



INTEGRATED LITHIUM-ION BATTERY FREQUENTLY ASKED QUESTIONS



Available on Hyster® J50-60XNL, E50-60XNL, J40XNTL and J40XNL models.

TRUCK AND BATTERY FEATURES

1. The integrated lithium-ion battery capacities are:

- J50-60XNL: 33.6, 25.2, 16.8kWh
- E50-60XNL: 33.6, 25.2, 16.8kWh
- J40XNTL/J40XNL: 20.1kWh

2. What battery features are included in the truck?

All J50-60XNL, E50-60XNL, J40XNTL and J40XNL models come with the standard features provided with the Hyster Lithium-ion Ready program. This includes: battery state of charge via the truck display, low state of charge warning features and early shutdown warnings.

The integrated models advance the integration between the battery, charger and truck even further. Introduced in this truck are the following features:

- Battery to charger CAN communication
 - This allows the battery to control charge rate, putting faster charge into the battery from 0-90% before the charging slows to protect the battery from overcharging.
- High temperature thermal controls
 - Battery has the ability to detune the truck traction performance and detune charge rate to allow longer run times and increase battery life in high ambient environments. (See “What about high ambient applications”).
- Heating pads for battery storage. (See “What about cold storage”).

3. How does the residual capacity compare to lead acid models?

While the integrated truck is lighter, Hyster engineering has optimized the location of the counterweighting to match the lead acid capacity more efficiently.

What this means in practice is that the integrated J50-60XNL residual capacity matches that of the lead acid with the minimum weight requirements.

The layout of the E50-60XNL allows for even more counterweighting and has improved residual capacity vs a lead acid with minimum weight requirements.

Please consult rating experts for more details.

4. What is the battery warranty?

7 years or 12,000 hours. Visit the J50-60XNL, E50-60XNL, J40XNTL and J40XNL product pages on the Dealer Portal for more warranty information.

5. Where is this truck built?

The J50-60XNL series is built in the Craigavon facility in Northern Ireland. The E50-60XNL, J40XNTL and J40XNL series are manufactured in our Greenville facility located in North Carolina.

6. What is the operating temperature for the battery?

The battery operating range is -40° to 140°F (-40° to 60°C).

7. What about cold storage?

All integrated trucks come with battery heaters installed for storage conditions. When the truck is connected to the charger, heaters engage to keep the battery temperature above 32°F (0°C). The heaters keep the battery above freezing when stored in -20°F (-30°C) indefinitely.

8. What about high ambient applications?

To maximize battery life and productivity the J50-60XNL, E50-60XNL, J40XNTL and J40XNL models have introduced high thermal cutbacks. When the battery internal temperature reaches 131°F (55°C) tractive performance and charge rates begin to detune. If the battery reaches 140°F (60°C) the battery will shut down.

Cooling options are available to be added and recommended for high ambient applications with fast charging demands. The cooling option adds vented panels with fans to pull air across the battery. These fans engage when the battery reaches thermal cutback or anytime on charge.

9. Can the battery be removed?

The battery is maintenance free; therefore, access or removal is not part of normal service schedule. If needed, the battery can be removed vertically from the floor.

10. Are there any major option incompatibilities?

The J50-60XNL, E50-60XNL and J40XNTL/XNTL are incompatible with the following options: mechanical hydraulics and UL. The integrated lithium-ion battery is designed to UL standards, and internal componentry is UL listed; however, at this point, the battery itself is not yet UL certified or listed. Fully enclosed cab is available on the J50-60XNL only.

INTEGRATED LITHIUM-ION FAQ

CHARGERS

11. What chargers are available?

The integrated lithium-ion battery communicates to drive the charger. As a result, the following chargers have been validated and approved. Visit the charger product pages on the Dealer Portal for more warranty information.

- Ecotec Fast Access: <https://partnerportal.hyster.com/americas/parts/supplier-overview/ecotec/>
- PosiCharge ProCore: <https://partnerportal.hyster.com/americas/parts/supplier-overview/posicharge/>

12. How fast can the battery be charged?

Charge rate is dependent on facility infrastructure and charger selection. Both Ecotec and PosiCharge offer a range of charger sizes.

- E50-60XNL with a 30kW fast charger can provide a full battery charge* in 65min.
- J50-60XNL with a 30kW fast charger can provide a full battery charge* in 65min.
- J40XNTL/XNL with a 30kW fast charger can provide a full battery charge* in 45min.

13. What infrastructure is required for full charge capacity?

The fastest charge rate requires infrastructure providing 480VAC on a 50A breaker. Options are available for 208/240VAC and 600VAC. Contact information for the charger supplier can be found on the Dealer Portal.

14. What are the charger warranties?

Charger warranties and service is provided by the Ecotec and PosiCharge. Visit the charger product pages on the Dealer Portal for more warranty information.

15. What is onboard charging?

Onboard charging is an option that can be added to the truck to allow charging directly for a wall plug. This option adds an EV style connector (J1772) to the truck to allow direct charging. This option comes with a charging cable and adaptors for 240V (14-50R and TT-30R plugs) and 120V (5-15R plug).

16. How fast can I charge with the onboard charger?

Utilizing a 240V circuit the onboard charger provides 6kW to the battery, at 120V there is 1.4kW to the battery.

17. How long does it take to charge with the onboard charger?

You can get a quick estimate of charge time by dividing the battery size with the charger power.

For example, charging a 33.6kWh battery from lift-lock out* would take:

- 240V at 6kW = 5 hours and 15min
- 120V at 1.4kW = 22 hours and 15min

Charge times for all battery configurations can be found on the product spec sheets.

18. The onboard charge times look slow! Why would I want an onboard charger?

The onboard charging option provides two unique benefits:

- Cost effective way to charge for applications with the downtime for slower charging. For example, an application running a J40XNL in a medium duty application for every hour the truck is in use will require 40min of charging via 240V outlet or 2 hours and 40min via 120V outlet. Different charge time scenarios can be found on the product spec sheets.

Medium – High throughput, runs near capacity without attachments or high lifts

- Maximum flexibility – the addition of the onboard charger does not change the ability of the unit to charge faster via offboard chargers as outlined in questions 11 through 13. This allows the flexibility to charge depending on their usage. It also allows units to be charged in non-traditional ways such as diesel generators or solar banks during power outages or areas with limited power options.

ORDERING

19. How do I order an integrated lithium-ion model?

The integrated lithium-ion models are ordered through NOVO. You will see the new integrated models next to the standard non-integrated base models. Please note this line item includes the battery and operator station improvements. This does not include the charger or the new air ride seat.

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21. How do I order a charger?

The charger is not ordered via NOVO. Chargers can be ordered through the D3 Direct Ship program via aftermarket. All charger orders go toward dealer AIM-HY targets. Visit the charger product pages on the Dealer Portal for more information.

22. What is the lead time for an integrated lithium-ion battery model?

The lead time is the same as the listed lead times for the standard product. There are no increases in lead time due to SPED.

23. Is leasing available?

Yes. Contact Hyster Capital for more information.

