

# Pelican<sup>®</sup> PLUG-IN HYBRID ELECTRIC (PHEV\*)

The iconic Elgin Pelican, three wheel mechanical sweeper, can now be configured as a plug-in hybrid electric (PHEV.) Just like all Pelicans, the newest member of the Pelican family features outstanding maneuverability and visibility, a 10 ft. sweeping path, 9 ft 6 in high dump frontal hopper, and the heavy duty No-Jam chevron conveyor belt. The Pelican PHEV utilizes the latest technology in the electrification market utilizing a battery and generator system that meets the demanding duty cycle of municipal street sweeping. The electrified drive system works in conjunction with the ultra-low emissions John Deere<sup>®</sup> 4.5L engine that is certified to the latest U.S. EPA and CARB standards. The Pelican PHEV was designed for uncompromised performance while providing meaningful reductions in emissions.

Please contact your local Elgin dealer or visit us at [www.elginsweeper.com](http://www.elginsweeper.com) to learn how this is the most efficient Pelican ever built.

## AVAILABLE ENHANCEMENTS

- Side broom tilt
- Automatic lubrication system
- Lifeliner<sup>®</sup> hopper liner
- Beacon light with protector
- Strobe light with protector
- Broom hours
- Limb guards
- Air suspension seat
- PM10 Dust Suppression



Your Elgin Dealer is:



\*Plug-in hybrid electric vehicle, or PHEV, are hybrid vehicles containing battery packs that can be recharged by an external power source via a charging cable in addition to the onboard internal combustion engine.

## SWEEP SYSTEM – POWER

### ENGINE

**Make** Deere 4045 Tier 4 Final  
**Type** 4 cylinder  
**Displacement** 276 cu. in. (4.5 L)  
**Bore** 4.19 in (106.43 mm)  
**Stroke** 5.0 in (127 mm)  
**Compression Ratio** 19:1  
**Horsepower** 74 HP (55 kw) @ 2,400 RPM  
**Torque** 224 ft-lb (304 Nm) @ 1,600  
**Fuel Tank Capacity**  
 35 U.S. gal (132.5 L)

### STANDARD ACCESSORIES

Full flow oil filter, electronic governor, dual safety element dry-type air cleaner with in-cab restriction indicator, fuel cleaner, counterbalanced, wet sleeve

## SWEEP SYSTEM – COMPONENTS

### GENERAL SPECIFICATIONS

**Wheel Base** 127.4 in (3236 mm)  
**Overall Length** 16 ft (4877 mm)  
**Height with Cab** 9 ft 10.5 in (3010 mm)  
**Width Outside Tires** 8 ft 6 in (2591 mm)  
**Curb to Curb Turning Radius** 15 ft (4572 mm)  
**Sweeping Path**  
**One Side Broom** 8 ft (2438 mm)  
**Two Side Brooms** 10 ft (3048 mm)

### Weight

**One Side Broom** 16,150 lbs (6170 kg)  
**Two Side Brooms** 16,850 lbs (6482 kg)

**Travel Speed** Up to 20 mph (32 Km/h)

**Electric Drive** Dual motors (AC); Front wheel drive; Gear reduction wheel drives; Single, treadle pedal for forward/reverse; Regenerative braking

### Hydraulic Service Brakes

#### Tires

**Front** 11R22.5 load range H (2)  
**Rear** 215/75R 17.5 load range H (2)

#### Wheels

**Front** Steel disk type  
**Rear** Dual steel disk type mounted on alloy steel axle

**Guide wheel** with rear swing-arm suspension

### CAB

**Type** ISO mounted; Structural steel tube frame; Sealed w/ 100% filtered air intake, sound insulated

**Door** Full view glass

**Opening** From rear

**Dust protection** Rubber gasket sealed; Windows Safety glass with tinted windshield and tinted sun visors, 360° visibility; Tinted upper glass

### Dome light

**Heater pressurizer with defroster**

Multi-vent air disbursement

**Windshield wipers** intermittent, with washers

**Mirrors** RH (1) West Coast with convex insert and (1) 10 inch convex; LH (1) 12 inch convex and (1) 8.5 inch convex IN-CAB (1) rear view

**Seat** 21 in wide deluxe foam cushion with belt

### FINISH

#### UNDERCARRIAGE

Grey powder coat

#### BODY

High gloss powder coat  
 Custom colors available

### CHASSIS

Chassis is fully welded; formed channel and boxed tube style with jack points

### WARRANTY

**SWEEPER**– 1 year parts and labor

**ENGINE** – Consult factory

**BATTERY** – Consult factory

### INSTRUMENTATION

**Panel** Full vision, illuminated

**Gauges** Speedometer/odometer, tachometer, engine hour meter, engine temperature, oil pressure, voltmeter, hydraulic oil temperature, water level, hybrid display, and on-board diagnostics

### ELECTRICAL SYSTEM

Hot stamped and color coded wiring, alternator/regulator-unitized, 160 Ampere

**Battery** 12 volt, group 31, 1000 CCA, 180 min. reserve, with disconnect switch

**Lights** Halogen sealed multiple beam headlights, LED combination stop and tail lights, adjustable LED side broom lights, directional signals with hazard switch.

**Steering** Tilt and telescoping steering column

### In-Cab Air Conditioning

### MAIN BROOM

**Diameter** 35 in (889 mm)

**Length** 66 in (1676 mm)

**Type** Prefab. disposable, polypropylene double wrapped at both ends

**Core** Steel reversible

**Dirt Shoes** rubber with greaseable pivot

**Digging Pressure & Wear Control** in-cab hydraulic float

**Lift Control** In-cab hydraulic raise and lower

**Drive** Hydraulic motor

**Mounting** Hydraulic cylinder suspended

**Speed** Variable with engine RPM

### GUTTER BROOM

**Type** Vertical digger

**Diameter** 36 in (914 mm)

**Disc Construction** Steel plate

**Speed** Variable with engine RPM

**Flexibility** In-cab positioning hydraulic float

**Drive** Hydraulic motor

**Mounting** Free floating

**Adjustment** In/out (recoil spring), up/down

**Digging Pressure/Wear Control**

Hydraulic, in-cab, pressure sensing

**Broom material** Tempered steel wire

### CONVEYOR

**Type** Chevron cleat reinforced rubber belt

**Speed** Variable with engine RPM

**Flexibility** 9 in. (229 mm) oscillation for large object passage

**Drive** Hydraulic motor, chain and sprocket drive

**Bearings** Sealed self-aligning, re-lube

### DEBRIS HOPPER

**Capacity Volume** 3.5 yd<sup>3</sup> (2.7 m<sup>3</sup>)

**Material Volume** 3.4 yd<sup>3</sup> (2.6 m<sup>3</sup>)

**Hopper Lift and Dump Control**

Electrohydraulic in-cab

**Safety** horn, electronic back up alarm, back up camera, and sweep flashers

### ELECTRICAL HYBRID COMPONENTS

**Architecture** Range-extending Series Hybrid, All-electric Drivetrain

**Mode Selection** Fully automated transition between battery only and on-demand charging

**Battery Type** High Voltage Lithium-Ion (NMC)

**Plug-in Charging** Level 2 (J1772)  
 4.8 kw or higher recommended

**Maximum Dump Height** Up to 9 ft 6 in (2895 mm)

**Time to Tilt Hopper** 17 sec

**Time to Retract to Working Position** 21 sec

**Design Lift Capacity** 9,000 lbs (4,080 kg)

**Frontal Dumping** Standard

### HYDRAULIC SYSTEM

**Fixed Displacement Pump**

**Fittings** O-ring face seal type

**Reservoir Capacity** 33 gal (106 L)

**Reservoir Level** Externally readable with low level & high temp alarm and engine shutdown

**Inlet Strainer** 100 mesh

**Filter** Return, 10 micron absolute, full flow

**Filter Restriction Indicator** In cab

**Breather/Fill Cap** 10 micron

### WATER SPRAY SYSTEM

**Tank Construction** Polyethylene

**Tank Capacity** 220 gal (832 L)

**Fill Hose** 16 ft 8 in (5080 mm) with hydrant coupling and double jacket accessory

**Wash Down** Integral cascade hopper/conveyor wash and lower roller

**Pump** Diagram with run dry capability

**Spray Nozzles** Atomizing, adjacent to each broom

**Controls** On/off, volume high/low in-cab

**Filter** Non-corrosive housing,

100 mesh screen

Cleanable anti-siphon fill standard

### BRAKE SYSTEM

#### Service

Multi Caliper Disc type

Hydraulically applied

Power Assisted

#### Park

Wet Disc multi pack with spring applied

Hydraulically released push/pull activation

Interlock to prevent drive through if applied

### ECOINFUSED TECHNOLOGY®

Combining science and innovation to produce more environmentally efficient products



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