





WARNING: NEVER ALLOW POSITIVE AND NEGATIVE CONTACTS OF ANY TYPE TO CONTACT EACH OTHER AT ANY TIME. NEVER ALLOW ANY POSITIVE CONTACT(S) TO TOUCH ANY METALS ON THE VEHICLE AT ANY TIME.



<u>WARNING</u>: While working with tools, always wear proper safety equipment including safety glasses and gloves & always use them properly. Remove any metal jewelry such as ring(s), watch band(s), bracelet(s), necklace(s) that could make an inadvertent electrical contact. You could be seriously injured and/or cause death.



WARNING: Use a calibrated torque wrench on all fasteners.



<u>WARNING:</u> Failure to properly check every fastener torque may cause component failure, electrical shock, electrical fire, serious injury, and/or cause death.



<u>WARNING:</u> JP60-1400-G Fuse Block 4 Position w/Clear Cover is rated for 30A MAX current at each of the four positions. The whole item is rated for 100A MAX current. A 100A MRBF fuse is used to protect against exceeding this total current limit. If you have an accessory that requires more than 30A, and you are experienced in doing so, you may splice the wiring to reduce the power requirements of each set of leads as to not exceed 30A per position on the Fuse Block. You must ensure and manage the power draw requirements of accessories attached to the Fuse Block do not exceed the 100A limit. Failure to do so may cause component failure, electrical shock, electrical fire, serious injury, and/or cause death.



<u>WARNING:</u> If the JP60-1400-M Winch Switch is in the "ON" position the vehicle ground may be connected even if the JP60-1400-I Circuit Breaker is in the "OFF" position. Both items must be in the "OFF" position for proper vehicle battery storage function.

<u>Before</u> <u>You</u> Begin

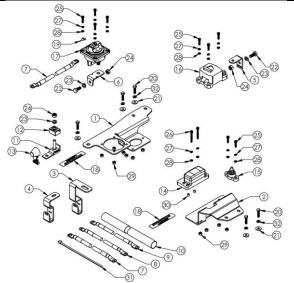
- Verify all items are included, reference the Bill of Materials diagram on the next page. Do not begin the installation if any item(s) are missing. If any item(s) are missing, please contact Dynatrac at (714) 596-4461.
- Read the instructions completely prior to performing any work. Only perform the work if you are an experienced and fully equipped mechanic.
- Allow for plenty of time, approximately 30-60 minutes is required.
- Perform work in a dry covered area preventing rain or other moisture from entering the engine bay and surrounding areas.
- This kit is compatible for JL/JT vehicles with a 2.0L or 3.6L gas engine. It is not compatible for vehicles with a Diesel or HEMI engine.

#### **Recommended Tools**

- Rachet(s) & extension(s)
- Socket(s) and/or Wrench(es); 3/8", 1/2", 10mm, 12mm, 13mm, 14mm
- •Allen Wrench; 5/32"
- Screwdriver(s); Flathead, Phillips
- Needle Nose Pliers
- Scissors / Wire Cutters
- Electrical Tape







JP60-1X1400-A PROSWITCH, JL/JT

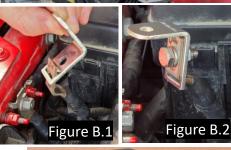
TEM NO.	Part #	DESCRIPTION	QTY.
1	JP60-0004-BM	Bracket, RHS, Switch Mount, JL/JT	1
2	JP60-0004-BN	Bracket, LHS, Accessory Power, JL/JT	1
3	JP60-0004-BO	Bracket, Cable Hanger, LHS, JL/JT	1
4	JP60-0004-BP	Bracket, Cable Hanger, RHS, JL/JT	1
5	JP60-1400-K	Bracket, Cable End Adapter to Circuit Breaker, JL/JT	1
6	JP60-1400-O	Bracket, Cable End Adapter to Winch Disconnect Switch, JL/JT	1
7	JP60-1400-A	Battery Cable, 2 AWG UL CABLE, BLACK, 20" Length, 3/8" (M10) End #1, 5/16" (M8) End #2	2
8	JP60-1400-B	Battery Cable, 4 AWG UL CABLE, RED, 56" Length, 3/16" (#10 stud) (M5) End #1, 5/16" (M8) Connector End #2	1
9	JP60-1400-C	Battery Cable, 4 AWG UL CABLE, BLACK, 67" Length, 5/16" (M8) Connector Both Ends	1
10	JP60-1400-D	Flat Filament Expandable Braided Sleeving, Size 1", 45" Length, BLACK, 6-6 Nylon	1
11	JP60-1400-F	MRBF Fuse Mounting Bar, 3/8" Mounting Hole, M8 x 1.25 Stud, Single Stud	1
12	JP60-1400-E	Fuse, MRBF (Marine Rated Battery Fuse), 100A, 58V, Bolt-Down	1
13	JP60-1400-L	MRBF Cover, RED, Single Stud	1
14	JP60-1400-G	Fuse Block, 4 Position w/Clear Cover, 100A MAX, 30A MAX Per Circuit	1
15	JP60-1400-H	Junction Block Stud, 1/4"-20 Stud, BLACK	1
16	JP60-1400-I	Circuit Breaker, Eaton Bussman Series, Marine Rated Surface Mount, 150A, 48V	1
17	JP60-1400-M	Battery Disconnect Switch, Marine Rated Panel Mount, 300A at 48V, 3/8"-16 Thread Studs	1
18	DA 60-0007-J	Name Plate, DYNATRAC, PROSWITCH, Aluminum	2
19	DA 60-0007-K	Label, Winch Disconnect Switch	1
20	DA60-0014-DR	Hardware, Bolt, Hex Head Screw, M6x1.0 x 25mm Length, Class 8.8, Zinc Plated Steel	5
21	DA 60-0014-DS	Washer, Oversized, 6.4mm ID x 18mm OD x 1.6mm Thick, Zinc Plated Steel	5
22	DA 60-0014-DT	Hardware, Bolt, Hex Head Screw, M8 x 1.25 x 20mm Length, 18-8 Stainless Steel	2
23	DA 60-0014-DU	Washer, Split-Lock, M8 Screw, 18-8 Stainless Steel	3
24	DA60-0014-DV	Nut, Nylon Locking, M8 x 1.25, Class 8, Zinc Plated Steel	3
25	DA 60-0014-EA	Hardware, SHCS, 10-32 x 3/4" Length, 18-8 Stainless Steel	9
26	DA 60-0014-EB	Hardware, SHCS, 10-32 x 1.5" Length, 18-8 Stainless Steel	2
27	DA60-0014-DX	Washer, Split-Lock, #10 Screw, 18-8 Stainless Steel	11
28	DA60-0014-DY	Washer, Flat, M5 Screw, 5.3mm ID x 9mm OD x 1mm thick, 18-8 Stainless Steel	11
29	DA60-0014-DW	Nut, Nylon Locking, 10-32, Zinc Plated Steel	11
30	JP60-3590-A	Spacer, Slotted, #10 Screw, .198" ID x .255" OD x .250" Length, Zinc-Plated Steel	2
31	DA60-0014-CY	Hardware, Cable Zip Tie, 0.18" width, 0.05" thick, 11" Long, 50lb break strength, Black	10
32	DA 60-0014-EC	Washer, Split-Lock, M6 Screw, 18-8 Stainless Steel	5



- 1. Figure A.1, highlighted in red, disconnect the auxiliary battery negative battery cable from the primary battery negative terminal. Isolate & insulate the cable end to prevent accidental contact with foreign object(s) to help prevent electrical shock, short, or fire. Don't disconnect the Intelligent Battery Sensor (IBS), highlighted in blue, or your Stop/Start system may not function for up to 24 hours, due to the IBS being set into learn mode.
- 2. Figure A.1, highlighted in green, disconnect the primary battery negative cable terminal end from the primary battery negative terminal. Isolate & insulate the cable end & battery terminal to prevent accidental contact with foreign object(s) to help prevent electrical shock, short, or fire.
- 3. Figure A.1 & Figure A.2, highlighted in yellow, disconnect the vehicle negative ground cable from the passenger side fender, rear stud position.
- 4. Figure B.1 & Figure B.2, install JP60-1400-K Bracket Cable End to Circuit Breaker onto the vehicle ground cable end from the previous step using the supplied hardware as shown. Isolate & insulate the cable end to prevent accidental contact with foreign object(s) to help prevent electrical shock, short, or fire. On vehicles with dual batteries the cable(s) may still have 12V power supplied from the secondary AUX battery if the steps have not been followed correctly or if an aftermarket item or customization to the vehicle is interfering. Use a multimeter to confirm that the vehicle frame does not have 12V power to it. It can be common for the vehicle frame to have 12V power immediately after the correct cables have been disconnected. For safety purposes to help prevent accidental electrical shock or fire, please wait a short time for the voltage to drop checking that it is approx. O.OV 1.2V before proceeding with further installation steps. It can be common to have 0.5V 1.2V always. DANGER, do not proceed if the vehicle frame has 12V power.
- 5. Figure C.1, assemble JP60-1400-G Fuse Block 4 Position w/Clear Cover & JP60-1400-H Junction Block Stud onto JP60-0004-BN Bracket LHS (Driver's Side) using the supplied hardware. For reference, on the mounting bracket are oblong holes near a bend which may be used to place zip ties to help route and secure your accessory wires.
- 6. Figure C.2, for *JP60-1400-G Fuse Block 4 Position w/Clear Cover*, highlighted in red, never loosen the nut at the bottom of the stud to prevent the stud from contacting the mounting bracket to help prevent any electrical shock, short, or fire.
- 7. Figure C.2 & Figure C.3, for the *JP60-3590-A Spacer Slotted*, highlighted in green, if these spacers are not used under *JP60-1400-G Fuse Block 4 Position w/Clear Cover* when mounted to *JP60-0004-BN Bracket LHS (Driver's Side)*, the fuse block may distort causing the clear cover press button mechanism not to function properly.

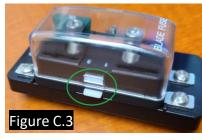






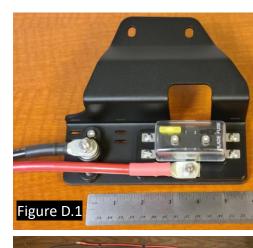








- 8. Figure D.1 & Figure D.2, position JP60-1400-C Battery Cable, BLACK, 65" Length and JP60-1400-B Battery Cable, RED, 51" Length cable next to each other as shown with the red cable eyelet, smaller hole end side, to be longer by approx. 3 5/8" from the black cable eyelet. This end of the pair of cables will be installed onto the Driver's Side of the vehicle. You may temporarily position the BLACK cable onto JP60-1400-H Junction Block Stud and the RED cable onto JP60-1400-G Fuse Block 4 Position w/Clear Cover to better position the cables. Place electrical tape around both cables to hold this position and orientation to prevent the cables from moving position and/or twisting for the next step(s). Place electrical tape starting approx. 3" from the Driver's Side end of the black cable at approx. 12-13" increments. Remove cables and reserve hardware for later step(s).
- 9. Figure E.1, Figure E.2, & Figure E.3, install *JP60-1400-D Flat Filament Expandable Braided Sleeving* onto the cables with the Driver's Side end approx. 1" or less from the black cable end as shown. To install first you must push it onto the cables, so that it expands. You may need to push/pull in stages until it is in position. Once in position, with one hand tightly hold the sleeving on the Driver's Side end and with your other hand firmly slide your hand down the length of the sleeving so that the sleeving contracts tightly onto the cables. *We do not recommend cutting this filament, it has been cut using a hot knife which melts the individual filaments together preventing it from unraveling or fraying apart. If the sleeving is cut, you will need to melt the filament ends together, or tape and/or tie the cut sleeving end(s) together to prevent unraveling or fraying.*
- 10. Figure F, install the assembled JP60-0004-BN Bracket LHS (Driver's Side) onto the Driver's Side fender at the location shown using the supplied hardware.
- 11. Figure G, highlighted in green, remove both nuts from these positions, then pull up & dislodge the Engine Coolant Reservoir bracket from the firewall. Place the cables behind the bracket below the black plastic trim on the firewall. Place the Engine Coolant Reservoir bracket back onto its mounting studs on top of the firewall making sure the locating pin at the bottom, highlighted in red, is attached. Double check the positioning & routing of the cable is adequate, not pinched and/or against any sharp objects. Currently only fasten only the driver's side of the Engine Coolant Reservoir bracket to the firewall, reserve the other nut for a later step.













- 12. Figure H, position the BLACK cable as shown onto the open stud of *JP60-1400-H Junction Block Stud* and fasten using reserved hardware from previous step(s).
- 13. Figure H, position the RED cable as shown onto the open stud of *JP60-1400-G Fuse Block 4 Position w/Clear* Cover and fasten using reserved hardware from previous step(s). During maintenance on the vehicle, use EXTREME CAUTION not to touch anything to these positive RED contact points on the Cable End, Fuse Block, and/or any other metals or conductive item(s). It is HIGHLY RECOMMENDED to disconnect the opposite end of the positive RED cable from the battery power source prior to any maintenance in addition to placing the circuit breaker in the "OFF" position and/or any other effective grounds on the vehicle.
- 14. Figure I.1 & Figure I.2, ensure cables aren't twisted then as shown insert the cables into the bottom of *JP60-0004-BO Bracket Cable Hanger LHS (Driver's Side)*. Install 1-2 zip tie(s) loosely oriented as shown, slide *JP60-0004-BO Bracket Cable Hanger LHS (Driver's Side)* down the cable and install onto the remaining firewall stud used to mount the Engine Coolant Reservoir bracket using the nut reserved from the previous step. Rotating the Cable Hanger may help it to get into position. Tighten zip tie(s) to be snug and trim off excess, do not overtighten zip tie(s).
- 15. Figure J, install JP60-0004-BP Bracket Cable Hanger RHS (Passenger Side) to the stud position as shown. Install 1-2 zip tie(s), tighten snugly, and trim off excess. Do not over tighten zip tie(s). Isolate & insulate cable ends to help prevent accidental shock, short, or fire.
- 16. Figure K.1, double check that no foreign object(s) are touching items on the Driver's Side potentially causing an electrical short which may lead to electrical shock, short, or fire. Once cleared you may install the *JP60-1400-F MRBF Fuse Mounting Bar* onto the cleaned primary battery positive terminal bus bar, highlighted in green, ensuring it seats properly and fully. Double check that it isn't hung up on the busbar bent corner(s). If you have a winch, if not already installed, you may install its positive cable to the directly to battery at this time per the winch manufacturer instructions. The winch cable must mount directly to the battery terminal, it cannot mount onto the fuse. *Upon completing this step, the items that are directly and indirectly connected to the red cable will now have positive power supplied to them and will now be live. For safety purposes you must now consider and treat these items and areas as an additional battery positive terminal while using or maintaining your vehicle. To remove or to disconnect positive power disconnect the red cable from the primary battery positive terminal.*
- 17. Figure K.2, place *JP60-1400-E Fuse 100A MRBF, highlighted in yellow,* onto *JP60-1400-F MRBF Fuse Mounting Bar. On* top of the fuse place *JP60-1400-B Battery Cable, RED, 51" Length cable,* then fasten using the supplied lock washer & locknut hardware.

















- 18. Figure L, using the smaller mounting hole end of the cable, install the *JP60-1400-A Battery Cable, BLACK, 20" Length* onto the vehicle ground stud location found on the passenger side fender, highlighted in yellow. Orient cable end eyelet so that it mounts & sits properly, flush against the mounting surface. Highlighted in green, as shown locating tab is positioned incorrectly for reference. Position locating tab into rectangular hole as vehicle ground cable nut is tightened.
- 19. Figure M, mount JP60-1400-I Circuit Breaker Marine Rated 150A onto JP60-0004-BM Bracket RHS (Passenger Side) using the supplied hardware. Maximum mounting torque rating is 4.1 ft-lb (50 in-lb, 5.6 N●m). Next mount JP60-1400-M Battery Disconnect Switch, Winch Switch onto bracket using the shown orientation using the supplied hardware. Position the circuit breaker & the switch in the "OFF" positions.
- 20. Figure N.1 & N.2, with the Battery Disconnect Switch, Winch Switch, in the "OFF" position, using the larger mounting hole end of the cable, install *JP60-1400-A Battery Cable, BLACK, 20" Length* onto the "BATTERY" side, highlighted in red, of the *JP60-1400-M Battery Disconnect Switch, Winch Switch* in the orientation shown.
- 21. Figure N.1 & N.2, assemble the winch ground cable onto *JP60-1400-O Winch Switch Cable Adapter* using the supplied hardware and orientation shown. Next install *JP60-1400-O Winch Switch Cable Adapter* onto the "COMMON" side, highlighted in green, of the *JP60-1400-M Battery Disconnect Switch*.
- 22. Figure O, with the circuit breaker & battery disconnect switch, winch switch, in the "OFF" positions, install the circuit breaker bracket assembly onto the passenger side fender at the shown location using the supplied hardware. Ensure the cables connected to the *JP60-1400-M Battery Disconnect Switch, Winch Switch* are routed & positioned safely and securely as to prevent any pinching, contact with sharp item(s), and/or any other condition(s) which may wear and/or damage the cables.









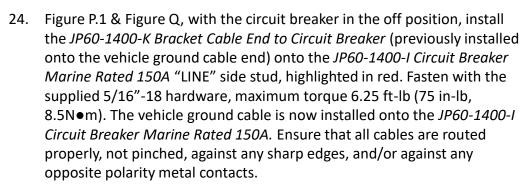






#### DYNATRAC PROSWITCH INSTALLATION STEPS

23. Figure P.1, Figure P.2, & Figure P.3, with the circuit breaker in the "OFF" position, first place the larger mounting hole end of *JP60-1400-A Battery Cable, BLACK, 20" Length* onto the "LOAD" side of the circuit breaker, highlighted in green, with the cable end eyelet upside down as shown to ensure proper electrical contact is made between both cables. Then place *JP60-1400-C Battery Cable, BLACK, 65" Length* right side up as shown on the same "LOAD" stud. Fasten with the supplied 5/16"-18 hardware, maximum torque 6.25 ft-lb (75 in-lb, 8.5N ●m) <u>WARNING:</u> If either cable is installed onto the "LINE" side stud the vehicle and/or the *JP60-1400-H Junction Block Stud* will have negative ground power supply even if the circuit breaker is in the off position.



- 25. Figure R, with the circuit breaker in the OFF position, highlighted in red, install the vehicle ground cable onto the primary battery negative terminal. Highlighted in green, install the auxiliary battery ground cable & JP60-1400-A Battery Cable, BLACK, 20" Length onto the negative battery terminal bus bar.
- 26. Double check everything is assembled, fastened, & positioned properly. Double check that all wiring is secure, routed properly & safely, and not against sharp items or pinched. Double check that items or opposite polarity are not in contact. Double check that all tools and foreign object(s) are removed from the engine bay area(s). Once everything is cleared you may switch the Circuit Breaker & Winch Switch to the "ON" position and use your vehicle. The Winch Switch doesn't need to be on for the vehicle to function, but both are required to be "ON" for winch function. Your vehicle and JP60-1400-H Junction Block Stud will now have a negative ground power supplied to them while the circuit breaker is in the "ON" position.











<u>CAUTION:</u> Placing the circuit breaker in the off position will disable any anti-theft system, keyless entry & power window system(s). Secure the vehicle cabin to your preference prior to switching the circuit breaker & winch switch to the OFF positions.

<u>CAUTION:</u> If the JP60-1400-M Battery Disconnect Switch, Winch Switch is in the "ON" position the vehicle ground may be connected even if the JP60-1400-I Circuit Breaker is in the "OFF" position. Both items must be in the "OFF" position for proper vehicle battery storage function.





- 27. Figure S.1 & S.2, ensure the mounting areas are clean from contaminants, then apply a DA60-0007-J Name Plate, DYNATRAC, PROSWITCH onto the JP60-0004-BN Bracket LHS (Driver's Side) & then onto the JP60-0004-BM Bracket RHS (Passenger Side).
- 28. Figure T.1, if a plastic *DA60-0007-K Label, Winch Disconnect* Switch is supplied, please skip this step and proceed to the next step. If an aluminum material *DA60-0007-K Label, Winch Disconnect* Switch is supplied please find a clean 1.5" 2" diameter item to bend the *DA60-0007-K Label, Winch Disconnect* Switch onto so it matches the *JP60-1400-M Battery Disconnect Switch, Winch Switch* curvature. The item could be a cooking spice bottle, the round end of a hammer, or anything rigid of the specified diameter. The flat label is shown at the bottom of this image, the bent label is shown at the top of the image.
- 29. Figure T.2 & T.3, ensure the mounting area is clean from contaminants, then apply the bent *DA60-0007-K Label, Winch Disconnect* Switch onto *JP60-1400-M Battery Disconnect Switch, Winch Switch*. The bent label should fit closely to Figure T.3 and not to Figure T.2 before it is adhered to the switch knob.







