

# ALL-DAY HYBRID POWER ON THE JOB



**Advanced Plug-In  
Hybrid System**

For Medium- and Heavy-Duty Work Trucks

This next generation of Allison electronic controls offers a variety of features to further improve fuel economy and maximize transmission protection with advanced prognostics.



# 5<sup>th</sup> Generation ELECTRONIC CONTROLS



## Fuel Economy

To get the most out of every drop of fuel, the Odyne hybrid parallel system, in conjunction with Allison 5th Generation Electronic Controls, offers an enhanced array of smart controls designed to increase fuel efficiency and fuel economy for the specific needs of any application. These include Launch Assist from the Electric Motor, Load-Based Shift Scheduling (LBSS), Reduced Engine Load at Stop (RELS) and Shift Energy Management (SEM). Next generation Allison 5th Generation Electronic Controls provide unprecedented flexibility when it comes to specifying maximum fuel economy.

## Prognostics

Calibrated to the vehicle's particular operating requirements, Allison's advanced prognostics monitor various operating parameters to determine and alert when service is due. This eliminates unnecessary oil and filter changes and provides maximum transmission protection.



### Oil Life Monitor

Not only does it help you get maximum oil life while providing the maximum protection for the transmission, the Oil Life Monitor also saves you money by preventing unnecessary fluid changes.



### Filter Life Monitor

It helps extend filter change intervals to reduce routine maintenance downtime and saves you money in the long run, all the while providing maximum protection for the transmission.



### Transmission Health Monitor

It helps avoid costly repairs and downtime by taking the guesswork out of scheduling routine transmission maintenance and ensures the transmission is operating at its maximum performance level.

*Additional electronic control packages are available. See your local Allison representative for the ones that fit your particular application.*

# WORKING HARDER, SMARTER, SAFER AND LONGER

## ALLISON TRANSMISSION AND ODYNE HYBRID SYSTEMS HAVE TEAMED UP TO PROVIDE AN INNOVATIVE PLUG-IN HYBRID POWER SYSTEM SOLUTION FOR MEDIUM- AND HEAVY-DUTY WORK TRUCKS REQUIRING EXTENDED WORKSITE STATIONARY POWER.

The Allison | Odyne hybrid power system targets the specific mobile and stationary needs of utility bucket trucks, digger derricks, cranes and other applications requiring all-day stationary power at worksites. It features an Allison fully automatic transmission utilizing Allison's patented Continuous Power Technology™ to deliver unmatched startability and smooth, full-power shifts for superior acceleration and drivability - all to get your crews to the worksite faster and more efficiently. While driving, the Odyne hybrid electric motor provides launch assist and regenerative braking for improved fuel economy and reduced emissions. Once on site, Odyne's stationary power hybrid system offers the capacity and endurance to supply all-day power for even extremely demanding auxiliary equipment.



## Allison gets you there - faster, easier and more fuel efficiently

Allison Automatics have a reputation for both performance and reliability. Here's why they are the preferred choice for rugged-duty applications:

### STARTABILITY

Startability is a vehicle's capability to launch and pull a load. Manual and automated manual transmissions have to launch at very low engine rpm in order to prevent damage to the clutch. This means less torque, which is why they have very deep 1st gear ratios to help them overcome their clutch limitations. An Allison Automatic uses the full torque from the engine and multiplies it with the torque converter. Then, when the 1st gear ratio and rear axle ratio are factored in, the Allison provides far more powerful startability.



### MAINTENANCE MADE EASY

Routine oil and filter changes are the only regular preventive maintenance required with an Allison Automatic. Easily accessible integral and spin-on oil filters reduce labor costs and valuable downtime. TranSynd™ TES 295 transmission fluid greatly extends oil change intervals for most applications.



### INHERENT DURABILITY

The Allison torque converter eliminates start-up lurches and lugging, thereby protecting the transmission and driveline. Further, Allison Automatics have no start-up clutches to wear or burn out—unlike manual or automated manual transmissions.



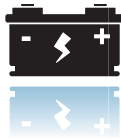
# ALLISON | ODYNE PLUG-IN HYBRID SYSTEM

THE SYSTEM PROVIDES STATIONARY ELECTRIC POWER FOR AUXILIARY EQUIPMENT ON TRUCKS OVER 14,000 LBS/6350.3 KG, INCLUDING DIGGER DERRICKS, COMPRESSORS, CRANES, UTILITY TRUCK BUCKETS AND OTHER HEAVY-DUTY WORKSITE DEVICES.



## ON-SITE POWER LIKE NEVER BEFORE

The system has the capacity and endurance to supply all-day power for even extremely demanding auxiliary equipment. The system easily recharges overnight via plug-in cable and stores energy during the day through regenerative braking while driving or seamlessly at the worksite from the motor generator, as needed.



## PERFECT FIT

The hybrid system's minimally intrusive design preserves the OEM chassis warranty and provides greater reliability. It interfaces with many OEM chassis and Allison fully automatic transmissions, for a seamless, trouble-free solution.

## A QUIET, REDUCED EMISSION ENVIRONMENT

Operators appreciate the quiet operating environment, which means a better, safer communications and training worksite. With significantly reduced emissions, operators also report a reduction in exhaust induced headache and fatigue.



## WISE INVESTMENT

In fuel savings, increased productivity and reduced maintenance, an Allison | Odyne Hybrid System more than pays for itself over the life cycle of the vehicle.

**See your Allison | Odyne distributor for the system that best meets your application.**

## FUEL SAVINGS UP TO 50%

The Allison | Odyne Hybrid System helps reduce fleet operating and maintenance costs, and, depending on duty cycle, enables large trucks to obtain fuel economy improvements of up to 50% or more, compared to traditional diesel/gas engines. This efficiency may result in fuel savings of up to 1750 gallons per year\*.



**Allison | Odyne Hybrid Systems are available through Altec, DUECO and Terex locations globally.**

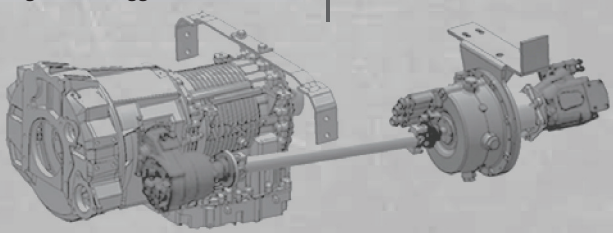
For more information, contact your Odyne representative today or connect with us at [odyne.com](http://odyne.com).



## KEY FEATURES AND BENEFITS

<b>Reduced Fuel Costs</b>	Up to 1750 gallons of diesel fuel per year*
<b>Reduced Emissions</b>	Depending on the application, estimated up to 19.25 tons of GHG (CO <sub>2</sub> ) saved per year*
<b>Reduced Noise Level At WorkSite</b>	Operator can talk to others during all electric operation compared to a typical engine-powered truck, improving operator safety
<b>Extended Job Site Time With Engine Off</b>	Optimized with lower cost, overnight off-grid charging with electricity, whereas conventional hybrids burn more expensive fossil fuel to frequently charge batteries in the field
<b>More Power</b>	Up to 50 extra horsepower while driving for improved acceleration when climbing hills, accelerating and cornering and more power for operating equipment at the job site
<b>Lower Maintenance Cost</b>	Reduced chassis and engine maintenance over vehicle life due to lower engine hours
<b>Lower System Weight</b>	Utilizes Johnson Controls lithium-ion batteries
<b>Safety</b>	Designed to SAE-J1772, preventing inadvertent drive-off while charging. High Voltage Interlock Loop (HVIL) detects issues and safely shuts down the system
<b>Operator Friendly</b>	Operation is similar to conventional vehicles and minimal training is required
<b>Performance Monitoring</b>	System changes can be made remotely, as an option

## SPECIFICATIONS Odyne Hybrid System

ELECTRICAL	OVERALL	OPTIONS
<b>System Voltage:</b> 300V	<b>Approximate System Weight:</b> 1,200 lbs/544.3 kg (single battery pack) to 1,600 lbs./725.8kg (dual battery pack)	<b>Electric air conditioning in cab</b> while engine is off at worksite
<b>Motor:</b> Remy HVH250 – 80 hp/58.8 kW continuous, 110 hp/80.9 kW peak	<b>Chassis Compatibility:</b> Chassis over 14,000-lbs/ 6350.3 kg GVW	<b>Hydronic heater in cab</b> while engine is off at worksite
<b>Batteries:</b> High voltage maintenance-free Johnson Controls lithium-ion battery pack(s) 14 or 28 kWh	<b>Drive Train Interface:</b> Industry standard with Allison fully automatic transmissions	<b>Exportable power</b> up to 14,000W
<b>Approximate Battery Weight:</b> 350 lbs/181.4 kg per battery pack	<b>Ground Clearance:</b> Standard chassis ground clearance	<b>Advanced telematic system</b> with data acquisition and system upgrade capabilities
<b>14 kWh Charge Time:</b> 4 hours with 220V/30A supply, 10 hours with 110V/20A supply	<b>Components:</b> Designed for rugged environments	
<b>28 kWh Charge Time:</b> 8 hours with 220V/30A supply, 20 hours with 110V/20A supply		
<b>Charge Station &amp; Charging Cord:</b> SAE J1772 compliant charging cord		
<b>Cord Receptacle:</b> Mounted on the street side, curb side or on the back of the body		
<b>Component IP Rating:</b> IP65 or IP67		

\*Estimate based on International IHC DT engine chassis with Odyne PHEV system greater than 25 kWh in use 250 days per year for 10 years with 2 hours of driving and 4.5 hours of electric mode operation and approximate fuel cost of \$5 per gallon diesel and approximately 22.2 pounds of CO<sub>2</sub> per gallon of diesel fuel burned.



## ALLISON BRAND PROMISE

The Allison Brand Promise is the automatic experience with an unrivaled combination of Quality, Reliability, Durability, Vocational Value, and Customer Service.

[www.allisontransmission.com](http://www.allisontransmission.com)

# WINNEBAGO®



## Lower your overall cost of operation with the commercial vehicle industry's first **all-electric Zero Emission Winnebago.**

Available on 33' and 38' Class A commercial platforms, this 100% Battery Electric Vehicle from Winnebago® qualifies for many federal, state and local incentives for vehicle purchase and infrastructure upgrades, including charging stations.

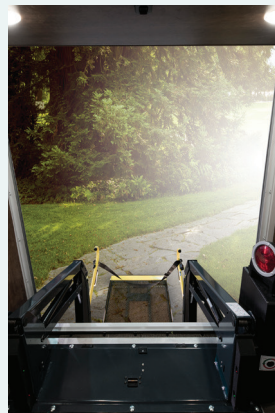
Depending on interior energy demands, this groundbreaking Class A coach delivers 85 to 150 miles on a full charge, making it ideal for short-range, fixed-base applications such as:

- ⚡ Mobile Medical Clinics
- ⚡ Mobile Dental Clinics
- ⚡ Bloodmobiles
- ⚡ Bookmobiles
- ⚡ Mobile Offices
- ⚡ Mobile Retail
- ⚡ Mobile Classrooms
- ⚡ Mobile Outreach
- ⚡ Media Event Vehicles
- ⚡ Law Enforcement Command Units
- ⚡ DUI/BAT Vehicles

### Customized to meet your requirements

Winnebago's interlocking SuperStructure® design means a truly barrier-free interior, allowing maximum customization to meet your needs. Available options include:

- ⚡ Slide rooms
- ⚡ Alternate entrance door locations
- ⚡ Wheelchair lifts
- ⚡ Cargo doors



Wheelchair lift



ZEV Drivetrain



TM4 Electric Traction

# Key facts

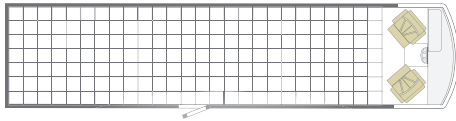
- ⚡ Range: 85–150 miles (full charge)
- ⚡ Charge time: 7–8 hours – Level 2 and Level 3 charging capability
- ⚡ Sodium-Nickel technology (“Safe Battery Technology”)
- ⚡ 24/7 remote monitoring of in-vehicle electronics and battery health
- ⚡ Optional vehicle telematics available
- ⚡ Based on Ford’s F53 commercial chassis
- ⚡ No Commercial Driver’s License required in most states
- ⚡ Onsite or local service of ZEV components
- ⚡ More than 300 Winnebago service locations for service on Winnebago components
- ⚡ Full Ford® chassis warranty on remainder of Ford components



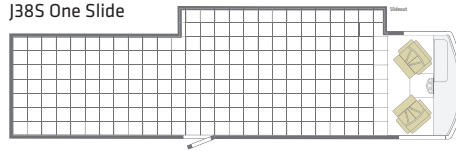
## J38S

Available with 26,000-lb. GVWR. No CDL required.

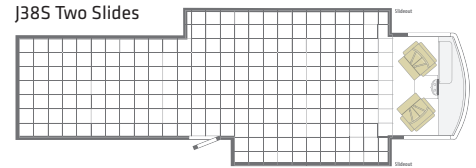
J38S No Slide



J38S One Slide



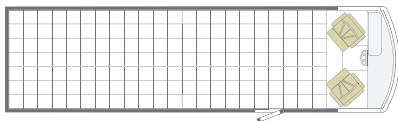
J38S Two Slides



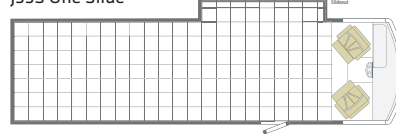
## J33S

Available with 26,000-lb. GVWR. No CDL required.

J33S No Slide



J33S One Slide



### Dimensions & Measures

	<b>J38SE</b> Ford® F53 ZEV	<b>J33SE</b> Ford® F53 ZEV
Length	38'10"	33'8"
Exterior Height with Roof A/C	12'11"	12'11"
Exterior Width	8'5.5"	8'5.5"
Interior Height	7'	7'
Interior Width	8'0.5"	8'0.5"
Wheelbase	248"	208"

For Product Information:  
**WinnebagoInd.com**  
**(800) 492-9135**

**WINNEBAGO**<sup>®</sup>  
 THE MOST RECOGNIZED  
 NAME IN MOTORHOMES<sup>®</sup>  
[WinnebagoInd.com](http://WinnebagoInd.com)

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 Printed in USA  
 Seat belts are your most important  
 hookup. Always buckle up.  
**NYSE: WGO**



## WHY HIRE A CONSULTANT?

Reasons why a consultant can bring great value to your organization:

- \* To bring temporary or on-going expertise that supplements, not supplants, your staff.
- \* To help with a special need, to do the specialized work.
- \* To obtain expertise that you need and to deliver quality that you might otherwise not be able to afford to hire.
- \* To provide confidentiality or to inject an objective voice.
- \* To bring in the "outside expert". Sometimes leadership perceives that it's only the opinion of "the expert" that counts.
- \* To see the situation through fresh, disinterested eyes, without the filters and preconceived notions the internal people may have.
- \* To enable all staff and volunteers to fully participate in a process such as strategic planning, without one of them having to wear a facilitator's or coordinator's hat too.
- \* To achieve the efficiency of having an expert for a short period of time. Most organizations have needs that require specialized skills, but which are not sufficient in scope to justify a full-time employee.
- \* To get the job done efficiently. A consultant, guided by expertise and experience, is more likely to get the job done right the first time.
- \* To model and offer learning—something that a staff person may not be able to do as freely just because of perceived power issues, hierarchical constraints, etc.
- \* To ask the right questions.



# OUTREACH VEHICLE CONSULTING

"Your partner for the road ahead"

[vehicleSUCCESS.com](http://vehicleSUCCESS.com)

# Outreach Vehicle Consulting ... and so much more

Knowledge is the cornerstone of any successful project, but only SVS combines expert knowledge with superior technical skills to provide a complete "concept to delivery" solution.



Although all of our services are modular, the majority of our clients request a "soup to nuts" package to provide the best value, and support our proven methodology for success.

A typical bookmobile service package includes aspects from all of our service categories...



## Consultation

- \* Expertise throughout project
- \* Budgeting assistance
- \* Sustainability guidance
- \* Base vehicle selection
- \* Component selection

## Design

- \* Floor plan development
- \* Specification author
- \* Pre-construction engineering refinement

## Management

- \* RFP issue and response analysis
- \* Contract negotiation
- \* Vendor liaison
- \* Construction management

## Inspection

- \* Up to three (3) field inspections of vehicle during construction
- \* Ensure contract and regulatory compliance
- \* Verify quality standards, above and below the surface

## Consignment

- \* Rehoming your used outreach vehicle with the best possible value

Our president, Michael Swendrowski, founded Specialty Vehicle Services, LLC. in 2002 after a very successful 20-year career within the Specialty Vehicle industry. Michael held many high-profile positions, within multiple



organizations across the United States, including Sales Manager, Engineering Manager, Production Manager, and just prior to departure, Director of Operations for one of the premier bookmobile manufacturing companies in the USA. In addition to his vast real-world experience, Michael has formal training in both Business and Electronics and is internationally renowned for his innovative developments in mobile applications and sustainability options for this unique market.

Michael heads all SVS bookmobile projects personally because of his love for these units, expertise, and his involvement in the bookmobile community.

In addition to being a strong advocate of library outreach, Michael has served as Chairman of the ALA Subcommittee on Bookmobiles, Board member for The Association of Bookmobile and Outreach Services, a contributing author to the industry reference book "On the Road with Outreach", and regularly gives informative presentations at



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## SVS Client List (partial)

2018 Edition

Albany Public Library*	<i>Albany, NY</i>	Memphis Public Library	<i>Memphis, TN</i>
Anaheim Public Library	<i>Anaheim, CA</i>	Mendocino County Library	<i>Ukiah, CA</i>
Anderson Public Library*	<i>Anderson, IN</i>	Meridian Library District	<i>Boise, ID</i>
Ann Arbor District Library	<i>Ann Arbor, MI</i>	Miami-Dade Public Library System	<i>Miami, FL</i>
Arlington Heights Memorial Lib.	<i>Arlington Heights, IL</i>	Monroe County Public Library+	<i>Bloomington, IN</i>
Arapahoe Library District	<i>Centennial, CO</i>	Mountain View Public Library	<i>Mountain View, CA</i>
Arrowhead Library System	<i>Mountain Iron, MN</i>	New Castle- Henry Co. Pub. Lib.	<i>New Castle, IN</i>
Ashland Public Library*	<i>Ashland, OH</i>	Oakland Public Library	<i>Oakland, CA</i>
Bloomington Public Library	<i>Bloomington, IL</i>	Ocean City Free Public Library	<i>Ocean City, NJ</i>
Boonslick Regional Library*	<i>Sedalia, MO</i>	Okefenokee Reg. Library Syst.*	<i>Waycross, GA</i>
Bristol Public Library	<i>Bristol, VA</i>	Ottawa Public Library+	<i>Ottawa, ON</i>
Calgary Public Library+	<i>Calgary, AB</i>	OverDrive, Inc.	<i>Cleveland, OH</i>
Calvert Library	<i>Prince Frederick, MD</i>	Owatonna Public Library*	<i>Owatonna, MN</i>
Cambria County Library System*	<i>Johnstown, PA</i>	Owen County Public Library	<i>Spencer, IN</i>
Central Skagit Library District	<i>Sedro Woolley, WA</i>	Philadelphia Free Library	<i>Philadelphia, PA</i>
Chemung County Library District	<i>Elmira, NY</i>	Philipsburg Jubilee Library	<i>St. Maarten, Dutch W. I.</i>
Corvallis-Benton Library*	<i>Corvallis, OR</i>	Pikes Peak Library District*	<i>Colorado Springs, CO</i>
Coshocton Public Library	<i>Coshocton, OH</i>	Placer County Library	<i>Auburn, CA</i>
County of Los Angeles Public Lib.	<i>Downey, CA</i>	Racine Public Library+	<i>Racine, WI</i>
Crowley Ridge Public Library	<i>Jonesboro, AR</i>	Raleigh County Public Library*	<i>Beckley, WV</i>
Detroit Public Library	<i>Detroit, MI</i>	Rochester Public Library	<i>Rochester, MN</i>
Eastern Shores Library System	<i>Sheboygan, WI</i>	Rochester Hills Public Library+	<i>Rochester, MI</i>
Edison Township Public Library	<i>Edison, NJ</i>	Rockbridge Regional Libraries	<i>Lexington, VA</i>
Fairfield County District Library*	<i>Lancaster, OH</i>	Roseville, City of	<i>Roseville, CA</i>
Fort Vancouver Regional Library Distri	<i>Vancouver, WA</i>	Saint Clair County Library*	<i>Osceola, MO</i>
Fountaindale Public Library	<i>Bolingbrook, IL</i>	San Mateo County Library	<i>Half Moon Bay, CA</i>
Four County Library System	<i>Vestal, NY</i>	Santa Barbara Pub. Lib. Syst.	<i>Santa Barbara, CA</i>
Frankfort Public Library*	<i>Frankfort, IL</i>	Santa Cruz Public Libraries	<i>Santa Cruz, CA</i>
Gadsden County Public Library	<i>Quincy, FL</i>	Seattle Public Library	<i>Seattle, WA</i>
Homer Township Public Library	<i>Homer Glen, IL</i>	Skokie Public Library	<i>Skokie, IL</i>
Humboldt County Library+	<i>Winnemucca, NV</i>	Sno-Isle Libraries+	<i>Marysville, WA</i>
Humboldt County Public Library	<i>Eureka, CA</i>	South Brunswick Public Library	<i>Monmouth Junction, NJ</i>
Jefferson County Library	<i>Port Hadlock, WA</i>	Stark County District Library+	<i>Canton, OH</i>
Jefferson County Public Library	<i>Lakewood, CO</i>	Saint Clair County	<i>Osceola, MO</i>
Jefferson Township Public Library	<i>Oak Ridge, NJ</i>	Saint Louis County	<i>St. Louis, MO</i>
Kent District Library	<i>Comstock Park, MI</i>	Tell City-Perry Cty. Pub. Library	<i>Tell City, IN</i>
King County Library System+	<i>Issaquah, WA</i>	Three Rivers Reg. Library Syst.*	<i>Brunswick, GA</i>
Kootenai-Shoshone Area Libraries	<i>Hayden, ID</i>	Tulsa City-County Library	<i>Tulsa, OK</i>
La Porte County Public Library	<i>La Porte, IN</i>	Wake County Fleet Operations	<i>Raleigh, NC</i>
Lewis & Clark Library	<i>Helena, MT</i>	Warren Newport Public Library	<i>Gurnee, IL</i>
Lompoc Public Library System	<i>Lompoc, CA</i>	Waukegan Public Library*	<i>Waukegan, IL</i>
Lorain Public Library System*	<i>Lorain, OH</i>	Westchester Library System	<i>Tarrytown, NY</i>
Marin County Free Library+	<i>San Rafael, CA</i>	Williston Community Library	<i>Williston, ND</i>
Marion County Public Library	<i>Fairmont, WV</i>	Windsor-Severance Library Dist.	<i>Windsor, CO</i>
Markham Public Library	<i>Markham, IL</i>	Yuba County Library	<i>Marysville, CA</i>
Maui Friends of the Library	<i>Wailuku, HI</i>		



† = Multiple vehicles or projects

\* = Consignment client

*“Your partner for the road ahead!”*

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