



**GENESIS**  
O F F R O A D

## **Toyota Tacoma Dual Battery System**

172-TTDBK



**Installation Instructions for  
2016+ Toyota Tacoma**



## Before you Begin

Please read through these instructions thoroughly. To avoid mistakes and lost time, follow the sequence shown. Leave the battery posts covered during installation to avoid accidentally shorting out the batteries.

Parts List	Qty	Tools Needed
Battery Tray	1	7/16", ½" socket/wrench
Top Plate	1	10, 12mm socket
Smart Isolator	1	Ratchet with extension
High Amp Power Bus Bar	1	Center punch
Ground Bus Bar	1	<b>25/64"</b> Drill bit
Dust Cover	1	Touchup paint
Wiring Harness	1	Cutoff wheel or air saw
½" Lid Bolts	4	
Nutserts	6	
7/16" Stainless Bolts/Washers	6	
Post Clamp Bolt	1	
Post Clamp Nuts	2	
Post Clamp Washer	1	
Nutsert install hardware:	1	
Grade 8 Bolt, 7/16"		
Grade 8 Thick Washer		
Serrated Flange Nut, ½"		



1. Use a 10mm socket to loosen the factory battery post clamp bolts and the hold down bracket.

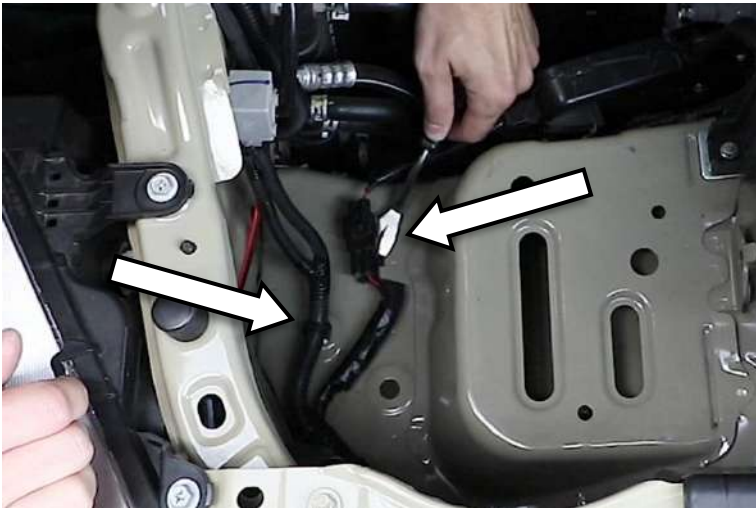
2. Remove the factory battery and the plastic battery tray.



3. Use a 10mm socket to loosen the bolt for the ground wire on the inner fender. Rotate the wire 90 degrees for better clearance for the new batteries, and tighten the bolt.



4. Use a cutoff wheel, air saw, or similar to trim off the latching tab on the front of the fuse box and lid. This will allow extra room for installing the batteries. The lid will still stay attached securely.



5. Use a pry tool to move these 2 factory wires to make room for the new tray legs. Disconnect the plug now for easy access for your center punch later.



6. Drop the new tray in place. Note it will be a very tight fit in all directions. To the rear it will touch the fuse box support leg. It should clear the oil fill tube by a few millimeters. Make sure all 6 legs sit flat on the factory sheet metal. Avoid the raised stamped areas by the lower 2 legs. Ensure the tray does not touch the radiator hoses at the front corner. If necessary, gently push the hoses out of the way.



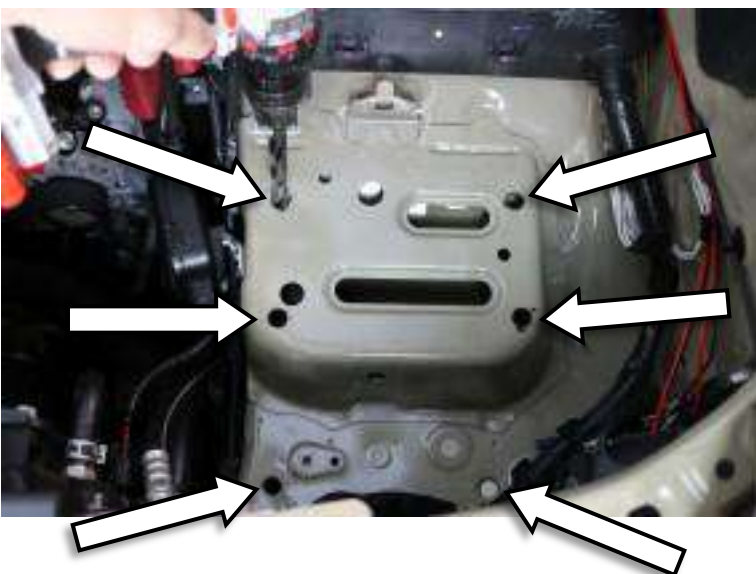
7. Install the aux battery first. Shift the tray as needed to get the battery to slide all the way towards the fender, clearing the headlight assembly at the front corner. Install the cranking battery next, with the posts towards the engine. Adjust the position of the tray so the battery does not interfere with the oil fill cap.



8. After verifying clearance by the oil fill cap, the fuse box wires, the headlight assembly, and the stamped raised areas by the lower legs, make an alignment mark with a pencil on the tray and the factory sheetmetal. Carefully remove the batteries so that we can center punch and drill holes to secure the tray. Use the alignment mark to ensure the tray does not move.



9. Use a center punch to mark the location of all 6 holes.



10. Drill the holes using a **25/64"** drill bit. **Note: It is critical to use the correct size bit so the nutserts will clamp properly.**

Deburr the edges of the holes, and cover the bare steel with touch up paint.



11. Insert the 6 nutserts into the new holes.

Use the provided hardware shown below to install the nutserts. Tighten the bolt until the nutsert is fully compressed against the sheetmetal.

Reconnect the wire harness plug that you disconnected earlier.

**NOTE: The engine will not start if that plug is left disconnected!**



12. Reinstall the battery tray, with the legs sitting on top of the nutserts. Position the tray using the alignment marks you made earlier. Double check your clearance around the fuse box and the oil fill cap. Note the holes in the tray are slightly oversized to allow for misalignment of the drilled holes.



13. Drop in the provided stainless bolts with washers into the well nuts.



14. Double check your alignment marks. Adjust the position as necessary, then tighten all 6 bolts. The base of the tray should be very sturdy and not move at all.



15. Reinstall your batteries. Ensure they both sit flat and level with each other. The front corner will be very tight to the radiator support.



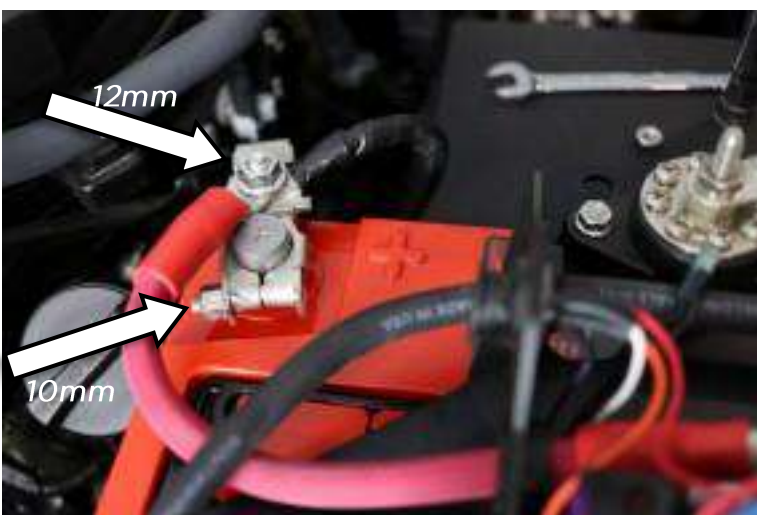
16. You should be able to remove the oil fill cap with no interference. If necessary, reposition the tray for clearance.



17. Remove the factory post clamp bolt, and insert the provided longer post clamp bolt, the factory square washer, and one provided nut. Tighten the post clamp.



18. Place the lid on top of the batteries. Put the short ground wire onto the post clamp first, then the longer ground wire, the round washer, and nut. Tighten the nut to secure the ground wires.

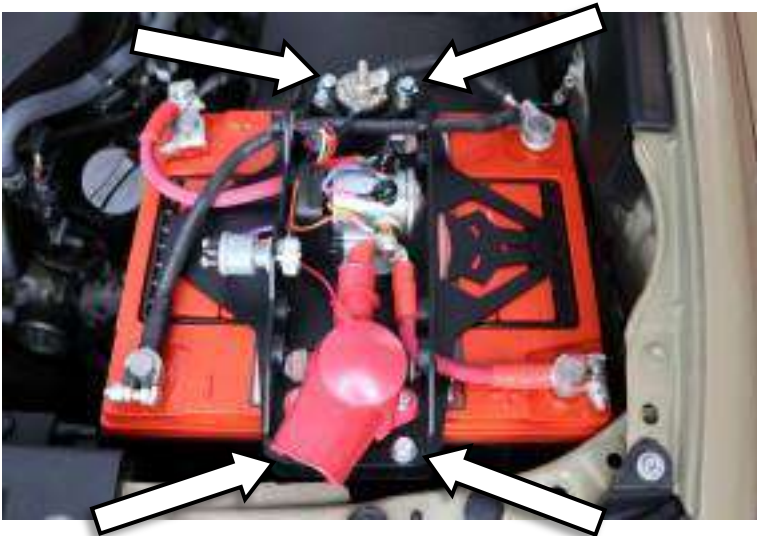


19. Tighten the factory positive post clamp with a 10mm socket. Install the red wire under the factory 12mm nut as shown.

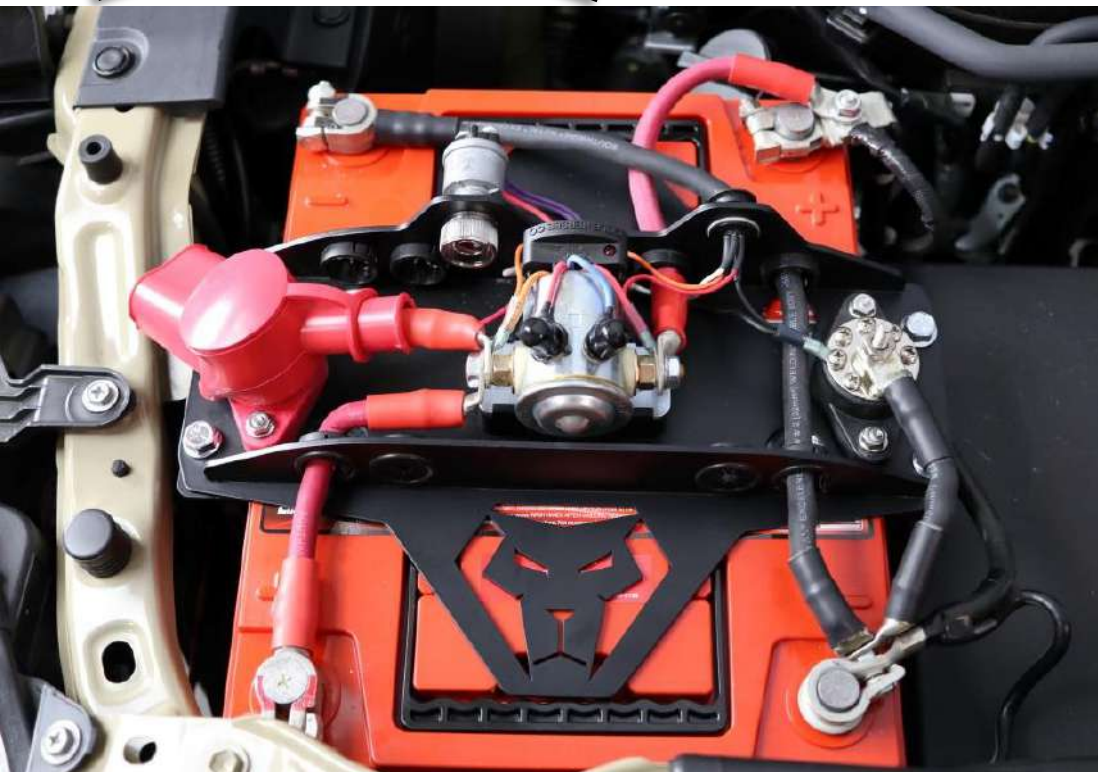




20. Tighten the other 2 post clamps with a ½” socket or wrench. **Be careful not to bump the factory sheet metal when tightening the positive post clamp.**



21. Install the provided ½” serrated flange head bolts to secure the lid. Tighten in a crisscross pattern to ensure even torque. Do not overtighten the bolts. The lid will sit slightly above the tray with most Group 34 batteries. If using Optima brand batteries, the lid will sit flush on top of the tray since Optima batteries are slightly shorter than standard.



Final Installation

## Smart Isolator Specifications

- The batteries will be automatically connected together when either battery is above 13.2v (plus or minus 0.1v) for 2 minutes.
- Batteries will be isolated when they drop below 12.7v (plus or minus 0.1v) for 1 minute.
- The red LED on top of the isolator is a status indicator.
  - Light On - batteries are connected
  - Light Off - batteries are isolated

**Caution - the silver solenoid may be hot while the batteries are connected.**

This is completely normal, and not a cause for concern.

Characteristic	Min	Typical	Max	Notes
Normal input voltage	9v		16v	Unit functions within this range
Continuous current		200 A		750 A inrush
Connect voltage		13.2v		After 2 minutes at this level
Disconnect voltage		12.7v		After 1 minute at this level
Quiescent current		5mA	8mA	Relay off, start signal input open or grounded.
Operating temp range	-40 C		+85 C	
Ingress protection		IP65		Per IEC
Vibration, Shock				Per SAE J1455
EMI/RF				Per SAE J1455 & J1113

## Boost Button

- The momentary push button allows you to manually connect the batteries.
- If the cranking battery is too low to start the engine, press the boost button one time to connect the batteries, aux helps start the engine, if it has enough power.
- The boost feature requires 9.0v on the cranking battery to link the batteries together. If the cranking battery is below 9.0v, you can manually link the batteries together with jumper cables, or swap positions of the batteries.

## Connecting Accessories

- Connect high-amp accessories (winch, stereo amp, etc) to the large center studs on the power and ground bus bars.
- Connect low-amp accessories (LED lights, CB, etc) to any of the 8 small screws on the power and ground bus bars.
- All accessories on the power and ground bus bars will be powered from the aux battery when the smart isolator separates the batteries. This prevents your accessories from draining the cranking battery.

## Connecting Jumper Cables, Trickle Chargers, or Solar Panels

- Jumper cables can be connected to the factory positive (on cranking battery) and the factory negative (on aux battery). This gives you the most direct path to the alternator and starter for maximum efficiency.
- Connect trickle charger or solar panels the same way. It will charge your cranking battery first, then link the batteries together and the trickle charge will flow through the isolator to charge the aux battery. See Smart Isolator functions above.

## Expand your system with these great options!

### G Screen Monitoring System

This 1" LCD can be added at any time. Simply plug the harness into the port on the lid, no wiring required.

- Dual battery voltage display
- In-cab Boost feature
- Isolator status -
  - Boost On = batteries connected
  - Boost Off = batteries isolated
- Air Pressure Monitoring (sensor kit sold separately)



### Digital Air Pressure Sensor

Turn your G Screen into an air pressure gauge.

- Sensor screws into an on-board air tank
- Single wire harness plugs into G Screen
- Instantly adds new PSI screen
- No air hoses to run or wiring to figure out



### Aux Power Outlets

Add an extra 12v outlet or dual USB charging outlets where you need them.

- 12v outlet is great for powering a fridge - connect to the power and ground bus bars to protect your cranking battery
- Dual USB outlets are perfect for charging phones, iPads, cameras, etc.
- Kit includes one outlet and a 20' wire harness with 20 amp in-line fuse and high quality terminals

