

EVO / ECO



Lodal, Inc.

EVO Smart Truck Series

EVO ... from the word EVOLUTION ... the evolution of the compacting, residential solid waste collection truck.

The evolution is now virtually complete. The EVO Smart Truck is the most advanced, the most cost effective, and the most productive residential collection vehicle on the market.

EVO series trucks are fully integrated machines -- cab, chassis and body are designed and custom manufactured from the ground up to be the very best at residential collection with a one person crew.

- **Smart Hydraulics** -- Simple, two spool valve, and only four cylinders (excluding power steering) on the truck -- two for raising and lowering the tailgate, and two for compaction or ejection of the load. Hydraulic lines are enclosed and protected (with plenty of access panels), and are exposed only where flexing is necessary.

- **Smart Tail Gate** -- Self locking and unlocking -- no turnbuckles. Operator stays at the load ejection position behind the cab and within the vehicle envelope on the 18" deep LH loading platform.



- **Smart Brakes** -- Antilock braking system standard on rear wheels.

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● **Smart Hopper** -- The work center of the EVO machine ... large, deep, midships hopper with low loading height. Automatic packing cycle (with manual override) allows continuous loading -- even on top of the ram while packing, plus "pack-on-the-move," at operator's option, provides for a clear hopper at the next stop.

● **Smart Cab** -- Effective 360 degree visibility, and close-in front visibility, from either curb side or street side stand up drive positions. Sit down, over-the-road drive on left side. Low, step-in, step-out door openings with protected, inside sliding doors.



● **Entire Power Module** -- Engine, transmission, hydraulic pump, and radiator -- drawers out the front for fast replacement, if necessary.

● **Live Hydraulic Pump** -- Crankshaft driven single or tandem pump circulates oil through simple open center system -- no time lost engaging and disengaging PTO.

● **Attachments** -- Semiautomated cart dumpers or a fully automated arm can be mounted at the hopper.

● **Smart Wheelbase** -- Short wheelbase, high crank angle, and overhang on the front drive/steer axle maximize maneuverability and minimize potentially costly back ups in cul-de-sacs and other route tight spots. Closed wheel openings with rubber moldings are both functional and safety oriented.

Standard Equipment on the EVO-T25 ROUTE BUILDER, EVO-MAG-20 and EVO-17-XL Includes:

- Fully integrated cab, chassis, and body
- CAT engine
- Allison automatic transmission
- Antilock braking system on rear wheels
- Spicer drive lines
- Drive/Steer front axle
- S-CAM brakes, with automatic slack adjusters on all wheels
- Route service and holding brake system
- Fast idle engine cut out to protect drive lines and transmission
- Twin, telescopic compaction/ejection cylinders
- Low step-in, dual stand-up drive cab
- Dual cab fans
- Three position roof vent
- Air horn
- Hopper night light
- Battery kill switch
- Left hand bang board
- Front and rear mud flaps
- Closed wheel openings with rubber molding

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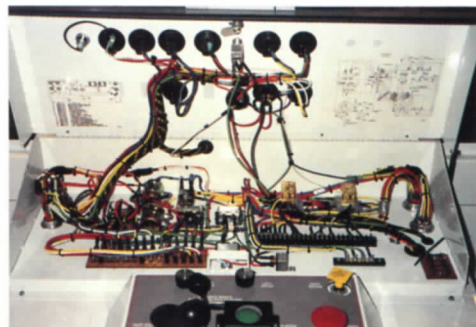
The EVO control console houses the fast idle cut out button (black); automatic pack cycle button (green); the pack cycle stop button (red); the route service and holding brake; the right and the left windshield wiper and washer; and the park brake.



The EVO transmission shift tower, control console, and electrical console are centrally located in the cab to provide equally easy and ready access from either the left-hand or right-hand operating positions.



Dash board, with gauges for front axle air pressure, rear air pressure, fuel level, transmission temperature, engine coolant temperature, engine oil pressure, volt meter, hour meter, tachometer, speedometer, odometer and trip meter, unlocks at the top and rotates forward for convenient access to wiring and instrumentation.



The electrical console opens to display and make available for testing all electrical circuits in the truck. A full test board including every circuit is provided, along with extra fuses, to facilitate electrically trouble shooting the entire truck right from the cab.

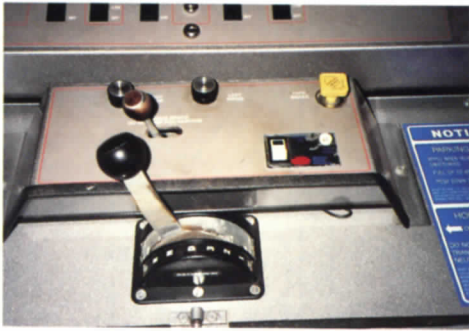


The console at the front center of the cab houses the axle differential lock-out switch; eight warning lights: low oil pressure, transmission in neutral, park brake on, low air pressure, high engine coolant temperature, tailgate open or ajar, differential lockout engaged, high transmission oil temperature; and an air pressure gauge which reads the pressure at which the route brake is set, and also its rate of application.



The EVO electrical system consists of nine modular harnesses of aircraft quality, multi-prong, quick disconnect, color coded and individually numbered wires and loom. Should a part of the system get damaged, it is necessary only to replace that particular module, plug to plug. The ECO electrical system has six such modules.

HIGHLIGHTS



The ECO transmission shift tower and control console is much the same as that of the EVO, except that absent are the fast idle cut out button, the pack cycle button, and the pack cycle stop button. Also, a hot-shift PTO control is present on the ECO control console.

Standard Equipment on the ECO-35-R, ECO-35-SR, and ECO-SA39-R Includes:

- Fully integrated cab, chassis, and body
- CAT engine
- Allison automatic transmission
- Antilock braking system on rear wheels
- Spicer drive lines
- Drive/Steer front axle
- S-CAM brakes, with automatic slack adjusters on all wheels
- Route service and holding brake system
- Hot shift PTO
- Low step-in, dual stand-up drive cab
- Dual cab fans
- Three position roof vent
- Air horn
- Loading night light
- Battery kill switch
- Front and rear mud flaps
- Closed wheel openings with rubber molding



The transmission shift lever and the route service holding brake lever are, the large majority of the time, used in unison as if they were one lever. Grasping the knob at the top of each lever, the operator shifts the transmission from neutral to drive while simultaneously releasing the route service and holding brake. Conversely, when the operator shifts the transmission from drive to neutral, he simultaneously applies the route service and holding brake.

This route brake contributes significantly to the overall effectiveness of the Lodal system. As soon as it is actuated, it applies a predetermined amount of air pressure to all wheel service brakes in a predetermined amount of time. Unlike quick and instantaneous foot pedal applications of the brakes, the route brake applies the shoes to the drums gradually, but rapidly, and without spiking. Increased brake lining and tire life will result from proper use of the route brake.



The left-hand work station of the EVO is large and deep, and the operator is able to keep himself within the vehicle envelope. At this station, between the cab and the hopper, are the tailgate control lever, with safety lock; the lever for manually overriding the automatic pack cycle and for operating the ram in the manual mode; the switch to select either the automatic or the manual mode; and the pack and pack stop buttons. (Also shown is the control lever and valve for an optional left hand cart dumper.) An identical work station (except for the tailgate lever and selector switch) exists on the curb side of the truck.



Dual stand up drive on both sides of cab. A three position, tilt steering wheel is provided on the left side. Also on the left side is an elevated, second set of throttle and brake pedals for sit down, over-the-road driving.



Lodal's new paint process begins with cleaning fabricated assemblies and components to SSPCI (top of the line preparation). We then apply 2-3 mils of an immersion rated, high build, industrial quality epoxy by Tnemec. The first top coat is an acrylic polyurethane which is subsequently sanded down to ensure maximum adhesion and appearance of the second top coat. The second and final top coat is the same acrylic polyurethane as the first, which provides outstanding gloss, chemical resistance, and color stability. Total finish thickness is 5-6 mils. (And even though some parts of the truck are made of galvanized steel, the same process is used throughout.)

ECO Recyclables Truck Series

ECO ... from the word ECOLOGY ... the ecologically oriented machine.

Most of the design features of the EVO Smart Truck Series are inherent in the ECO Recyclables Truck Series. The main differences between the two are in the body and frame configurations which result directly from the jobs each machine is intended to do.

Both residential and/or commercial collection body configurations are available for either commingled collection or curb separation of up to 10 materials.

- Steel bi-fold doors and/or aluminum pop-in doors, with onboard storage, close up all manual loading openings.

- Manual loading doors are optional on the street side.

- Low loading height.



- Brakes -- Antilock braking system standard on rear wheels.

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- The **ECO-35-R** is a 35 cubic yard unit with movable dividers. It unloads to the rear.
- The **ECO-35-SR** is a 35 cubic yard unit that unloads to either the left side or both sides and also to the rear. It provides for maximum separation or isolation of materials from each other by virtue of three separate containers. These containers can be further divided by welded panels.
- The **ECO-SA39-R** is a semiautomated, 39 cubic yard, full trough, full roof unit that can dump up to six carts simultaneously with automatic latching and unlatching. It unloads to the rear. The **ECO-SA-39R** excels at both commercial collection and/or residential collection.

• **Optional Lodal Plastics Compactor**, with 25:1 compaction ratio holds 4,000 one gallon milk bottles, or approximately 30 cubic yards of loose, uncompacted milk bottles, mounts on deck between cab and body.

• **In-cab controls** for unloading. Tailgate control and container hoist controls are located directly behind the driver's seat.

• **In-cab, hot shift control** precludes gear clash when engaging PTO.



• **Cab** -- Effective 360 degree visibility, and close-in front visibility, from either curb side or street side stand up drive positions. Sit down, over-the-road drive on left side. Low, step-in, step-out door openings with protected, inside sliding doors.

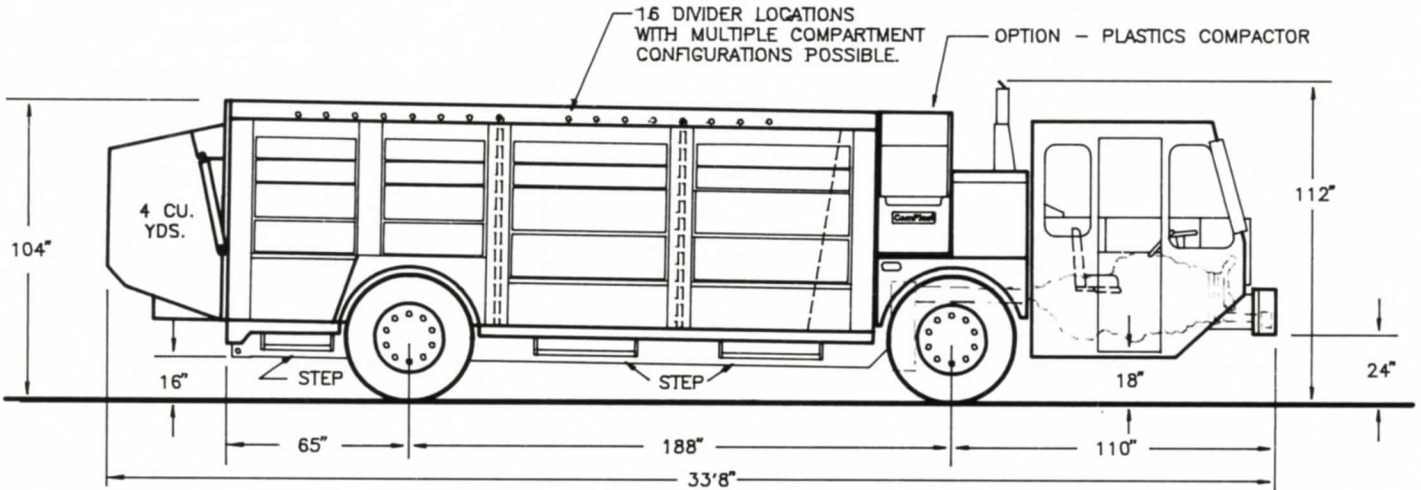
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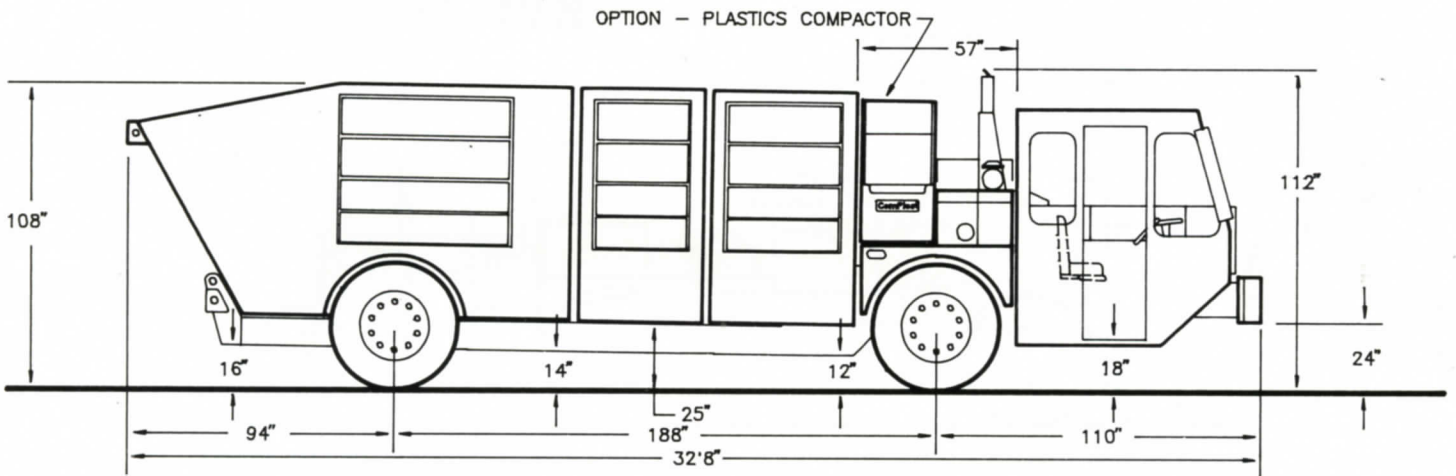
ECO Basic Dimensions

All specifications subject to change without notice

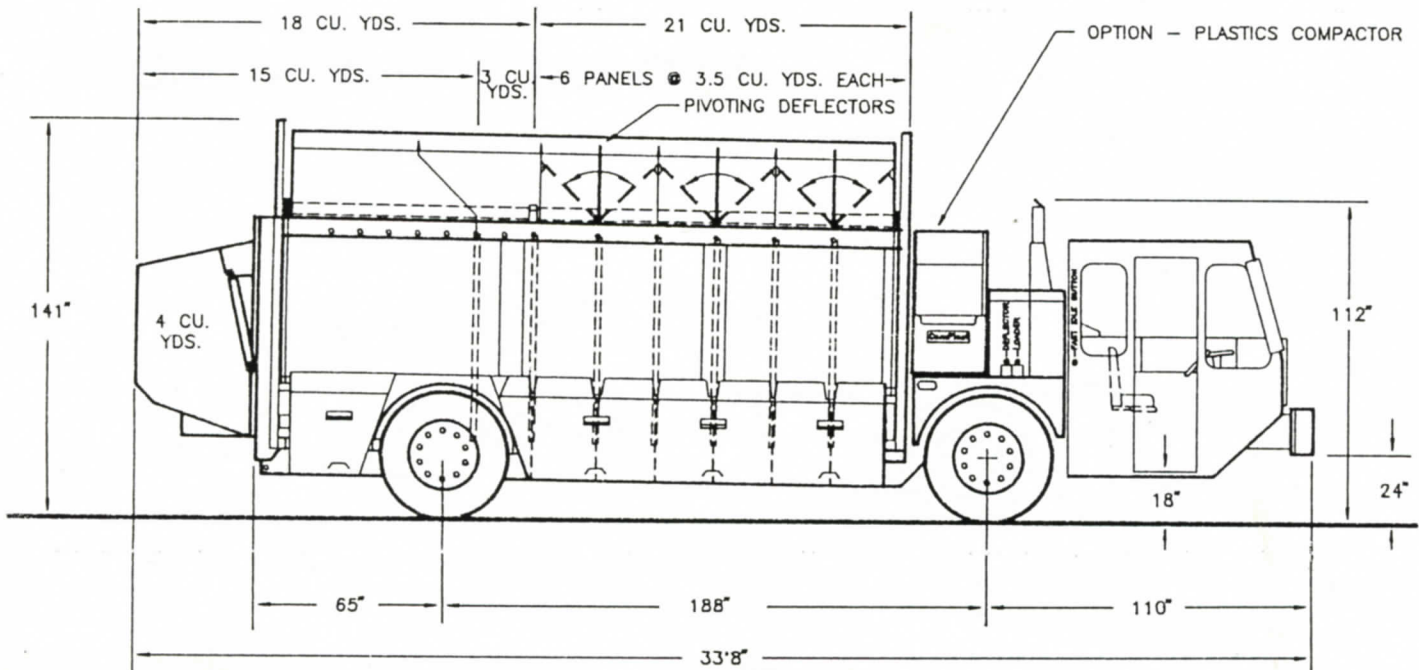
ECO-35-R



ECO-35-SR

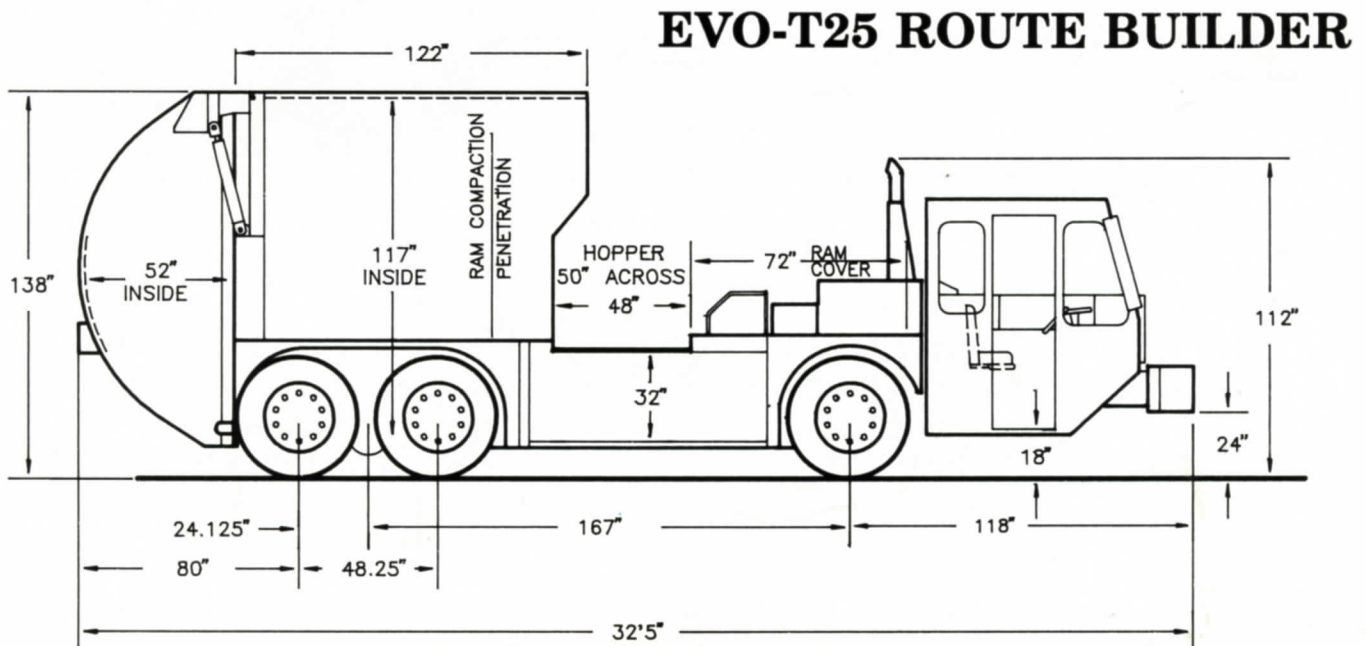
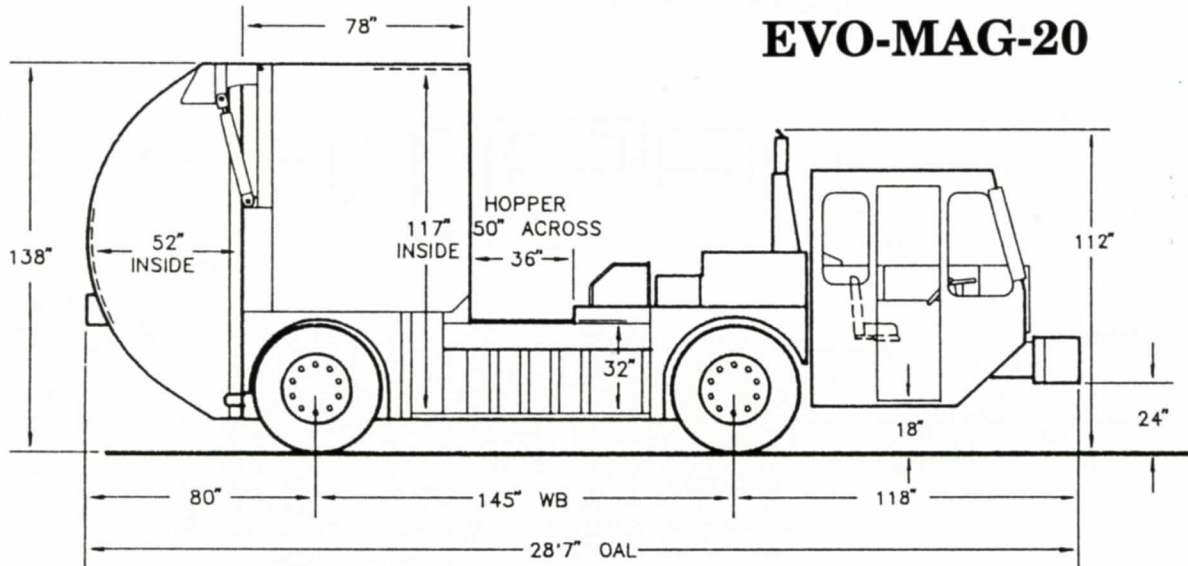
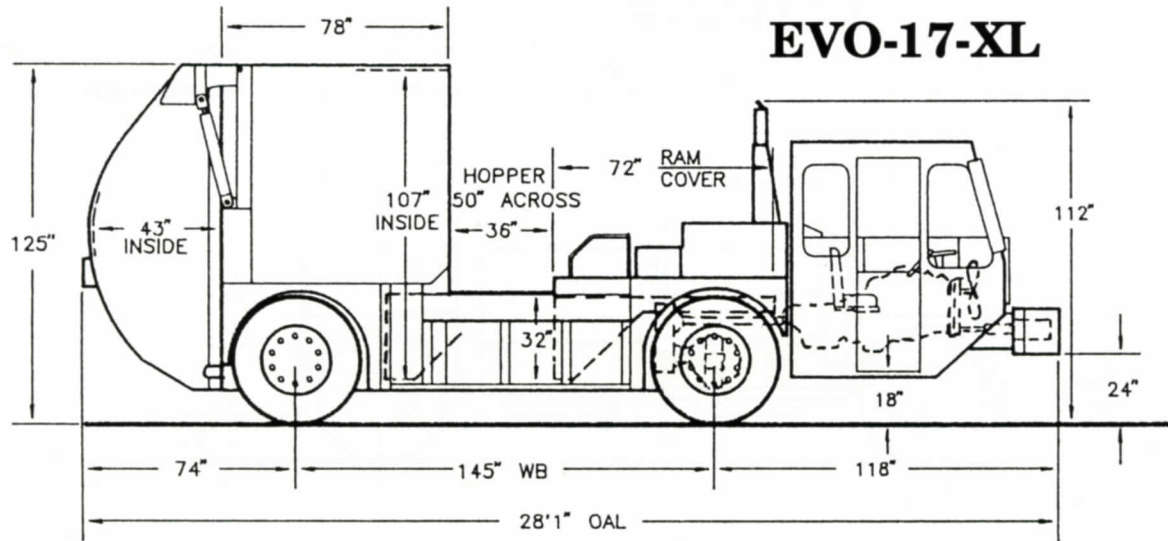


ECO-SA39-R



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