

NEMESIS INDUSTRIES

JK Dual Battery Tray

Thank you for purchasing one of our quality products. From product conception to the moment we packaged this product our focus has been on providing you with the very best. A great deal of effort is spent making sure you receive a quality part that will hold up to years of abuse. If for any reason you are unsatisfied with the purchase of any of our products they may be returned within 10 days in unused condition for your choice of an exchange or a full refund, less shipping charges. Thank you for your purchase and we hope to see you on the trail soon.

Pre-Install Notes:

Before you start it is imperative that you read these instructions carefully. Failure to do so may result in damage to your vehicle, unsatisfactory installation, or personal injury.

- 1) Your personal safety is of the utmost importance. Please, exercise extreme caution when working around and under your vehicle.
- 2) Wear personal protective equipment such as safety glasses, hearing protection and gloves when working on your vehicle.
- 3) Carefully read the **Product Warranty** and **Assumption of Risk Agreement** at the end of this document.
- 4) It is the purchasers/installers responsibility to inspect the package for any missing or damaged pieces prior to beginning installation. If any discrepancies are discovered please contact us immediately so we may rectify the situation.
- 5) This document is also available on our website in .pdf format with high resolution images that can be enlarged for greater clarity. www.nem-ind.com/tech

Installation Instructions



Box Contents:

Battery Base



Fire Wall Mount



Battery Hold Down Riser



Battery Hold Down



Fender Support



Dual Battery Locator



Factory Tray Adapter 3.8L



Factory Tray Adapter 3.6L



Factory Tray Adapter BOR HEMI





Hardware Pack Contents:

Quantity	Size	Part
11	5/16" X 3/4"	Flathead Bolts
11	5/16"	Serrated Flange Nuts
4	3/8" x 1"	Button Head Bolts
5	3/8"	Thick Washers
6	3/8"	Clip Nuts
1	3/8"	Nylock Nut

Tools Required:

1/4" Drive Ratchet	7/32" Hex Key
1/4" Drive Extension (12")	Drill
1/4" Drive 13mm Socket	7/16" Drill Bit
1/4" Drive 10 mm Socket	Small Flat Tip Screwdriver
12 mm Open-end Wrench	Clip Removal Tool or Pliers
10 mm Open-end Wrench	Fuel Line Fitting Tool (3.6L Only)
1/2" Open-end Wrench	Paint Pen/Marker
9/16" Open-end Wrench	Cut Off Wheel, Body Saw or Reciprocating Saw
5/16" Hex Key	



Precautions:

- 1. Make sure the vehicle is in park or first gear with the parking brake set. Vehicle should be on a level, sturdy surface and properly secured to prevent movement while working on it. We recommend using wheel chocks or blocks to ensure the vehicle does not move during the installation process.**
- 2. If lifting of the vehicle is required please consult the vehicle owner's manual for proper lifting techniques and jack placement. Use jack stands to support the vehicle when working under it.**
- 3. Always wear appropriate personal protective equipment: gloves, hearing, and eye protection at a minimum.**
- 4. Use caution when lifting components into place, make sure components are secured during installation.**
- 5. If drilling is required eye protection is especially important to avoid injury. Also be sure to thoroughly inspect the area around where you are drilling to avoid damaging wiring or other components.**
- 6. Use extreme caution when cutting or trimming is required.**
- 7. Please follow the recommended specifications for torque on all hardware. We recommend checking the torque during regular routine maintenance on all aftermarket accessories.**
- 8. Use caution when routing electrical cables and lines. Avoid moving parts, components that become hot and rough or sharp edges.**
- 9. Always insulate and protect all exposed wiring and electrical terminals.**
- 10. Disconnect the battery cables from both terminals with caution, and ensure that they do not touch.**
- 11. When installing hardware use anti-seize or brake caliper grease to minimize the risk of damaging threads and allow for easy removal at a later time.**
- 12. When making electrical connections use dielectric grease to avoid damage from moisture and ensure a long lasting connection.**



Install Procedure:

Please follow these instructions only, if you are having difficulty with a particular step or a part is not fitting as described STOP and contact us before proceeding. Taking actions outside of these instructions can result in damage to your vehicle.

1. **Disconnect negative battery terminal.**

Tools: 10mm open-end wrench. DO NOT TOUCH TO POSITIVE.

2. **Disconnect the positive lead from the battery.**

Tools: 10mm open-end wrench.

Tip: Wrap the positive terminal of the battery with electrical tape to avoid accidentally arcing the battery.

3. **Remove battery.**

Tools: 10mm socket, 1/4" Drive 12" extension, 1/4" drive ratchet.

4. **Disconnect Intake Air Temperature sensor (IAC). It is located in the air intake tube near the throttle body.**

Tip: Make sure the red lock is moved to the unlocked position.





- 5. Using a flat tip screwdriver loosen the hose clamp attaching the air intake tube to the throttle body.**

Tools: Flat tip screwdriver.



- 6. Remove the crank case vent tube from the air box.**

- 7. Remove the air box by pulling up.**





8. Remove wiring harnesses that are affixed to the factory battery tray.

Tools: Clip removal tool or Pliers.



9. Disconnect body harness at battery box.

Tip: Make sure the red lock is moved to the unlocked position.

10. Remove the power wire from the TIPM.

Tools: 13mm socket, 1/4" drive ratchet.





11. Remove Battery harness ground from inner fender.

Tools: 10mm open-end wrench

Tip: Make sure to retighten the ground bolt once the battery harness ground is removed. Loose ground wires can cause damage to the TIPM. The Battery harness ground will be relocated to the fender ground located just to the rear of the one it was just removed from.



12. Now that the battery harness is completely disconnected move it out of the way and rest it on the engine.



13. Remove the Evaporative purge valve.

Tip: 3.8L apply upward pressure on the clip fittings as you are depressing them to get them to release.



Tip: On 3.6L motors you need to use a fuel line fitting tool to remove the line





14. Remove TIPM from its mount. Use a small screwdriver to depress each of the four (4) tabs while applying upward pressure to the TIPM. Once it is removed rest it on the fender.

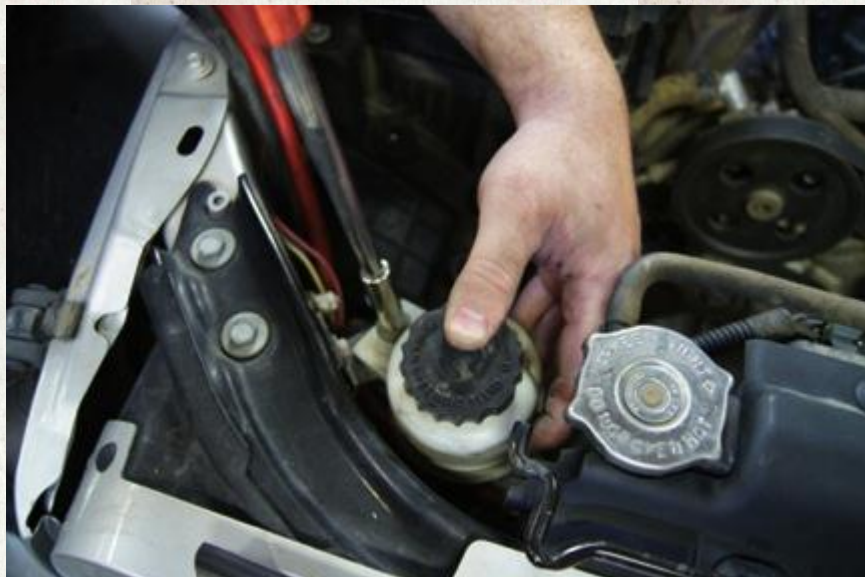
Tools: Small Screwdriver.

TIP: Do not unplug any of the connectors attached to the underside of the TIPM.



15. Remove bolt holding the power steering reservoir and lay it over in the engine bay.

Tools: 10mm socket, 1/4" drive 12" extension, 1/4" drive ratchet.





16. Remove all of the hardware holding the battery tray in place.

Tools: 10mm socket, 1/4" drive 12" extension, 1/4" drive ratchet

Tip: Three (3) nuts are located on the firewall, three (3) bolts are located along the inner fender, and the last bolt is located under the power steering reservoir by the passenger front headlight.

17. Remove the stock battery tray.

Tip: It is easier to remove the battery tray if one person holds the TIPM and associated wiring out of the way, while a second person works to remove the battery tray.

Note: When removing the battery tray be careful to avoid damaging wires or pulling them loose from connectors.

18. Trim the factory battery tray.

Tools: Paint pen / marker, cutoff wheel / saw.

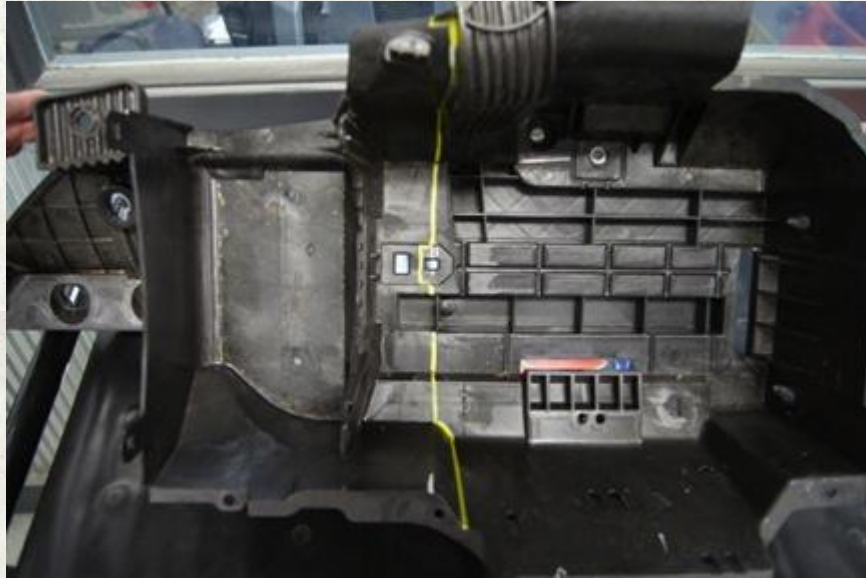
Tip: Take your time with this step; it is worth it in the long run.

3.8L Motor Trim Line

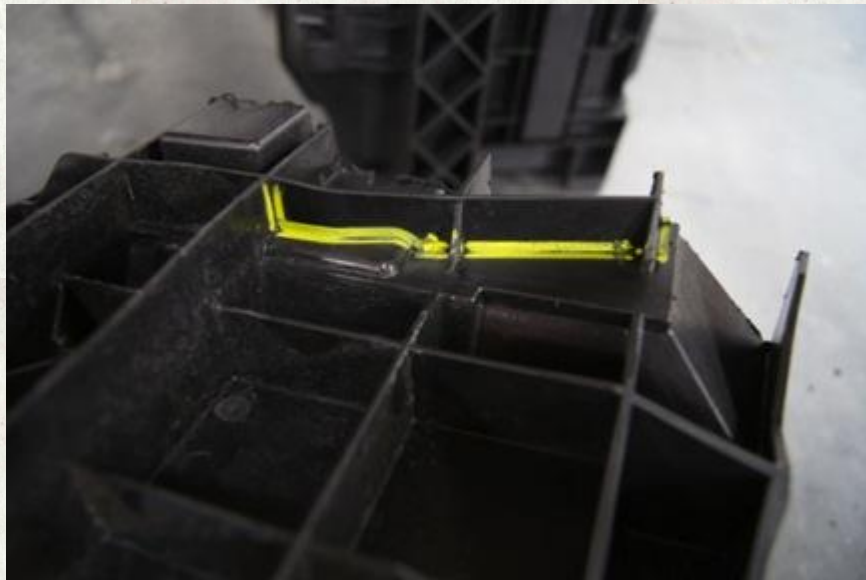




3.6L Motor Trim Line:

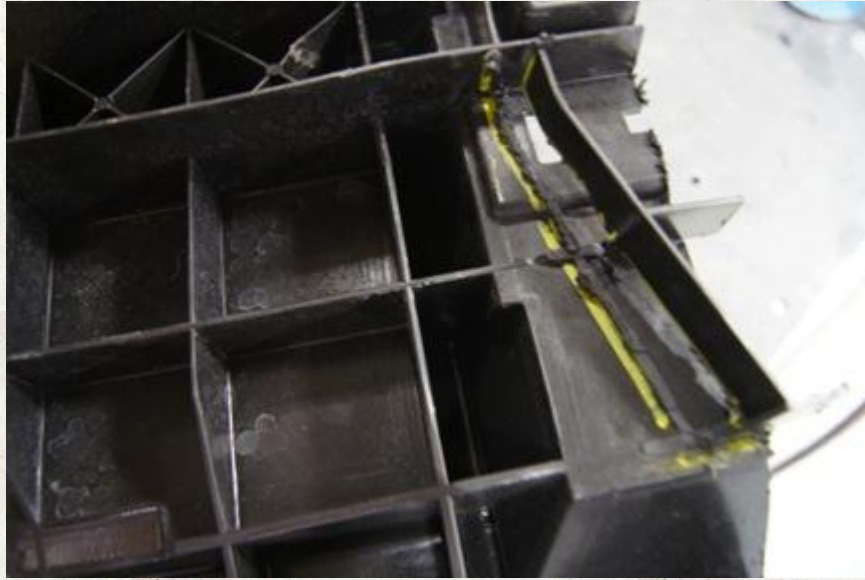


3.6L Motor Tray Additional Trimming:





3.6L Motor Tray Additional Trimming:



3.8L Tray after Trimming:





3.6L Tray after Trimming:



19. Locate all of the Nemesis Industries Dual Battery Tray components.

Tip: Do not tighten any hardware until all hardware is installed.

20. Attach the Dual Battery Tray firewall mount to the battery base. Once all seven bolts are in place tighten them.

Tools: 5/16" Hex Key, 1/2" Open-end Wrench.

HDW: (7) - 5/16" x 3/4" long flat head bolts

(7) - 5/16" serrated flanged nuts





21. Install 3/8" clip nuts into the holes located in the battery base of the dual battery tray.

HDW: (2) – 3/8" clip nuts



22. Attach the factory tray adapter bracket to the dual battery tray.

Tools: 5/16" Hex Key, 1/2" Open-end Wrench.

HDW: (2) - 5/16" x 3/4" long flat head bolts

(2) - 5/16" serrated flanged nuts





23. Tighten all hardware on the battery tray.

24. Attach Fender Support to the dual battery tray. Leave these bolts loose.

Tools: 5/16" Hex Key, 1/2" Open-end Wrench.

HDW: (2) - 5/16" x 3/4" long flat head bolts

(2) - 5/16" serrated flanged nuts



25. Remove the body colored 10mm fender bolt located just in front of the bolt removed with the factory battery tray.

Tools: 10mm socket, 1/4" drive ratchet.





26. Install dual battery tray into the Jeep. You will reuse the three (3) factory firewall nuts, one of the factory bolt inner fender bolts, and the color matched bolt removed in the previous step.

Tools: 10mm socket, 1/4" drive 12" extension, 1/4" drive ratchet, 1/2" open-end wrench and 5/16" hex key.

Tip: Do not tighten any of the bolts until all are installed. Once they are installed, snug the inner fender bolt first to level out the tray. Next tighten the three (3) firewall nuts. Finally tighten all of the hardware including the 5/16" hardware previously left loose on the fender support.





27. Place the front half of the factory battery tray into the Jeep using the two remaining mounting holes to locate it.



28. Once the front half of the factory battery tray is in place use a paint pen or marker to mark the location of the slot located in the factory tray adapter.

Tip: Pull the inner fender liner back to give better access to this area.





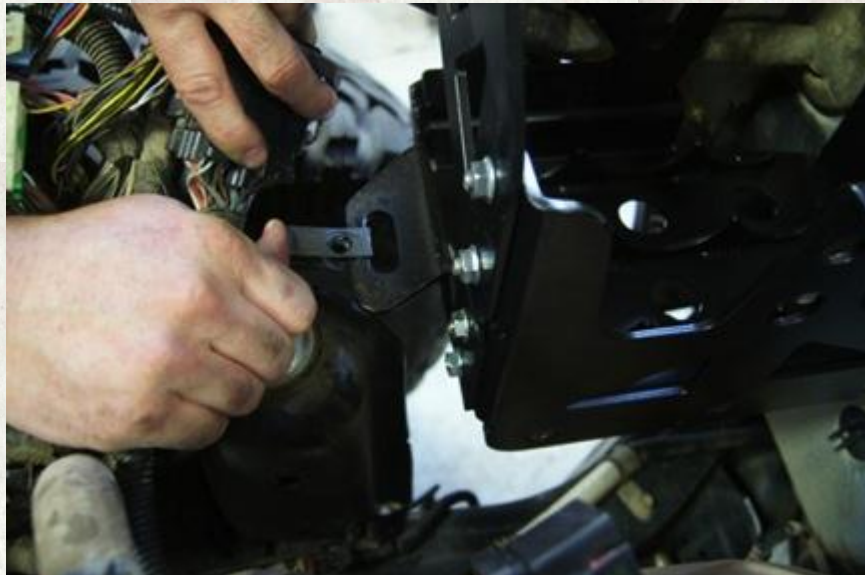
29. Remove the trimmed portion of the factory tray and drill a 7/16" hole in the center of the slot traced in the previous step.

Tools: Drill, 7/16" drill bit



30. Install a 3/8" clip nut into the slot located on the factory tray adapter.

HDW: (1) – 3/8" clip nut



31. Reinstall the front half of the factory battery tray.

Tools: 10mm socket, 1/4" drive ratchet, and 1/4" drive 12" extension.



32. Reinstall TIPM

Note: When installing the TIPM be sure to check that all wires are routed in a way that they will not get caught. All wiring will fit snugly under the TIPM just as it did in the factory configuration.



33. Reattach power steering reservoir to the core support.

Tools: 10mm socket, 1/4" drive ratchet, 1/4" Drive 12" extension.



34. Install air box.

TIP: Applying grease or WD-40 to the three (3) studs on the bottom of the air box makes the install easier.



35. Tighten air intake tube to throttle body.

36. Attach crank case vent to air box.

37. Attach air intake temperature sensor wiring to sensor.



38. Attach lines to the evaporative purge valve.



39. Re-install evaporative purge valve. It will attach to the same mount it did in the factory configuration.

Tip: (3.8L only) flip the clamp holding the two (2) evaporative lines together. Then zip-tie the lines so they do not make contact with the dual battery tray.





40. Should you choose to use the Painless Wiring battery management system (P/N 40120) we have included a mounting location on the battery hold down riser. Install the battery management controller to the outside of the battery hold down riser.

Note: Please follow the instructions included with the battery management device to ensure proper wiring and use.



41. Install the hold down riser.

Tools: 1/4" drive ratchet, 12" extension, and 7/32" hex socket.

HDW: (2) - 3/8" button head bolts

(2) - 3/8" washers





42. Tape or otherwise cover the positive post of the Optima battery to be installed into the dual battery tray.

Tip: This battery will be the secondary battery.

43. Lower the secondary battery into the dual battery tray.



44. Place the dual battery locator on top of the secondary battery.





45. Install the primary battery.



46. Install the dual battery hold down bracket.

Tools: 1/4" drive ratchet, 1/4" Drive 12" extension, and 7/32" hex socket.

HDW: (3) - 3/8" button head bolts

(3) - 3/8" washers

(1) - 3/8" serrated flange nut





47. Reattach TIPM power lead to the TIPM.

Tools: 13mm socket, 1/4" drive ratchet.

Tip: Route the power lead away from any heat source.



48. Attach the battery harness ground to one of the inner fender ground studs.





49. Connect the body harness plug, and attach it to the battery hold down bracket.

Tip: Holes are provided in the battery hold down bracket to allow for reuse of the factory fir trees.



50. At this point you should wire the dual batteries in the fashion you prefer, or as per the instructions of the battery isolator you have chosen.

51. Attach factory battery harness to the top or primary battery.

TIP: Do not attach the positive lead until all wiring is completed. Also you will want to make sure that all accessories are turned off, the Key is not in the ignition and the doors are closed, before attaching the positive terminal.

52. Once all wiring is complete attach the ground from the factory battery harness to the primary battery.

Thank you for your purchase. If you have any questions or comments about these instructions please contact us at:

303-974-2440

info@nem-ind.com



Troubleshooting:

- 1. Please check our technical support page for additional resources pertaining to the install of this product.**



Warranty:

The goal of all of us at Nemesis Industries, Inc.™ is to ensure you are delighted not only with this purchase, but also with any additional purchases and to that end Nemesis offers a ten (10) day from the ship date no questions asked return policy if products are returned in an "unused" condition, this excludes custom parts or parts with custom paint or powdercoat. In addition, Nemesis warrants your product for two (2) years from the date of sale to be free from defects in material and workmanship under normal installation and use. This warranty is limited to the costs of repair and replacement. Therefore, no type of labor or shipping allowance is available in connection with a customer's repair, removal, reinstallation or return of a damaged product. Should any questions arise, please call Nemesis at (303) 974-2440. We remind you that all finishes, painted or powder coated, must be cleaned and waxed regularly and the portion of the warranty concerning the products' finish does not apply to products that have been chipped, scratched or damaged in any way. All warranty claims are subject to inspection by Nemesis. Following such inspection, the product in question may either be repaired or replaced when found defective. Prior to any replacement or repair, written authorization as to the action to be taken shall be issued by Nemesis. Failure to contact Nemesis prior to having warranty work performed shall immediately void all applicable warranties.

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Assumption of Risk and Release. Customer assumes all risk and responsibility of engaging in an Off-Road Activity which is acknowledged as being inherently dangerous. Customer understands that persons participating in an Off-Road Activity must possess specialized knowledge and skills, and in voluntarily deciding to do so, Customer assumes all risks inherent therein which may be encountered at any time in connection with an Off-Road Activity. With full knowledge of the above and all risks inherent therein, Customer and others who may voluntarily choose to engage in an Off-Road Activity accepts full responsibility for and assumes all risks associated with engaging in an Off-Road Activity, whether known, unknown, or inherent, and acknowledge and agree that such persons are assuming all responsibility for any and all consequences resulting from the participation in an Off-Road Activity, including, but not limited to, injury and/or death to Customer or others and damage to the Vehicle and other property. Customer and each other participant in any Off-Road Activity hereby release, and forever discharge and shall hold harmless each other and Nemesis, including all of their respective predecessors, affiliates, successors, assigns, partners, venturers, principals, officers, directors, managers, shareholders, attorneys and agents and their respective insurance carriers (the "Released Parties") and hereby release and forever discharge, indemnify and hold harmless the Released Parties, and any and all persons claiming under them, however involved, of and from any and all liability for any and all claims, demands, damages and costs, liabilities, losses, expenses, obligations, compensations, reimbursements, actions, rights, loss of profits, and rights and causes of action, of every kind and nature whatsoever, including court costs and attorney fees, whether known or unknown, which Customer and any other participant may now have, or claim at any future time to have, arising from or growing out of, or by reason of, or based in whole or in part upon, any act, omission, event, transaction, matter or thing involved, alleged or referred to, whether direct or indirect, involving an Off-Road Activity.

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Covenant Not to Sue. Customer and any other participant specifically covenant and agree, each with the other, never to institute or participate in any suit or action, including class actions, at law or in equity, whether sounding in tort or contract, against the Released Parties and all persons claiming under them or any of them by reason of any claim, demand, action, or cause of action described in this Release.

Miscellaneous Provisions. This Release shall be binding in all respects upon, and shall inure to the benefit of the Released Parties and their heirs, successors and assigns. This Release shall be governed by the laws of the State of Colorado, and the sole and exclusive jurisdiction for the determination of any controversy or claim arising out of the purchase of any Nemesis product shall be in the District Court of Arapahoe County, Colorado. In the event that a court of competent jurisdiction enters judgment declaring any material provision of this Release invalid or unenforceable, the remainder of this Release shall remain in full force and effect and such provision shall be limited or eliminated to the minimum extent necessary so that such invalid or unenforceable provision shall otherwise remain in force or effect. Neither Customer nor any other participant shall be entitled to any favorable construction of any provision of this Release because the Release was drafted by Nemesis or by an attorney for Nemesis. The acceptance of a Nemesis product constitutes Customer's voluntary acceptance of this Release, Customer's acknowledgement that no oral statements or inducements have been made and that full and adequate consideration has been received for this Release.

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