allison 3500 RDS |
| Alternator | 160 AMP |
| Electrical system | 12 v negative ground system |
| Battery | (2) Group 31 2250 CCA |
| Two-speed rear | Ratio: 6.17/8.42 |

Capacities

| | |
|----------------------|--|
| Hopper usable volume | 4.5 yd ³ , includes 42" debris chute |
| Hopper construction | 9 gauge stainless steel LIFETIME WARRANTY NO PRORATION |
| Payload capacity | 12,000 LB (chassis dependent) |
| Fuel tank | 50 gallon |
| Water tank | 360 gallon |
| Tank construction | Polyethylene |

General Data

| | |
|------------------------------|---|
| Chassis requirement | 33,000 gww - Class 7 |
| Wheelbase | 136" (chassis dependent) |
| Dump height | 12.5' (chassis dependent) |
| Dump angle | 54° |
| Sweep path, main broom | 58" |
| Sweep path, MB & (1) SB | 90" |
| Sweep path, MB & (2) SB | 120" (144" extended reach) |
| Elevator type | Squeegee, 12 flights |
| Elevator wear plate material | .25" stainless steel |
| Elevator drive | Hydraulic chain driven, forward/reverse |
| Hopper lift control | Hydraulic 2 stage scissors |
| Sweeping speeds | 2-15 MPH (chassis dependent) |

We are **THE ONLY** sweeper manufacturer to offer an all-inclusive warranty (2 years/2,000 hours) and an "entire debris hopper" constructed of stainless steel as a standard with a **LIFETIME WARRANTY**.



Endless Sweeping Solutions™

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Technical Specifications

Commercial Chassis/ Single Engine

The Johnston ES351 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 10,000 LB front axle and a 23,000 LB two-speed (6:17/8:42 ratio) rear axle geared for proper over the road and sweep speeds, the Johnston ES351 is transporting its load quickly and safely.

Gutter Brooms

Large 44" hydraulic-driven, leading arm, digger-type, free floating gutter 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" long.

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

Main Broom

Our aggressive 34.5 X 58" 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 is fitted with standard T-Plate steel skid dirt shoes. Optional carbide or new maintenance free strip-brush type dirt shoes are available.

Variable Dump Height Hopper LIFETIME WARRANTY

Choose to unload at ground level or into a dump truck with side boards or anywhere in between. The stainless steel 4.5 yd³ 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 12,000 LB and hopper dump angle is 54° including 42" chute for better reach and efficient off-loading of debris.

Elevator

Utilizing a chain driven, 12 flight squeegee type elevator over polyurethane sprockets, the Johnston ES351 effectively captures and moves all street debris up its stainless steel floored elevator and into its all stainless steel debris hopper.

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

Hydraulic System

The Johnston ES351 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 ES351 mechanical sweeper delivers a tight 18.6" turning radius from a truck with a 136" 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 direct-coupled hydraulic driven twin diaphragm pump delivering water to multiple water spray nozzles, strategically located at each gutter 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.